Cultural Influences on Financial Reporting and Propensity to Use the Extraordinary Items Adjustments to Smooth Reported Profits: A Comparative Study of Australian and Singaporean Practice

by

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I, Sophia Ying Ying Soo-Tho, declare that all work in this thesis is my own. All references to the work of others have been duly acknowledged.
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"Glory in his holy name;
let the hearts of those seek the
Lord rejoice.
Look to the Lord and his strength;
seek his face always."

[Psalm 105 : 3-4]
ABSTRACT

Accounting practices are observed to vary from country to country. It has become increasingly important that a standard accounting "language" be developed so that financial reports convey the same message to users from different countries and cultures. It is proposed that observed differences in accounting practice are due to underlying cultural differences and that these must be understood in order to harmonize accounting practice.

Hofstede’s (1980) definition of and framework for the analysis of culture have been used to assist in identifying the predominant national cultures of Australia and Singapore - two countries with similar British colonial roots but with distinctly different national cultures. Gray’s accounting values model, which extends Hofstede’s analytical framework into the accounting "sub-culture" arena, and the Harrison and McKinnon model, which seeks to analyze the responses of an accounting regulatory system to historical events, both point to there being a link between the accounting regulation practices and the national cultural values of Australia and Singapore.

Singaporean’s Confucianistic values (deference to authority, valuing of traditions, collectivism, strong work ethic, etc.) result in a greater acceptance of government intervention in accounting regulation than is the case for Australia where individualism, independence and suspicion of authority are key cultural elements. The implication drawn from this analysis is the expectation that manipulative profit smoothing in financial reporting would be practised to a greater degree by corporate directors in Australia than in Singapore, because societal norms influence their discretionary choice of accounting policies and compliance attitudes.

This expectation was confirmed by empirical analysis of reported company financial information in both countries covering the period 1972 to 1989, providing supportive evidence for the view that cultural differences do affect the propensity to indulge in profit smoothing manipulation (using extraordinary items adjustments).

The usefulness of the CoV (i.e. the coefficient of variation of the relative change in reported net profit figures) as an adequate indicator for detecting the practice of profit smoothing manipulation and as an unbiased cross-cultural comparative tool was affirmed. The analytical framework developed for the analysis of cultural influences on accounting practice should have useful application in other spheres of accounting and management practice.
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CHAPTER 1

INTRODUCTION

1.1 Background

Accounting practices vary from nation to nation. The accounting practices that are applicable to one country may not be relevant to another. Perera (1989, p.42) stated that: "a world-wide diversity of accounting requirements and practices" exists across countries. Choi and Mueller (1978) noted that these differences are related to varying cultural influences on accounting and pointed out that:

different accounting environments ought to spark different accounting responses so as to make accounting processes and their information products as socially useful as possible ... if we then accept the proposition that the environments in which accounting operates are not the same in different countries or even in different organizations, it stands to reason that accounting must necessarily differ from case to case if it is to retain the sharp cutting edge of social utility.

Perera (1989, p.43) stated further that:

accounting is a socio-technical activity involving both human and non-human resources or techniques as well as interaction between the two. Although the technical aspect of accounting is less culture dependent than the human aspect, because the two interact, accounting cannot be culture free.

Accounting is not only technical in nature. The human aspect is equally significant. Consequently, it is important to understand how culture and societal values influence accounting practice. Cultural differences present a barrier to the generalization and transfer of accounting techniques across countries. Attempts are being made internationally to standardize and harmonize accounting practice. An understanding of cultural differences and their consequences in national accounting practice is thus important in today's world of international dialogue and globalism.
1.2 Motivation

Accounting has undergone various stages of historical development to enable it to meet the changing needs of society. From an initial primitive stage in which accounting was used for recording and reporting information to sole proprietors, it has developed to the present situation where accounting serves as a major medium of communication, not only in complex, industrial societies within nations, but also increasingly in the international arena of multinational companies and worldwide transactions. The international harmonization of accounting practice is of growing interest in order to facilitate the comparability and understanding of financial information trans-nationally.

An international accounting "language" is becoming increasingly accepted as necessary for business communication. There is a push for the international harmonization of accounting standards in order to satisfy the objective of globalization of financial information serving the needs of multinational companies and the international community generally and to provide an international market for securities (Chan, 1986, p.102). Moves toward the generation of a universal set of financial information for worldwide usage are severely handicapped by existing international cultural differences. Nurmi (1986, p.4) recognized this situation by stating that:

[As] the business world [grows] ... more and more international or even global managers have experienced cultural shocks when trying to adopt their Western business practices to societies and cultures having core values dramatically different from the Western ones.

The type of accounting practice determined as suitable and appropriate for a particular country invariably involves a process of value
judgements made by either the accounting profession or by the government. These value judgements, in turn, are thought to rely fundamentally on the value system held by the decision makers themselves, which is in some way related to their culture. Thus, it is anticipated that culture plays a role in influencing government and accounting profession decision making. The nature of culture, its influence and its implications for accounting practice will be the general focus of this study.

1.3 Specific Objectives

The specific focus of this thesis is to investigate the effect of national culture on the profit smoothing manipulation behaviour of corporate directors. The term "national culture" will be used to encompass the predominant societal norms and value systems of a nation, which, in this case, is anticipated to have an influence on the accounting practice and organization of that nation. Two aspects of accounting organization, namely "accounting regulation" and "the financial reporting system", will be examined. "Manipulative profit smoothing" in financial reporting is the deliberate and reprehensible distortion of reported profit figures by corporate directors, in order to report profit figures of a "convenient magnitude" (Craig and Walsh, 1989, pp.229-230). Profit smoothing by corporate directors is motivated by the desire to prevent an over reaction on the part of shareholders and the share market to any perturbation in reported annual company profit figures.

Accompanying this specific objective are the following additional
thesis objectives:

(i) to survey the literature to determine the "state of the art" as regards the current understanding of culture and its impact on accounting practice.

(ii) to study the response of the accounting profession in two countries of differing cultural values to government intervention in accounting regulation as an indicator of the cultural parameters in these two countries. Thus, an attempt will be made to define the cultural characteristics of a particular country, specifically as they relate to accounting practice.

(iii) to build a theoretical framework for the understanding and analysis of culture and its impact on accounting behaviour and to provide a basis for predicting corporate director behaviour, especially in regard to their propensity to engage in profit smoothing in financial reporting.

(iv) to find a suitable mechanism for the detection of profit smoothing in financial reporting.

(v) using this mechanism in part (iv) to search for evidence of a difference in the profit smoothing behaviour of corporate directors in the two countries under study. This is in order to provide empirical evidence in support of the predictions of the theoretical framework and thus in support of the theoretical framework itself.

1.4 Method and Limitations

1.4.1 General Method

Reference to three major studies will be made in this thesis as they have laid a useful groundwork for this present study.

Hofstede (1980) analyzed the values underpinning a culture. He defined "four dimensions" which represent elements common to cultural systems. His model is used as the major analytical framework for examining the impact of culture on the accounting regulation behaviour in two nations possessing differing cultural values. Australia and Singapore are the two countries selected for study. Both nations have had similar
origins as past British colonies, resulting in many common features, yet, at the same time, having vastly different predominant cultures.

Gray’s (1988) accounting values model then links the national culture to the accounting profession’s behaviour, by incorporating Hofstede’s "four dimensions" into an analysis of accounting behaviour. Perera (1989, p.43) justified the Gray model approach by stating that:

to analyze the cultural influence on accounting [one] should identify (1) a set of specific societal values or cultural factors which are likely to be directly associated with accounting practices, and (2) the manner by which the association between societal values and accounting practices occurs, for it is only then that the impact of cultural influence can be examined logically.

Thus, based on Gray’s (1988) model, a review of the accounting regulatory systems in Australia and Singapore is undertaken to illustrate the relationship between cultural influences and accounting regulation behaviour. The attitude of the Australian and Singaporean accounting profession to government intervention in accounting regulation will be compared in order to highlight differences in cultural values and perceptions.

Harrison and McKinnon’s (1986) study of the effect of change on the accounting regulation system through the tracing of historical events and the reaction to those events is then used to substantiate the conclusions drawn from the Hofstede and Gray models.

Having thus established a relationship between cultural influences and accounting regulation behaviour, Gray’s model is then extrapolated to make a priori predictions of financial reporting behaviour in Australia and Singapore, specifically in relation to profit smoothing behaviour. Perera
(1989, p.48) supported the extrapolation of Gray's model into the financial reporting arena by his comments that:

the extent of disclosure in financial reports would seem to differ between countries in line with the differences in the value orientations of the preparers of those reports.

A comparison of financial reporting system performance behaviour of these two countries is carried out to provide empirical evidence in support of the inference drawn from the theoretical framework.

Thus, the theoretical framework comprises a qualitative analysis for which empirical evidence is also sought. Such a theoretical framework should prove useful in future studies examining other aspects of accounting behaviour in differing cultural contexts and in general studies of culture and its ramification.

1.4.2 Limitations

The national culture and its influence on accounting practice is the primary focus of this thesis. It has been recognized that different organizations appear to exhibit individual organizational cultural characteristics which differentiate them from other organizations (Pratt and Beaulieu, 1992). No attempt is made to examine organizational culture in this thesis as the national culture is thought to underlie organizational culture. The individual, irrespective of which organization he or she belongs to, still shares the common set of fundamental values pertaining to his or her national culture. Thus, it is not anticipated that differences in organizational culture will fundamentally alter conclusions drawn from a study based on national culture.
The Soeters and Schreuder (1988) study on the interaction between national and accounting organizational cultures provides useful insights. Soeters and Schreuder (1988, p.76) compared Dutch accountants working in Dutch (local) firms with (Dutch) accountants working in the U.S. Dutch-based multinational companies to examine whether the U.S. (i.e. foreign) culture had a significant impact on the organizational culture of these international firms. Their study proved that the U.S. culture had a significant impact. In the same vein, when top-management directors of multinational companies are themselves foreigners, foreign cultures can be expected to have an impact on organizational culture. These foreign directors will invariably conform to their respective native cultures and not those of the country to which they have been posted. Since the empirical testing of this thesis focuses on the profit smoothing manipulation behaviour of corporate directors, the impact of these foreign cultures on the multinational corporation director behaviour is an unknown factor which may distort the results.

There does not appear to have been any survey data collected concerning the impact of culture on corporate directors’ behaviour. Consequently, no direct measuring instruments of culture (Soeters and Schreuder, 1988; Hofstede et al., 1990; Pratt and Beaulieu, 1992) are applied in the empirical testing. A cross-cultural comparison of the degree of profit smoothing manipulation between Australia and Singapore is used instead to provide a test for the existence and implications of the impact of national culture.
1.5 **Structure in Outline**

Chapter 1 defines the subject and framework for this study.

Chapter 2 reviews the literature pertaining to culture and its impact on accounting, specifically highlighting Hofstede’s analysis of national culture and Gray’s extrapolation of Hofstede’s model into the accounting arena. Harrison and McKinnon’s investigation (1986) of the effect of change on the accounting system by tracing historical events and their consequences is also reviewed. The literature review serves to evaluate the usefulness of Hofstede’s definition of culture and provide the philosophical and theoretical foundation for this study.

Chapter 3 examines the demography and political history of Australia and Singapore in relation to their accounting regulatory systems’ existing structure and operational form, evidencing differing cultural influences. This relationship between cultural influences and accounting regulation is reviewed, based on both Hofstede’s (1980) and Gray’s (1988) classifications. Harrison and McKinnon’s (1986) model is then used to support the Hofstede and Gray classifications and their application to Australian and Singaporean accounting regulatory system behaviour.

Chapter 4 establishes the impact of national culture on financial reporting. This is demonstrated by showing how the dominant cultural values of Australia and Singapore influence the manipulative profit smoothing practised by corporate directors in these countries.

Chapter 5 develops the testing model used in this study. The Craig
and Walsh (1989) study is replicated using an extended Australian data set to test whether their findings, which detect profit smoothing manipulation in Australia, still hold. In addition, for comparative purposes, a similar test is conducted using Singaporean data. A significant statistical variance in the results between Australia and Singapore is expected, and, if confirmed, would support the inference that the degree of profit smoothing manipulation is conditioned by the cultural values of these countries.

In Chapter 6 the empirical results are analyzed according to the testing model developed in Chapter 5.

Chapter 7 summarises the findings of this study and makes comments regarding their implication and application.

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1 The Craig and Walsh (1989) study covered data from 1972 to 1985. Additional data from the period 1986 to 1989 has been included in this thesis to form an extended data set.
CHAPTER 2

REVIEW OF THE RELATIONSHIP BETWEEN CULTURE AND ACCOUNTING

The study of the impact of culture on social behaviour has been extensively dealt with in the anthropology, sociology and psychology literature (e.g. Kroeber and Kluckhohn, 1952; Berry, 1973; Hofstede, 1980; Rossi and O'Higgins, 1980). Interpretations of what culture actually is and its definition vary widely. Since the significance of the impact of culture on accounting has only been more recently acknowledged, such research has borrowed heavily from the already well established research of other fields. Of the many definitions of culture in existence, accounting literature has relied extensively on Hofstede's (1980) definition of culture and "culture" model to provide a contingency explanation of international accounting diversity (for example, Gray, 1985; Perera, 1989; Donleavy, 1991). The notion that cultural influences play an important role in accounting development is explored after deciding upon an appropriate definition of culture.

2.1 "Culture" and "Sub-culture" Defined

The definition of "culture" used here is drawn mainly from Hofstede's (1980) model, in which emphasis was placed on the relationship between human behaviour and culture. This fits with the conclusion of Belkaoui (1989, p.149) that:

Culture shapes and is shaped by its people ... culture controls human behavior in nonrational and persistent ways.
Hofstede (1980) defined "culture" as "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede, 1987, p.59). He emphasized societal norms as the value systems shared by the majority in a society. Kroeber and Kluckhohn (1952, p.81) had earlier pointed out that values underlie culture:

"... the essential core of culture consists of traditional (i.e., historically derived and selected) ideals and especially their attached values."

Burnett (1990, pp.12-13) referred to culture as an outward expression of a shared framework of concepts and presuppositions that provide people with their basic assumptions about reality. Burnett went on to say that "everyday experiences are fitted into this framework in order to give a totality of meaning and comprehension for the individual" (ibid.). A person's perception of reality is therefore shaped by his or her values and presuppositions. These values and presuppositions are inculcated into the individual's fundamental beliefs early in life and are usually unquestioned. They vary from culture to culture. Accordingly, Nurmi (1986, p.3) referred to the individual's fundamental beliefs as a set of "relatively enduring beliefs about preferences ... [where] values are learned, ... [which] ... change slowly and ... [where] an individual's values have social bonds". Thus, these values at a collective level represent Hofstede's "national culture". Values, then, determine culture. Culture is the living out of collectively-held values in all aspects of life, e.g. from dress and eating customs to social organization and governmental procedures. Similarly, accounting organizational behaviour is another
aspect of life which is projected to be values (or culturally) determined.

Belkaoui (1989, p.161) described the manifestation of uniform behaviour as derived from an underlying common national culture in his statement:

national cultures act as networks of subjective meanings or shared frames of reference that members of each culture share to varying degrees and that, to an external observer, appear to function in a rule-like or grammar-like manner.

That culture is predictive of human behaviour is supported by Berry’s (1973) study:

Cross-cultural psychology seeks to comprehend the systematic covariation between cultural and behavioral variables. Included within the term cultural are ecological and societal variables, and within the term behavioural are inferred variables. Thus, the purpose is to understand how two systems, at the levels of group- and individual-analyses, relate to each other.

Greater understanding of how culture affects one aspect of human behaviour should be useful in predicting how it will affect another. Thus, cultural studies should also help in understanding the effect of culture on human behaviour in the accounting organizational sphere.

Other definitions of culture comparable with that of Hofstede are those of Sapir (1964) and Child and Kieser (1981). Sapir (1964) defined culture as:

the expression of a richly varied and yet somehow unified and consistent attitude toward life...

However, this definition is too broad to be useful. Child and Kieser (1981) defined culture as:

patterns of thought and manners which are widely shared. The boundaries of the social collectivity within which this sharing takes place are problematic so that it may be appropriate to refer to a class or regional culture as to a national culture.

The latter refines Sapir’s definition to a certain extent, whilst also being
in accordance with Hofstede's representation of culture. In addition, it alludes to a difficulty in defining cultural boundaries.

There must be a distinction made between "culture" (collective behaviour in societies as a whole, or as nations) and "sub-culture" (behaviour at the level of an organization, profession or family). "Sub-culture" is a sub-set of the overall behaviour expressive of the national culture. Figure 1 summarises this relationship pictorially. For the purpose of this thesis, both the accounting regulatory and financial reporting systems are treated as a "sub-culture" unit.
Figure 1
"Subculture" as a sub-set of National Culture

External Factors:
(e.g. Colonization, Technology Transfer, Forces of Nature, War, International Trade, Investment due to inflow of Multinational Corporations)

Environmental or Ecological Influences
(Geographical, Economic, Demographic, Historical, Technological, Urbanisation)

Predominant Culture

Values and Presuppositions

- Media
- Political System
- Professional Associations
- Accounting Regulatory Systems*
- Accounting Reporting System*
- Legal System
- Business Organisations
- Family & Others
- Religion
- Capital Market
- Food, Dress Manners & Language
This distinction between "culture" and "sub-culture" was alluded to by Hofstede (1987, pp.59-60), when he explained that culture is multi-layered:

national culture is the shared mental programming of most members of a nation; organizational or corporate culture is the additional programming shared by most members of an organization; and occupational culture is the programming acquired by those exercising a distinct occupation like accountants or accounting professors. On top of that ... a generation culture, a class culture, a family culture, and so on.

Schein (1983, p.14) defined organizational culture as follows:

Organizational culture, then, is the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaption and internal integration - a pattern of assumptions that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.

It is to be emphasized that, though the "pattern of assumptions" underlying each organizational culture tend to vary from organization to organization within the country, the core values of the national culture remain as predominant and common to all these organizations. In other words, the fundamental values of these organizational cultures are pivoted on the national culture of the particular country. This is recognized by Saffold’s (1988, p.546) study as:

the powerful, pervasive role culture plays in shaping organizational life lends plausibility to speculations that cultural factors may be linked with exceptional levels of organizational performance.

Saffold’s view is also shared by the works of Soeters and Schreuder (1988, p.76) and Pratt and Beaulieu (1992, p.680).

The above views project that accounting organizational behaviour generally "tend[s] to exhibit more stable and predictable behaviour ...

[and] it is highly likely that organizational cultures vary with national
cultures" (Soeters and Schreuder, 1988, pp.75-76). For the purpose of this thesis, the behaviour of both the accounting profession and corporate directors will be viewed as being subject to the national cultural influences of their country. The "national culture" of both Australia and Singapore will be examined using Hofstede's (1980) model. Upon this basis the "organizational or corporate" sub-culture will be examined with regard to accounting organizational behaviour.

The Pratt and Beaulieu (1992) study of "the nature of organizational culture in public accounting" includes a "practice" element in their definition of culture. They defined culture to comprise both values and practices:

the former [values] describes what "should be" while the latter [practices] describes what "is" ... Values are attributes of individuals characterized by broad tendencies to prefer certain states of affairs over others ... The observable practices of the culture's membership are also important in that they represent manifestations of the culture's values (ibid., pp.668-669).

The collective consensus of shared values in a culture leads to a uniform practice expression. Pratt and Beaulieu stated that their definition of culture is in accordance with that of Hofstede's et al. (1990). This "practice" component therefore provides a way of quantifying the cultural impact.

This thesis recognizes the importance of both the "values" and "practice" components. Examination of the observed behaviour (i.e. the "what is" behaviour or the "practice" component) and the underlying cultural values (i.e. the "what should be" behaviour or the "values" component) should yield further understanding of both components and
of their inter-relationship.

To summarize, the **definition of culture adopted here is Hofstede's "collective programming of the mind which distinguishes the members of one human group from another".** The accounting regulatory and financial reporting systems are regarded as sub-units of the national culture. The general aim of this thesis is to illustrate how "national culture" is a major conditioning force in shaping the psycho-cognitive dimensions of accounting organizational human behaviour. **By "national culture" is implied the predominant set of societal norms (or underlying values) of a nation which influences how people think, feel, perceive and behave in all aspects of life.**

### 2.2 Culture and Accounting Research

Scott's (1931) "Cultural Significance of Accounts" provided an early acknowledgment of the impact of culture on accounting. Since then, several different accounting research fields, enamoured by cross-cultural behaviour research and classification research methodologies, have sprung up. All appear to have been motivated by the desire to formulate a better framework for analyzing and testing the impact of culture. To trace the development of thought recognizing the significance of the impact of culture on accounting, four separate areas of accounting literature have been chosen and briefly reviewed. These are:
(1) Societal Accounting Research (Section 2.3),
(2) Cross-cultural Behavioural Research (Section 2.3),
(3) Classification Research (Section 2.4 and 2.5), and
(4) The Impact of National Culture on Accounting Research (Section 2.6)

Societal accounting research has adopted the approach of viewing an accounting system as a societal system functioning within a society. Cross-cultural behavioural research attempts to show that accounting practice is a product of its human element. Classification research attempts to draw attention to the significant differences in accounting practices existing across nations and attributing these differences to the impact of culture. The more recently developed "impact of national culture on accounting" research is considered to be the most useful to date, as it provides a useful framework for the analysis of cultural influences on accounting.

2.3 Societal Accounting and Cross-cultural Behavioural Research

The increasing attention in the literature given to analyzing accounting in its social context (for example, Scott, 1931; Lowe and Tinker, 1977; Burchell et al. 1980, 1985; Cooper and Sherer, 1984), indicates a growing recognition of the role of accounting in society. In attempting to associate accounting with its social context, Burchell et al. (1980, p.21) explained that:

Accounting has been seen as both reflecting and enabling the construction of society as we now know it, with both institutional forms and modes of social action interwined with its emergence and development.
The specific historical and institutional environments in the society in which accounting operates also help shape accounting practice. Cooper and Sherer (1984, p.219) pointed to this interplay between accounting and its environment:

Attempts to resolve technical issues [of accounting] without consideration of this environment may result in an imperfect and incomplete resolution due to the acceptance of current institutions and practices.

Gilling (1976, p.60) noted that "accounting is a product of its environment, and as such it will, and should, change with its environment". May (1961) and Chambers (1966) agreed that accounting is determined environmentally, so that where there is a change in the environment, accounting practice will undergo change accordingly.

Accounting is also regarded as a human endeavour. Consequently, changes in accounting practice will be contingent on the perception accountants have of the environment. Gilling (1976, pp.68-69) described the relationship between accounting practice, its environment and its practitioners as follows:

Accounting is a human contrivance. It has a social as well as an economic basis. It deals with objectives and relationships that are largely social in character and which derive the greater part of their meaning from a social context. It is a practice-oriented subject performed by humans ... The behaviour of a profession toward its environment is a matter of perception of that environment. Once an image of that environment has been established, then behaviour will be determined by that image and the frame of reference that it creates.

Gilling’s (1976) emphasis on "human perception" provides an important link between culture and accounting practitioners’ behaviour. Human perceptions are derived from the process of performing cognitive deductions and judgements about what one encounters within the environment versus one’s own set of culturally derived values formed by
one's upbringing. Thus, the whole process of perception and consequent human behaviour is affected by cultural conditioning (Rossi and O'Higgins, 1980).

Meanwhile, cross-cultural behavioural research in the accounting field (Chow et al., 1991; Harrison, 1992) has addressed the question of whether accounting techniques and practices are transferable and interchangeable between countries. It has substantiated that they are, in fact, nation-specific. Belkaoui (1989, p.157) indicated the importance of the impact of culture on accounting, by specifying that:

Culture has been considered to be an important environmental factor impacting upon the accounting system of a country. It has also been argued that (1) accounting is, in fact, determined by culture, and (2) the lack of consensus across different countries on what constitutes proper accounting methods is the result of their purpose being cultural not technical. These arguments point to a cultural determinism in accounting whereby the culture of a given country determines the choice of its accounting techniques and the perception of its various accounting phenomena.

Thus, culture is represented as a contributing factor to the shaping of accounting practices, and specifically tailors such practice according to the needs of individual nations.

As illustrated so far, it is impossible to separate accounting from its cultural context. Baladouni (1977, p.54) highlighted this relational link when he stated that:

to assume that each generation of accountants bursts upon the world unbiased, unprejudiced, and unimpaired by the past is to demonstrate a total unawareness of human culture and how it works.

Though this literature has supported the idea that culture plays an important role in accounting, one major problem has been the imprecise definition of culture (Amernic, Kanungo and Aranya, 1983). Hofstede's
(1980) model originating from cross-cultural studies in the sociology literature is, to date, the most detailed representation of culture.

2.4 Classification Research

The literature on international differences in accounting practices is oriented toward the group classification of practices with similar characteristics. The relevance of such research had been justified by Arpan and Radebaugh (1985):

> even though no two systems are identical, some systems are similar to others while significantly different from still others. Thus, an understanding of certain groupings can be useful in determining how different one country's system is likely to be from another's and, hence, what degree of caution and further study is advisable when analyzing accounting information generated in another country.

The purpose of classification research is to "describe, and [to act] as a mechanism to understand phenomena" (Secord and Su, 1991, p.36).

The classification literature vaguely acknowledges that cultural influence is a relevant factor in examining the differences in national accounting practices from country to country (Mueller, 1967 and 1968; Choi and Mueller, 1978; Nobes, 1984; Nair and Frank, 1980). For example, in the late 1960s, Mueller was the first to pioneer the classification of accounting systems (1967) and business environments (1968). Mueller's (1967) first classification, which groups accounting systems into four patterns of development, stressed that the nature of an accounting system is a product of environmental factors. Similarly, his second alternative classification, which is stated in terms of business environments, comprised of: (1) stages of economic development, (2)
stages of business complexity, (3) shades of political persuasion, and (4) reliance on some particular system of law. Mueller (1968, p.2) claimed that his "range of four is considered sufficient to embrace accounting as it is presently known and practised in various parts of the globe". Similarly, Nobes (1984, p.42) further developed a hierarchical scheme of classification, after realizing that there were some limitations in Mueller’s claims. For example he noted that:

the Netherlands is the only country in one of the groups, and the classification does not show whether Dutch accounting is closer to Anglo-Saxon accounting than it is to Swedish accounting ...

Thus, the Netherlands could not be embraced by Mueller’s "range of four" classification. In contrast, Nair and Frank (1980) carried out a statistical analysis of accounting measurement practices in forty-four countries, based on Price Waterhouse survey data, to develop their "four-group measurement" classification. This statistical process comprised both factor analysis and cluster analysis. Factor analysis first identified the appropriate factors which explain the variance between countries. Then several of the principal explanatory factors were selected and used to calculate the correlations of each country on each factor. From this, it was hoped to produce clusters of countries. The factors which influence accounting development were identified to include the underlying business complexity, economic development, legal systems and the political and social climate existing within the national boundaries.

Thus, classification research has made some contribution in
drawing attention to the influence of environmental factors on accounting development. The clustering method, which groups those countries sharing similar characteristics, helps to reduce the diversity in the differences of accounting practices across countries and provides a supportive explanation for such variation. Gray (1988, p.72) summarized this clustering method as operating with two major approaches:

First, there is the deductive approach whereby relevant environmental factors are identified and, by linking these to national accounting practices, international classifications or development patterns are proposed ... Second, there is the inductive approach whereby accounting practices are analysed, development patterns identified, and explanations proposed with reference to a variety of economic, social, political and cultural factors.

The clustering method, however, is still considered too broad to be useful (Secord and Su, 1991, p.38; Gray, 1988, p.74).

Classification research has not given an in-depth definition of culture which Hofstede’s (1980) model has. Classification research merely illustrates the impact of culture on accounting with general and indirect reference to environmental factors. Gray (1988, p.74) recognized this:

only very general relationships between environmental factors and accounting patterns have been established. The significance of culture in the context of prior classification research is far from clear. It may be that cultural influences have been generally subsumed in the predominant concern with economic factors but this has not been made explicit. Accordingly, the influence of culture on accounting would seem to have been largely neglected in the development of ideas about international classifications.

2.5 Use of Classification Research to Highlight the Differences in the Accounting Regulatory Systems of Australia and Singapore

Two methodologies, subjective classification (the deductive approach) and statistical analysis (the inductive approach), have been used to
cluster countries into groups. These two approaches use economic and other environmental factors as their basis for classification. Three major subjective classification studies analyzing cultural influences on accounting (Mueller, 1967; Seidler, 1967; American Accounting Association's Committee, 1977), are now used to highlight the differences between the accounting regulatory systems of Australia and Singapore. These identified differences will serve as the initial step in demonstrating the cultural influence on accounting practice.

2.5.1 The Mueller Study (1967)

As mentioned earlier, Mueller suggested four main patterns of development, encompassing the economic, political and other environmental factors, to classify countries of similar accounting practices into groups. These four main patterns are briefly described as follows:

(a) The Macroeconomic Pattern - where business accounting interrelates closely with the national economic policies,

(b) The Microeconomic Pattern - where accounting is viewed as a branch of business economics in a market-oriented economy,

(c) The Independent Discipline Approach - where accounting is viewed as a service function and derived from business practice (developed independently of government), and,

(d) The Uniform Accounting Approach - where accounting is viewed as a means of administrative control of business by government.

A distinction can be drawn between (a) and (d) in terms of the degree of governmental dominance. (d) is regarded as an extreme case of
complete governmental dominance within the country. Whereas, (a) reflects more of a mutual cooperation between business entities and the government. Likewise, a distinction can also be drawn between (b) and (c). (c) represents the dominance of professionals in business practice. (b) is the situation in which demonstrates business is primarily driven by market forces, rather than it being dominated by either the government or the professional bodies. On the basis of this type of analysis a distinction can be drawn between Australia and Singapore. Australia’s accounting regulatory system appears to adopt the "independent discipline approach" due to the degree of professionalism practised by the Australian accounting profession. Whereas, Singapore seems to adopt the "macroeconomic pattern" in light of the cooperation between the accounting profession and the government, despite its accounting self-regulation status. These differences provide a basis for evaluating whether accounting policies serve the needs of national economic policy or whether the accounting profession is primarily interested in maintaining the standards of professional practice. This helps to provide an insight into the extent of government involvement in accounting regulation and how the accounting profession reacts to this involvement.

2.5.2 The Seidler Study (1967)

Three models of accounting systems were identified in the Seidler study:

(1) the British model,
(2) the USA model, and
(3) the Continental European model.
Each model was based on a particular sphere of super-power influence. This classification may be particularly useful when categorizing the accounting practices of developing countries by tracing the source from which the original transfer of accounting technologies took place.

Since both Australia and Singapore were former colonies of Britain, they are classified as being under Seidler’s "British model". The British influence on each country’s accounting development can be observed along with the subsequent variation in practice between the two countries. These varying degrees of British influence and the subsequent variations are evidence of the extent to which culture has affected the respective countries’ accounting regulatory systems.

2.5.3 The American Accounting Association Study (1977)

In a similar manner to the Seidler (1967) study, the AAA’s Committee in International Accounting (1977) classified countries by producing a subjective classification based on zones of differing colonial influence. They identified five different groups of countries, these being countries influenced by:

(1) the British,
(2) the French, Spanish or Portuguese,
(3) the USA,
(4) the German or Dutch, or
(5) the Communist countries.

The Australian and Singaporean accounting practices are again classified under the "British group".

In a similar vein, the AAA’s Committee (1977) used a further
system of classification based on the extent of national economic
development. Australia and Singapore were both classified as "less
developed countries". Despite the fact that Singapore has become one
of the fastest growing economies in the world since its independence in
1965, it is still classified as a less developed country (LDC) by Tang and
Tse (1986) in their study of "accounting technology transfer to less
developed countries". Australia is categorized similarly (Hove, 1986).
This provides another avenue to examine how Australia and Singapore
react to cultural change, by examining the cultural effects caused by the
increased inflow of multinational corporations into the respective
countries. It can be demonstrated that the Singaporean accounting
profession strives more consciously and deliberately towards meeting
Singapore’s national economic policy than does the Australian
profession.

2.6 The Impact of National Culture on Accounting Research
The impact of culture on accounting has only recently been clearly
acknowledged in the literature (Secord and Su, 1991) and at
professional conferences: "the American Accounting Conference, New
York, August 1986; the Workshop of Accounting and Culture,
Amsterdam, June 1985; and the Workshop of Accounting and Culture,
Brussels, December 1987" (Perera, 1989, p.43) and the "Second South
East Asia University Accounting Teachers Conference Jarkata,
Indonesia, January 1991" (Secord and Su, 1991). Hofstede (1980) was
the first to introduce an accurate method for measuring cultural effects, notwithstanding that "culture" was previously an abstract and ill-defined term. Gray (1988) was the first to identify the mechanism for clearly relating Hofstede's societal values with the accounting profession's behaviour.

The review of literature, thus far, has shown agreement that culture seems to play an important role in explaining the existence of differences in accounting practices in different countries. Consequently,

... to develop theories, and to test these theories we need to analyse why different countries have different accounting practices, what are the particular characteristics of a country that lead to its particular accounting methods, what causes the differences, what are the common characteristics (Samuels and Piper, 1985, p.156).

This thesis, relying particularly on both Gray's (1988) and Hofstede's (1980) classifications, examines the cultural differences between Australia and Singapore, in relation to the corresponding differences in their accounting regulatory systems. A theoretical framework is then developed to predict profit smoothing manipulation behaviour by corporate directors in the two countries based on these observed differences in cultural behaviour.

2.6.1 Hofstede's (1980) Four Dimensions Model

Hofstede (1987) distinguished four levels in culture, viz. symbols, heroes, rituals and values. These levels together form "a hierarchy from superficial and easy to change to deeply-rooted and difficult to change" (ibid., p.60). Culture is an outward manifestation of the commonly-held
values and presuppositions. The fact that values belong to "the fourth and deepest-seated level - most difficult to change" (ibid.) indicates that there is a relative stability to a country's culture. As a country's culture is subjected to ecological and external changes, these values will interact and possibly be changed accordingly. External influences are factors from outside the nation or country which impinge upon it. Ecological or environmental influences are those influences within a nation which contribute to the shaping of its values and institutional structures.

Hofstede (1987, p.62) defines "values" as:

broad tendencies to prefer certain states of affairs over other states of affairs, usually acquired in our early youth, largely unconscious, and not susceptible to argument. They determine our attributions of "good" and "bad", "beautiful" and "ugly", "right" and "wrong", "normal" and "abnormal", and even "rational" and "irrational".

Differences in such values were collated by Hofstede (1984, pp.83-84) into the following four underlying dimensions:

(a) Individualism versus Collectivism
Individualism stands for a preference for a loosely knit social framework in society wherein individuals are supposed to take care of themselves and their immediate families only. Its opposite, Collectivism, stands for a preference for a tightly knit social framework in which individuals can expect their relatives, clan, or other in-group to look after them in exchange for unquestioning loyalty (it will be clear that the word 'collectivism' is not used here to describe any particular political system). The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among individuals. It relates to people's self-concept: 'I' or 'we'.

(b) Large versus Small Power Distance
Power Distance is the extent to which the members of a society accept that power in institutions and organisations is distributed unequally. This affects the behaviour of the less powerful as well as of the more powerful members of society. People in Large Power Distance societies accept a hierarchical order in which everybody has a place which needs no further justification. People in Small Power Distance societies strive for power equalisation and demand justification for power inequalities. The fundamental issue addressed by this dimension is how a society handles inequalities among people when they occur. This has obvious consequence for the way people build their institutions and organisations.

(c) Strong versus Weak Uncertainty Avoidance
Uncertainty Avoidance is the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. This feeling leads them to beliefs
promising certainty and to maintaining institutions protecting conformity. Strong Uncertainty Avoidance societies maintain rigid codes of belief and behaviour and are intolerant towards deviant persons and ideas. Weak Uncertainty Avoidance societies maintain a more relaxed atmosphere in which practice counts more than principles and deviance is more easily tolerated.

(d) Masculinity versus Femininity
Masculinity stands for a preference in society for achievement, heroism, assertiveness, and material success. Its opposite, Femininity, stands for a preference for relationships, modesty, caring for the weak, and the quality of life. The fundamental issue addressed by this dimension is the way in which a society allocates social (as opposed to biological) roles to the sexes.

Gray concurred with the above definition of "values" when he stated that these dimensions represent "elements of a common structure in cultural systems" (Gray, 1988, p.75). Like values, such dimensions are similarly considered to be relatively stable and evolve "in response to the ecological characteristics of a country and change as a response to intrusive events" (Eddie, 1989, p.6). Gray's (1988, p.4) definition of "culture" as "a system of societal or collectively held values" is consistent with Hofstede’s analysis.

Donleavy (1991, p.304) recommended the use of Hofstede's (1980) four dimensions as "axes that enable four dimensional co-ordinates to be specified for every culture of every society ...". He supported the feasibility of using Hofstede’s (1980) model to explain the pervasive diversity in the recent accounting literature (Harrison and McKinnon, 1986; Gray, 1988; Perera, 1989). The national cultural differences between Australia and Singapore will therefore be delineated based on these four dimensions. This thesis particularly places emphasis on the "large versus small power distance" and "individualism versus collectivism" dimensions, as they specifically relate to the cultural differences of Australia and Singapore.
Harrison (1992, pp.2-3) summarized the usefulness of Hofstede’s (1980) four dimensions of cultural differences as enabling:

culture to be broken down into its underlying characteristics or components. These components may then be examined for their implications ... and for their distributions in different nations ... [These] specific components [permit] ... the prior specification of hypothetical associations between those components and the variables or relations at issue in the research.

On this basis, Hofstede (1980) used cluster analysis to group countries into quadrants of like culture according to scores obtained by applying his four value dimensions. Based upon this quantifying approach, the effect of various cultural influences in different countries becomes evident. Australia and Singapore are classified by Hofstede (1987) as per Figure 2, which gives the position of 50 countries on Power Distance and Uncertainty Avoidance scales.
Figure 2
Position of 50 Countries on the Power Distance and Uncertainty Avoidance Scales:

A POWER DISTANCE X UNCERTAINTY AVOIDANCE PLOT For 50 Countries and 3 Regions.

UNCERTAINTY AVOIDANCE INDEX

Small Power Distance
Weak Uncertainty Avoidance
(village market)

Large Power Distance
Weak Uncertainty Avoidance (family)

DEN SWE.
IRE GBR.
USA SAF.
NZL CAN.
• AUL NOR NET

POW ER DISTANCE INDEX

Small Power Distance
Strong Uncertainty Avoidance
(well-oiled machine)

Large Power Distance
Strong Uncertainty Avoidance (pyramid of people)

SIN = Singapore
AUL = Australia

Adapted from "The Cultural Context Of Accounting" by Hofstede (1987, p.6, Table 1)
Hofstede (1987) classified Australia's national behavioural norm under the "village market" category, whereas Singapore fell into the "family" category (refer to Figure 2). By "village market", Hofstede (1987, p.66) meant a society in which there is "no decisive hierarchy" and there are "flexible rules, and a resolution of problems by negotiating". "Family" on the other hand portrays an "undisputed personal authority of the father-leader" but with "few formal rules" (ibid.).

In his earlier "four dimensions" analysis, Hofstede (1980) categorized both Australia and Singapore as weak in "uncertainty avoidance" (refer to Figure 2). Note that according to Hofstede (1980), Singapore (i.e. classified as "uncertainty avoidance" index (UAI) = 8) has a weaker uncertainty avoidance than Australia (i.e. classified as UAI = 51). This implies that Singaporeans are able to tolerate ambiguity (or uncertainty) more than Australians, and in fact, more than most other nationalities.

Singapore has a predominant Chinese population (approximately 75 percent). Hofstede's (1980) "weak uncertainty avoidance" ranking of Singapore seems to be in contradiction with fundamental Chinese values. Chinese have always tended to cling more to traditions and the past as a consequence of the teachings of Confucius:

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2 Confucius (551-479 B.C.) was a philosopher, moral teacher and political theorist, who had a great and lasting influence on Chinese thought and behaviour. He saw the family unit as the key to a successful and united nation and stressed the responsibilities inherent in human relationships and that each person had his/her place in society. The Five Cardinal Virtues he taught were to live a principled life, to be faithful to one's friends, to be loyal to the state, to be honest in official duty and to be courageous on the battle field. Failure in any one of these five duties would disgrace one's parents and be a dereliction of filial duty. His governing
Another major defect lies in its veneration of the past. Confucius' system was built on the foundation of antiquity and emphasized this at the expense of adjusting to changing conditions of civilization. In the habit of searching the past, his philosophy succeeded in contributing to continuity and stability but interfered with new ideas and the forces of progress. As a traditionalist, Confucius felt that if each man followed tradition, society would of itself be perfect. Thus, the old systems are to be preserved but not reformed; the ideas of the past are to be venerated but not criticized. The result has been an overbalanced conservatism that the modern revolutionary Chinese [communists] are most emphatic in condemning (Chu and Chu, 1961, p.38).

Therefore, the veneration of the past has led to a conservatism and stability that has no doubt been instrumental in ensuring the longevity and continuity of Chinese society and culture. These values are deeply rooted in the thinking of a person who is brought up in a traditional Chinese society. Burnett (1990, p.90) recognized that the influence of Confucianistic ideas is still prevalent even in communist China as it is in other Chinese societies which have not been influenced by Marxism:

Confucianism is not a body of ideas to which an unbeliever can be converted, but a way of life which could only be practised within traditional Chinese society. Confucianism is now dead within China, but its influence upon the Chinese worldview remains strong to this day.

Western values have no doubt had an impact on Singaporeans, however, traditional Chinese values still predominate. These values would seem to support the view that Singaporeans should be conservative in behaviour and tend to tolerate less (rather than more as indicated by Hofstede) ambiguity. Hofstede's (1980, pp.184-187, Figures 4.4, 4.5 and 4.6) description of the high UAI (i.e. "uncertainty avoidance" index) societal norm and its implications, which refers to characteristics such as "time is
money", "inner urge to work hard", "strong need for consensus", "nationalism", "achievement defined in terms of (national) security", "belief in experts and their knowledge" etc., are seen to better fit Singapore than Australia. Consequently, because of this apparent contradiction between Hofstede’s (1980) UAI for Singapore and expectation based on Confucianistic values, it is necessary to look further at how Hofstede (1980) derived his "uncertainty avoidance" index.

Hofstede's (1980) data was obtained from a survey of workers in 40 countries. His questionnaires had only three questions from which the "uncertainty avoidance" index was derived. Note that having only three questions may be insufficient to provide adequate data for the "uncertainty avoidance" index, especially if there is the possibility for confusion amongst respondents on any one of the three questions. These questions were stated by Hofstede (1980, p.164 and p.405) as follows:

(a) Rule orientation: Agreement with the statement "Company rules should not be broken - even when the employee thinks it is in the company's best interest" (B60).

(b) Employment stability: Employees' statement that they intend to continue with the company (1) for two years at the most, or (2) from two to five years or (3) for more than five years (but they probably will leave before they retire), or (4) until they retire (A43).

(c) Stress, as expressed in the mean answer to the question "How often do you feel nervous or tense at work?" (A37).

The scores for Australia and Singapore which Hofstede (1980, Appendix 2, pp.411-412) derived from these questions were as follows:
Table 1
Hofstede's (1980) Country Scores* from Questions B60, A43 and A37

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of responses for 1967 to 1969</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>Number of responses for 1971 to 1973</td>
<td>1114</td>
<td>58</td>
</tr>
<tr>
<td>Question B60 (expressed as mean multiplied by 100)</td>
<td>311</td>
<td>350</td>
</tr>
<tr>
<td>(related to rule orientation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question A43 (expressed as a %)</td>
<td>questions 1 &amp; 2 23</td>
<td>questions 1 &amp; 2 42</td>
</tr>
<tr>
<td>(related to employment stability)</td>
<td>question 4 48</td>
<td>question 4 28</td>
</tr>
<tr>
<td>Question A37 (expressed as mean multiplied by 100)</td>
<td>331</td>
<td>363</td>
</tr>
<tr>
<td>(related to stress)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty Avoidance Index (i.e. UAI)</td>
<td>51</td>
<td>8</td>
</tr>
</tbody>
</table>

* Country scores are where possible, the means of the survey rounds (1967 - 1969 and 1971 - 1973) and, for each survey round, of seven occupations.

The scores for question B60 (refer to Table 1) seem to indicate that Singaporeans are less "rule oriented" and more likely to break company rules than Australians (i.e. the lower the score the more the argument that rules should not be broken). However, this contradicts expectations based on the conservative, collective and deference to authority values which come from Confucianism. One possible
explanation could be that question B60 was phrased in the negative: respondents were asked whether they agree (i.e. if strongly = score of 1) or disagree (i.e. if strongly = score of 5) with this statement, indicating their response on a five-point scale (Hofstede, 1980, pp.403-410, Appendix 1). A linguistic problem could have arisen causing confusion as to how to agree or disagree with a negative statement. For example, "do you disagree (or agree) that company rules should not be broken?" (Hofstede, 1980, p.409, Appendix 1, question B60) is a confusing question especially in bilingual situations. Singapore’s survey was probably given in English (that being the "lingua franca") despite the fact that the Singaporeans’ mother tongue may be Mandarin, Malay, Tamil or some other dialect.

Question A43 scores (refer to Table 1) indicate that some 48 percent of Australians thought that they would stay in their present jobs until retirement. Whilst some 42 percent of Singaporeans anticipated continuing with their present company for less than 5 years, as compared with 23 percent of Australians. This level of "job-hopping" amongst Singaporeans would work in the direction of supporting a weaker uncertainty avoidance index for Singapore than for Australia.

Scores for question A37 (refer to Table 1) indicate that Australians feel nervous and tense at work more often than do Singaporeans (i.e. a lower score indicates that a person feels nervous and tense more often). It may be that the Singaporean working environment is actually less stressful than the Australian, although
observations of actual work environment conditions would appear to say otherwise. It could be that individual perceptions of what constitutes nervousness vary from culture to culture. Australians, being used to a relaxed work environment, may be more sensitive to and intolerant of stressful environments. Hofstede (1980, p.162) had defined "stress" as:

> a state of mind and body which corresponds to the state of preparation for aggression in primitive man, released through acts of aggression. When social norms forbid overt aggression, modern man must cope with his stress in different ways. Stress is a subjective experience. "Stress is in the eye of the beholder. If you think you are under stress, you are under stress" ... The same objective situation may be felt as stressful by one person and as relatively stress-free by another ...

Singaporeans seem to have an ability to cope with stress in their working environment by virtue of the fact that they are living in a highly pressurised society where they constantly find themselves being subjected to peer pressure to conform with societal expectations and to pressure from employers to perform.

The scores for the three questions (i.e. B60, A43 and A37 in Table 1) were weighted and subtracted from 300 to calculate Hofstede's "uncertainty avoidance" index³ (i.e. the lower the index the more uncertainty can be coped with). Thus, Hofstede (1980) derived a score of "51" for Australia and "8" for Singapore, inferring that Singaporeans cope best of all nations with ambiguity and uncertainty.

³ Hofstede (1980, p.164) in his "computation of the uncertainty avoidance index" (UAI) used "mean percent values for question b, and mean scores on five-point scales for questions a and c. These mean scores have been multiplied by 30 (for a) and 40 (for c) to make their range, and therefore their contribution to UAI, roughly equal to the range in percentage values of question b. The actual formula used is:

\[
UAI = 300 - 30 \times (\text{mean score rule orientation}) - (\% \text{ intending to stay less than } 5 \text{ years}) - 40 \times (\text{mean stress score})
\]
In addition to the potential linguistic problem with question B60 and the possible stress perception problem with question A37, it must be noted that other factors may be operating to bias the data for Singapore. For example, Singaporeans tend to respond according to their perception of employer's (in this case) expectations. Perhaps fearing that the employer might somehow come to know how individuals responded and that this could work in their disfavour, Singaporeans would tend to want to give the answers they think they are expected to and thus try to give a good impression of themselves. Hence, this survey data may in fact be confirming the compliance behaviour of Singaporeans rather than indicating tolerance of uncertainty.

Environmental factors may also be operating to motivate Singaporeans to "job-hop" (this is in relation to question A43). For example, when an economy is depressed and unemployment levels are high, people will tend not to change jobs. Conversely, when an economy is vibrant and growing, job opportunities with potential for remunerative and career rewards are greater. Singapore happened to be in the latter situation when Hofstede (1980) conducted his survey.

A "higher law" may also be in operation, contributing to Hofstede's weak "uncertainty avoidance" index for Singapore. Security could be seen to be achievable through material well being and social status. Thus, short term uncertainty may be acceptable in seeking to fulfil longer term uncertainty avoidance goals. This is the case in Singapore.
The factors mentioned so far could explain the apparent greater acceptance of uncertainty by Singaporeans in comparison with Australians according to Hofstede's (1980) analysis. Still another impinging factor could be the relative sample sizes concerning Hofstede's (1980) survey (refer to Table 1). Two surveys rounds were completed for Australia with the 1967-1969 survey having 805 respondents and the 1971-1973 survey having 1,114 respondents (i.e. a total of 1919 respondents). In comparison, Singapore had only one survey round (i.e. 1971-1973) with only 58 respondents. In addition, Singapore had the least number of respondents among all the countries surveyed. Thus, Singapore's "uncertainty avoidance" index should have a lower confidence level than for the indices of any other nations.

One further part for consideration is the significant differences in the scores for questions B60 and A37 (refer to Table 1). How significant is the difference between a mean of 3.11 for Australia and the mean of 3.50 for Singapore in relation to question B60 (and similarly 3.31 and 3.63 in relation to question A37, respectively)? The weighing factors of 30 and 40 (refer to Table 1 and footnote 2) for questions B60 and A37 respectively, will amplify any differences, but the question concerning the significant differences in the original data still remains.

For these reasons, all that can really be said is that both Australia and Singapore are weak "uncertainty avoidance" countries. Not much weight should be placed on the relative positioning of Australia and Singapore in the "uncertainty avoidance" dimension.
It is the "power distance" dimension that separates Australia and Singapore. Singapore is categorized as a "large power distance" country, whereas Australia is a "small power distance" country. Pratt and Beaulieu (1992, p.67) described this "large power distance" as a manifestation of:

distinct hierarchical structures that are normally not subject to question. Subordinates in such cultures tend to view and prefer management as autocratic or authoritative,

as opposed to the small power distance country practising consultative or democratic management. Their description supports the use of "power distance" when examining the role and influence of government in the respective countries. This "small versus large power distance" classification matches Hofstede's (1987) later classification of Australia and Singapore into the patterns of "village market" and "family", respectively.

Australia and Singapore were chosen as the nations of focus in this thesis because of their distinctly different cultural backgrounds as identified by Hofstede's classification. The "large power distance" or "family" classification of Singapore suggests that the government has more influence in Singapore than Australia. A consequence of this pointed to by Gray (1988) is that there is less opportunity to exercise professional discretion in the accounting regulatory system of Singapore in comparison to Australia. Gray (1988) broadly categorized the Australian accounting practice as one based on professionalism, whereas the Singaporean accounting practice was seen as more strongly subject
2.6.2 Gray's (1988) Accounting Values Model

Gray’s (1988) accounting values model extends Hofstede’s cultural analysis into the realms of accounting practice. Gray (1988) linked Hofstede’s "four dimension" values at national level (societal values) to the values he introduced at the accounting sub-cultural level. He did this on the basis that *(ibid.*, p.45):

> value systems or attitudes of accountants ... expected to be related to and derived from societal values with special reference to work related values.

His intention was to provide an overall view of the impact of culture upon the behaviour of accounting profession. His accounting values comprised of *(ibid.*, p.78):

(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 versus Flexibility** - a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies.

(c) **Conservatism versus 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.

(d) **Secrecy versus Transparency** - a preference for confidentiality and the restriction of disclosure of information about the business only to those who are involved closely with its management and financing as opposed to a more transparent, open and publicly accountable approach.

Puxty *et al.* (1987, p.282) anticipated a relationship between national culture and accounting regulatory systems in his statement that:

> Reflecting historical and cultural differences between nation-states, variations in the combination of principles that regulate institutions and practices of regulation are to be expected.
A combination of three organizing principles (i.e. the market, the state and the community) are identified by Puxty et al. as underlying the different modes of regulation (ibid., p.274). These modes of regulation fluctuate between the two extremes of "liberalism" (i.e. regulation is dominated by the market forces) and "legalism" (i.e. regulation is dominated by the state) (ibid., p.282). Evidence of these models of regulation in different countries may be due to the effect of different cultures.

In Figure 3, Gray (1988) illustrated the relationship between societal values (culture) and the accounting sub-culture. Societal values are shown to influence accounting values and accounting institutions and systems. Societal values are, in turn, shown to be influenced by external and ecological factors. The accounting systems influence national ecological factors, whilst accounting values are shown to be influenced by both the societal values and accounting systems.
Figure 3
Societal and Accounting Sub-Cultural Values.

Adapted from "Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally" by Gray (1988, p.7, Figure 2).
It will be shown that government intervention in accounting regulation is perceived differently by accounting professionals in Australia and Singapore. This is an indication of a cultural difference. This approach was taken from the works of Chow et al. (1991) and Harrison (1992), in which they examined the feasibility of the general application of management accounting systems across countries of differing cultures. It will be shown later in Chapter 3 that the accounting profession in Singapore, in contrast to Australia, defers to authority and is more inclined to accept the government dominance.

### 2.6.3 Harrison and McKinnon’s (1986) "Modified Exogenous" Model

Burchell (1980) and Hopwood (1983) recognized the importance of studying the effect of change on an accounting system in order to provide a better understanding of the properties of that system. Puxty et al. (1987, p.209) recognized the importance of considering historical roots when trying to understand a present situation:

> Historical conditions ... are associated with the changing nature of accountancy regulation and its specific features in each nation state.

This suggests that analyzing the process of accounting change should give further understanding as to the nature of the system as seen through its response to external and ecological changes.

Harrison and McKinnon’s (1986) model borrowed the endogenous and exogenous frameworks, used in sociological research. The exogenous framework (Smith 1973, 1976) concentrated on the effect of the stimuli (i.e. external to the system) in initiating a change in
the system, disregarding the system's response to those stimuli. Alternatively, the endogenous framework focused on the system's response and excluded the stimuli. Harrison and McKinnon (1986, p.236) combined the two frameworks and further incorporated the effect of the interactions and interdependencies between the system and neighbouring systems. Their model is briefly reviewed to show how it can be applied to an analysis of the impact of national culture on accounting organizational behaviour.

What Harrison and McKinnon (1986) proposed was a new framework for studying corporate reporting regulation and accounting change (ibid., pp.233-235):

Corporate reporting regulation is viewed as a social system, and change analysis is used to induce the essential properties of that system ... [The] framework uses change analysis to reveal the attributes and essential properties of regulation in a specific nation. In so doing, insights into the process of accounting change will also emerge ... By viewing corporate reporting regulation as a social system, policy makers become seen as a constituent part of that system and themselves subject to change. Attention is directed, therefore, not only to change within the system, but also to change of the system. The process of accounting policy formulation becomes an outcome of the system, one aspect of the behaviour exhibited by actors within it.

Their framework was an attempt to analyze "change within the social system" and "change of the social system" over time4. Whenever there is change, they argued that explicit attention must be given to cultural and historical factors (ibid., p.235). Harrison and McKinnon (1986) defined the relationship between historical events and change as follows:

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4 Harrison and McKinnon regard their model as a development and extension of Smith's (1973, 1976) model.
Events constitute the concrete and incontrovertible substance of the historical record and provide the data for change analysis. However, while change is described as a succession of events, events in themselves do not constitute change, nor do all events necessarily lead to change. The relevant events are those associated with a turning point, or occurrences which mark a transformation from one pattern in the system to a new or modified pattern. (ibid., pp.236-237).

Change was seen as having two dimensions in the temporal (the time span over which various phases of transformation take place before completion of the transformation occurs) and the spatial. According to Harrison and McKinnon's model, the notion that change is spatial concerns "the location of the subject system in relation to other systems or units" (ibid.). Firstly, the source of change is to be located "i.e. is endogenous or exogenous to the subject system" (ibid.). Secondly, the impact of the continuous interactions (interdependencies) among systems on the process of change in the subject system must be analyzed (ibid.).

Harrison and McKinnon's (1986) "modified exogenous" framework proposed four major components of change analysis: (a) intrusive events, (b) intra-system activity, (c) trans-system activity and (d) culture. Each of these is described below (ibid., pp.238-240):

(a) Intrusive events: these are "change stimuli or events which typically emanate from without the system and disrupt the system's pre-existing pattern. In respect of social systems generally, intrusive events may comprise war, colonization, missionary activities, economic depression, trade and technological exchange, and the international movement of people and ideas".

(b) Intra-system Activity: this involves "interactions among the structural elements of the systems itself. Thus, in respect of a system of corporate reporting regulation, it is the interactions among the specific regulation authorities comprising the system. These may include governmental, semi-governmental and professional accounting bodies".
(c) **Trans-system Activity**: this involves "the interactions across systems boundaries: i.e. among neighbouring systems. Thus, it is the interactivity between the system of corporate reporting regulation and neighbouring systems such as political, legal and corporate. In addition, it refers to the interactions across those latter systems ... for example, it is used as a shorthand connotation for the human interaction and negotiation processes which take place between the collectives, groups and individuals comprising the systems themselves."

(d) **Culture**: This "possesses two attributes of importance for the analysis of systems change. First it pervades not only the system under study, but all systems within the nation. And second, [it] does not generate events as data for change analysis ... [It] serves to constrain or facilitate change through its influence on the nature of this interactivity".

The intra-systems activity and trans-systems activity and cultural factors act as a **system-response** reacting to **stimuli** (intrusive events). Special emphasis is placed on the system-response in evaluating a change; the mere identification of stimuli is insufficient:

identification of exogenous stimuli provides an explanation of why the system underwent change. However, it does not explain the form of change; i.e. the system-specific response to the intrusive event ... the system response [demonstrates] ... that culture influences the interdependencies within the system (intra-systems activity) through its impact on interdependencies across systems (trans-systems activity) (ibid., p.245).

Thus, culture is seen to shape the system response to intrusive events. Harrison and McKinnon (1986, p.240) stressed that their "modified exogenous framework of social systems change is built on a series of propositions which link the four aspects". These propositions are as follows (ibid., p.240):

**Proposition 1**: "trans-systems activity provides the critical, associational link between culture and the system."

**Proposition 2**: "systems change is the product of both the intrusion of events and the continuous interactions among the neighbouring systems and the system under study."

They summarized the relationship of these two propositions as:

The form of social systems change is visible in the response events occurring within the system. These events are generated through interactivity among the groups and individuals which comprise the structural elements of the system (intra-systems activity). The collective and individual responses of the structural elements of the system to change stimuli are circumscribed by the interactions between the system and its neighbouring systems (trans-systems activity) (ibid.).
In conclusion, Harrison and McKinnon’s analysis of historical events and associated changes in the accounting regulatory system also provides support for there being a link between culture and accounting. The intrusive events which have affected the accounting regulatory systems of Australia and Singapore include British colonialization, the inflow of multinational corporations and local company failures. The relevant system responses to these intrusive events consist of:

(a) the role of government in relation to regulation policy (trans-system activity),

(b) the national behavioural norms where Australians value their rights and Singaporeans practise collectivism (cultural environment), and

(c) the effectiveness of government intervention in the accounting regulatory systems, in relation to the perceived appropriateness of such intervention by accounting profession (intra-system activity).

2.7 Application from the Accounting Literature

To summarize, since Scott’s (1931) early work which gave initial indication of a link between culture and accounting, several different fields of accounting research began to explore the significance of the impact of culture on accounting. Societal accounting research, cross-cultural behavioural research and classification research, each using a different approach, developed their respective frameworks to analyze and test the extent of the impact of culture. Classification research has given clear indication of a link between culture and accounting. The later research into the impact of national culture on accounting more clearly defined culture
and clarified the framework for analyzing the inter-relationship. These were two areas of weakness in the earlier research.

Hofstede’s (1980) four dimensions should provide a starting point for the analysis of the societal norms of Australia and Singapore despite the highlighted difficulty in the specific case of Singapore’s "uncertainty avoidance" index. It is recognized that in surveying, depending on the nature of the questions posed, even the responses may have underlying cultural messages.

The Hofstede (1980), Gray (1988) and Harrison and McKinnon (1986) models will now be applied in Chapter 3 to compare the accounting regulatory systems of Australia and Singapore and to analyze the underlying cultural values and inter-relationships.
CHAPTER 3

CULTURAL INFLUENCES ON THE ACCOUNTING REGULATORY SYSTEMS OF AUSTRALIA AND SINGAPORE

In most countries, the framework for setting accounting standards is generally accepted as being "a hybrid between the professional and the legalistic"\(^5\) approaches (Bloom and Naciri, 1989, p.90). However, differences do exist in these framework-differences, which Bloom and Naciri (1989, p.90) attributed to prevailing cultural differences:

There are a number of differences in the standard-setting procedures and the standards themselves among the countries [such as the United States, Canada, England, West Germany, Australia, New Zealand, Sweden, Japan, and Switzerland] considered [by them] ... in the light of the cultural differences among the countries.

Can the effect on accounting regulation of differing national cultural values be demonstrated? What is the nature of the differences in the cultural parameters and how also these differences affect accounting regulation behaviour? To answer these questions a study has been made of the cultures and accounting regulation behaviour of Australia and Singapore.

3.1 Demography and Political History of Australia and Singapore

Singapore is a small island, of approximately 636 square kilometres. It comprises one main island and 58 islets (Federal Research Division, 1991, pp.xiii-xiv). The total population was about 2.6 million people in July 1989. It is a multi-racial, multi-lingual and multi-religious society, comprising a

\(^5\) "Professional" approach is defined as a private organization which is responsible for establishing principles or standards of financial accounting and reporting, independent of the government (Bloom and Naciri, 1989). In contrast, the "legalistic" approach implies that the government plays the dominant role in the governing of accounting standards through statutory law (ibid.).
Chinese majority (76.4 per cent), a substantial Malay minority (14.9 per cent), a small Indian community (6.4 per cent), and even a small Eurasian community with other minor ethnic groupings (2.3 per cent). The four official languages are English, Mandarin, Malay and Tamil. Other spoken dialects include Hokkien, Teochew, and Cantonese. It is a government policy for all citizens to be bilingual: "competent in English and an Asian "mother tongue"". The religious break-up is as follows: Buddhism (28.3 per cent), Christianity (18.7 per cent), Daoism (13.4 per cent), Hinduism (4.9 per cent), Islam (16 per cent), other religions (1.1 percent), with the rest (17.6 per cent) claiming to be "free thinkers". Therefore, Singapore is regarded as a multicultural society.

Singapore was colonised by Britain in 1819. The Japanese occupation from 1941 to 1945 shattered the image of British invincibility in the minds of Singaporeans (Chew and Lee, 1991, p.117). As a result, Mr Lee Kuan Yew and his colleagues decided to govern it alone and the British government pledged to prepare Singapore for eventual self-government within the British Commonwealth (ibid.). In June 1959, Singapore received internal self-government under a government formed by the People’s Action Party (under Mr Lee Kuan Yew’s leadership). Later, in 1963, Singapore was merged into the Federation of Malaysia for the sake of Singapore’s political and economic future. This merger lasted

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6 "Mother tongue" is designated by the government as either Malay, Tamil, or Mandarin Chinese (Federal Research Division, 1991, p.xxii).

7 Singapore was under British rule for almost 140 years. Its growth and development from the time of its birth (1819) to 1959 was owed to British occupancy (Sandhu and Wheatley, 1989, p.3).
for only one year and eleven months\(^8\) (ibid., p.158). Separation from Malaysia finally brought about Singapore’s total independence on August 9th, 1965. Within the same year (December 2nd, 1965) it became a republic. It has been an independent country ever since, governed by the Peoples’ Action Party (PAP). In its early beginnings, the government implemented authoritative rulings to facilitate the necessary reforms:

In the first decade after separation, internal political developments of Singapore were primarily shaped by the policies and measures taken by the republic’s leadership to achieve three goals - the creation of a healthy, viable economy; the strengthening of state structures; and the promotion of a consensus on the core political values of society (ibid., p.158).

After its economic problems were progressively brought under control in the 1970s, the government shifted its focus to "community cohesion and improving the quality of citizens":

CCCs [Citizens’ Consultative Committees] and the community centers ... [have the] major responsibility of managing and conducting the many official political and educational campaigns at the grass roots level designed to reorientate the behaviours of the citizens (ibid., p.165).

This focus on its citizens was part of the government’s plan to improve the quality of skills and technical competence of its populace. Therefore, "the ruling party cultivated a distinct authoritarian style of government, one which stressed order, stability, and economic development and discouraged competitive politics" (ibid., p.170). The impact of this style of government on Singaporeans was significant:

Post-separation Singapore saw the rapid establishment of an ‘administrative state’ where Singaporeans felt the omnipresent public bureaucracy in virtually every sphere of their lives. Citizens rapidly learnt that the only effective means to elicit a response from the Government was the use of officially established political channels (ibid., p.170).

\(^8\) The separation between Singapore and Malaysia was due to a conflict in the political visions and styles of leadership.
Australia is similar to Singapore in that it is also regarded as a multicultural society and was a past British colony. Yet, the underlying cultural values of these two countries are quite different.

To the original aboriginal population in Australia was added a European population (predominantly British of Anglo-Saxon and Celtic ethnic origins) (Ho, 1990). It is only since the Second World War that a large-scale immigration program has resulted in a highly diverse, multicultural population. Recent statistics (Australian 1994 Year Book, p.3) indicate that the population is approximately 17.7 million people. This multicultural population comprises of "persons from 140 ethnic backgrounds, speaking 90 languages, and practicing more than 80 religions" (Ho, 1990, pp.259-260). The main spoken language is English.

Australia itself is a huge continent, divided into six states and two territories. Its land area is approximately 7,682,300 square kilometres (Australian 1994 Year Book, p.3), which is 12,079 times the size of Singapore. Prior to 1 January 1901, the six states were self-governing colonies. Each had its own constitution, government and judicial system (McAllister et al., 1990, p.1). These individual colonies then became states of the Commonwealth at Federation, governed by the Commonwealth of Australia Constitution Act 1900. The Commonwealth of Australia, thus, became a self-governing dominion under the British Crown. Although the

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9 The Commonwealth of Australia Constitution Act 1900 contains "nine sections which are commonly called the 'covering clauses'; the ninth section sets out the Constitution itself. The covering clauses cannot be amended in Australia; amendment would require a British statute, which may not be available unless requested by all the states" (McAllister et al., 1990, p.1).
constitution endowed the Commonwealth of Australia with potential nationhood, later events such as the adoption of the Statute of Westminster (1931) in Australia in 1942 brought about full international sovereignty\(^\text{10}\). The constitution provided for a balance of power among three arms of government: the legislature, executive, and judiciary and between State and Federal levels of government. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen’s Representative. The United Kingdom Westminster parliament could legislate for Australia only at Australia’s request up until 1986, but the Australia Act of 1986 terminated this power. This officially sealed Australia’s status as a sovereign, independent nation.

To conclude, British influence began in Singapore in 1819 (in Australia in 1788). Direct British involvement ceased in both countries following the Second World War, although this nominally came in Australia in 1901 and in Singapore in 1959. Thus, a direct parallel is observed in the circumstances of both countries in their emergence from a British colonial past.

Because of the significant differences in area and population, it is understandable that Australia’s system of government should be more complex. The legislature at the federal level has an upper house called the Senate and a lower house (the House of Representatives) led by the Prime Minister. Most of the states have also adopted a bicameral parliamentary

\(^{10}\) It is not possible to give an exact date when Australia became a sovereign nation (Zines, 1992, p.235).
system under the leadership of the State Premiers. Any conflict between states or residents of different states is resolved by the High Court of Australia (Section 75 of the Australian Constitution).

There have been as many as five dominant political parties operating within the federal arena of Australian politics, together with numerous other minor parties (McAllister, 1989, p.32). These five dominant parties are (1) the Liberal Party\textsuperscript{11}, (2) the Australian Labour Party (ALP)\textsuperscript{12}, (3) the National Party (previously Country)\textsuperscript{13}, (4) the Australian Democrats\textsuperscript{14} and (5) the Democratic Labour Party (DLP)\textsuperscript{15} (with similar party contests at the state levels)(ibid.). The ALP formed the Australian Federal government in block periods of 29th April 1904 to 17th August 1904, 13th November 1908 to 1st June 1909, 29th April 1910 to 24th June 1913, 17th September 1914 to 14th November 1916, 22nd October 1929 to 6th January 1932, 7th October 1941 to 19th December

\textsuperscript{11} The Liberal Party has existed since 1909. It is a "federal organisation based on seven divisions, one for each state and the Australian Capital Territory. Each is autonomous and has its own constitution. The seven divisions come together to form a federal council, a federal executive and a federal secretariat" (McAllister \textit{et al.}, 1990, pp.33-35).

\textsuperscript{12} The Australian Labour Party is Australia's oldest political party, whose origin can be traced back to the late nineteenth century. This party is organised "as a federal body with national machinery superimposed on six state and two territorial branches" (McAllister \textit{et al.}, 1990, p.40). The ALP leads the current federal government of Australia with Mr. Paul Keating serving as the Prime Minister.

\textsuperscript{13} The National Party began as "an independent parliamentary force when the Farmers and Settlers' Association won two wheat-belt seats in elections in May 1914 to the Western Australian Legislative Council" (McAllister \textit{et al.}, 1990, p.44).

\textsuperscript{14} The founder of the Australian Democratic Party was an ex-Liberal member. This party was only formed in May 1977 (McAllister \textit{et al.}, 1990, p.48).

\textsuperscript{15} The Democratic Labour Party resulted from a split in the Australian Labour Party occurring between 1955 and 1957 (McAllister \textit{et al.}, 1990, pp.50-51).
1949, 5th December 1972 to 11th November 1975, from 11th March 1983 onwards to the present (ibid.). The Liberal Party (in coalition with the major non-labour parties) governed in block periods of 9th February 1923 to 22nd October 1929, 9th November 1934 to 26th April 1939, 14th March 1940 to 7th October 1941, 19th December 1949 to 5th December 1972, 11th November 1975 to 11th March 1983 (ibid.).

This multiplicity of parties and levels of government contrasts with the one-government system16 of Singapore led, to date, solely by the PAP. The sound and authoritative governance practised in Singapore has earned a substantial amount of trust, confidence and co-operation from Singaporeans. Singaporeans’ support for their government is demonstrated by the "strong degree of identification with the PAP’s policies, which have brought about continuing stability and prosperity" (ibid., p.386). Differences in attitude to government and authority will be observed in later discussion. These differences have important implications when the regulation of accounting standards in Australia and Singapore is looked at. The accounting regulatory systems of both countries will now be studied using mechanisms suggested in classification research literature.

3.2 The Accounting Regulatory Systems of Australia and Singapore

Before proceeding, "accounting regulation" and "accounting self-regulation"
will be defined. "Accounting regulation" has to do with the setting and enforcement of accounting standards, codes of ethics, education, requirements for entry to the profession and professional disciplinary practice etc.. "Accounting self-regulation" is indicated when the accounting professional body is involved in the development and enforcement of accounting practices, in the main independent of the government.

3.2.1 Accounting Practice serving the needs of National Economic Policy versus Accounting Practice steering more towards Professionalism

Singapore.

Singapore has been categorized as following a macroeconomic pattern (Mueller, 1967; Tang and Tse, 1986; Donleavy, 1991), because its accounting practice is intended to serve the needs of national economic policy (refer to section 2.5.1). This relationship is deemed to be a result of the establishment of the Singapore Economic Development Board (EDB) in 1961. The EDB is an autonomous quasi-government body overseeing macroeconomic planning: its objective has been to lead Singapore from being a trading nation to become a modern industrial economy (Shimizu, 1988, p.106).

Historically, the Singaporean government has created and maintained an environment conducive to business activity through government legislation and policies, geared towards attracting overseas business and foreign investment (Low, Koh and Yeo, 1985, p.7). These development strategies were summarized by Tang and Tse (1986, p.88,
Singapore's development strategies are particularly aimed at the private sector. The government seeks to provide good infrastructure for free enterprise and attractive fiscal policies. Singapore enjoys a stable political climate. Its government has also vigorously encouraged its workforce to pursue education and training. This gives Singapore a competitive edge over neighbouring countries in attracting foreign investment.

The level of government involvement in the development of accounting policies is seen in that "national legislation affects the types of accounting records to be maintained, the form and content of financial statements to be filed, reporting periods to be observed, and expense for tax purposes" (Choi, 1979, p.56). Thus, Singapore's government is committed to national economic growth. Its policies are sensitive to the needs of business so that Singapore may develop and prosper. The economic growth of Singapore has been due mainly to these policies and Singapore's success in attracting foreign investment.

Australia.

Based on section 2.5.1, Australia has been classified as adopting the Independent Discipline Approach (Mueller, 1967; Donleavy, 1991), because
the accounting profession has been deemed to be self-regulating from its inception. Evidence for this can be seen in the early establishment of independent professional bodies. The Institute of Chartered Accountants in Australia (ICAA) was established in 1928 and the Australian Society of Accountants (ASA) was established in 1953. The ICAA and ASA are "the end result of mergers and amalgamations of the multitude of organisations which from 1886 were formed to represent the interests of accountants in Australia" (Allen, 1991, p.54). The active involvement of the accounting profession in ensuring standards of professional practice and more recently in the setting of accounting standards is additional evidence of a self-regulating professional stance.

3.2.2 Degree of acceptance of Government Intervention in the Accounting Regulatory System

Singapore.

There were no accounting pronouncements or recommendations issued by the Singaporean accounting profession prior to 1970. In the earlier years,

accounts were prepared in accordance with the Companies Act and practising accountants in Singapore who were members of accountancy bodies in other countries would also follow the practices recommended by their respective governing bodies ... (Hwang, 1982, p.11).

Therefore, prior to 1970, there appeared to be little uniformity of accounting practices in Singapore. Singaporean accounting practices were heavily influenced by British accounting practices, primarily through the adoption of the Companies Act into Singaporean legislation.
The Singapore Society of Accountants (SSA)\textsuperscript{17} was established by an Act of Parliament in 1963. This gave the impression that the impetus for self-regulation actually came from initiatives taken by the Singaporean government in recognition of the importance of producing "true and fair" financial statements; rather than it really being a preference of the Singaporean accounting fraternity.

All present economic decision-making in Singapore seems to follow an authoritarian style of governance similar to that adopted at the time of gaining independence. This is despite the fact that the PAP government currently projects a consultative image. Likewise, with the accounting regulatory system, which began with government regulation through the Companies Act and subsequently moved toward self-regulation, a continuation of intervention by the government in the accounting self-regulatory system is evidenced. The prominence of government influence in the current "self-regulation" scene demonstrates that the PAP government only has the intention of creating an "appearance of independence". In reality, the government has not given a significant degree of autonomy to the accounting profession. The profession's tendency to cling more to traditions appears to reinforce its submissive posture towards the government in the accounting regulation matters. Three incidents are cited which provide evidence consistent with this

\textsuperscript{17} The Singapore Society of Accountants changed its name to the Institute of Certified Public Accountants of Singapore (ICPAS) on 11th February, 1989 (Government Gazette, Subsidiary Legislation Supplement, The Accountants Act, Republic of Singapore).
assertion.

Firstly, when the accounting society issued the first series of Accounting Bulletins and Accounting and Auditing Practice statements in 1970, their contents were mostly a codification of existing practices and requirements of the Companies Act, with only a few changes (Hwang, 1982). There was no attempt by the profession to develop its own accounting standards.

Secondly, it was not until the SSA joined the International Accounting Standards Committee (IASC) in 1975, that the influence of the Companies Act’s provisions was eroded through the development of new Singaporean accounting policies. This involved the establishment of the Accounting Standards Committee (ASC) in 1977. The ASC centred its reviews mainly on the International Accounting Standards (IAS) proposing them in exposure drafts, before issuing them as the Statements of Accounting Standards (SAS) in Singapore. As a result, IASs were accepted gradually into SASs (Hwang 1982). To date, all of the IASs have been adopted as SASs\textsuperscript{18} with minor modifications only (Han, 1990, p.20), resulting 27 accounting standards. The provisions of the SASs do not counteract the provisions of the Companies Act, which remains as the main form of regulation in Singapore. Hwang (1982, p.65) substantiated this view by explaining that "the Act only stipulates the minimum disclosure requirements and does not disallow additional disclosure beyond what is

\textsuperscript{18} Similarly, SSA has adopted many International Auditing Guidelines issued by the International Federation of Accountants (IFAC). Statutory audit requirements are specified in the Companies Act (Tang and Tse 1986, p.92).
required by the Act". Since SASs have no legal backing, the Singapore government has ensured compliance by allowing the Registrar of Companies (ROC) and the Stock Exchange of Singapore (SES) to assist in the enforcement of the SASs (Hwang 1982, pp.157-158). In addition to the SASs, there are Statements of Recommended Accounting Practice (RAP)\(^{19}\).

Thus, even though the Singaporean accounting profession appears to be self-regulating, it has readily accepted the use of the IASs as its own without significant modification. The profession has taken little initiative in the development of its own accounting standards. Also, the Council appointed by the Accountants Act (1963) as a governing body of ASC, gave clear indications confirming that the final decision-making with regard to accounting regulation actually lay with the government and not with the accounting profession.

Thirdly, absolute government control usually gives rise to a rigid accounting system ("legalistic framework"\(^{20}\)), which is more likely to hinder rather than promote national economic policy. The Singaporean government recognises this weakness and is aware of the importance of the accounting profession's involvement because of its level of expertise in this

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19 The RAP consists of (1) RAP 1A "Framework for the Preparation and Presentation of Financial Statements", (2) RAP 1 "Standards of Disclosure in Financial Statements", (3) RAP 3 "Reporting Value Added Information", (4) RAP 4 "Accounting for Financial Futures", (5) RAP 5 "Off-Balance Sheet Finance and Window Dressing", (6) RAP 6 "Accounting by Charities".

20 The "legalistic framework" refers to systems where "financial statements are drawn up in accordance with a rigid set of rules, irrespective of whether adherence to those rules contradicts the commercial realities" (The Spicer & Oppenheim Guide to Financial Statements Around the World, pp.1-3).
area. Thus, the Singaporean accounting profession has been given certain powers to promulgate accounting standards, subject to the existing laws and regulations of government (Choi, 1979), affirming the appearance of self-regulation. The fact that the government has not supported any degree of professional liberty and independence in Singapore's accounting regulatory system can be inferred from comments made by Foo, Kon and Tan (1989)\(^2\), when discussing how compliance with Singapore's Companies Act and SASs is ensured:

The form and content of a company's financial statements are prescribed by law as embodied in the Companies Act (Chapter 50). In addition, compliance with SAS is required even though these are not mandatory in law. Noncompliance with SASs will generally result in a reference being made in the audit report.

The Singapore government has adopted a decentralised policy, in which the Singaporean accounting profession is encouraged to participate in decision-making in a government-supervised top-down management hierarchy. Therefore, the Singaporean government is observed to maintain a degree of control over accounting regulation, whilst simultaneously appearing to allow the participation of the accounting profession in order to give the impression to the public that the issuance of financial statements are prepared according to a "fair commercial view"\(^2\) rather than a "legalistic" framework.


\(^{22}\) The "fair commercial view" allows more flexibility in the preparation of financial statements. According to this view, "the only inviolable rule is that financial statements must give a clear and realistic picture of the performance and financial position of the reporting company" (The Spicer & Oppenheim Guide to Financial Statements Around the World 1989, pp.1-3). In this scenario, the primary users are the investors. The objective is to provide information on a company's affairs and operations.
Australia.

Australia is a mixed economy (Masel, 1983, pp.541-542):

In a mixed economy, regulation is one of the techniques employed to mitigate market forces by equalizing the respective powers of market factors and by institutionalizing responsibility on the part of directors ... Thus governments have found it necessary to intervene in order to minimize market imperfections ... This dual form of regulation - implying that governments should recognize self-regulatory organizations but should oversee their activities and stand ready to regulate directly where and as circumstances may require ...

The intention of such "dual form regulation" is to permit "different interests to pursue their own priorities while limiting the capacity of particular interests to dominate the rule-development process" (Walker, 1987, p.283). This reflects the general attitude of the Australian accounting professionals who prefer self-regulation and regard the role of government as being secondary.

There is recognition in Australia that accounting professionals have a higher level of expertise in accounting standards setting than does government and that legislation, in and of itself, will not achieve the desired ends:

it has long been recognized that it is impractical for legislation to seek to describe in detail all the requirements in order to ensure that financial statements prepared by directors give a true view. It is these considerations which have led to the promulgation of accounting standards developed principally by the accounting profession, with the object of supplementing the legislative requirements imposed upon the directors and the auditors (Masel, 1983, p.543).

Even though the Australian private-sector setting of accounting standards began to incorporate statutory backing from 1984 onwards (Whittington, 1989, p.198), it was meant only to back regulation procedures already in place. This probably explains the accounting profession's initial

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23 "Private-sector setting" system is associated with "active stock markets and emphasis on reporting relevant information to equity investors" (Whittington, 1989, p.198).
receptivity towards statutory backing (Walker, 1987).

The Australian institutional arrangements for the setting of accounting standards underwent three major phases (Rahman, 1991, p.28). The first phase, 1920's to late 1960's, showed an initial desire on the part of the Australian accounting profession to self-regulate. The second phase, late 1960's to 1983, was a period of dominance by accounting professionals in accounting standards setting. They became active in planning it as part of their agenda. The third phase was in the 1980s, when the accounting profession saw a need for the provision of a statutory backing for the Australian accounting standards. These three phases will now be briefly discussed.

As early as the 1920s, the Australian accounting profession attempted to issue accounting guidelines and recommendations, on an ad hoc basis, based on the then-current British practice. The first accounting standards, issued in Australia in the 1950s, were criticised as being loosely drafted and few in number. The Australian Accounting Research Foundation (AARF), which was established in 1966, has since been the central agency involved in the development of accounting and auditing standards.

The set of accounting standards issued by the profession is known as the Australian Accounting Standards (AAS). The AAS series consists of 28 Statements of Accounting Standards and 4 Statements of Accounting Concepts. In the opinion of the accounting profession, this AAS series is believed to serve as an essential benchmark for accountants to provide
clear guidance for professional practice and credibility. The accounting profession also believes its devotion in establishing its own standards is more "ethical, technical and educational" (1992 Accounting Handbook, p.29). These standards are binding on the members of the Australian Society of Accountants (ASA)\(^{24}\) and Institute of Chartered Accountants in Australia (ICAA). The APS1 statement states, *inter alia*, that:

members ... prepare general purpose financial reports to conform with the standards and the concept statements ... auditors ... report non-compliance. Non-compliance may result in disciplinary procedures, which include fines and, in extreme cases, forfeiture of membership (1992 Accounting Handbook, p.28).

However, accounting standards are recognized by Hines (1983, p.24) to have "different economic consequences for different firms, [therefore] they are likely to be controversial". This explains why they are not neutral. They can be biased toward the interests of accounting professionals. In the light of this problem, Hines (1983, p.25) showed that the existence of the Accounting Standards Review Board\(^{25}\) (ASRB) is necessary to maintain the political viability of the accounting standard-setting body so that "its process must be, and be seen to be, neutral". In this context, the Australian accounting profession favoured the assistance of the ASRB on the basis that it would promote an acceptance of accounting standards by ensuring an adequate representation of government and private interests in the formulation of such standards.

The ASRB, established in January 1984, was appointed by the

\(^{24}\) The Australian Society of Accountants changed its name to the Australian Society of CPAs (ASCPA) in 1990.

\(^{25}\) ASRB was renamed the Australian Accounting Standards Board (AASB) in 1991.
Ministerial Council of the Australian Government to endorse and enforce accounting standards. The accounting standards are first submitted as exposure drafts to the ASRB by any interested parties (not just by the accounting profession). Expert advice is then sought and public hearings are held whenever necessary, before the standards are approved by the ASRB. This gives rise to a second set of accounting standards - the ASRB standards. The ASRB standards are closely modelled on the AAS series and cover much of the same ground. There is reasonable consistency between these two sets of accounting standards. However, unlike AAS standards, ASRB standards have the force of legislative backing and are only applicable to companies incorporated under the Corporations Law.

Since Australia is a member of the IASC, the IASs become the third set of accounting standards. Unlike Singapore, Australia does not adopt off-the-shelf IASs. To meet the requirements of the IASC, Australia maintains its own accounting standards by ensuring that both the AAS and ASRB standards are compatible with the IASs (Professional Statement ARS 3 "Compatibility of Australian Accounting Standards and International Accounting Standards").

Singapore, in comparison, possesses only one series of accounting standards: Statements of Accounting Standards (SAS) which, as mentioned earlier, have no direct legislative backing (the Companies Act providing the legislative framework). The accounting standards of Australia and Singapore are now compared and contrasted in Figure 4.
Australia
3 Sets of Accounting Standards

(1) AAS

Australian accounting profession prefers to establishes its own standards. The AAS and ASRB are believed to be drafted in a "tougher style" and are more "single minded". This excludes ambiguities created by some international standards (IAS).

(2) ASRB

Singapore
1 Set of Accounting Standards

(3) IAS

To meet the objective of International Accounting Standards: globalisation of financial information to enable comparability of international financial information.

(1) SAS

Singaporean accounting profession is not prepared to establish their own standards. The accounting body simply adopts the IAS with some required modifications.

Due to the emphasis on professionalism in Australian accounting regulation, government intervention is only welcome when it assists the maintenance of the profession’s self-regulatory status. Government intervention is therefore viewed as a threat to their existing role. This is reflected in the strong resistance of accounting professionals to moves by the government to dominate in the accounting standards setting in the 1980s (Craig and Clarke 1993).
3.2.3 Extent of British influence on Accounting Regulatory Practices

Australia and Singapore were both once British colonies and though British accounting policies were (and still are) influential in the development of accounting policies of both nations, international accounting research has classified these two nations differently: Australia under the "Anglo" group (Donleavy, 1991) or "Anglo-American" group (Perera, 1989); and Singapore under the "Commonwealth" group (Donleavy 1991) or "Asian-Colonial" group (Hofstede 1980). Apparently, due to the differences in the cultural backgrounds of the two countries, the extent of the British influence on accounting practice in Australia and Singapore has differed.

Singapore.

The accounting education system in Singapore is modelled on the British system26. Foo (1988, p.131) described the British influence on Singapore’s accounting education as:

... deeply entrenched in a number of ways: (1) through the export of British accounting personnel; (2) through the export of accounting qualifications; (3) through the establishment of overseas accounting examination centers (e.g., as early as 1935 when the Association of Certified and Corporate Accountants [ACCA] established examination centers in Singapore and Kuala Lumpur); (4) through involvement of British experts in the planning, directing, organizing, teaching, and assistance in one form or another in the development of academic institutions in Singapore (e.g., professional accounting course was first introduced at the Singapore Polytechnic in 1957); and (5) through British historical influence upon the business, education and administrative environments in the early days of Singapore. This close relationship still exists today.

This British influence is still strong in Singapore in that the passing of the UK’s Certified Accountant’s examinations, or obtaining a Chartered Accountant’s designation in certain British Commonwealth countries,

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26 The British practice mentioned in relation to the Singaporean accounting practice is essentially referring to the period before Britain’s entry into the European Economic Community (EEC).
continues to satisfy Singapore’s education requirements for admission to the SSA, as an alternative to obtaining a degree in accountancy from the University of Singapore (Tang and Tse, 1986). Singapore has also maintained the British precedent in looking to the Companies Act to exercise control over the accounting regulatory system. This view still prevails even though the Singaporean government has encouraged the accounting profession to regulate its own accounting standards.

**Australia.**

In the Australian case, the British influence was particularly significant prior to 1970. Accounting principles introduced in the 1940’s relied heavily on British precedent:

> the ICAA first issued 'Recommendations on Accounting Principles' in 1946 ... were virtually copies of similarly titled documents produced by the Institute of Chartered Accountants in England and Wales" (Walker, 1987, p.269).

As with Singapore, company law was based on British legislation. Zeff (1973, p.23) described the earlier climate of Anglophilia evident in the Australian accounting regime:

> In 1928, with the acquiescence of the English Institute, the Australian Institute became the first accountancy body outside the British Isles to receive a Royal Charter ... As late as 1949, the President could refer to the English Institute as the "parent" of the Australian body. In this climate, it was axiomatic that the pronouncements of the English Institute would weigh heavily in the minds of the General Councillors.

However, American influences began to supplant British influences after 1970 (Morris and Barbera, 1990, p.238). This trend probably can

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27 "Up to 1963 Act, the Companies Act of Singapore was fashioned closely to the UK’s ACT" (Hwang 1982, p.11, footnote 29).

be related to the fact that the United States was gradually becoming an international leader in accounting standards setting (Whittington, 1989, p.197). Australia's openness to the United States at a political level, added incentive for moving away from British influence and trying to emulate American accounting practice. American accounting practice has been characterized as having "continually-expanding functions and rapidly mutating rules" (Tang and Tse, 1986, p.86). This characteristic paralleled the Australian accounting profession's stand in adopting a problem-solving approach towards its self-regulation: to meet the "emerging need for a change" where it is "willing to change [its] established modes of work, and [adapts] to the altered circumstances" accordingly (ibid.). Indeed, the Australian accounting research body, AARF, appears to be analogous with the United States' accounting research body, Financial Accounting Standards Board (FASB) (Bloom and Naciri, 1989, p.85). Similarly, the ASRB is comparable with the Securities and Exchange Commission (SEC), and the Ministerial Council parallels the United States Congress (ibid.). Singapore, in contrast, appears to cling more to traditions (including British accounting practice traditions) and is less willing to innovate.

3.2.4 Transfer of Accounting Technologies due to the influence of Multinational Corporations

In addition to the influence of domestic national policy on accounting

29 "Accounting technology" had been defined by Tang and Tse (1986, p.94, footnote 3) as "all concepts, principles and techniques for generating accounting and financial information. It is also meant to include all methods and procedures for promulgating accounting standards and improving the level of accounting knowledge in a country".
standards setting, international pressures are also recognized to play a role:

In view of the increasing internationalisation of accounting, it is important to consider what has happened elsewhere in the world, because it is unlikely that [a country] will be able to pursue a completely independent course. Financial accounting everywhere is subject to some form of regulation whether by statute or by private sector bodies. International experience has meant that there is a variety of methods of standard setting currently in place, and the choice of methods seems to be contingent upon the economic, legal and political environment of the country concerned (Whittington, 1989, pp.197-198).

Hove (1986, p.82) pointed to two external international pressures (colonization and the operations of transnational corporations) as influencing the form of accounting regulation adopted in Australia and Singapore; whether it operates by statute or through private sector bodies. As illustrated earlier in Section 3.2.3, the colonization of Australia and Singapore by Britain was an important original influence on accounting development in both countries. Transnational corporations (multinational corporations) seem to be today's "economic colonizers". Tang and Tse (1986, p.163) pointed to the Singaporean experience:

Singapore has ... induced many international accounting firms to set up local offices, usually in conjunction with a domestic accounting partnership. When Singapore entrepreneurs go into joint ventures with multinationals who provided modern production or marketing technology, the transfer of accounting technology occurs *pari passu*.

The significant presence of multinational corporations in Australia and Singapore has resulted in an increasing internationalization of business in these countries. This explains why both countries are eager to adopt a common set of accounting standards - the IASs. International pressure is increasingly being brought upon these two countries to synchronise their accounting standards with the IASs, in order to achieve the objective of international harmonization.

With the establishment of the IASC in 1973 came the expectation
that member countries would adopt the IASs it issued (Taylor, Evans and Joy, 1986, p.2). Since Australia and Singapore are members, it may increasingly be that they and other member nations may face mandatory adoption of the IASs as national accounting standards, rather than it continuing to be optional.

In assessing the above mentioned trends, it has been noted that IASC was:

originally a somewhat passive body which issued rather permissive standards ... it has [only] recently started to be more pro-active, proposing to restrict the range of practices which it endorses" (Whittington, 1989, p.197).

There was no immediate pressure from IASC to fully implement the IASs at the time when Australia and Singapore became members. Singapore’s gradual adoption with minor modifications of all IASs as its SASs (Hwang, 1982; Tang and Tse, 1986; Han, 1990) appears to support the observation, as indicated earlier, that the Singaporean accounting profession is far more compliant than the Australian accounting profession in implementing its government’s policy. Australia had its own accounting standards (i.e. AASs) prior to the addition of the IASs. The continued acceptance of AASs subsequent to the adoption of the IASs supports the proposition that the Australian accounting profession recognizes accounting as its area of expertise. The Australian members take pride in their own research and the development of their own accounting standards and are not prepared to give up their previous efforts altogether. Thus, the Australian accounting profession is described as a private sector regulating body (Whittington, 1989, p.198). In contrast, the Singaporean accounting profession appears
to be regulated by statute (Hwang, 1982; Leong, Low and Pang, 1988). Government intervention is, therefore, more likely to be an accepted norm in the Singaporean accounting regulatory system than in Australia.

Conclusion.

The application of the mechanisms suggested by the earlier classification literature to the accounting regulation systems of Australia and Singapore thus seems to suggest differences in the cultural values of the two countries. Generally, both systems are a hybrid of government involvement (the "legalistic" approach) and involvement of the accounting profession (the "professional" approach). However, the accounting regulatory systems of the two nations differ from each other in their specifics, thereby indicating differing cultural values. It has been noted that the Australian accounting profession prefers self-regulation, whereas, the Singaporean accounting profession is quite comfortable with their independence "in appearance" with the government being in-charge overall. The remnant of the British influence from its colonial past remains more prominent in Singapore's accounting regulatory system. In contrast, the Australian accounting profession has since the 1970s changed course and has tended to follow American patterns instead. The modelling of SASs from the IASs seems to show that the Singaporean accounting profession defers to authority and seeks to work in cooperation with the government policy. On the other hand, the Australian accounting profession prefers to be independent and seeks to continue to maintain this privilege by devoting research efforts towards improving AASs, even after the issuance
of IASs. In conclusion, the Australian accounting profession appears to steer towards "professionalism", while the Singaporean accounting profession appears to prefer the "legalistic approach".


The mechanisms and models of the more recent literature will now be applied to the accounting regulatory systems of Australia and Singapore to give a clear and more detailed picture of the relationship between culture and accounting regulation behaviour.

3.3.1 Application of Hofstede's (1980) Four Dimensional Model to Examine the Cultural Backgrounds of Australia and Singapore

The societal norms of Australia and Singapore are reviewed in the context of their underlying value systems. These fundamental value systems are examined within Hofstede’s (1980) four dimensions framework. Eddie’s (1989) research results (refer to Table 2), which looks at parameters for countries in the Asia/Pacific region, are also used for reviewing purposes.

In view of the discussion in Section 2.6.1 of the difficulty with Hofstede’s (1980) relative "uncertainty avoidance" ranking of Australia and Singapore, "uncertainty avoidance" indices for Australia and Singapore (refer to Table 2) will not be included in the tabulations of Eddies’ (1989) data in Tables 3 to 6.
### Table 2
An index measurement of Australia and Singapore based on Hofstede's four culture dimensions

<table>
<thead>
<tr>
<th>Country</th>
<th>Power* Distance</th>
<th>Uncertainty* Avoidance</th>
<th>Individualism*</th>
<th>Masculinity*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>36</td>
<td>51</td>
<td>90</td>
<td>61</td>
</tr>
<tr>
<td>Singapore</td>
<td>74</td>
<td>8</td>
<td>20</td>
<td>48</td>
</tr>
<tr>
<td>Range of reported figures</td>
<td>11-94</td>
<td>8-112</td>
<td>12-91</td>
<td>5-95</td>
</tr>
</tbody>
</table>

* these indices are based on Hofstede's (1980) study

Adapted from "The Association between Cultural Values and Accounting Systems Characteristics in the Asia-Pacific Region: an Exploratory Study" by Eddie (1989, p.35, part of Table 8.)

(a) "Large versus Small Power Distance"

According to Table 2, the power distance column indicates that there is a significant difference in this index between Australia and Singapore. This shows that Singaporeans can cope better in an authoritative environment than Australians. This supports Hofstede’s classification, in which Singapore falls under the category of "large power distance" and Australia under "small power distance".

Australia.

The "small power distance" categorization finds support in the approach Australians have taken in their constitutional framework. Because of their tendency toward egalitarianism (Nurmi, 1986; Turner, 1988; Breen, 1989), Australians have adopted the "theory of
constitutionalism\textsuperscript{30} to limit the power of government. The Australian constitution was a mixture of both American and British traditions:

The Australian founders adopted an American-style, codified, justiciable constitution, which invites people to constant litigation against government action, while yet leaving large areas of government procedure uncodified, as in the British tradition, and therefore not clearly open to judicial interpretation" (Maddox, 1987, p.87).

The limitation of government powers defined in the Australian constitution is reflected in Australia's federal government system, which disperses power between state and federal levels of government. Though Australia favours the limitation of government power to protect the rights of its citizens, it does permit some form of central power. This explains the mixed economy principle adopted in Australia, where government intervention occurs when required.

As well as being egalitarian, Australians have an "easy-going" approach to life and to achievement (Nurmi, 1986, p.6). This characteristic of the Australian life-style has had its benefits:

The Australian strength lies in her friendly interpersonal atmosphere and smooth co-operation. Easy-going life-style may carry the risk of lazy-going work-style. Still it facilitates the interpersonal roles of management in the leadership of organizations and in the liaison function outside the organizations. The "accord" backed by the government can lay a basis for a nationwide co-operation and goodwill (ibid., p.16).

It appears that these Australian values may either be "conducive to decreased productivity, if people prefer [the] easy life to work, or the same values may lead to effective co-operation and shared objectives" (ibid., p.17).

\textsuperscript{30} "Constitutionalism" is a "political doctrine which insists that people do have private and social lives to lead, and that it is the duty of governments to protect and foster those areas of privacy without interfering with them" (Maddox, 1987, p.73). Therefore, this doctrine is a theory limiting the powers of government by introducing clearly defined jurisdictions to circumscribe the government operation.
Australians are more inclined to work in an environment of relaxed laws and regulations (Renwick, 1980). Unfortunately, this benefit is mitigated with self-interest rather than interests held in common (Graetz and McAllister, 1988).

**Singapore.**

Government intervention was introduced initially in Singapore as a necessary and imperative tool to build the new nation. Examples of the manifestation of such intervention in the earlier phase of Singapore's development can be seen in the areas of (1) the provision of public housing, (2) directives for population growth and (3) government incited National Campaigns to promote certain values amongst its citizens (Sandhu and Wheatley, 1989, pp.111-116). The authoritarian approach still persists despite the apparent move to a more consultative stance (ibid., p.117). Government intervention is an accepted norm within the Singaporean culture. Thus, Singapore is a "large power distance" country, in that its people seem comfortable with the situation that enormous power is vested in the hands of a ruling elite.

Hill and Still (1980, p.48) described the motives and values underlying Singaporean work practice:

> the industrial society allows him to determine his place in the hierarchy through his own efforts ... Starting with the desire for social mobility (1), the individual increases (or, indeed, begins) his commitment to the economic system (2) to reap economic benefits and enhance the probability of job promotion (3). This has a positive effect upon his social status.

They identify social status as being an important Singaporean cultural value. Also, Singaporeans are materialistic (Minchin, 1990, p.vii).
Materialism, because of the associated improved personal social status it brings, results in Singaporeans working hard and pursuing job-promotion. This motivation, in turn, contributes indirectly to the country’s national productivity.

Singapore, having a predominantly Chinese population, has strong underlying Confucianistic values. Characteristic of these values are strong family ties, deference to authority and a strong work ethic (Chai and Chai, 1961). The Singapore government, led by Prime Minister Lee in a "top down" management structure, has sought to harness these cultural characteristics and focus them towards achieving national goals by encouraging the discipline and efficiency of its people (Simizu, 1988, p.96). Hence, the combination of the leadership provided by Singapore’s government, Confucianistic values and a self-interest motivating the citizenry towards material well-being and personal and family social status explains why Singaporeans prosper in a "hierarchical order" society.

 Australians are capable of similarly contributing towards national goals but with less organization and structure by relying on interpersonal cooperation motivated by self-interest.

(b) "Strong versus Weak Uncertainty Avoidance"

Australia is shown in Table 2 as having an uncertainty avoidance index of 51 compared with an index of 8 for Singapore. The Australian index, being below the mid-point of a range of 8 to 112 supports

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31 Mr Lee Kuan Yew was Prime Minister for over 31 years up to late November 1990. He was then succeeded by Mr Goh Chok Tong on 28th November 1990 (Chew and Lee, 1991, p.398).
Hofstede’s classification of both Australia and Singapore as having a weak uncertainty avoidance. As per the discussion in Section 2.6.1, Hofstede’s uncertainty avoidance index included such elements as willingness to change jobs, the ability to cope with stress in the working environment and readiness to go against company rules. Thus, both Australians and Singaporeans are seen to be people who can cope with uncertainty and ambiguity. What will be emphasized, in the context of uncertainty avoidance in the discussion following, will be the readiness to adapt to change as against the tendency to hold to the traditions and conventions of the past.

Australia.

Australia is described as a "pragmatic society, concerned mainly with practical questions ... and disdainful of ideas and doctrines" (Maddox, 1987, p.1). Therefore, Australians are expected to be more confident and self-assured in terms of their ability to cope with problems and adapt to altered circumstances. They consider their expertise as being highly valuable, which results in a degree of autonomy and discretion (Considine, 1990, p.43).

Furthermore, Australians are extremely innovative. Just one example of this is seen in the area of sport:

Australians have a great interest in sports and all-games, they have invented some that are played nowhere else in the world and they enjoy them as social occasions (Nurmi, 1986, p.6).

Australians, because of past isolation, have had to be self-sufficient and innovative to overcome life’s challenges (Garvin, 1988). They continue to contribute new inventions and technologies to the world scene.
Singapore.

Singaporeans, on the contrary, are reluctant to expose themselves to uncertainties and have the tendency to cling more to traditions. This behaviour can be seen in three events drawn from Singapore's historical records:

(1) When Singapore received "internal self-government from the British in June 1959, there was a widespread sense of elation (tinged with anxiety among some middle-class Singaporeans) as well as expectations of eventual complete independence" (Chew and Lee, 1991, p.363).

(2) When Singapore "merged into the Federation of Malaysia in September 1963 and thereby gained independence, there was general rejoicing over the new relationship which was based on old ties between the peoples of these territories" (ibid.).

(3) "There was little enthusiasm over the proclamation of Singapore as 'forever a sovereign democratic and independent nation, founded upon the principles of liberty and justice and ever seeking the welfare and happiness of her people in a most just and equal society'" (ibid.)

At the time of independence, Singapore was facing serious problems such as urban decay, inadequate housing, limited educational facilities (Sandhu and Wheatley, 1989, p.128). Consequently, the declaration of independence for Singapore was not an attractive prospect for its citizens. It meant that their destiny was unknown and it increased the uncertainties Singaporeans were likely to experience.

Singaporeans generally prefer to be led rather than be left fending for themselves. They are risk-averse people in many aspects. This probably explains why the PAP government has had no difficulty in maintaining the same style of governance. The citizens have been enjoying protected and sheltered lives and are not prepared to risk an alternative form of governance\(^{32}\).


(1) "To ensure Singapore's survival, the PAP government continued its policy of industrialization (initiated in 1961) and began to build the Armed Forces with the introduction of national service in 1967. In 1968, the Employment Act was amended to ensure discipline among workers by preventing them from striking ... During the same year, the Conservative government in Britain announced that it would withdraw its military forces based in Singapore by the end of 1971. This move threatened the survival of Singapore, as the British naval base employed about 40,000 workers ... Accordingly, the PAP government ... [introduced] the creation of a Bases Reconversion Unit to handle the conversion of the naval base into a commercial shipyard ..."

(2) "Its effective response to the communist and communal threats ... during the 1950s and 1960s."

(3) "Its ability to deliver goods and services to the population." For example, the Housing Development Board (HDB) was created in February 1960 to overcome the housing problems in Singapore; the Economic Development Board (EDB) was introduced in August 1961 to deal with the severe unemployment problem; a comprehensive anti-corruption legislation, an incorruptible anti-corruption agency, and constant improvement of salaries and working conditions in the public bureaucracy were introduced to curb the corruption problem, which was a way of life during the colonial period.

(4) "The lack of credible alternative to the PAP among the opposition political parties."

The outcome of the 1988 government election best described the perceptions of the Singaporeans towards its PAP government:

Singaporean voters wanted 'to have their cake and eat it, too', that is, they generally wanted the PAP to remain in power because there was no credible alternative; but, at the same time, they also desired some opposition in Parliament to serve as a check on the government (Chew and Lee, 1991, p.391).

Singaporeans are, therefore, expected to be cautious and reserved in handling matters, weighing costs and benefits very carefully before action is taken. This explains why there is a tendency to rely continually on the existing government for leadership. The Confucianistic values of seeking to follow and maintain traditions, deference to authority and a general desire for continuity, stability, prosperity and strong patriarchal leadership would
explain the events cited and the acceptance by Singaporeans of government intervention.

(c) "Individualism versus Collectivism"

The "individualism" index in Table 2 indicates that Australians favour individualism much more strongly than Singaporeans. A significant difference in the indices places Australia at the top end of the range with Singapore falling toward the bottom end of the range. This supports Hofstede's classification in which Australia is categorized under "individualism" and Singapore under "collectivism".

Australia.

The emphasis on individualism is evident in the decision of the Australian government to drop its previous "assimilationist immigration policy" in the early 1970s in favour of a multiculturalism policy. This change was to cater for the needs of "an increasing cosmopolitan and culturally pluralistic Australian society" (Ho, 1990, p.260):

This new [multiculturalism] approach ... operating within the theme "unity within diversity", advocates a new multicultural Australian nation with equal rights and opportunity for all regardless of their ethnic origin (ibid.).

Australia is, therefore, described as a "multicultural society" (Holton and Smolicz, 1988, pp.1-2).

Multiculturalism has the egalitarian objective of:

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33 The "assimilationist immigration policy" operates on the belief that immigrants to Australia "would readily embrace Australia's dominant Anglo-Celtic values ... removing or sublimating the ethnic identity of many of the groups who had arrived as immigrants" (Ho, 1990, p.260).
achieving a fairer society in which people's life chances are not affected by their ethnicity, race, religion, language, or place of birth ... [so as to ensure] ... a fair share of resources to all Australians ... [and to preserve] ... social cohesion of the nation (Ho, 1990, p.261).

However, this policy is criticized for cultivating a drastic individualistic character, where an "unrestricted cultural autonomy" policy places emphasis on "loyalty to one's origin above commitments to Australia" (ibid.).

Individualistic Australians desire a high degree of independence even at the expense of family and social relationship ties:

Self-fulfilment is seen in [the Australian] society primarily in terms of contractual obligations, but not much emphasis is put on those social bonds that are not contractual and rationalist or based upon autonomy; very little is being said in public debates and even less done in public policy to enhance and support the crucial social bonds and relations of loyalty, patriotism, kinship, familial feeling and historical belonging (Holton and Smolicz, 1988, p.6).

Thus, individualism is enshrined as an important value in the Australian society. A further illustration to demonstrate that individualism is regarded as the pre-eminent value can be seen in the restructuring of the Australian Public Service (APS). The emphasis of APS was on democracy and equity:

structural rigidity of the 1970s has been supplanted by the structural fluidity of the 80s ... The Public Service Reform Act (1984) introduced the Senior Executive Service (SES) as well as requirements in relation to industrial democracy and equal employment opportunity ... (Passfield, 1989, p.1).

The rights of the individual are thus valued highly. Later in section 3.3.2, it is illustrated that individualism has actually frustrated government attempts to dominate the Australian accounting regulatory system.

Intervention, regulation and control by central authorities are used to serve as tools in Australia to "overcome [the] dilemmas of collective action and to ... help strike ... bargains ... between conflicting and powerful groups" (Papadakis, 1990, p.230). Generally, Australians are wary of
authority. This is seen in Turner’s (1988, p.62) view that "bureaucratic regulation ... [is used to] undermine the self-regulating individual". Thus, Australians perceive bureaucratic regulation (government intervention) as a threat to their existing rights.

Singapore.

The Singaporean government, like the Australian government with its multiculturalism policy, has had as one of its objectives the maintenance of social cohesion within its society. However, the policies adopted by the PAP government to achieve this are quite different to those of Australian government. In Singapore, democracy is effected by having a committed, effective and efficient centralised representative government:

In shaping a democracy in Singapore, the PAP was far less concerned with adhering to the Western notion of a bill of rights, diffusion of power, and the multiplicity of parties, than with developing representative government and drawing a line between strong disciplined government appropriate to a new state and misgovernment by the corrupt and tyrannical (Chew and Lee, 1991, p.179).

Therefore, Singaporean government adopted a quite different approach to cope with its cosmopolitan society:

first, it has to ensure that the public bureaucracy is committed to nation-building through the formulation and implementation of policies that will enhance the integration of the various ethnic groups ... second obligation in a plural society is to ensure that both public and private organizations in Singapore are fair and impartial in their treatment of their clientele, regardless of their ethnic group, language or religion. There is also a Presidential Council for Minority Rights which examines bills presented in parliament to ensure that the rights of the different minority groups in Singapore are not endangered (Quah, 1987, p.79).

Two policies introduced by the PAP government since the 1960s further helped to implement national integration:

1. No new societies or associations could be registered if they were formed on racial or ethnic lines with effect from 1969.

2. The active promotion of a new network of inter-racial community organisations under the direction of the government's People's Association (PA) and the Prime Minister's Office (PMO) (Tan, 1985, p.69).
The banning of new ethnic associations was a necessary move to prevent division and a "feeling" of separation. In addition, the government has sought to actively promote grassroot organizations so as to elevate teamwork and cross-cultural leadership qualities. There is no distinctive and structured minority policy in Singapore. Singapore focuses on the "enhancing of cultural differences at one level, while promoting national harmony at other levels" (Clammer, 1988, p.99). Overall national unity is promoted through:

- conscription into military service for almost all men, through the promotion of national symbols, slogans and events such as the annual National Day parade, and through a common educational system which promotes common values through one of the four official languages - English, Mandarin, Malay and Tamil - and especially through the first (ibid.).

Hence, a collective identity has been strongly emphasized in the vigorous promotion of national goals in Singapore (Tan, 1985, p.69). This collective behaviour is best described as trying to emulate the Japanese management system, in which Japan's cultural system "elevates the group above the individual" and "identifies strongly with the group and company loyalty" (Chong et al., 1990, p.37). The promotion of this collective value was especially evident when the Singaporean government switched from an authoritative style to a consultative style of government after the December 1984 general election (Chew and Lee, 1991, p.391). Mr Goh Chok Tong,

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34 The grassroot organisations consist of the Community Centres (CCCs which were formed in 1960), Management Committees (MCs in 1963), Citizens Consultative Committees (CCC in 1965) and the Residents Committees (RCs in 1978). Such grassroot organisations "promote group participation in social, cultural, educational and athletic activities across racial and ethnic boundaries. Another important objective is to provide leadership training - to instill in leaders a spirit of service to the nation and community which transcends communal and racial loyalties" (Tan, 1985, p.71).
in the "Agenda for Action: Goals and Challenges" (adopted by the Parliament on 25th February 1988), stressed the importance of such a consultative style of governance, by recommending that:

the ties between the elected leaders and the people ... must be constantly nurtured through continual discussion, feedback and explanation35.

The consultative approach was, therefore, introduced with the objective of providing an atmosphere of mutual-understanding and cooperation between the government and its citizens. The PAP government pledged its commitment by introducing the following policies:

(1) "established six advisory councils (each chaired by a Cabinet minister) in the areas of culture and the arts, sports and recreation, family and community life, youth, the handicapped, and the aged. Each council was given between 6 and 9 months to prepare a report for the Government" (ibid., p.392).

(2) Three political reforms - "the introduction of the Government Parliamentary Committees (GPCs), the Town Councils (TCs), and the GRC scheme" (ibid., pp.393-398).

Though the significant change in policy to a consultative type of government helped to promote a group spirit in Singapore, the determining factor was still the use of periodic national campaigns. The campaigns were (and still are) used as "an instrument of policy implementation as well as an agent for changing the attitudes and behaviour of Singaporeans" (Quah, 1987, p.89). The national campaigns, therefore, serve as a form of social discipline36 for the population.

Besides having an efficient government, it is "the quality of its


36 "Social discipline" is defined as "the compliance with guidelines of behaviour (that is, policies) established by democratically elected decision-makers and designed to attain national goals" (Quah, 1983, p.269).
people, their commitment, and their will to succeed" that also has contributed to the economic and political success of Singapore over the past thirty years (Sandhu and Wheatley, 1989, p.139).

(d) "Masculinity versus Femininity"

The masculinity index in Table 2 indicates that though there is not a great difference in the indices, Australia’s index is above the mid-point of the range of 5 to 95 and Singapore falls slightly below it. This again supports Hofstede’s classification of the two countries: Australia belongs to the "masculine" category and Singapore falls within the "feminine" category, though the index for Singapore does indicate that it is not far outside the "masculinity" range.

Australia.

Macintyre (1990, p.4) had suggested that Australia has actually pioneered a "masculine" democracy. Generally, Australians are assertive. They will seek a leadership role to gain the power and authority to enforce their rights within a particular organization. Besides, Australians are also bold and aggressive in challenging the decisions of their government. This is evidenced in the rapid increase in the number of administrative law cases occurring within Australia37 (Tomasic and Fleming, 1991). These factors serve to illustrate the general thrust towards democracy and equality pursued by Australians, which Beilharz (1989, p.96) described as:

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37 The number of administrative law cases are so many and the variety of complaints raised before courts is so widespread, that an attempt is made to come up with a common set of rules to assist in the handling of such complexities: *Australian Broadcasting Tribunal V Bond* (1990) 94 ALR 11.
individualism [is maintained by] ... an obligation to judge, and to argue; and in these judgements and arguments ... will inevitably (and positively) summon ... democracy, freedom and justice.

**Singapore.**

Singapore's "feminine" nature is revealed in the tendency to practise conformity and in the fact that citizens are generally law-abiding. Chong *et al.* (1990, p.37) described the Singaporean society as tending to:

conform to corporate norms [as being] further reinforced by the Asian values systems, which stressed the importance of deference to authority, as well as the harmonious labour-management relations fostered by the government.

This submissive characteristic is partly due to the fact that a "sustained and systematic public criticism of the Government" is never tolerated in Singapore (Chew and Lee, 1991, p.177). Disincentives and sanctions are used by the PAP government to encourage cooperation (Sandhu and Wheatley, 1989, p.117).

The style of government in Singapore has been described as:

conforming to a constitutional representative government but sanctioning authoritarian decision-making and the concentration of power in a few executives (Chew and Lee, 1991, p.179).

Its governance actually possesses a "democratic ambience surrounding what is clearly authoritarian decision-making" (*ibid.*, p.178). Prime Minister Lee has ensured that "in the pursuit of a political objective, events were so structured that there were very few alternative choices of policies available which seemed to fit the circumstances, and the seemingly inevitable option that should be or could be adopted was the one he favoured" (*ibid.*, pp.178-179). However, Singapore cannot be characterized as a "despotic and closed" society either, because the government's political strategy "has always emphasized communication with the people" (*ibid.*, p.178).
Though Singapore is enjoying a "high level of citizen representation in national decision-making through the system of democratic elections", it has not attained a "democratic system of optimum participation in decision making by the population" (Sandhu and Wheatley, 1989, p.119).

From December 1984, a feedback process was introduced to promote a consultative operation to encourage public opinion in Singapore. The main purpose was to reduce the existing dominance of government intervention in Singapore, since the nation had already attained maturity (ibid., p.116).

However, the major flaw of such a consultative operation lay in the fact that "although people may make their views known through the official channels, the final policy decisions still rest with the government" (ibid., p.119). Thus, the governance of Singapore still remains centralized, despite the fact that there has been a change to a consultative style of government.

Since implemented government policy has been seen to be in the interests of its citizens, the continuing acceptance of government intervention can be understood.

Conclusion.

This review of the national behaviour of Australians and Singaporeans, based on the Hofstede's "culture" classification, has highlighted the contrasting predominant value systems in these countries. Singaporeans are more inclined to acquiesce and cooperate with their government. Australians, on the contrary, are more concerned with protecting their rights and maintaining equality and a distribution of power. Bureaucratic regulation (i.e. government intervention) is an accepted norm and forms
part and parcel of the Singaporean culture. In contrast, regulation in Australia operates only to ensure compliance to the democratically chosen standards and policies.

3.3.2 Application of Gray’s (1988) Accounting Values Model to Review the Relationship between the Culture and the Accounting Regulatory Systems of Australia and Singapore

The relationship between accounting regulation behaviour and the cultural values pointed to in Section 3.3.1 will now be explored. Gray’s (1988) classification of the Australian and Singaporean accounting profession behaviour (refer to Figures 5 and 6) is used as a basis for this review.

Gray’s (1988) accounting values model is useful in reviewing the accounting regulation systems of Australia and Singapore, because he built his hypotheses with the specific intention of relating Hofstede’s culture dimensions to his own accounting sub-culture values. Later, Eddie (1989, pp.16-20) tested this empirically (refer to Tables 3, 4, 5 and 6) using his index measure to correlate each of Gray’s accounting sub-culture values against the relevant Hofstedian cultural value dimension, based on factors selected by him (ibid., Tables 1, 2, 3 and 4, pp.27-30). The findings of Eddie (1989) will also complement the review of the accounting regulation systems in the two countries.
Figure 5
Accounting Systems: Authority and Enforcement

Adapted from "Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally" by Gray (1988, p.12, Figure 3).

Note: Singapore is classified under Asian-Colonial. Australia is classified under Anglo.
Figure 6
Accounting Systems: Measurement and Disclosure

![Diagram showing the relationship between Secrecy, Optimism, Conservatism, and Transparency across different cultural regions, including Nordic, Asian-Colonial, Anglo, Latin, Japanese, Near Eastern, African, and Less developed Latin.]

Adapted from "Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally" by Gray (1988, p.13, Figure 4).

Note: Singapore is classified under Asian-Colonial.
Australia is classified under Anglo.
The accounting regulatory systems of Australia and Singapore will now be examined using Gray's (1988) accounting values as follows:

(a) Professionalism versus Statutory Control

In referring to Gray's (1988) "professionalism versus statutory control" value, Perera (1989, p.47) stated that "the higher the degree of professionalism the greater the degree of professional self-regulation and the lower the need for government intervention". It is noticed that the "professionalism" indices in Table 3 separate Australia and Singapore. Australia is ranked highest amongst the countries of the Asia-Pacific region. The index for Singapore falls right on the mid-point of the range of 8 to 88. Thus, this supports Gray's classification (refer to Figure 5) of Australia as practising "professionalism", whilst Singapore is on the border line between "statutory control" an "professionalism. (Note that the "power distance" index is observed to be inversely related to the "professionalism" index). This would infer, from Perera's observation above, that the Australian accounting profession has a high degree of professional self-regulation, with only limited government intervention. In contrast, the Singaporean profession is subject to greater government intervention with lesser degree of professional self-regulation. This trend is consistent with Eddie's (1989) analysis of cultural values and accounting system characteristics (of individualism and power distance) in Australia and Singapore summarized in Table 3.
Table 3
The index measurement of Australia and Singapore based on Gray's H1 model

H1: The higher a country ranks in terms of individualism and the lower a country ranks in term of uncertainty avoidance and power distance then the more likely it is to rank highly in terms of professionalism (Gray, 1988, p.90).

<table>
<thead>
<tr>
<th>Country</th>
<th>Individualism</th>
<th>Power Distance</th>
<th>Professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>90</td>
<td>36</td>
<td>88</td>
</tr>
<tr>
<td>Singapore</td>
<td>20</td>
<td>74</td>
<td>48</td>
</tr>
<tr>
<td>Range of reported figures</td>
<td>12-91</td>
<td>11-94</td>
<td>8-88</td>
</tr>
</tbody>
</table>

* these indices are based on Hofstede's (1980) study
** this index is based on Eddie's (1989) study

(Adapted from "The Association between Cultural Values and Accounting Systems Characteristics in the Asia-Pacific Region: an Exploratory Study" by Eddie (1989), p.32, part of Table 5.)

Derivation of the Professionalism Index:

According to Eddie (1989, p.12), "a strong independent accounting profession ... is characterised by an active research and standard setting role, detailed and enforced disciplinary rules, continuing education and postgraduate study requirements and a predominant private sector employment of accounting professionals. On the other hand countries with low score on the professionalism index ... [are] characterised by strong reliance on government directives".

Singapore.

From 1970 to 1974, professional accounting pronouncements and recommendations were merely a duplication of rules contained in Singapore’s Companies Act. This is evidence that the profession continued to allow the Companies Act to dominate during its first five years of self-
regulation. Thus, Singaporean accountants were willing to submit themselves to the prevailing authority. They did not seek to change the status quo. This would support the low "individualism" index indicated in Table 3.

When the PAP government encouraged its accounting professional body to introduce its own regulatory measures, the accounting profession, rather than attempting to formulate its own accounting standards, chose to follow another authority - the IASC. Singapore became a member of this body in 1975. The Singaporean accounting profession demonstrated a penchant for risk-avoidance behaviour in its adoption of already published and accepted standards like IASs and modifying them according to its needs. This is another indication of Singapore's low "individualism" index as shown in Table 3.

As discussed in Section 3.3.1, government intervention is observed to be an accepted norm in Singaporean society. This is probably the reason why the Singaporean accounting profession is quite comfortable that self-regulation is practised only "in appearance", rather than in reality. In other words, the PAP government still has a dominant role in accounting regulation. The determining factor behind the acceptance of government intervention lies in the "power distance" index. The high "power distance" index reflects the autocratic Singaporean bureaucracy at the national level. This manifests similarly in the accounting regulatory system. The government appointed a Council to oversee the research activities of the ASC. Thus, accounting regulation is subject to government supervision.
Australia.

In contrast, the Australian accounting profession was self-regulating from its inception. From the 1960's onwards, the Australian accounting profession began to become actively involved in conducting research and in developing accounting standards in order to gain a self-regulating role in accounting standards setting as well. An outcome of this was the establishment of the AARF in 1966.

Donleavy (1991, p.311) pointed to the reluctance of the Australian accounting profession to automatic adoption of the IASs:

[the choices made by the Australian accounting profession is] always mediated by the home grown opinions and interests of the strong professional network, who are unlikely ever to support automatic national esconsing of international standards. Australians prefer to innovate and tailor accounting standards to suit local needs.

Allen (1991, pp.53-61), in his assessment of professional dominance in Australia, gave an account of a number of events which are consistent with the view that the accounting profession has striven to protect its position of dominance in accounting regulation:

(1) Both the Institute and the Society [ICAA & ASA] have developed extensive ethical codes with elaborate disciplinary procedures for infringement of their ruling ... [which can be used] as evidence of responsible self-control (pp.56-57)

(2) [They] have historically made sporadic attempts to improve their image, the Society's Certified Practising Accountant (CPA) campaign in the 1980s was the most visible attempt to engender in the public's mind an association between the term "professional" accountant and Society members (p.57).

(3) It was expected that a unified profession would be in a better position to address the issues - such as inadequate accounting standards - which threatened to undermine the profession's privileges and autonomy at the time ... [However,] the strategy of professional unification [between ICAA and ASA] is assessed as being unsuccessful ... (p.58).
(4) The area of expertise must be protected from encroachment from outsiders as the knowledge base of a profession assists in the validation of the professional claim ... [As a result,] Chartered and public accounting firms also experienced a shift in emphasis as they moved into the management-consulting industry. By 1985, their share of the market was 25 per cent, an increase of 20 per cent since 1980 (pp.53,59).

(5) Professional dominance is successful to the extent that the professional has control over education and entry and is able to define and enforce generally accepted competence levels. It is contended that accounting has been partly successful in achieving professional dominance in this sphere (p.61).

He (ibid., p.60) also pointed to the heavy involvement of the Australian accounting profession in accounting standards settings as being indicative of an intent to prevent government intervention in this area:

The determination of standards is a strategy which seeks to codify rules of practice, thereby fulfilling its responsibility to its members and to society generally. Should the profession fail, outside intervention in the determination of standards is an omnipresent possibility.

The high "individualism" index, in Table 3, is appropriate in the light of this continuing professional dominance in Australia.

Protests made when the government attempted to take over accounting standards setting from the accounting profession in 1984 are evidence of the Australian accounting profession's antipathy towards government control. These protests were made despite the fact that the profession itself seemed to have failed in enforcing compliance on third parties and on its own members:

subsequent monitoring of compliance with accounting standards has been minimal and though failure to observe Australian Accounting Standards supposedly exposes members to the possibility of disciplinary action, in practice the two bodies [ICAA and ASA] have avoided imposing such sanctions (Walker, 1987, p.270).

The profession has been further criticized by some for not being able to issue accounting standards which would adequately close potential loopholes and ensure compliance. The Australian accounting standards were described as "diligently established ... but they may not contribute
towards the efficacy of financial reporting" (Rahman, 1991, p.33). These deficiencies on the part of the profession and its standards have, however, not undermined the self-confidence the profession has in itself. A positive attitude towards solving problems is strongly reflected in the personality of the Australian accounting profession. The resistance to government dominance therefore evidences a high degree of individualism in Australia, where the accounting profession sees it as its right to have the dominant role in the setting of standards.

As discussed in Section 3.3.1, unlike the Singaporean bureaucracy, the Australian bureaucracy at the national level is characterized by a small "power distance", where Australians are always seen to be ready to challenge the decisions of their government. Their individualistic attitudes and egalitarian values mediate against any stringent autocratic structures. There is a strong preference for an environment of relaxed laws and regulations among the Australians. The challenging of government decisions can also be observed in the accounting regulation arena. Disputes arose centering particularly on the issue of the copyrighting of 'approved accounting standards,' and the ASRB's intention of giving other organizations, besides accounting professional bodies, the opportunity to submit accounting rules (Walker, 1987, pp.273-274). As a result the members "vented their intolerance during the ASRB's fledgling years of operation, 1984-1988" (Craig and Clarke, 1993). They managed to lobby "successfully in 1986 to secure changes in ASRB membership and policies and thereby regain control of the accounting standards setting agenda and
mechanism", thus foiling the plans of ASRB (ibid., pp.11-12). During 1986 the accounting profession's resistance was so strong that the ASRB, in order to minimize the disputes, gave up trying to take over the 'approval' process of accounting standards (Walker, 1987, p.283). It was in 1988 that a "joint venture" or coalition between the accounting profession and the government was established, but the relationship was strained (Craig and Clarke, 1993, p.13). By 1989, the AARF and the ASRB merged their standard setting functions, leaving AARF to resume its original role in leading accounting research. This resumption of authority by the AARF indicates that the Australian accounting profession was not satisfied with the joint-venture and proceeded to dilute the government's regulatory powers even further, in order to recover its rights. Therefore, acrimony persisted and the two parties resisted joining forces to work on a better series of accounting standards. This evidence of the resistance of the Australian accounting profession to government dominance substantiates the low "power distance" index of Australia, as indicated in Table 3.

Conclusions drawn so far support the argument that unless the Australian government accepts that it is its role to assist accounting professionals in their setting and regulation of accounting standards, such intervention will result in a conflict of interests between the two parties. In the case cited above, both authorities became so involved in back-biting that they seemed to have totally forgotten their mandate to serve the public interest. Both parties were only interested in gaining control over accounting standards setting.
Note that Hofstede's **power distance** and **individualism** dimensions, together with the **uncertainty avoidance** dimension discussed in Section 3.3.1 part (b), are underlying Gray's professionalism versus statutory-control categorization (refer to Table 3).

(b) **Uniformity versus Flexibility**

The degree of "uniformity" evident in financial reporting will be a determining factor in how accounting standards are applied: "the higher the degree of uniformity the lower the extent of professional judgement and the stronger the force applying accounting rules and procedures" (Perera, 1989, p.47). The "uniformity" indices in Table 4 indicate that Australia is ranked lowest within the range of 24 and 68, whilst Singapore is ranked slightly below the mid-point of the range. This supports Gray's classification (refer to Figure 5) of both Australia and Singapore as belonging to the "flexibility" category. The significant difference between the indices of the two countries shows that Australia is more flexible than Singapore. In fact, Australia is considered the country with the most flexibility in the Asia-Pacific region. (Note that the "power distance" index is directly related to the "uniformity" index).
Table 4
The index measurement of Australia and Singapore based on Gray's H2 model

H2: The higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism then the more likely it is to rank highly in terms of uniformity (Gray, 1988, p.10).

<table>
<thead>
<tr>
<th>Country</th>
<th>Power' Distance</th>
<th>Individualism'</th>
<th>Uniformity''</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>36</td>
<td>90</td>
<td>24</td>
</tr>
<tr>
<td>Singapore</td>
<td>74</td>
<td>20</td>
<td>42</td>
</tr>
<tr>
<td>Range of reported figures</td>
<td>11-94</td>
<td>12-91</td>
<td>24-68</td>
</tr>
</tbody>
</table>

* these indices are based on Hofstede's (1980) study

** this index is based on Eddie's (1989) study

(Adapted from "The Association between Cultural Values and Accounting Systems Characteristics in the Asia-Pacific Region: an Exploratory Study" by Eddie (1989), p.33, part of Table 6.)

Derivation of the Uniformity Index:

According to Eddie (1989, p.13), "a country with high score on the uniformity index would have an accounting system in which disclose formats and measurement rules were specified in detail by government or a regulatory agency. Accounting information would be primarily used by government for macroeconomic planning and control. Corporations would be prohibited from changing accounting policies over time ... Where a country had a low score on the uniform index ... Accounting information would be mainly used by external parties for decision making purposes".
Singapore.

Singapore has adopted the British practice of having a less comprehensive form of differential reporting. All companies are required to prepare audited annual financial reports. However, the details of the information forwarded to the Registrar of Companies is dependent on the size of the company. It is the fact that it is mandatory for all companies in Singapore to have an audited report, and the fact that there is just one set of accounting standards (SASs) to follow in the preparation of that report, that prevents the possibility of accounting standards overload. Differing application options for accounting standards is therefore not a primary issue in Singapore.

As indicated in earlier discussion (refer to Section 3.2.3), with the continuing reliance on British practice in the Singaporean reporting system since the time Singapore ceased to be a British colony, it appears that the Singaporean accounting profession is not keen to venture out on its own. It prefers to be led. This risk-aversion behaviour of the Singaporean accounting profession along with the lack of accounting standards

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38 "Differential reporting" relates to the "imposition of different statutory and professional reporting requirements for different categories of reporting entities. The implication is that certain entities are exempt from complying with some statutory and professional reporting requirements. This means that categories of entities are given legal and professional approval to provide relatively lower disclosure to external parties. Examples of different categories are large versus small entities, public as opposed to private companies or some combination of legal structure and size" (Holmes, Kent and Downey, 1991, p.126). It is adopted in an ad hoc fashion in various countries (McCahey, 1989, p.83).

39 "All limited companies [both public and private limited companies], except exempted private companies, must file audited financial statements together with directors’ and auditors’ reports and an annual return each year with the Registrar of Companies" (The Spicer & Oppenheim Guide to Financial Statements Around the World; "Singapore" by Foo, Kon and Tan, p.251).
application options is consistent with a higher "uniformity" index for Singapore when compared with that for Australia, as discussed below.

**Australia.**

Australia has adopted a comprehensive form of differential reporting and is now facing an accounting standards overload problem (McCahey, 1989). The differing application options provided by the AASs and the ASRB standards have given rise to the potential for complication and confusion when it comes to compliance. Holmes, Kent and Downey (1991, pp.125-126) illustrated the differences in the ways these standards have been applied as follows:

Since the establishment of the Accounting Standards Review Board (ASRB) in 1984, Australian companies incorporated under the Companies Act 1981 are generally required to comply with Approved Accounting Standards when compiling financial statements for disclosure purposes. Additionally, Australian Accounting Standards (AAS) apply to all incorporated and unincorporated entities, where a member of the Institute of Chartered Accountants (ICAA) or Australian Society of Certified Practising Accountants (ASCPA) prepares the financial statements. Full compliance with the professional standards is required where any entity is classified as a 'reporting entity'. However, no guidelines exist for the minimum level of compliance with professional standards required for non-reporting entities. In effect this allows 'non-reporting entities' to apply accounting standards selectively when preparing financial statements for external users. At present, if an Approved Accounting Standard covers a topic similar in nature to an Australian Accounting Standard, the Approved Standard will override the Australian Standard. In such cases non-corporate entities in the private sector and public sector reporting entities will be exempt from compliance with the Approved Standard.

Australia’s flexibility has been attributed to the accounting standards overload problem (McCahey, 1989). A large degree of flexibility permits the practice of "creative accounting" in Australia (Clarke, 1988). This "creative accounting" may have served to exacerbate the failure of the Australian accounting profession to enforce compliance.

The choice to develop its own comprehensive form of differential reporting in Australia demonstrates the high level of confidence the
Australian accounting profession has in itself. The profession is observed
to be innovative and has as its intention to bring about a better reporting
system in Australia. The "individualism" index in Table 4 supports this
scenario.

Note that Hofstede's power distance and individualism dimensions,
together with the uncertainty avoidance dimension discussed in Section
3.3.1 part (b), are underlying Gray's uniformity versus flexibility
categorization (refer to Table 4).

(c) Conservatism versus Optimism

The extent of conservatism practised by the accounting profession
will be indicative of the approach taken: "the higher the degree of
conservatism the stronger the ties with traditional measurement practices"
(Perera, 1989, p.47). The "conservatism" indices in Table 5 indicate that
Singapore falls just below the mid-point of the range of 22 to 82 that
Australia is ranked lowest amongst the countries in the Asia-Pacific region.
This supports Gray's classification (refer Figure 6) of both Australia and
Singapore as belonging to the "optimism" category: Australia is observed
to be more optimistic than Singapore. (Note that the "individualism" and
"masculinity" indices are observed to be inversely related to the
"conservatism" index).
Table 5
The index measurement of Australia and Singapore based on Gray's H3 model

H3: The higher a country ranks in terms of uncertainty avoidance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of conservatism (Gray, 1988, p.10).

<table>
<thead>
<tr>
<th>Country</th>
<th>Individualism</th>
<th>Masculinity</th>
<th>Conservatism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>90</td>
<td>61</td>
<td>22</td>
</tr>
<tr>
<td>Singapore</td>
<td>20</td>
<td>48</td>
<td>50</td>
</tr>
</tbody>
</table>

Range of reported figures 12-91 5-95 22-82

* these indices are based on Hofstede's (1980) study
** this index is based on Eddie's (1989) study

(Adapted from "The Association between Cultural Values and Accounting Systems Characteristics in the Asia-Pacific Region: an Exploratory Study" by Eddie (1989), p.34, part of Table 7.)

Derivation of the Conservatism Index:

According to Eddie (1989, p.14), "countries which score highly on the [conservatism] index will have corporations that generally adopt a strict interpretation of historical cost for asset valuation. There will be limited disclosure of market values of investments or other assets ...".

Singapore.

The fact that the Singaporean accounting profession continues to accept the traditional historical cost accounting system supports the "uncertainty avoidance" dimension as discussed in Section 3.3.1 part (b): a [world-wide] trend towards the adoption of decision usefulness as an objective of financial reporting and the consequent implementation of current value accounting ... has had some impact on the profession's thinking in Singapore ... however, ... the profession in Singapore is not about to abandon the time-honoured system of historical cost accounting. Even the users of financial statements are not prepared to see the extinction of the stewardship objective of accounting although they are more inclined to see decision usefulness as a primary objective (Low and Tan, 1988, p.13).
This demonstrates that the Singaporean accounting profession is more conservative and less amenable to change. They are more comfortable with the use of traditional historical accounting rules.

The general acceptance of the historical cost accounting system in Singapore, supported by the Low and Tan (1988, p.13) study, demonstrates that Singaporeans tend to believe that financial statements prepared in this way is able to assist their investment decision-making. This acceptance by the Singaporeans of the historical cost system is generally supported by the fundamental belief that the statutory requirements and accounting standards of Singapore, requiring minimal disclosure of financial information, are sufficient and adequate (ibid.). In addition, the historical cost system continues to have the Singaporeans' support, because "Singapore also has a very low rate of inflation which makes the implementation of current value with its high expense of collating information seem less attractive" (ibid.).

The strong belief of Singaporeans in the effectiveness of stipulated disclosure requirements is based also on the trust and confidence Singaporeans have in their government. This has earned through being efficient, effective and committed in the implementation of its policies as discussed in section 3.3.1. Thus, Singapore's government management structure, which is superimposed over its business structures, contributes to the high "power distance" or authoritarian Singaporean society structure.

Australia.

Unlike Singapore, Australia has taken a more optimistic viewpoint,
by attempting to replace the traditional historical cost accounting system with a current cost accounting system. The traditional stewardship objective of the historical cost system has been recognized as being inadequate to meet the current user needs. Instead, Australia has adopted the United State's (FASB's) view that financial information is to be prepared for the investors' and creditors' economic decision-making purposes (Chambers, 1966). The users of financial statements are, therefore, seen to be more diverse than is assumed under the historical cost system. Hence, it appears that Australians are more assertive and more comfortable with risk taking than Singaporeans. This is supported by the high "masculinity" and "individualism" indices in Table 5.

Note that Hofstede's individualism and masculinity dimensions, together with the uncertainty avoidance dimension discussed in Section 3.3.1 part (b), are underlying Gray's conservatism versus optimism categorization (refer to Table 5).

(d) Secrecy versus Transparency

The degree of secrecy in the national culture will influence the extent of financial information disclosure in accounting reports: "the higher the degree of secrecy, the lower the extent of disclosure" (Perera, 1989, p.47). The "secrecy" indices in Table 6 indicate that Singapore is ranked slightly below the mid-point of the range of 32 to 88, while Australia is ranked lowest amongst the countries in the Asia-Pacific region. This substantiates Gray's classification (refer to Figure 6) of both Australia and Singapore as belonging to the "transparency" category. The comparatively
lower Australian "secrecy" index indicates that Australia enjoys a higher level of transparency in financial disclosures than does Singapore. (Note that the "individualism" and "masculinity" indices are observed to be inversely related to the "secrecy" index).

Table 6
The index measurement of Australia and Singapore based on Gray's H4 model

H4: The higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy (Gray, 1988, p.11).

<table>
<thead>
<tr>
<th>Country</th>
<th>Power Distance</th>
<th>Individualism</th>
<th>Masculinity</th>
<th>Secrecy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>36</td>
<td>90</td>
<td>61</td>
<td>32</td>
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<tr>
<td>Singapore</td>
<td>74</td>
<td>20</td>
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<tr>
<td>Range of reported figures</td>
<td>11-94</td>
<td>12-91</td>
<td>5-95</td>
<td>32-88</td>
</tr>
</tbody>
</table>

* these indices are based on Hofstede's (1980) study

** this index is based on Eddie's (1989) study

(Adapted from "The Association between Cultural Values and Accounting Systems Characteristics in the Asia-Pacific Region: an Exploratory Study" by Eddie (1989), p.35, part of Table 8.)

Derivation of the Secrecy Index:

According to Eddie (1989, p.15), "country scoring highly on the secrecy index would have corporate reports that were not disseminated widely in the community. The information contained in the reports would be primarily confined to details prescribed by regulation ..."
Singapore.

In recent years, financial reporting in Singapore has only gradually shifted emphasis from having primarily a traditional stewardship function to serving decision-making usefulness and evaluation purposes (Lee, 1991, p.24). This is an indication that financial reporting in Singapore has been slow to encourage disclosure of information primarily for investors' decision making purposes.

As discussed earlier in Section 3.2.2, the Singaporean accounting regulation system is very much subject to government intervention. Usually, a heavily government-controlled situation is more prone to 'secrecy'. Since Singapore's national economic policy is geared towards attracting overseas business and foreign investment, "transparency" of financial reporting then becomes an important priority. As pointed out by Perera (1989, p.54), government intervention may contribute to the credibility of the financial information:

> an active role of governments in developing accounting principles and providing legal authority is likely to result in a higher reliability of published financial information, which may be essential for creating public confidence and trust in companies, and for creating an atmosphere where industrialization can make progress ...

His views are therefore supported and advocated in the national economic policy of Singapore, where the emphasis is on maintaining accurate disclosure of information. This explains why Singapore's financial reporting is categorized under "transparency", and not "secrecy". However, the autocratic style of governance in Singapore does inhibit the freedom of information which explains why Singapore is less "transparent" when compared to Australia.
The PAP government's national policy ensures that financial statements filed with the Registrar of Companies are useful in monitoring company performance. This is a crucial factor which has served as a powerful incentive in drawing foreign investment into Singapore via the influx of multinational companies. As discussed in Section 3.2.1, since government intervention is an accepted norm in Singapore, the PAP government has no problem in implementing national policy through its accounting mechanisms by prescribing minimal financial disclosure requirements. Leong, Low and Pang (1988, p.10) observed that there has been an overall increase in financial disclosure due to the mandatory measures. They further noted that some of these disclosures were even reported voluntarily, reflecting cooperation of corporate directors with the government.

The low "individualism" and "masculinity" indices in Table 6, together with the uncertainty avoidance dimension discussed in Section 3.3.1 part (b), are indicative of the Singaporean accounting profession's preference for compliance with prescriptive legal regulation and statutory control.

Australia.

Perera (1989, p.50) described Australia's financial disclosure performance as being more subject to capital market factors. Australia has a mixed economy with a free market subject to some government control. As discussed in Section 3.3.1, because of the prominence of individualism in Australia, the Australian accounting profession prefers to be
"independent of legal direction or government intervention" (ibid.).

The Australian accounting profession believes that the exercising of its professional discretion will serve the public interest better than government direction. The members argue that this is the professionals’ field of expertise, in which they are more capable of meeting the public users’ needs than is the government. Their self-confidence is reflected in the high "individualism" and "masculinity" indices in Table 6.

Once again it is seen that Perera’s (1989, p.52) general rule applies: i.e. with a relatively high level of professionalism a low level of preference for secrecy is expected. The Australian accounting profession, being committed more towards "professionalism", has a lower "secrecy" index in Table 6 in comparison to Singapore.

Note that Hofstede’s power distance, individualism and masculinity dimensions, together with the uncertainty avoidance dimension discussed in Section 3.3.1 part (b), are underlying Gray’s (1988) secrecy versus transparency categorization (refer to Table 6).

Conclusion.

This analysis, based on Gray’s (1988) model, of the Australian and Singaporean accounting profession behaviour demonstrates that the national cultural values of the two countries underlie the fundamental perceptions, opinions and behaviour of their respective accounting professionals.

From Tables 3, 4, 5 and 6, it is apparent that the "individualism" versus "collectivism" dimension underlies each of the derived Gray’s
accounting values. It helps to explain the accounting profession's acceptance or otherwise of government intervention. This "individualism" versus "collectivism" dimension best explains how the "legalistic" behaviour of Singaporean accounting profession and the "professional" behaviour of Australian accounting profession determine the respective accounting regulating systems.

The "professional" practice of Australian accounting professionals is best seen in the approach they usually adopt when looking for avenues for improvement in accounting standards. Instead of looking at comparable developments overseas, their primary focus is to address the problems they are confronting locally. Zeff (1973, p.25) supported this view by describing Australians as:

eclectics ... But ... they are not inclined to embrace accounting practices solely on the evidence of their acceptance abroad. ... the Australians cannot be as well informed on the subtleties of developments abroad. This fact, viewed in the context of increasing accounting pressures from abroad and the evident desire of the Australian profession to find Australian solutions to its problems, argues for the development of a continuing dialogue between the Australian bodies and their counterparts overseas on accounting trends as they emerge.

In contrast, the "legalistic" practice of the Singaporean accounting professionals indicates a practice of "ritual activity", as Hofstede (1987, p.3) defined it:

from a cultural point of view, accounting systems in organizations are best understood as uncertainty-reducing rituals, fulfilling a cultural need for certainty, simplicity, and truth in a confusing world, regardless of whether this truth has any objective base ... Once you agreed on the ritual, a lot of problems become technical again, such as how to perform the ritual most effectively.

This is reflected in the continuing acceptance of past colonial British influence in Singaporean accounting practice. Briston (1978, p.108) explained that this clinging onto traditions is because "those who operate
it (the accounting system under the British influence) have a vested interest in its perpetuation, partly because of the high rewards which it provides..."

The continuing dominance of government in the Singaporean accounting regulatory system, even after the possibility for self-regulation was introduced, is a further reflection of the professionals’ tendency to cling to the traditional authoritative governing system. The adoption of IASs as SASs (with minor modifications) also substantiates Singaporeans’ willingness to be subject to authority and be led rather than stepping out decisively on their own.

In speaking of "professional" and "bureaucratic" (or "legalistic") practice, Aungles and Parker (1989, p.30) commented that:

the professional tends to have a relatively low loyalty to his or her employing organisation but a high commitment to role skills. The bureaucrat tends to show high loyalty to the employing organisation but low commitment to role skills.

This is descriptive of the respective situations in Australian and Singaporean accounting practice in which Australians are more "professional" and Singaporeans are more "bureaucratic" in approach. The collectivism in Singaporean culture means that there is generally a high outward loyalty to authority societal norms. In contrast, Australians' "individualism" is reflected in their commitment to "role skill" performance.

As observed earlier, the Australian accounting profession has enjoyed its monopoly of the accounting standards setting process and has regarded attempts by the government to intervene in the process as a threat to its rights.
3.3.3 Application of Harrison & McKinnon's (1986) "Modified Exogenous" Model to Substantiate the Cultural Relationship demonstrated by both Hofstede and Gray

Harrison and McKinnon's (1986) model is now used to trace historical events which have impacted the accounting regulation system of Australia and Singapore and to examine how the resultant changes have been influenced by cultural factors.

**Analysis of change in Australia's accounting regulation system.**

Gibson (1979) showed that for seventy years (from 189640) the development of corporate accounting in Australia proceeded by way of legislative changes, that is by external regulation. During the 1960s, and especially from the 1970s onwards, the already established self-regulating Australian accounting profession began to be heavily involved in the setting of accounting standards (*ibid.*). This self-regulation in accounting standards setting was then interrupted in 1984 when the Australian government intervened with the intention to dominate, instead of accepting its role of assisting the accounting profession in its self-regulation (Craig and Clarke, 1993).

(a) The British Colonial Influence.

The intrusive event activating British influence on the Australian accounting regulation system was the fact that Australia was once a colony of Britain. British influences resulted in a series of system specific

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40 The first set of minimum requirements was implemented through the Companies Act 1896 in Victoria. It was only a quarter century later that the rest of the states enacted a similar legislation in their Companies Act: Tasmania 1920, Queensland 1931, South Australia 1934, New South Wales 1936 and Western Australia 1943 (Gibson, 1979, p.25)
responses. The responses consisted of (a) the adoption of the Companies Act as a regulatory system in Australia, (b) parallel amendments made in Australia based on Britain’s amendments made in times of economic crises, and, (c) the reliance of Australian accounting profession’s practice on British precedent until the 1960s.

A sudden change away from the British influence towards an American influence occurred especially in the 1970s (refer to section 3.2.3). Both Australia’s and Singapore’s economic systems had their foundations in "colonial govermentality" ... in which government was the principal agent" (Lansbury and Gilmour, 1977, p.8). Subsequently, Australia moved away from the bureaucratic ascendency experience under British colonial influence41. Britain’s move to join the European Economic Community (EEC) isolated Australia from its United Kingdom markets and forced it to look to the Asia/Pacific region economically and politically. Subsequently, Australia adopted a multiculturalism policy which led to a change in the ethnic mix of the Australian population away from what was primarily a population of British stock.

(b) Australian Accounting Standards Setting.

From the 1960s onwards, the Australian accounting profession began to become involved actively in accounting standards setting. The intrusive event for this move stemmed from the many unsuccessful
attempts made to cope with repeated company failures by amending the
Companies Act (Morris and Barbera⁴², 1990). The system specific
response was to advocate conformity and compliance with financial
disclosure requirements. This response showed that the accounting
profession, which was already self-regulating, saw that it was its duty and
right to take full responsibility for this function. The members became
heavily involved in the setting of accounting standards.

The mixed nature of the Australian economy is reflected here in the
fact that government dominance is not readily accepted in Australian
"individualistic" society. Though the Australian accounting profession
sought the assistance of the government which resulted in the
establishment of the ASRB in 1984, it intended to preserve its continuing
dominance in accounting standards setting. There was no intention of
allowing the government to take over this role. However, the government
tried to highlight the non-compliance problem occurring in the 1980s, in
order to take control of the regulation of accounting standards. The
intrusive event motivating the government to try to dominate was similar
to that leading to the move towards self-regulation of the accounting
standards setting in the 1960's, i.e. repeated company failures, in this case,
in the 1980s (Morley, 1979; Gibson and Downey, 1980; Harris, 1981;
Ramsay, 1982; Ramsay and Sutcliffe, 1986; Kirkness, 1987). The system
specific response was nevertheless the same as before, i.e. the government

⁴² "A chronology of the development of corporate financial reporting in Australia 1817
to 1988" by Morris and Barbera (Parker, 1990, pp.237-270).
saw it as its duty to advocate conformity and compliance with financial
disclosures: "to ensure the enforceability of accounting standards,
particularly against non-accountant third parties" (Craig and Clarke, 1993,
p.5). However, the government faced great resistance from the accounting
profession. Australians will challenge the authority and decisions of their
government. This supports the "masculine" classification of the Australian
accounting profession, as derived from Hofstede's definition of
"masculinity" versus "femininity" dimensions. The Australian accounting
profession is therefore seen to be bold and self-assertive in its behaviour.

The non-acceptance of government dominance in the Australian
accounting standards setting is a clear illustration of the "cultural lag"43,
which Passfield (1989) used to explain the occurrence of "cultural
resistance"44 when a strategic change is introduced within an organization.
The "cultural lag" of the Australian accounting profession is deemed to be
dependent on how the accounting profession perceives the purpose of
government intervention. The perception of threat will activate defensive
routines because the accounting profession sees it as "threatening
fundamental beliefs and values held by the prevailing culture" (ibid., p.4).
This factor has served to inhibit the fulfilment of the government's
intention to take over the accounting standards setting. This supports

43 "Cultural lag" is deemed to exist whenever "the running beliefs and ideas, developed
under earlier conditions, continue to influence ... behaviour and organisational
structure even though the external and internal environment has changed
dramatically" (Passfield, 1989, p.2).

44 "The existing culture in an organisation is seen ... as a real constraint to corporate
change and development" (ibid., p.2).
Hofstede’s classification of Australia as a "small power distance" country with limited government intervention and as a country whose people are "individualistic" rather than "collective" in behaviour.

**Analysis of change in Singapore’s accounting regulation system.**

Singapore’s accounting regulation system has been amended primarily through changes in laws (i.e. by external regulation). The accounting professional body (SSA) was introduced by the government in 1963 as a move towards accounting self-regulation. However, this self-regulation was implemented by government rather than the accounting profession itself. Singapore is an "administrative state" with a strong public bureaucracy superimposed over business management structures. This coincides with Hofstede’s (1980) "large power distance" description of Singapore.

(a) **The British Colonial Influence.**

There were two major intrusive events which led to a continuing British influence on the accounting practice in Singapore. Firstly, Singapore, like Australia, was a former colony of Britain. Secondly, there has been an "absence of organized accounting professionalism and native sources of accounting authority" (Choi and Mueller, 1978, p.28). Consequently, "standards from other areas or countries are likely to be utilized in filling the existing void" (*ibid.*). The British accounting system was adopted to fill this void and these roots continue to play an important role in the development of Singapore’s accounting practice. Corporate reporting in Singapore, like Britain, is regulated mainly by company
legislation. This supports Mabon's (1965, p.35) observation that:

the U.K.'s professional accounting influence, and reporting practices and requirements particularly, extend through much of the world by way of the British-linked nations. Even though Great Britain's ties with its numerous former colonies and dominions have been loosening, most of these countries seem to follow the British lead in the professional accounting approach.

Company legislation has provided an adequate accounting regulatory system in Britain. During the 1970s, Britain was recognized as having the most effective system of companies legislation due to its ability to maintain its legislation current and meet the needs of business community:

the British experience stands as a monument to the assertion that legislatively based regulation can be kept current and can actually lead rather than stifle (Mueller, 1972, p.127).

The British Companies Act 1967 was significantly concerned with disclosure. It was described as "a giant step forward in financial disclosure" based on an increasing awareness of the social responsibilities of business firms (ibid., pp.128-129).

Because of the strong British influence, Singapore's financial disclosure requirements would be expected to place a similar substantial emphasis on reporting obligations. Low and Tan's (1988, p.13) study confirms such an expectation. They found that "more and fuller disclosure of up to date information and current values" is required by Singapore's minimal disclosure requirements in financial reporting (ibid.). Hendriksen's (1969) description of the direction of British legislation as steering towards social and economic rather than accounting goals also applies as the underpinning objective of Singapore's financial reporting system, which serves to help achieve national goals.
Singapore's accounting regulatory system has thus been heavily influenced by the British system. Hofstede's classification of Singapore as a "large power distance" country, together with its "uncertainty avoidance" level discussed in Section 3.3.1 part (b), are substantiated. This explains its continuing to adopt the Companies Act as the main basis for regulation. With a "large power distance" dimension, Singapore is easily able to incorporate its national policies in the development of accounting policies.

The system specific responses due to British colonial influence consist of (a) Singapore's accounting education system being modelled on Britain's and (b) the adoption of the Companies Act as the basis for regulation.

(b) Singapore Accounting Standards Setting.

The second intrusive event initiating the adoption of IASs as its sole accounting standards, occurred as "IASs were introduced into Singapore at a time when no equivalent standards existed locally" (Hwang, 1982, p.155). Hence, unlike Australia, Singapore does not share the:

experience of countries like the US and the UK where there were already generally accepted standards in the areas covered by the IASs. As such, the question of local standards being subjugated to the IAS does not exist which in turn diminishes the problem of nationalism (ibid.).

The inflow of multinational corporations in Singapore (refer to Section 3.2.4) also serves as another intrusive event which makes the adoption of the IASs a desired course of action.

The system specific response was the ready adoption of IASs. This was demonstrated by Hwang's (1982) study. He surveyed a sample of annual reports of listed Singapore registered companies over a period of
time. His study showed that after the IASs were initially introduced, the "IASs have definitely influenced the accounting practices of listed Singaporean companies and that they (the IASs) have attained some degree of general acceptance in Singapore" (ibid., p.163). The ready acceptance of the IASs in Singapore, was explained by Hwang (1982) as a consequence of:

(i) The topics covered by these IASs are relatively non-technical;
(ii) The lack of equivalent local standards;
(iii) The support given by the SSA with regard to their implementation in Singapore;
(iv) The lack of legal constraint (ibid.).

The ready acceptance of the IASs and the ready conformity of the Singaporean accounting profession with the international body (i.e. IASC) gives support to Hofstede's "feminine" description of Singapore. Accounting professionals preferred to be led rather than be left on their own. The accounting profession is working actively towards achieving the government's goal of synchronising Singapore's accounting practice with the rest of the world through the adoption of all the IASs (with minor local modifications). This cooperation of the accounting profession with the government and the harmonious working relationship between the two also supports Hofstede's "collectivism" categorization for Singapore.

3.4 The Acceptance of Government Intervention at a National Level and its role in Accounting Standards Setting in Australia and Singapore

According to the literature, government intervention in the accounting regulation system was believed to improve the reliability of financial disclosures and maintain the credibility of financial reports in the eyes of
the public:

interference by governments may be essential to ensure higher reliability ... for creating public confidence and trust in corporations, for creating an atmosphere where industrialization can progress, and for making economic and social decisions (Jaggi, 1975, p.84).

Jaggi's (1975) view is shared by both Enthoven (1965) and Needles (1976). Needles (1976) emphasized that accounting development must be in accordance with reinforcing the economic strategies of the nation. This concurred with Enthoven's (1965) view that government support in the development of accounting norms, regulations, practices and training was important.

Though the literature appears to give the impression that government intervention is the ultimate solution to all accounting regulatory problems, the Australian case has proven otherwise. The government's intention to dominate the Australian accounting standards setting from 1984 resulted in both parties being involved in an on-going process of competing for ascendancy in accounting standards setting. Unlike Australia, government dominance is undeniably apparent in the Singaporean accounting regulatory system.

The striking difference between the Australian and Singaporean accounting regulatory systems finds a parallel in the findings of Willmott et al. (1992, pp.49-50) in their study of the variations in the accounting regulatory systems of Germany, Sweden, the United Kingdom and the United States:

differences [of institutional arrangements within which to regulate accounting, accounts and accountants] reflect differences of culture, history, sociopolitical structure and patterns of supra-national influence. The processes within these arrangements differ too. In these differences ... [they] have seen contrast in the
interplay between the organizing principles of dispersed competition\textsuperscript{45}, hierarchical control\textsuperscript{46} and spontaneous solidarity\textsuperscript{47} ... [Thus,] it may be more appropriate to view each national situation as a medium as well as an outcome of a global regulatory process.

It has been proposed that the effectiveness of government intervention is contingent upon the perceived appropriateness by the people in the country in question of government having a role in a particular area. This perceived appropriateness of the role of the government is seen as the crucial factor in determining the level of acceptance of government intervention on the part of the accounting profession. The accounting professionals' attitude to and opinion and perception of the role of the government is based on the fundamental values inculcated early in the individual's life and, thus, also is culturally influenced.

3.5 Cultural Factors Influencing the Accounting Regulatory Systems in Australia and Singapore

By looking at the accounting regulation system from a historical perspective and at its response to specific changes, something can be learnt about the underlying values and culture of the accounting professionals of Australia and Singapore. The specific intrusive events and their associated system specific responses studied suggest the following conclusions.

\textsuperscript{45} "Dispersed competition" (Community) refers to "the operation of the market as a principle of order that arises through contracts amongst suppliers and buyers of goods or services in the pursuit of wealth" (Willmott, 1992, p.36).

\textsuperscript{46} "Hierarchical control" (Market) refers to "the principle of social order organized through bureaucratic agencies, where rules and sanctions are employed in authoritative control over specific activities and persons" (ibid.).

\textsuperscript{47} "Spontaneous solidarity" (State) refers to "the principle of social order based upon communitarian compacts forged through the sharing of common values, or practices, and mutual esteem" (ibid.).
Harrison and McKinnon's (1986) "modified exogenous" model confirms the relevance of the use of the "professionalism" categorization of Gray (1988), to describe Australia's self-regulating accounting system. Singapore, however, falls under Gray's (1988) "statutory-control" categorization. Hofstede's (1980) "four dimensions" (with the exception of the discrepancy in his "uncertainty avoidance" dimension as discussed in Section 2.6.1) classification of Australia and Singapore is also supported by Harrison and McKinnon's (1986) model. Furthermore, the Harrison and McKinnon's model also supports Gray's (1988) analysis of the relationship between the national culture and the accounting profession behaviour.

This study supports Perera's (1989, p.52) findings that a significant cultural difference exists between Australia and Singapore, especially in relation to Hofstede's dimensions of "individualism" and "power distance". The "individualistic" versus "collective" human behaviour is closely related to how comfortable Australians and Singaporeans are with "power distance". Thus, an authoritarian (i.e. large "power distance") society, like Singapore, is characterized by the following cultural factors underlying the general behaviour of Singaporeans: (1) deference to authority, (2) law-abiding, (3) clinging more to traditions, and, (4) cooperative and working in harmony with the government. In contrast, a fundamental belief in equality and the distribution of power (i.e. small "power distance") in the Australian society arises from the following cultural factors underlying the behaviour of Australians who: (1) value their individual rights, (2) are pragmatic and assertive, (3) are innovative and adaptive to change, (4) are
bold in challenging government decisions. Hofstede's "power distance" dimension is, therefore, most crucial in evaluating the perceived appropriateness of the role of the government at the national level.

Application of Gray's sub-cultural values in examining the differing outcomes of government intervention in the accounting regulatory systems of Australia and Singapore has confirmed that perceptions of the role of government play an important role in determining the behaviour of the accounting profession. This implies that the behaviour of accounting profession is inherently related to its commonly-held values, which are derived from the national culture (represented by Hofstede's (1980) four dimensions: (a) individualism versus collectivism, (b) large versus small power distance, (c) strong versus weak uncertainty avoidance and (d) masculinity versus femininity).

In Chapter 4, the characteristics of the national culture of Australia and Singapore, as discussed in Section 3.3.1, will be used to make a prediction of the degree of profit smoothing manipulation expected to be practised in the respective countries. The behaviour of corporate directors will be similarly viewed as inherently related to the individual's value system, where this value system derives from the national culture.
CHAPTER 4

CULTURAL INFLUENCES ON THE FINANCIAL REPORTING SYSTEMS OF AUSTRALIA AND SINGAPORE

By reviewing and comparing the accounting regulatory systems of Australia and Singapore, it has been possible to point to a link between the behaviour of the accounting profession and the predominant prevailing culture of the particular country. The national culture appears to guide and determine the nature and scope of accounting regulation and the accounting professionals’ attitude to government intervention.

A theoretical framework was developed during this analysis of accounting regulation. This will be extended and applied as a basis for predicting profit smoothing manipulation behaviour of corporate directors in both Australia and Singapore. An attempt will be made to show that an understanding of cultural parameters is useful in predicting human behaviour, in this case in the financial reporting arena, and thus provides a basis for understanding the various accounting practices manifest in the world today.

4.1 Development of the Theoretical Framework

In order to anticipate the effect of national culture on profit smoothing manipulation behaviour, a theoretical framework of two parts is proposed.

In the first part, the national culture of a particular country is observed to be at the root of both its accounting regulation and financial
reporting behaviour. Thus, national culture is the link or bridge from the study of accounting regulation behaviour to an understanding of the financial reporting behaviour of corporate directors. Hence, where there exists two facets of accounting organization sharing in common the predominant national culture, similar behaviour responses will be expected from both. This assumption of culture as the link relies heavily on the following:

(1) Hofstede (1987, p.59) defined "national culture" as the shared mental programming of most members of a nation.

(2) Gray (1988, p.45) noted that the human attitudes and value systems of a particular organization are "expected to be related to and derived from societal values with special reference to work related values".

The Australian situation illustrates how this is worked out in practice. The individualism inherent in Australian culture is reflected in the accounting professionals' strong resistance towards the intentional take-over of the accounting standards setting by the government, in order to protect their professional status. The accounting professionals only view the role of government intervention as assisting in the strengthening of their credentials in self-regulating. Thus, the readiness of Australians to challenge the decisions of their government and their preference for an environment of relaxed laws and regulations are indicative of the professionals' resistance to yield to the control of the government. Since the cultural parameters are common to both the Australian accounting regulating and financial reporting systems, the Australian corporate directors would be expected to respond similarly towards government.
The expected lack of priority given by corporate directors to cooperation with government can be attributed to the fact that Australia is a small "power distance" country, where an authoritative government system is not an accepted norm. This "non-cooperative" behaviour would be expected to manifest itself in an increased incidence of profit smoothing manipulation in financial reports. This linking of human behaviour in different accounting spheres on the basis of culture is represented diagrammatically in Figure 7:

As illustrated by the left arm of Figure 7, the review of the impact of culture on the accounting regulatory system, based on Gray's (1988) model, is the basis for substantiating the impact of the national culture on the accounting profession's behaviour in general. Based on the common human cultural parameters derived, prediction of the
extent of profit smoothing manipulation by corporate directors can be made, as represented in the right arm of Figure 7.

The second part of the framework then proceeds to illustrate that both accounting regulation and financial reporting behaviours vary from country to country due to differences in culture (Hofstede, 1980; Harrison and McKinnon, 1986; Gray, 1988). This thesis focuses specifically on Australia and Singapore, and examines how their cross-cultural differences, in turn, influence the differences in the degrees of profit smoothing manipulation practised in the respective countries (refer to Figure 8).
Accounting Regulation and Financial Reporting Behaviours vary in accordance with the differing Cultural Values of Australia and Singapore

* Australian Cultural Background

Organization

Accounting Regulatory System

To show that the variation existing in the accounting profession's behaviour is a result of the difference in the cultural backgrounds of Australia and Singapore, in accordance with Gray's (1988) model.

* Singaporean Cultural Background

Organization

Accounting Regulatory System

Prediction of a variation in corporate directors' manipulative profit smoothing behaviour, on the basis of a difference in the cultural backgrounds of Australia and Singapore.

Empirical evidence from comparative testing.

* The basis for comparison is the contrasting and distinctly different cultural backgrounds of the two countries.
The prediction of corporate directors' profit smoothing behaviour from the theoretical framework is then substantiated using comparative testing. The method of testing attempts to demonstrate whether the derived (or "what should be") profit smoothing manipulation behaviour, actually portrays the practised (or "what is") manipulation behaviour. The concept for this type of testing has been borrowed from the works of Pratt and Beaulieu (1992). Unlike the tests of human behaviour usually adopted in the literature (Soeters and Schreuder, 1988; Hofstede et al., 1990; Pratt and Beaulieu, 1992), this thesis focuses on the resultant product of human behaviour (i.e. profit smoothing manipulation) due to the impact of national culture, rather than the human behaviour itself.

The Craig and Walsh (1989) study has indicated that the measure of the variability in the reported net profit figures (i.e. coefficient of variation (CoV) figure) is an adequate mechanism for detecting profit smoothing manipulation. Hypotheses are developed in this thesis to conduct comparative testing of the degree of variability of this parameter in Australia and Singapore to provide evidence for the extent of profit smoothing manipulation practised in the respective countries. A significant difference, if confirmed, would support a link between national culture and corporate director behaviour.

4.2 What is Profit Smoothing Manipulation?

Generally, profit smoothing has been seen as an accepted management
objective. This is because corporate directors recognize its ability to reduce:

the estimate of various claimants of the firm about the volatility of its underlying earning process, which in turn, lowers their assessment of the probability of bankruptcy. This is valuable for the firm's stockholders since it decreases the firm's cost of borrowing and favourably affects the terms of trade between the firm and its customers, workers, and suppliers (Trueman and Titman, 1988, p.128).

However, financial reporting practices may exhibit three different types of profit smoothing behaviour: (1) "natural smoothing"\textsuperscript{48}, (2) "real smoothing"\textsuperscript{49}, and (3) "artificial smoothing" (Beidleman, 1973). The Craig and Walsh (1989) study focused mainly on "artificial smoothing". "Artificial smoothing" involves deliberate manipulations which "do not represent underlying economic events or affect cash flows, but shift cost and/or revenues from one period to another" (Eckel, 1981, p.29). Thus, what is meant in this thesis by manipulative profit smoothing is a reprehensible and deliberate distortion of reported profit figures with the intention to deceive and mislead.

\textbf{4.2.1 Definition of Extraordinary Items}

"Extraordinary items" (EI) are defined to be "revenues and expenses which are not related to normal operations of the business" (Henderson and Peirson, 1988, p.182). The Australian accounting standards, paragraph 7 of AAS 1, defines EI as:

\textsuperscript{48} "Natural smoothing" is practised where "the profit generating process inherently produces a smooth stream of profit" (Craig and Walsh, 1989, p.230).

\textsuperscript{49} "Real smoothing" is practised where "management takes action to control underlying economic events directly affecting future profits (Craig and Walsh, 1989, p.230)."
items of revenue and expense which are attributable to events or transactions of a type that are outside the ordinary operations of the reporting entity and are not of a recurring nature.

Examples of EI are provided in paragraph 22 of AAS 1, include:

(a) the sale or abandonment of a significant operation or all the assets associated with such an operation; and
(b) the condemnation, expropriation or unintended destruction of property.

The timely disclosure of the extraordinary items is important to reflect an accurate and true performance of the company.

4.2.2 How Extraordinary Items Adjustments could potentially be used as a means to practise Profit Smoothing Manipulation

The Craig and Walsh (1989, pp.229-230) study "provides empirical evidence regarding recurrent assertions that the managements of Australian companies conspire to report profit figures of a 'convenient' magnitude", where extraordinary items adjustments were the parameters which could potentially be manipulated. They (ibid., pp.231-232) explained the nature of EI adjustments, which can give rise to the possibility of profit smoothing manipulation:

EI adjustments are applied in a essentially discretionary nature and seem likely to be a convenient, observable and frequently used device for reporting 'desired bottom line' profit figures. But this does not mean, nor is it intended to be construed as meaning, that EI adjustments should be regarded as always occurring in order to smooth profit ... [However,] EI adjustments are the product of directors' exercise of choice and judgement in determining the timing of the extraordinary event, the amount of its financial impact, and the period of reporting.

EI adjustments are therefore ideal for profit smoothing purposes because they are recognized to be "inherently creative, for they mask failure to disclose financial facts as they arise" (Walsh, Craig and Clarke, 1991, p.175). It is this flexibility in applying EI adjustments which may
result in profit smoothing manipulation.

4.3 Corporate Directors’ Role in Financial Reporting

Due to the separation of ownership and control in public companies, management (officers and directors) becomes primarily responsible for the preparation of financial statements. Corporate directors are accountable to investors for the custody of company assets and for ensuring effective business operation. The accountant’s role is primarily advisory in nature, where "the rules and regulations and the professional guidelines relating to the disclosure of information" are interpreted to the management (Jaggi, 1975, p.80). Since corporate directors have the responsibility of looking after company’s affairs, subject only to auditors’ inspection, they are able to exercise their discretion in the choice of accounting methods relevant to the company. Therefore, "what is disclosed will be determined by individual enterprise" (Benston, 1980, p.53). It is this discretion that provides corporate directors an opportunity to manipulate by profit smoothing, thereby affecting the accuracy of financial reporting.

4.4 Compliance Behaviour of Corporate Directors Defined in relation to Profit Smoothing Manipulation

According to Perera (1989, p.43), selection of an appropriate cultural component or dimension will assist in analyzing the behaviour of members of a particular sub-culture, e.g. the profit smoothing manipulation behaviour of corporate directors:
in analyzing the impacts of culture upon the behaviour of the members of any particular sub-culture, a researcher must select the cultural components or dimensions most pertinent to the particular facet of cultural behaviour.

Corporate director compliance behaviour with its underlying cultural values is the cultural dimension selected as most pertinent to manipulative profit smoothing behaviour.

The role of the corporate director potentially gives rise to a conflict of interests. Chong et al. (1990, p.32) described this "conflict of interest" situation as follows:

the separation of owners from managers in the modern public corporation has created potential areas of conflicting interests ... In so far as the differences concern the style of running the company rather than a clash in fundamental objectives, the symbiotic relationship between managers and stockholders need not be threatened. However, this relationship is threatened if there is misconduct on the part of the management.

Agency theory also recognizes the presence of this conflict of interests by emphasizing that shareholders and corporate directors, being utility maximisers, will always act in their best self-interest. Since deliberate manipulative profit smoothing is the focus of this study, this conflict of interests and the potential for misconduct by corporate directors is of importance. The conflict of interests will be examined from the perspective of how culture affects the compliance behaviour of corporate directors, so as to encourage or discourage them from manipulating profit smoothing. Compliance behaviour is therefore defined as the tendency to comply strictly with the statutory

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50 The separation of ownership and control between the shareholders and corporate directors of a public company is a feature of an agency relationship (Jensen and Meckling, 1976). Agency theory is based on a contractual relationship between agents (corporate directors) and principals (shareholders), where a trade-off between the agency costs and benefits ensures an efficient functioning of the corporation (ibid.).
requirements and accounting standards, with less intention of exploiting the flexibility allowed in these requirements for self-interest purposes.

The general approach used to deter corporate directors from the practice of profit smoothing manipulation is the implementation of punishment measures (e.g. imprisonment, fines, loss of reputation, civil action, adverse publicity). The societal norms of the country may serve to either encourage or discourage the practice of profit smoothing manipulation. These underlying cultural values may include: (1) the attitude to authority (i.e. deference to authority versus suspicion of authority), (2) the moral values underlying the society, (3) commitment to public interest versus self-interest, (4) individualism versus conformity to group practice and guidelines. Profit smoothing manipulation behaviour can, thus, be regarded as the product of the compliance behaviour of its corporate directors and its associated underlying cultural values.

4.5 Analysis of Corporate Directors' Profit Smoothing Manipulation Behaviour in Australia and Singapore

The degree of compliance practised is deemed to be dependent on the underlying societal values of the country inculcated into the perceptions, opinions and behaviour of the corporate directors. Based on the discussions in Section 3.3.1, the relevant societal norms of Australia and Singapore will now be compared in the context of profit smoothing manipulation behaviour.

An awareness of moral obligations to the society and social
responsibilities can serve as a contributing factor in influencing corporate directors' choices and judgements in the practice of profit smoothing manipulation. Low, Koh and Yeo (1985, p.7), in their review of "Corporate Social Responsibility in Singapore", concurred with this view by indicating that:

In recent years, corporate social responsibility and reporting has been a subject of much interest and debate in accounting literature in the United States and other Western countries. In Singapore, corporate social responsibility has assumed greater importance in the last decade in line with the betterment in living standards of society.

In Singapore the government has attempted to harness the collective behaviour and deference to authority characteristic of Singaporeans to work towards the achievement of the country's national goals. A feature of Singaporean collectivism is the peer pressure on the individual to comply with the societal expectations. The required conformity is engendered through the possibility of "losing face". The individual (and thus his or her family or clan) will be "shamed" (i.e. rejected and treated like an outcast by the rest of the group), unless he or she complies with the existing societal expectations. This can be a powerful collective force to encourage Singaporeans to fulfil their moral obligations and social responsibilities. Hence, a strong governmental influence coupled with peer pressure to conform with societal expectations, are expected to result in a high level of compliance among Singaporean corporate directors.

In contrast, in Australia, being a small "power distance" country, people put more emphasis on individual's rights, equality and
distribution of power. Australians value self-sufficiency, and admire rugged individualism. Also because of a convict past, Australians generally do not have a high regard for authority, including government. Remarks made by Garvin (1988, p.134) confirm that this disregard of authority is predominant in the culture of Australia:

Aussies have always had problems with the issue of authority in relationships. It is hardly surprising that for a population that has grown up out of a convict colony, personal sovereignty will obviously be a key issue: the big thumbs down will be given to authoritarian structures and the representatives of those structures, be they teachers, clergy, police or anyone who tries to be the boss. As many a would-be 'tall poppy' will testify, woe betide anyone who thinks he has the right to rule. He will find himself frustrated by a subtle spirit of non-co-operation. On the other hand, if a mate is in strife - as during Ash Wednesday fires or in a collapsing Darwin - the bush mateship comes alive again, as much in the sprawling suburbs of Melbourne and Sydney as in the provincial regions.

In the past, authority was seen as harsh and unjust. The "chopping the head off the tall poppy" syndrome and the desire for mateship and egalitarianism are attempts to remove class and authority in order to produce an "everyone-is-the-same" society in which you stick by your mates against the tyranny of circumstances, personal failings, authority etc., i.e. "the Aussie battler" syndrome. There is no greater compliment than to say "he's my mate!". Consequently, the practice of compliance behaviour among Australian corporate directors is therefore driven more by the obligations of individuals to one another than by the pressure of government or peer pressure. As a result of this attitude to authority, the level of compliance would be expected to be lower than in Singapore. In Australia, compliance is encouraged more by the use of criminal sanction for serious breaches of statutory requirements and by the possibility of civil action (i.e. law suits) by victims of the corporate
directors’ non-compliance. This indicates that the norm in Australia is a greater emphasis on individual responsibility with a lesser dependence on government intervention.

Figure 9 summarizes how compliance behaviour is used to link national culture and profit smoothing manipulation behaviour. The degree of profit smoothing manipulation practised in Australia is predicted to be higher than that in Singapore.
Figure 9
The Compliance Behaviour of Corporate Directors at the Organizational Level
(Sub-Cultural Level) is dependent on their acceptance of
Government Intervention

Government Policy

National Cultural Influences (external constraint)

Singapore’s Objective developing a committed, effective and efficient centralised bureaucratic government.

An authoritarian style of governance was first adopted and still prevails despite the present government’s consultative stance.

Singaporean deference to authority brings about acceptance of government intervention as a norm.

Compliance behaviour is propagated among Singaporeans due to the deference to authority characteristic and is driven by peer pressure to conform to societal expectations.

Compliance with the disclosure requirements appears to be observed at the company level, thus, ensuring accurate disclosure of financial information.

Financial Reporting

Profit smoothing manipulation is expected to be less prominent.

Australia’s Objective adhering to the Western notion of rights and the diffusion of power.

The Australia’s federal system limits the power of government in order to protect individual rights.

Suspicion of authority among Australians means that government intervention is not an accepted societal norm.

The suspicion of authority and the voluntary individual obligations to one another result in it being up to the individual’s discretion to exercise compliance in Australia.

Self-interests may take precedence over compliance behaviour. Therefore, the accuracy of financial information can be affected.

Profit smoothing manipulation is expected to be significant.
4.6 Relevance of Hofstede’s (1980) Four Cultural Dimensions to the Compliance Behaviour of Corporate Directors in Australia and Singapore

Whether or not a corporate director will deliberately choose to practise profit smoothing manipulation, it is suggested, is contingent on his or her moral and cultural values. The degree of compliance behaviour observed in Singapore and Australia is deemed to have the following respective underlying cultural components: (1) "deference to authority" versus "suspicion of authority", and (2) "peer pressure to conform with societal expectations" versus "voluntary individual obligation to one another".

From the discussion of Hofstede’s four cultural dimensions in Section 3.3.1, the "deference to authority" characteristic of Singaporeans is reinforced by Singapore being a "large power distance" country. Australians’ "suspicion of authority", on the other hand, is an outcome of Australia being a "small power distance" country. Similarly, the observed "peer pressure to conform with societal expectations" characteristic of Singaporeans is a consequence of the "collectivism" norm in Singapore. Australia’s "individualism" has contributed to the "voluntary individual obligation to one another" mentality. Hence, Hofstede’s "small versus large power distance" and "individualism versus collectivism" dimensions are the two major cultural dimensions, which help to predict the degree of profit smoothing manipulation practised in Australia and Singapore.

In Chapter 5, comparative empirical testing is conducted to ascertain the actual profit smoothing manipulation behaviour practised
in Australia and Singapore.

5.1 Development of the Empirical Testing Model to Evaluate the Impact of National Culture on Profit Smoothing Manipulation

Based on this theoretical framework, empirical testing is necessary to test the hypothesis that national culture does in fact affect the propensity of corporate directors to manipulate profit smoothing in financial reporting in Australia and Singapore.

The empirical testing model consists of two sections. They are:

1. Confirmatory testing of the Craig and Walsh (1999) study based on an extended set of Australian data and
2. A cross-cultural comparative test of data sets for Australia and Singapore.

Confirmatory testing of the Craig and Walsh (1999) study

A replication of the Craig and Walsh (1999) study, using extended Australian data for the period 1972-1999, is undertaken in order to verify whether their findings regarding the influence of profit smoothing manipulation in Australia still hold. The suitability of the CoV (i.e. coefficient of variation of the relative change in the reported net profit figures) as an indicator for the detection of the presence of profit smoothing manipulation will also be examined. In addition, the impact of company size on profit smoothing manipulation behaviour will be evaluated.

Cross-cultural comparative test

A cross-cultural comparison of the degree of profit smoothing manipulation...
CHAPTER 5

RESEARCH METHOD

5.1 Development of the Empirical Testing Model to Evaluate the Impact of National Culture on Profit Smoothing Manipulation

Based on this thesis’ theoretical framework, empirical testing is to be used to ascertain whether the national culture does, in fact, affect the propensity of corporate directors to manipulate profit smoothing in financial reporting in Australia and Singapore.

The empirical testing model consists of two sections. They are:

(1) confirmatory testing of the Craig and Walsh (1989) study based on an extended set of Australian data; and

(2) a cross-cultural comparison test of data sets for Australia and Singapore.

Confirmatory testing of the Craig and Walsh (1989) study.

A replication of the Craig and Walsh (1989) study, using extended Australian data for the period 1972 - 1989, is conducted in order to verify whether their findings regarding the existence of profit smoothing manipulation in Australia still hold. The suitability of the CoV (i.e. coefficient of variation of the relative change in the reported net profit figures) as an indicator for the detection of the presence of profit smoothing manipulation will also be assessed. In addition, the impact of company size on profit smoothing manipulation behaviour will be evaluated.

Cross-cultural comparison test.

A cross-cultural comparison of the degree of profit smoothing
manipulation between Australia and Singapore is then carried out based on a comparison of the respective CoV parameters. The purpose is to provide empirical support for the theoretical framework of this thesis (refer to Figure 8, Chapter 4). Based on the analysis of national culture in Chapters 3 and 4, a significant difference in the profit smoothing manipulation behaviour is expected to exist between Australia and Singapore. The empirical testing is to serve as a basis to evaluate the degree of profit smoothing manipulation practised. If this "practised" (or "what is") manipulation behaviour matches the "derived" (or "what should be") manipulation behaviour, then the link between national culture and the compliance behaviour of corporate directors is supported.

5.1.1 Method of Comparative Analysis

The comparative analysis has two objectives. Firstly, it is to observe whether:

(a) the practice of profit smoothing manipulation varies between Australia and Singapore.

Secondly, it is to confirm that:

(b) the degree of profit smoothing manipulation is conditioned by the societal norms (or the national cultures) of Australia and Singapore.

Confirmation of part (a) will open the door for the possibility that part (b) is also correct. From Chapter 4, corporate director compliance behaviour is thought to be particularly influenced by the two societal
norms of (1) "deference to authority" versus "suspicion of authority", and
, (2) "peer pressure to conform with societal expectations" versus
"voluntary individual obligations to one another".

In terms of Hofstede's (1980) four dimensions the relationship
between culture and manipulative profit smoothing in Australia and
Singapore is postulated to be as follows:

If there is found to be a greater power distance, more uncertainty
avoidance, less individualism, and less masculinity in Singapore,
as compared to Australia, the level of profit smoothing
manipulation practised should be greater in Australia than in
Singapore.

5.1.2 Highlights of Hypotheses Formulation for Testing Profit
Smoothing Manipulation

The six hypotheses developed by Craig and Walsh (1989, pp.235-236)
are adopted in this thesis. They are:

H1: The probability of material E1 (i.e. extraordinary item) adjustments resulting
in a smoothing of RNP (i.e. reported consolidated net profit after tax, minority
interests and extraordinary items) is equal to the probability of material E1
adjustments not resulting in a smoothing of RNP.

H2: The mean CoV (i.e. the variability of RNP figures over time) of companies
classified as smoothers is not significantly different from the mean CoV of
companies classified as non-smoothers.

H3: The mean beta of companies classified as smoothers is not significantly
different from the mean beta of companies classified as non-smoothers.

H4: Companies in the top 150 listed companies according to market capitalisation
are as likely as companies not in the top 150 to use material E1 adjustments to
smooth RNP.

H5: Companies with a declining trend in RNP are as likely to make a material E1
adjustment to increase RNP, as they are to make such an adjustment to decrease
RNP.

51 The "uncertainty avoidance" dimension is qualified by comments in Section 2.6.1
and Section 3.3.1 Part (b).
H6: Companies with \( q_{RNP} \) increasing trend in RNP are as likely to make a material EI adjustment to decrease RNP, as they are such an adjustment to increase RNP.

The above hypotheses are necessary for testing whether the CoV is an adequate indicator for detecting the practice of profit smoothing manipulation. In addition, they also help to evaluate whether this practice of profit smoothing manipulation is, in turn, influenced by the impact of company size. These six hypotheses are conducted separately for Australia and Singapore.

To evaluate whether the CoV is an unbiased cross-cultural comparative indicator for detecting the profit smoothing behaviour, two further hypotheses are adopted. They are to show that, irrespective of which country is involved, the CoV mean of "smoothers" should be lower than the CoV mean of "non-smoothers". This implies that the CoV mean of Australian "smoothers" is expected to be lower than the CoV mean of Singaporean "non-smoothers". Alternatively, the CoV mean of Australian "non-smoothers" should be higher than the CoV mean of Singaporean "smoothers". The two null hypotheses are developed as follows:

H7a: the CoV mean of Australian "smoothers" is not significantly different from the CoV mean of Singaporean "non-smoothers", and

H7b: the CoV mean of Australian "non-smoothers" is not significantly different from the CoV mean of Singaporean "smoothers".

Significant differences are expected from the testing of hypotheses H7a and H7b in order to reject these null hypotheses. These expected significant differences, if confirmed, provide a basis for an unbiased
A comparative test is then conducted to determine whether the degree of profit smoothing manipulation practised is higher in Australia than in Singapore. This implies that the CoV mean of Australian "smoothers" is expected to be lower than the CoV mean of Singaporean "smoothers". Consequently, the "smoothers" are separated from the "non-smoothers" for Australia, as well as for Singapore. These "smoothers" and "non-smoothers" are then tested separately for the two countries, which gives rise to another two additional null hypotheses:

**H8a:** the CoV mean of Australian "smoothers" is not significantly different from the CoV mean of Singaporean "smoothers".

**H8b:** the CoV mean of Australian "non-smoothers" is not significantly different from the CoV mean of Singaporean "non-smoothers".

A significant difference is expected in the testing of hypothesis H8a in order to reject this null hypothesis. If the expected significant difference is confirmed, it will show that there is a higher tendency for Australia to practise more profit smoothing manipulation than for Singapore.

### 5.2 Limitations of the Comparative Empirical Testing Method

No attempt has been made to survey a sample of Australian and Singaporean corporate directors for their compliance behaviour. Instead, a comparative analysis of Australia and Singapore is to be carried out to determine whether a significant variation in profit smoothing manipulation exists between the two countries. The expected significant
variation in the empirical results, if found, will confirm a strong likelihood of the national culture influencing profit smoothing manipulation behaviour.

The fact that the comparative test only indicates whether there is a significant variation in profit smoothing manipulation existing between Australia and Singapore is a limitation in itself. It must be noted that a significant variation may be the product of chance, or some other uncontrollable factors. An example of one uncontrollable factor could be the effect of the inflow of multinational corporations and foreign cultures. There is a high possibility that the corporate directors of these multinational corporations may be foreigners, whereby their compliance behaviour is then derived from their respective foreign origins. Thus, the statistical findings provide an indirect empirical support only for the impact of the national culture on compliance behaviour.

5.3 Sample Selection, Data Collection and Hypotheses Testing

The Craig and Walsh (1989) study focused on determining the RNP figures of listed companies in Australia. Their study is based on a one variable test to classify whether listed companies are practising profit smoothing manipulation.

5.3.1 Data Collection

The following data items are necessary to conduct the empirical testing (Craig and Walsh, 1989):
Craig and Walsh (1989) completed empirical testing of Australian data for the period 1972 to 1985. This thesis adds further data for Australia covering the period from 1986 to 1989. In the case of Singapore, data collection is replicated for the entire period, 1972 to 1989. This data has been extracted from the published consolidated profit and loss statements of listed public companies.

Also required is the forecasted ENP (Expected Net Profit figures). The justification for using ENP comes from the assumption that:

directors approving material EI adjustments were strongly influenced by the profit expectations of financial statement users, irrespective of whether the latter were regarded as 'naive' rather than 'informed'(ibid., p.233).

For hypotheses testing purposes, the following additional data items are also required:

(1) company betas (i.e ordinary share capital risk measures) as at December 1989,

(2) the absolute value of the coefficient of variation (CoV) of the relative change in RNP over each year between the period of 1972-1988, determined for each company, and

(3) market capitalisation of each company as at December 1989.

5.3.2 Sample Size

A sample size of 230 listed companies was selected from the Singapore
Stock Exchange listing of companies. As with the selection of the Australian data, a systematic random sampling method was adopted, selecting from alphabetically-listed companies to ensure "a spread of companies according to size" (ibid., p.235). For Australia, the selection began with the 84 listed companies already selected in the Craig and Walsh (1989) study.

5.3.3 A Summary of the Procedures carried out in the Craig and Walsh (1989) study

Three steps were adopted by Craig and Walsh (1989, pp.234-243) in their testing procedures and these have been applied again for the extended data set:

Step 1: Estimation of ENP for 1989:

(1) A random sample of companies was selected.

(2) Only companies with material EI adjustments for the financial year ended 1989 were selected. Companies with immaterial EI adjustments were not subjected to further testing. A "material" EI adjustment was defined as "one where the ratio of EI to NPBEI was greater than 5% in absolute terms".

(3) Next, companies with material EI adjustments were accepted for further testing only if RNP existed every year between the period of 1972 to 1988.

(4) The ENP for 1989 was then forecasted using the autoregressive (in the first difference) model as shown below:

\[ \text{This model induces "a constant mean and variance in a series ... known as stationarity and it assumes the process generating yearly differences in company profits is in equilibrium over time about a constant mean level. Consequently, the model attempts to embody the randomness or stochastic nature of the RNP series of a company without concern for cause-and effect relationships" (Craig and Walsh, 1989, p.238).} \]
\[ W_t = \phi W_{t-1} + \delta + \epsilon_t \]  \hspace{1cm} (1)

where \( W_t = RNP_t - RNP_{t-1} \)

\( RNP_t = RNP \) at any time \( t \)

\( \phi = \) Autoregressive parameter

\( \delta = \) Drift or trend in the differenced RNP series

\( \epsilon_t = \) Normal error term

When \( \phi = 0 \), expression (1) is reduced to the random-walk model, namely:

\[ RNP_t = RNP_{t-1} + \delta + \epsilon_t \]  \hspace{1cm} (2)

When \( \delta = 0 \), expression (2) is simply reduced to a model relying heavily on the previous year’s RNP:

\[ RNP_t = RNP_{t-1} + \epsilon_t \]  \hspace{1cm} (3)

The Box-Jenkins time series is applied to derive the parameter (\( \phi \)) of the autoregressive model.

**Step 2: Classification of companies as either "smoothers" or "non-smoothers":**

Companies are then classified as "smoothers" or "non-smoothers" on "the basis of one variable, that is, whether the effect of the total EI adjustment is to move RNP closer to, or further from, ENP" (Craig and Walsh, 1989, p.232). This is based on the assumption that:
company directors would seem more likely to approve material EI adjustments which result RNP figures being closer to, rather than further from, the current period expectations of financial statement users [ENP] (ibid.).

Thus, the required tests are:

\[ D = \text{RNP} - \text{NPBEI} \]

and

\[ C = \text{NPBEI} - \text{ENP} \]

where ENP, NPBEI and material EI adjustment were obtained for each company's 1989's results,

D represents the marginal effect of the EI adjustment,

C and D could be either positive, negative or zero.

The values of "C" and "D" are then compared based on the "evaluative conditions" stated in Table 7 to classify the company as "smoother" or "non-smoother":

<table>
<thead>
<tr>
<th>Smoothing Conditions</th>
<th>Non-smoothing Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. + C, - D and 2C &gt; D; or</td>
<td>1. + C, + D; or</td>
</tr>
<tr>
<td>2. - C, + D and 2C &gt; D.</td>
<td>2. - C, - D; or</td>
</tr>
<tr>
<td>3. C = 0, + D; or</td>
<td>4. C = 0, - D; or</td>
</tr>
<tr>
<td>5. + C, - D and 2C &lt; D ; or</td>
<td>6. - C, + D and 2C &lt; D .</td>
</tr>
</tbody>
</table>

Since the Craig and Walsh (1989) study only concentrated on material EI adjustments, "evaluative conditions were not applied to those
circumstances where \( D = 0 \) (ibid., p.239). They emphasized that "a company was classified as a 'profit smoother' if the effect of a material EI adjustment reduced the absolute difference between ENP and NPBEI" (ibid., p.238).

**Step 3: Hypothesis tests are conducted to determine whether (a) the use of material EI adjustments, or (b) the CoVs or (c) the trend movements of RNPs, represents an adequate indicator of the practice of profit smoothing manipulation.**

According to the Craig and Walsh (1989) study, the CoV has been proven to be an adequate indicator for the practice of profit smoothing manipulation. In addition, the use of material EI adjustments and the trend movements of RNPs have been proven to be inappropriate indicators. The six hypotheses tests used by Craig and Walsh (1989) will be replicated to verify that their views still hold. The tests on these hypotheses will be conducted separately using the Australian and Singaporean data sets. The Craig and Walsh six hypotheses were developed in order to examine the following possibilities:

1. To test whether the use of material EI adjustments does indicate the practice of profit smoothing manipulation.

2. To evaluate whether the coefficient of variation expressed as CoV (i.e. the variability of RNP figures over time) has the ability to detect the practice of profit smoothing manipulation. If the CoV is confirmed to be an adequate indicator, then "companies classified as smoothers could be expected to have significantly lower mean CoV than non-smoothers" (ibid., p.240). Thus, if the CoV is an adequate indicator for detecting the practice of profit smoothing manipulation, then the tests for parts (2a) and (2b) are conducted as follows:
(2a) To determine whether company size influences profit smoothing manipulation. Companies classified as "Top 150" (i.e. big companies) are expected to have a greater capacity to practise profit smoothing manipulation than the "Non-Top 150" companies (i.e. small companies) \textit{(ibid., p.240)}, and,

(2b) To determine whether profit smoothing manipulation is influenced by the company type. Mining (i.e. risky) companies are expected to have a higher tendency to practise profit smoothing than the industrial (i.e. less risky) companies \textit{(ibid., p.241)}.

(3) To examine whether the increasing or decreasing profit trends will indicate the practice of profit smoothing manipulation. Companies with increasing profit trends are likely to reduce reported profits and vice versa for companies with declining profit trends \textit{(ibid., p.236)}.

Craig and Walsh (1989) segregated the Australian companies into "smoothers" versus "non-smoothers", "Top 150" versus "Non-Top 150", "mining" versus "industrial" for the purpose of testing the first four hypotheses. Whereas, the fifth and sixth hypotheses involved a segregation of companies with increasing and decreasing RNP trends over the period 1972 - 1989.

5.4 Aspects of the Selection Process for the Singaporean Data

There were 269 companies listed in the 1976 Singapore Stock Exchange Companies Handbook. These companies were segregated into the following sectors:
Of the 269 companies, a sample of 230 companies was selected on a systematic random basis.

A large percentage (36.09% or 83) of Malaysian-incorporated companies ceased to be listed in the Singapore Stock Exchange after several years. These companies were excluded from the sample group, leaving a residual set of $230 - 83 = 147$ companies. Of these, 53 (23.04%) were also excluded because they did not prepare consolidated financial statements. As a result, only $147 - 53 = 94$ companies were subject to further data selection requirements. A further 16 companies (8 Malaysia-incorporated and 8 Singapore-incorporated companies) were eliminated due to the non-availability of financial reports particularly for the year 1981. The reason for this non-availability of financial reports was that the companies affected were either suspended or were undergoing some form of financial reconstruction. Thus, $94 - 16 = 78$ companies were left in the sample. But of these, two had ceased business operation, five were delisted and another five had been taken-over, thus all 12 (5.22%) were eliminated. The remaining 66 were then subjected to the material EI adjustment test. Of the 66 companies, only
29 (12.61%) had made material EI adjustments. A further 9 (3.91%) companies were then excluded, because these companies were incorporated sometime after 1972. Consequently, only 20 companies were accepted in the final sample for further analysis.

In the Craig and Walsh (1989) study, "mining" companies are used to represent the most risky sector and "industrial" companies to represent a less risky sector in order to compare the company risk characteristics. In the Singaporean case, "tin-mining" companies were amongst those excluded from the sample because they were either no longer listed in the Singapore Stock Exchange, or they had changed their principal activity of tin mining to another type of business. Both the "oil palm" and "rubber" sectors were also disregarded, because they were either:

(1) Malaysian-incorporated companies, which had ceased to be listed in the Singapore Stock Exchange after several years, or

(2) companies which did not prepare consolidated financial statements.

As a result, the "industrial and commerce", "finance", "hotel" and "property" sectors were the four sectors subjected to further testing. The Low, Pang and Leong (1990) study grouped these four sectors under "industrial". This thesis adopts their "industrial" classification. The fact that there were no mining ("risky" sector) companies amongst the remaining Singaporean data set gave rise to the problem of not having any classification comparable with the Australian industry group classifications used by Craig and Walsh (1989).
5.4.1 Factors Hindering the Singaporean Data Collection

The Craig and Walsh (1989) study involved a sample period beginning from 1972. Companies initially included in the Singaporean sample had to be later eliminated. A large number of companies, which were in existence before 1972, had to be eliminated because they were either not listed in the Singapore Stock Exchange from 1972 onwards or were not preparing consolidated profit and loss statements.

The fact that three pre-conditions were applied prior to the acceptance of a company into the data set could mean that there is an in-built bias positive toward realizing that expected profit smoothing manipulation behaviour results. These three pre-conditions were:

1. the company must have prepared a consolidated profit and loss statement for each financial year in the sample period,
2. there must be a net profit or loss figure reported for each financial year in the sample period, and,
3. there must have been a material EI adjustment reported for the financial year ending 1989.

A consolidated profit and loss statement is a summation of the holding and subsidiary companies’ performances. As such it may mask the actual performance of individual companies. The stringent requirements in (2) and (3) above could mean that the sample obtained finally for testing may not be representative of the total company population in terms of profit smoothing manipulation behaviour. This, however, cannot be proved.

A close survey of the Singapore Stock Exchange Companies Handbook revealed that 20 Singaporean companies were only converted
from private to public company status after 1972. Another 61 Singaporean public companies were incorporated only after 1972. A total of 81 Singaporean companies were therefore excluded from the sample as a consequence of this time-frame problem. The listing of these 81 companies, according to the 1991 Singapore Stock Exchange Companies Handbook, was as follows:

| Table 8 |
|-------------------|-------|-------|-------|-------|
| Breakup of 81 companies which were excluded from the final Singaporean sample |
| Number of Singaporean companies already in existence before 1972, only converted to public companies in the later years. | 1973-1980 | 1981-1985 | 1986-1990 | Total |
| Number of Singaporean companies incorporated after 1972. | 37 | 12 | 12 | 61 |
| Total number of companies | 45 | 15 | 21 | 81 |

The sudden influx of these 81 companies into the Singapore Stock Exchange listing after 1972, was in response to a "series of improvements [introduced by the Singapore government] in order to develop its own [Singapore's] securities industry with the aim of making the Republic an international centre" (Saw, 1991, p.67). Prior to the incorporation of the Singapore Stock Exchange in 1973, Malaysia and Singapore shared a joint Stock Exchange. A strong reliance on Malaysia meant that there was little incentive for the Singaporean government to encourage the incorporation of Singaporean companies before this date.
Singaporean companies only began to be incorporated after the split took place on 8th May 1973. This explains why a substantial number of listed companies in the sample were incorporated in Malaysia.

For these reasons only 20 companies could be included in the final sample for Singapore.

5.4.2 Adjustments made to the Accepted Singaporean Companies’ RNP

Some of the accepted Singaporean companies’ RNPs in the final sample were observed to contain a more than or less than 12 months’ profit figure due to the change of the financial period in a particular year. In order to ensure that the RNP contained a 12 months period profit figure, a method of annualization was utilized to eliminate this problem.

Annualization of RNP occurred as follows:

(i) if the RNP reported for a particular year was for more than 12 months then only the 12-months’ portion was retained for that particular year.

(ii) if the RNP reported for a particular year was for less than 12 months then the RNP was proportioned accordingly to make up a 12-month financial period.

Note that no change of the financial period took place in the year 1989. Therefore, no adjustments were required for the EI adjustment figures for the financial year ended 1989.

5.4.3 Conversion of the Accepted RNPs from Malaysian Currency to the Singaporean Dollar

A foreign exchange rate was calculated for every year within the period of 1972-1989. An average of four exchange rates was obtained on a
quarterly basis for each year (i.e. 31st January, 30th April, 31st July and 30th October) from the Australian Financial Review to calculate the average exchange rate on a yearly basis. These calculated yearly average exchange rates were then used to convert all the RNPs reported in Malaysian currency to Singaporean dollars for the respective years.

It was noted that there could be a possibility of the method of conversion contributing some sort of variability effects to the trend movements of the RNPs. However, these effects were deemed to be minimal because:

(1) the foreign exchange rates for one Malaysian dollar over the sample period of 1972 to 1989, were observed to be decreasing relatively smoothly within the range of a "one Singaporean dollar" equivalent to a "eighty Singaporean cents" equivalent (approximately),

(2) the mean of the foreign exchange rates was calculated to be 0.923 Singaporean cents i.e. close to one Singaporean dollar, and,

(3) the standard deviation of the foreign exchange rates was 0.0830 indicating only a slight fluctuation in the foreign exchange rates.

5.5 Aspects of the Selection Process for the Australian Data

The RNPs of the 84 Australian companies were extended by another 4 years to make up a period of 1972 - 1989. The results of the findings showed that 16 (19.05%) of the companies had been taken-over and two (2.38%) of the companies had been delisted, leaving only 66 companies for further testing. There were also problems in locating 17 (20.24%) other companies, which led to their elimination. Thus, only 66 - 17 = 49 companies remained in the sample size. Of these, 19 (22.62%) had not made any material EI adjustments in 1989, and were excluded. As a
result, only 49 - 19 = 30 Australian companies were included in the final sample for further analysis.

5.6 Final Data Sets for Australia and Singapore

The data set for Australia comprised 30 companies (refer to Appendix A for a listing of the companies). There were 20 companies in the data set for Singapore (refer to Appendix B for a listing of the companies). These data sets will be used to provide empirical support for the relationship between national culture and profit smoothing manipulation. The results of the empirical analysis will be discussed in Chapter 6.
CHAPTER 6

RESULTS OF THE EMPIRICAL ANALYSIS

Chapter 5 outlined the research method and the nature of the data set that will now be analyzed in order to try and find evidence of a relationship between national culture and profit smoothing manipulation. Before conducting a cross-cultural comparative analysis between Australia and Singapore, appropriate tests will first be applied to confirm that the CoV is a useful indicator for detecting the profit smoothing manipulation and that it is an unbiased tool for cross-cultural comparison purposes.

6.1 With Linear Trends, Adjustment for Outliers due to Violent Fluctuations

6.1.1 Treatment for Outliers due to the International Stock Market Crash

By plotting trend movements of RNPs for each company, it was noticed that violent fluctuations occurred in the financial years after 1985 for the majority of the companies. There may be several possible factors causing these observed fluctuations. For example, Australia was gradually plunging into deep economic recession during this period, facing a rapid increase in interest rates followed by a weakening of the Australian dollar. In addition, the world stock market crash of October 1987 is an obvious likely contributing factor.

Outliers are deemed to be data points, which are abnormally situated above or below the rest of the more reasonably scattered data.
The violent fluctuations observed in the RNPs for financial years after 1985, resulting in the distortion of the trend in the time series, were treated as outliers. These outliers create a predicament for investors wishing to discern a trend in order to project the following financial year’s figure.

As a means of dealing with outliers of this sort, "smoothing techniques" must be introduced to remove or at least reduce "volatile short-term fluctuations in a time series to provide for reasonable forecasting" (Pindyck and Rubinfeld, 1988, p.484). Dummy variables were therefore used to separate these unforeseeable abnormal effects, in order to accommodate the first order auto-regressive model, in the first difference, adopted in the Craig and Walsh (1989) study (refer to Section 5.3.3, Step 1, Part (4)). Only the effect of the stock market crash was taken into consideration due to the non-availability of some of the necessary Singaporean data pertaining to other possible factors explanatory to the observed fluctuation. For example, interest rate information was not available for the earlier part of the sample period. The sole use of the stock market crash as an explanation for the violent fluctuation was justified by the fact that a majority of companies in the final sample of both Australia and Singapore, were observed to be undergoing drastic fluctuations in either or both 1987 and 1988.

The stock market crash could have had either a positive or a negative effect on companies' performances. Some companies emerged from the crash stronger than ever and with their capacity for continued
development unimpaired. This was demonstrated by their take-over and acquisition of other companies. Other companies faced being taken-over or were suffering from heavy losses and had to write off a vast amount of debt, assets and investments, in what is known as "big-bath" accounting (Walsh, Craig and Clarke, 1991).

The effect of the stock market crash of October 1987 had to be eliminated from the affected time series in order to return the RNPs to the usual trend. Two adjustment models were recommended accordingly:

(1) the recovery from the stock market crash was assumed to occur gradually as linear increments of RNP over a period of 1987 to 1992 (MODEL 1), or

(2) the shock of the stock market crash was absorbed within the particular year of either 1987 or 1988, depending on whether the impact was instantaneous or delayed, assuming that there was no spill-over effect into the latter years (MODEL 2).

The above two adjustment models were used to anticipate how both the "informed" and the "naive" investors would react to what was publicly known information, specifically the news of the stock market crash. They were expected to consciously or unconsciously make some rational adjustments for the drastic fluctuations of RNPs in those affected financial years before venturing to forecast the following financial year’s RNP. The first model simulated the observed gradual recovery pattern of the all-ordinaries index after the stock market crash. Alternatively, the second model treated the sudden drastic increase or decrease in RNPs for the financial years 1987 and/or 1988 as a one-off "big-bath" accounting process taking place in the particular affected
financial year, assuming that the company's operation returned to normal in the years following. The main purpose of the adjustment models was, therefore, to eliminate abnormal fluctuations so that the normal linear trend can be resumed.

Further allowance was made for the different responses of companies towards the stock market crash, depending on the type or size of companies. Some seized opportunities to reap benefits, while others suffered heavy losses and yet still others managed to remain unaffected (Australian Financial Review, 21 October 1987). Since the companies making up the final samples for Australia and Singapore were derived from various sectors, it was expected that the stock market crash would impact differently on companies from different sectors, perhaps even having no impact on certain companies.

6.1.2 Other Adjustments made for Fluctuations existing prior to the International Stock Market Crash

In addition, the Singaporean data was observed to be fluctuating quite abnormally in the earlier part of the sample period. This may have been due to the fact that Singapore was very badly hit by the international oil crisis of 1973 causing the collapse of the entire Singapore Stock Exchange and the subsequent general recession between 1973 and 1979. The second international oil crisis of 1979 also affected Singapore. Since these events were considered to be publicly known, it would be reasonable to expect that investors would have considered making adjustments to the RNPs relevant to those affected financial years.
before proceeding to do their usual forecasting. Consequently, additional adjustment models were introduced to capture these retrospective effects with the use of dummy variables:

(3)(i) attempt to eliminate the occurrence of significant fluctuations prior to 1987, with non-existence of violent fluctuations in 1987 and/or 1988 (MODEL 3), or

(3)(ii) attempt to eliminate the occurrence of significant fluctuations prior to 1987, as well as taking into consideration of the latter violent fluctuations taking place in 1987 and/or 1988 (MODEL 3).

6.1.3 Modification of the Craig and Walsh (1989) model to eliminate the Drastic Fluctuations in the data

In general, the first order autoregressive model, in the first difference model, adopted in the Craig and Walsh (1989) study (refer to Section 5.3.3, Step 1, Part (4)), was modified to include two additional dummy variables summarizing all the three adjustment models introduced above:

\[ W_t = \phi W_{t-1} + \beta_1 S1_t + \beta_2 S2_t + \delta + \epsilon_t \]

where

\( S1_t \) and \( S2_t \) = Dummy variables to cope with violent fluctuations

The three adjustment models were represented as follows:

\textbf{MODEL 1: }\[ W_t = \phi W_{t-1} + \beta_1 S1_t + \delta + \epsilon_t \quad (a) \]
where $S_{2t}$ was left out, and $S_{1t}$ was allocated with values of 1, 0.8, 0.6, 0.4... etc. spreading over the period of 1987 to 1992 to indicate a gradual recovery.

**MODEL 2:**

$$W_t = \phi W_{t-1} + \beta_1 S_{1t} + \beta_2 S_{2t} + \delta + \epsilon_t \quad (b)$$

where $S_{1t} = 1$, to represent the impact of the stock market crash intervention in 1987;

$S_{2t} = 1$, to represent the impact of the stock market crash intervention in 1988;

$S_{1t} = 0$ and $S_{2t} = 0$ to represent that the RNPs were unaffected.

**MODEL 3:**

$$W_t = \phi W_{t-1} + \beta_1 S_{1t} + \delta + \epsilon_t \quad (c)$$

where $S_{2t}$ was left out, and $S_{1t} = 1$ to accommodate the years observed with violent fluctuations in the trend movements. $S_{1t} = 0$ to represent that the RNPs were unaffected.

If no adjustments were necessary, the original first order autoregressive model (in the first difference), adopted in the Craig and Walsh (1989) study, was applied (refer to Section 5.3.3, Step 1, Part (4)).
6.2 With Non-Linear Exponential Trends, Adjustment for Outliers due to Violent Fluctuations

When a company with RNPs over the period of 1972 - 1988 seemed to exhibit a non-linear exponential trend, logarithmic transformations of these RNPs were taken to remove growth over time of the variance of RNPs, i.e.:

\[ W_t = \log \left( \frac{RNP_t}{RNP_{t-1}} \right) \]  

(d)

Thus, for a non-linear trend, \( \log \left( \frac{RNP_t}{RNP_{t-1}} \right) \) was substituted for \( W_t \). The \( W_t \) as per equations (a) to (c) was then relied on, without the substitution of the logarithmic function, if a linear trend was observed.

Note that no logarithmic transformation can be performed if one of the RNP figures (i.e. either RNP\(_t\) in the numerator or RNP\(_{t-1}\) in the denominator of equation (d)) has a negative value. In this study, the affected companies (i.e. two Australian companies and one Singaporean company) with RNPs exhibiting a non-linear exponential trend all had positive net profit figures over the entire sample period.

6.3 Application of Procedures to select the most appropriate Autoregressive Model

The four adjustment methods mentioned earlier above, together with the original Craig and Walsh (1989) model, were considered to encompass all the possibilities available to investors in forecasting the following financial year’s RNP (i.e. ENP). They were expected to carefully exercise their own judgement in determining the most
adequate model from the various suggested models. Thus, the data was processed using each of these suggested models. Only the "successful"\textsuperscript{53} models were subject to further selection. From these the most appropriate autoregressive model was selected based on the following two conditions:

(i) the forecasted RNPs were fitted against the actual RNPs to select a model giving the best fit, and,

(ii) the model possessing a lower variance was preferred.

Consequently, the model with the best fit and accompanying lower variance was used to forecast the ENP figure for the financial year ended 1989.

The figures for the financial year ended 1989 (i.e. the derived ENP, the RNP, and the EI adjustment figure for each company) were then substituted into the required test equations (refer to Section 5.3.3, Step (2)) subject to the evaluative conditions for profit smoothing (refer to Section 5.3.3, Step (2), Table 7) in order to classify the companies as either "smoothers" or "non-smoothers".

\textbf{6.4 Categorization of Data in the Final Sample}

According to the 1991 Stock Exchange Companies Handbook (Part 1, Since 1st December 1989, p.27), the composition of "Top 30"\textsuperscript{54} and "Non-Top 30" companies in

\textsuperscript{53} By "successful", it implies that the results run by the particular autoregressive model actually converged.

\textsuperscript{54} In the Australian case, Craig and Walsh (1989) used the "Top 150" companies categorization.
the 20 company sample for Singapore was:

"Top 30" Companies 4

"Non-Top 30" Companies 16

The corresponding composition of "Top 150" and "Non-Top 150" Australian companies in the 30 company sample was:55

"Top 150" Companies 13

"Non-Top 150" Companies 17

Segregating companies into "industrial" and "mining", Australian companies was grouped as follows:

"Industrial" 21

"Mining" 9

Singaporean companies, on the other hand, were all categorized as "industrial" companies.

The companies were also classified in terms of "smoothing" and "non-smoothing". The Australian companies were segregated as follows:

"Smoothing" 9

"Non-Smoothing" 21

The Singaporean companies were classified as follows:

"Smoothing" 9

"Non-Smoothing" 11

55 The categorization of Australian companies was based on the "Top 150" categorization of Australian companies in the Weekend Australia, 30-31 Dec, 1989, p.28.
6.5 Statistical Analysis to Confirm that CoV is an Adequate Indicator for Profit Smoothing Manipulation

In testing H1 (refer to Section 5.1.2), a two-tailed binomial test of proportion was undertaken. The hypothesised "true" proportion of "smoothers" was to be 0.5. For Australia, a p-value of 1.33 percent was obtained for the sample proportion of 0.3 for "smoothers". Thus, H1 could be rejected. That is, there was a very high probability (i.e. 98.67 percent) that the use of material EI adjustments was significantly more likely to result in the smoothing of RNP than in non-smoothing of RNP in Australia. In the case of Singapore, a p-value of 16.02 percent was obtained for the sample proportion of 0.45 for "smoothers". Therefore, H1 could not be rejected. There was a 83.98 percent chance that material EI adjustments were as likely to result in the smoothing of RNP than in non-smoothing of RNP in Singapore. The results for the two countries did not seem to agree at this initial stage of testing. These results may have been affected by the composition of "smoothers" and "non-smoothers" in the data set and the respective small final sample sizes. Note that two-thirds of the Australian companies in the data set were "non-smoothers". Whereas, the Singaporean data set was balanced between "smoothers" and "non-smoothers". The data set used in this thesis did not provide supportive evidence for the use of material EI adjustments as a suitable indicator for detecting profit smoothing manipulation.

Subsequent tests were then undertaken to determine whether the
coefficient of variation of RNPs (CoV) is an appropriate indicator for "smoothing" purposes. The CoV was calculated for each company to test the second hypothesis H2 (refer to Section 5.1.2), testing separately for Australia and Singapore. Relatively high absolute values for CoV were observed, pointing to an exceptionally high degree of volatility in the RNPs for both countries over the sample period. These volatile CoV values were nevertheless anticipated as the actual RNP figures were recognized earlier to be fluctuating violently over the relevant years. To overcome this problem, the effects due to the outliers were removed from the affected RNPs before the CoV was re-calculated for that particular company. This implied that the value, captured by the dummy variable of the selected autoregressive model, was then added to or subtracted from the actual RNP figure affected by the abnormal historical circumstances. After adjustment, this re-calculated RNP figure would resume the normally expected trend movement.

The original sample sizes for Australia and Singapore were relatively small - thirty or less. Thus, further sub-division would mean that the individual sample size for each group would be even smaller. Consequently, problems could then be encountered in applying the Central Limit Theorem to approximate the sampling distribution as a standard normal distribution (Newbold, 1988, p.24). For example, if the value of one sample element happened to be abnormally large as compared to the rest in a particular group, the weight of such a value would invariably distort the spread of the entire sample distribution. The
spread of this sample distribution would be characterized by sample elements concentrated mainly in the earlier groupings, separated by a big gap, then followed by this particular abnormal element isolated in another group. Thus, application of the Central Limit Theorem had to be limited, depending on the composition of the data set. To minimise this problem, the CoVs which were deemed to be extremely "large" with respect to a particular sample group, were then replaced with artificial values to remove such distortions. These artificial CoV values were recalculated based on the RNPs, with the RNPs belonging to the latter part of the sample period being replaced with forecasted RNPs. The required forecasted RNP values were derived from running the already selected autoregressive model based on a shorter sample period. The before and after adjusted CoV parameters for Australia and Singapore are shown in Table 9:

<table>
<thead>
<tr>
<th></th>
<th>Australia's CoVs</th>
<th>Singapore's CoVs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before Adjustment</td>
<td>After Adjustment</td>
</tr>
<tr>
<td>mean</td>
<td>22.32</td>
<td>6.75</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>70.79</td>
<td>4.56</td>
</tr>
</tbody>
</table>

In Table 9, the CoV means (before adjustment) were observed to be lower for Australia than for Singapore. According to the Craig and
Walsh (1989) study, a low CoV mean will support the existence of profit smoothing manipulation. These results seemed, therefore, to provide some initial evidence for the theoretical prediction of this thesis: i.e. there is more profit smoothing manipulation in Australia than Singapore. However, a distinction between the CoV means (after adjustment) for the two countries was less apparent. Further tests were necessary to investigate the relative extent of profit smoothing in both countries.

The CoVs (after adjustment) were in turn categorized as "smoothers" or "non-smoothers" (refer to Table 10). A two-sample t-test was then applied separately for Australia and Singapore to determine if a significant difference in the RNP volatility could be detected between these two groups (refer to H2 in Section 5.1.2). A F-test was first carried out to investigate the differences in the CoV variances of "smoothers" and "non-smoothers". The purpose of the F-test was to determine the adequacy of a two-sample t-test. If a significant difference was observed between these variances, a two-sample approximate t-test would serve as a better means of testing the hypothesis. Otherwise, the usual two-sample t-test, based on an equal variance assumption, would be used.

The F-test results summarized in Table 10 showed p-values of 0.0314 and 0.0254 for Australia and Singapore, respectively. This

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56 The approximate t statistic is computed under the assumption of unequal variances. The Cochran and Cox (1950) approximation is used to derive the approximated p value. The approximated degree of freedom is then calculated based on the Satterthwaite’s (1946) approximation.
indicated high probabilities of 96.86 and 97.46 percent, respectively, that the differences in the CoV variances for "smoothers" and "non-smoothers" were significant for the two countries. As a result, a two-sample approximate t-test was considered to be more appropriate.

The p-values from the two-sample approximate t-test were 0.5 percent and 2.48 percent, respectively, for Australia and Singapore. In the case of Australia, H2 could be rejected showing a very high 99.5 percent probability that a significant difference could be observed between the CoV means of "smoothers" and "non-smoothers". Similarly, H2 could also be rejected for Singapore, because of an extremely high 97.52 percent probability that a significant difference could be observed between the CoV means of "smoothers" and "non-smoothers". This agreement in the results for the two countries seemed to suggest that the CoV can be used to detect "smoothing" behaviour.
### Table 10
A Comparison of "smoothers" versus "non-smoothers"

<table>
<thead>
<tr>
<th></th>
<th>Australian smoother</th>
<th>Australian non-smoother</th>
<th>Singaporean smoother</th>
<th>Singaporean non-smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>3.91</td>
<td>7.78</td>
<td>5.00</td>
<td>9.31</td>
</tr>
<tr>
<td>No. Of Cos.</td>
<td>8</td>
<td>22</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.005</td>
<td></td>
<td>0.0248</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>2.10</td>
<td>4.81</td>
<td>2.22</td>
<td>5.16</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td>0.0314</td>
<td></td>
<td>0.0254</td>
<td></td>
</tr>
</tbody>
</table>

In accordance with the Craig and Walsh study (1989), the effect of company size was then explored by extending the analysis of H2, where companies were first segregated into the following three groups:

1. **Low Mean CoV**: "Top 150" (or "Top 30") company and "Smoother" (Group 1),

2. **Intermediate Mean CoV**: "Non-Top 150" (or "Non-Top 30") company and "Smoother" plus "Top 150" (or "Top 30") and "Non-smoother" (Group 2), and

3. **High Mean CoV**: "Non-Top 150" ("Non-Top 30") company and "Non-smoother" (Group 3).
Table 11
A Comparison of the "Low Mean" CoV, "Intermediate Mean" CoV and "High Mean" CoV

<table>
<thead>
<tr>
<th></th>
<th>Australia's CoV Mean</th>
<th>Australia's No. of Cos.</th>
<th>Singapore's CoV Mean</th>
<th>Singapore's No. of Cos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Mean CoV (Gp 1)</td>
<td>3.38</td>
<td>5</td>
<td>2.69</td>
<td>1</td>
</tr>
<tr>
<td>Intermediate Mean CoV (Gp 2)</td>
<td>8.31</td>
<td>11</td>
<td>7.16</td>
<td>11</td>
</tr>
<tr>
<td>High Mean CoV (Gp 3)</td>
<td>6.73</td>
<td>14</td>
<td>8.24</td>
<td>8</td>
</tr>
</tbody>
</table>

The CoV means for group 1, group 2 and group 3 (refer to Table 11) were observed to determine whether they appeared to support the ranking suggested by the Craig and Walsh study. The results for Australia gave a meaningless result of group 1 < group 3 < group 2. Though the results for Singapore appeared to satisfy the ranking of group 1 < group 2 < group 3, the CoV means for groups 2 and 3 were noted to be relatively close to each other and thus it was difficult to draw any clear distinction between these latter two groups. Further comparison was also restricted, in the case of Singapore, by the existence of only one data element in group 1. Hence, subsequent tests like the one-way analysis of variance, followed by the multiple pairwise t-test utilising Bonferroni significance levels to test the order of ranking, were considered inappropriate.

The Craig and Walsh (1989) study showed that the CoV is a

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57 "It was hypothesised that the mean of CoV of group 1 companies would be less than the mean CoV of group 2 companies; and that the latter would be less than the mean CoV of group 3 companies. That is, mean CoV group 1 < mean CoV group 2 < mean CoV group 3" (Craig and Walsh, 1989, p.241).
useful indicator for:

(i) detecting profit smoothing manipulation, and

(ii) demonstrating that large companies have more capacity to practise profit smoothing manipulation than small companies.

Since the preliminary results of this thesis appeared to only provide initial evidence for part (i), and not for part (ii), subsequent related tests of the Craig and Walsh (1989) hypotheses H3 and H4 (refer to Section 5.1.2) were not conducted. In addition, the RNPs were observed to be fluctuating violently for most of the companies for Australia and Singapore in some stage of the sample period, thus, not giving any indication of the upward or downward trends. Consequently, the Craig and Walsh (1989) H5 and H6 (refer to Section 5.1.2), which involved the testing of trend movements, were also omitted.

Alternative tests for the detection of profit smoothing manipulation were then adopted. The new method specifically included a test for whether the size of company ("Top 150" vs. "Non-Top 150"/"Top 30" vs. "Non-Top 30") affects the smoothing/non-smoothing conditions.

Four\(^{58}\) selected combinations were necessary for comparing company size with the smoothing/non-smoothing condition:

(1) "Top 150" (or "Top 30") companies versus "Non-Top 150" (or "Non-Top 30") companies where the companies are classified as "smoothers".

\(^{58}\) Note that there are a total of six possible combinations available when comparing the "Top 150" (or "Top 30")/"Non-Top 150" (or "Non-Top 30") against the smoothing/ non-smoothing condition. However, the two other combinations were omitted because there was no common basis of comparison.
(2) "Top 150" (or "Top 30") companies versus "Non-Top 150" companies (or "Non-Top 30") where the companies are classified as "non-smoothers".

(3) "Smoother" versus "non-smoother", where the companies are "Top 150" (or "Top 30").

(4) "Smoother" versus "non-smoother", where the companies are "Non-Top 150" (or "Non-Top 30").

Combinations (1) to (4) provided the capacity for testing whether company size would affect the smoothing/non-smoothing condition. If the impact of company size is apparent, the CoVs will then be categorized into groups A and B and tested for ranking using a two-sample t-test. Group A, similar to the "low mean CoV" category of the Craig and Walsh (1989) study, comprises only of "Top 150" (or "Top 30") company and "Smoother". Group B comprises of "Non-Top 150" (or "Non-Top 30") company and "Smoother", "Top 150" (or "Top 30") and "Non-smoother" and "Non-Top 150" ("Non-Top 30") company and "Non-smoother", which encompasses both the "intermediate CoV" and "high CoV" categories of the Craig and Walsh (1989) study. If the CoV mean of group A is found to be significantly lower than the CoV mean of group B, then the impact of company size will be further verified.

The F-test was first carried out to investigate the differences between the CoV variances of the respective groups of comparison as shown in (1) to (4), so as to determine whether the "approximate"59 or the "usual" two-sample t-test was appropriate.

Due to the small sample sizes of each of the sub-divisional

59 Refer to footnote 56.
groups in (1) to (4), the critical level of significance for testing the new hypotheses (i.e. $H_9$ to $H_{12}$) was in turn selected to be at twenty percent for the two-sample t-test. This selected critical level of twenty percent significance was to decrease the probability of accepting a null hypothesis when it was false.

Separate results for Australia and Singapore were presented in Tables 12 to 15:

Table 12
A Comparison between "Top 150" versus "Non-Top 150" companies with the condition that both groups practise 'smoothing'

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top 150</td>
</tr>
<tr>
<td>CoV Mean</td>
<td>3.38</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>5</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.56</td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>0.71</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td>0.0108</td>
</tr>
</tbody>
</table>

Note that insufficient data (i.e. there was only one element in one of the comparative groups) in the case of Singapore, a two-sample t-test failed to facilitate a comparison. The F-test results summarized in Table 12 showed a p-value of 0.0108. This indicated that the difference in the CoV variances for Australian "Top 150" and "Non-Top 150" companies was significant. As a result, a two-sample approximate t-test was applied.
From **Table 12** (i.e. combination (1)), the CoV mean of Australian "Top 150" companies was observed to be relatively close to the CoV mean of Australian "Non-Top 150" companies. When both "Top 150" and "Non-Top 150" companies practised profit smoothing manipulation, this observed convergence of the two CoV means seemed to show that smoothing behaviour could be detected by the CoV. On the other hand, if company size is the determining factor in profit smoothing manipulation, it will be expected that "Top 150" companies will have more capacity to practise profit smoothing manipulation than "Non-Top 150" companies. The observed CoV means, however, did not seem to coincide with the latter expectation. The new null hypothesis was as follows:

\[ H_9: \text{the CoV mean of companies classified as "Non-Top 150" (or "Non-Top 30") and "smoothers" is not significantly different from the CoV mean of companies classified as "Top 150" (or "Top 30") and "smoothers".} \]

The p-value for the test of difference between the CoV means of the two groups was 0.56. Thus, \( H_9 \) could not be rejected. This implied that no significant difference was observed between the CoV means of Australian "Top 150" and "Non-Top 150" companies among "smoothers". Thus, the data set used in this thesis appeared to confirm only that the CoV has the capacity to detect profit smoothing manipulation. The impact that company size has on profit smoothing manipulation was not verifiable.
Table 13
A Comparison between "Top 150" (or "Top 30") versus "Non-Top 150" (or "Non-Top 30") companies with the condition that both groups practise "non-smoothing"

<table>
<thead>
<tr>
<th></th>
<th>Australian Top 150</th>
<th>Australian Non-Top 150</th>
<th>Singaporean Top 30</th>
<th>Singaporean Non-Top 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>9.61</td>
<td>6.73</td>
<td>12.21</td>
<td>8.24</td>
</tr>
<tr>
<td>No. Of Cos.</td>
<td>8</td>
<td>14</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.2680</td>
<td></td>
<td>0.2773</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>6.41</td>
<td>3.46</td>
<td>4.49</td>
<td>5.23</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td>0.0533</td>
<td></td>
<td>0.9750</td>
<td></td>
</tr>
</tbody>
</table>

The F-test result summarized in Table 13 showed p-values of 0.0533 and 0.9750 for Australia and Singapore, respectively. For Singapore, this indicated that the differences in the CoV variances for "Top 30" and "Non-Top 30" companies was insignificant. Consequently, the usual two-sample t-test was adopted for Singapore. The differences in the CoV variances for "Top 150" and "Non-Top 150" companies was significant, warranting the use of the two-sample approximate t-test for Australia.

From Table 13 (i.e. combination (2)), the CoV mean of "Top 150" (or "Top 30") companies was observed to be higher than the CoV mean of "Non-Top 150" (or "Non-Top 30") companies for both countries. However, if the impact of company size is to be apparent, the CoV mean of "Top 150" (or "Top 30") companies would be expected to
be lower than the CoV mean of "Non-Top 150" (or "Non-Top 30") companies. These contradictory results seemed to indicate that the impact of company size was not distinctly evident when profit smoothing manipulation was not practised. The new null hypothesis was as follows:

\[ H_{10} \]: the CoV mean of companies classified as "Non-Top 150" (or "Non-Top 30") and "non-smoothers" is not significantly different from the CoV mean of companies classified as "Top 150" (or "Top 30") and "non-smoothers".

The p-values for the test of differences between the CoV means of the two groups were 0.2680 and 0.2773 in Australia and Singapore, respectively. Thus, \( H_{10} \) could not be rejected for both countries. This implied that no significant difference was observed between the CoV means of "Top 150" (or "Top 30") and "Non-Top 150" (or "Non-Top 30") companies among "non-smoothers" for both countries. Thus, the data set for this thesis appeared to support the view that company size is irrelevant when profit smoothing manipulation is not practised.
Table 14
A Comparison between "smoother" versus "non-smoother" companies with the condition that they are "Top 150" companies

<table>
<thead>
<tr>
<th></th>
<th>smoother</th>
<th>non-smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>3.38</td>
<td>9.61</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.0286</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>0.71</td>
<td>6.41</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td></td>
<td>0.0007</td>
</tr>
</tbody>
</table>

Note that due to insufficient data (i.e. there was only one element in one of the comparative groups) in the case of Singapore, a two-sample t-test failed to facilitate a comparison. The F-test results summarized in Table 14 showed a p-value of 0.0007. This indicated that the difference in the CoV variances for Australian "smoothers" and "non-smoothers" was significant. As a result, a two-sample approximate t-test was adopted.

From Table 14 (i.e. combination (3)), the CoV mean of Australian "smoothers" was observed to be very much lower than the CoV mean of Australian "non-smoothers". It seemed to show that when profit smoothing manipulation is practised by a company, smoothing behaviour can be detected by the CoV. The new null hypothesis was as follows:
H11: the CoV mean of companies classified as "Top 150" (or "Top 30") and "smoothers" is not significantly different from the CoV mean of companies classified as "Top 150" (or "Top 30") and "non-smoothers". The p-value for the test of difference between the CoV means of the two groups was relatively low at 0.0286. Thus, H11 could be rejected with a high level of confidence. This implied that the CoV mean of "smoothers" was significantly lower than the CoV mean of "non-smoothers" among the Australian "Top 150" companies. Thus, it would seem that the CoV can be used to detect profit smoothing manipulation.

Table 15
A Comparison between "smoother" versus "non-smoother" companies with the condition that they are "Non-Top 150" (or "Non-Top 30") companies

<table>
<thead>
<tr>
<th></th>
<th>Australian smoother</th>
<th>Australian non-smoother</th>
<th>Singaporean smoother</th>
<th>Singaporean non-smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>4.79</td>
<td>6.73</td>
<td>5.28</td>
<td>8.24</td>
</tr>
<tr>
<td>No. Of Cos.</td>
<td>3</td>
<td>14</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.3946</td>
<td></td>
<td>0.1734</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>3.54</td>
<td>3.46</td>
<td>2.19</td>
<td>5.23</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.7586</td>
<td></td>
<td>0.0352</td>
<td></td>
</tr>
</tbody>
</table>

The F-test results summarized in Table 15 showed p-values of 0.7586 and 0.0352 for Australia and Singapore, respectively. For Australia, it indicated that the difference in the CoV variances for
"smoothers" and "non-smoothers" was insignificant. It followed that the usual two-sample t-test was adopted for Australia. The difference in the CoV variances for "smoothers" and "non-smoothers" was significant, warranting the use of two-sample approximate t-test for Singapore.

From Table 15 (i.e. combination 4), the CoV mean of "smoothers" was observed to be lower than the CoV mean of "non-smoothers" for both countries. It seemed to indicate that when profit smoothing manipulation is practised by a company, such smoothing behaviour can be detected by the CoV. On the other hand, if company size is the determining factor for profit smoothing manipulation, "Non-Top 150" (or "Non-Top 30") companies should have lesser capacity to practise profit smoothing manipulation than "Top 150" (or "Top 30") companies. Therefore, the practice of profit smoothing manipulation should be less obvious among "Non-Top 150" (or "Non-Top 30") companies. The new null hypothesis was as follows:

**H12:** the CoV mean of companies classified as "Non-Top 150" (or "Non-Top 30") and "smoothers" is not significantly different from the CoV mean of companies classified as "Non-Top 150" (or "Non-Top 30") and "non-smoothers".

The p-value for the test of difference between the CoV means of the two groups was 0.3946, meaning **H12** could not be rejected for Australia. This implied that no significant difference was observed between the CoV means of "smoothers" and "non-smoothers" amongst the Australian "Non-Top 150" companies. In contrast, the p-value of 0.1734 provided a weak basis for rejecting **H12** for Singapore. Thus, it
was suggested that unlike Australia, the Singaporean case did not support the view that "Non-Top 30" companies practise less profit smoothing manipulation. This was based on the choice of twenty percent as the critical significance level. Based on the data set for this thesis, the disagreement in results between these two countries again indicated that the impact of company size on profit smoothing manipulation did not seem to be detectable.

In summary, it seemed apparent that the CoV may be a useful indicator for detecting profit smoothing manipulation based on the results for combinations (1) and (3) (Tables 12 and 14 respectively). However, the impact of company size on such manipulation was not able to be verified. The results for combination 1 (refer to Table 12), for example, did not appear to support the expectation that "Top 150" Australian companies would be more susceptible to the practice of profit smoothing manipulation than "Non-Top 150" Australian companies. Whereas, the shortage of Singaporean data in a particular group made it impossible to conduct the same combination 1 comparison for Singapore. On the other hand, the disagreement in results for Australia and Singapore for combination 4 (refer to Table 15) did not support the view that "Non-Top 150" (or "Non-Top 30") companies are less likely to practise profit smoothing manipulation. As a result, no further test was conducted to rank the CoVs on the basis of low and high CoV means (i.e. "group A versus group B" comparison), as discussed earlier in this section.
By replicating the testing procedures used to test the effect of company size on smoothing (i.e. Tables 12 to 15), further investigation was carried out to determine whether the type of company ("industrial" vs. "mining") affects the smoothing/non-smoothing condition among Australian companies. No similar test was conducted for Singaporean companies because the sample only comprised "industrial" companies. Another four selected combinations were used to compare company type with the smoothing/non-smoothing condition:

(1) "Industrial" companies versus "Mining" companies, where the companies are classified as "smoothers".

(2) "Industrial" companies versus "Mining" companies, where the companies are classified as "non-smoothers".

(3) "Smoothers" versus "non-smoothers", where the companies belong to the "Industrial" category.

(4) "Smoothers" versus "non-smoothers", where the companies belong to the "Mining" category.

Combinations (1) to (4) provided the capacity to test whether company type would affect the smoothing/non-smoothing condition.

The F-test was again carried out to first investigate the differences between the CoV variances of the respective groups for comparison, as shown in (1) to (4). The purpose was to determine whether the "approximate" or the "usual" two-sample t-test was

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60 Note that there are a total of six possible combinations available when comparing the "Industrial"/"Mining" against the smoothing/non-smoothing condition. However, two other combinations were omitted because there was no common basis of comparison.

61 Refer to footnote 56.
appropriate.

To conduct a two-sample t-test, a twenty percent critical significance level was similarly adopted to test the new hypotheses (i.e. H13 to H16). This choice was made for the same reason that there was only a small sample size for each sub-divisional groups in (1) to (4).

Separate results for Australia and Singapore were presented in Tables 16 to 19:

**Table 16**

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industrial</td>
<td>Mining</td>
</tr>
<tr>
<td>CoV Mean</td>
<td>3.41</td>
<td>5.43</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td></td>
<td>0.2689</td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>1.68</td>
<td>3.26</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td></td>
<td>0.2194</td>
</tr>
</tbody>
</table>

The F-test results summarized in Table 16 showed a p-value of 0.2194. This indicated that the difference in the CoV variances for "industrial" and "mining" companies was insignificant, so the usual two-sample t-test was applied instead.

From Table 16 (i.e. combination (1)), the CoV mean of "industrial" companies was observed to be lower than the CoV mean of "mining" companies. It was expected that "mining" (or more risky)
companies would be more likely to practice profit smoothing manipulation than "industrial" (less risky) companies. The contradictory results, however, seemed to indicate that the practice of profit smoothing manipulation is not influenced by company type. The new null hypothesis was as follows:

**H13:** the CoV mean of companies classified as "Industrial" and "smoothers" is not significantly different from the CoV mean of companies classified as "Mining" and "smoothers".

The p-value for the test of difference between the CoV means of the two groups was 0.2689. Thus, **H13** could not be rejected. This implied that no significant difference was observed between the CoV means of "industrial" and "mining" companies among "smoothers". Thus, the data set for this thesis seemed to indicate that there was no clear evidence of the impact of company type on profit smoothing manipulation.

**Table 17**
A Comparison between "Industrial" versus "Mining" companies with the condition that both groups practise "non-smoothing"

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industrial</td>
<td>Mining</td>
<td></td>
</tr>
<tr>
<td>CoV Mean</td>
<td>8.09</td>
<td>7.12</td>
<td></td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>15</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td></td>
<td>0.5923</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>5.60</td>
<td>2.74</td>
<td></td>
</tr>
<tr>
<td>p-value of F-test</td>
<td></td>
<td>0.0889</td>
<td></td>
</tr>
</tbody>
</table>
The F-test results summarized in Table 17 showed a p-value of 0.0889. This indicated that the difference in the CoV variances for "industrial" and "mining" companies was significant. As a result, a two-sample approximate t-test was adopted.

From Table 17 (i.e. combination (2)), the CoV mean of "industrial" companies was observed to be relatively close to the CoV mean of "mining" companies. If the impact of company type is to be apparent, the CoV mean of "mining" companies will be lower than the CoV mean of "industrial" companies. The results seemed to indicate that the impact of company type was insignificant when profit smoothing manipulation was not practised. The new null hypothesis was as follows:

H14: the CoV mean of companies classified as "Industrial" and "non-smoothers" is not significantly different from the CoV mean of companies classified as "Mining" and "non-smoothers".

The p-value for the test of difference between the CoV means of the two groups was 0.5923. Thus, H14 could not be rejected. This implied that no significant difference was observed between the CoV means of "industrial" and "mining" companies among "non-smoothers". Thus, the effect of company type seemed to be insignificant when profit smoothing manipulation was not practised.
A Comparison between "smoother" versus "non-smoother" companies with the condition that they are "Industrial" companies

<table>
<thead>
<tr>
<th></th>
<th>smoother</th>
<th>non-smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>3.41</td>
<td>8.09</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.0088</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>1.68</td>
<td>5.60</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td></td>
<td>0.0148</td>
</tr>
</tbody>
</table>

The F-test results summarized in Table 18 showed a p-value of 0.0148. This indicated that the difference in the CoV variances for "smoothers" and "non-smoothers" was significant. As a result, the two-sample approximate t-test was adopted.

From Table 18 (i.e. combination (3)), the CoV mean of "smoothers" was observed to be very much lower than the CoV mean of "non-smoothers". If the CoV is to be an adequate profit smoothing indicator, then the CoV mean of "smoothers" should be significantly lower than the CoV mean of "non-smoothers", when profit smoothing manipulation is being practised by a company. The new null hypothesis was as follows:

**H15**: the CoV mean of companies classified as "Industrial" and "smoothers" is not significantly different from the CoV mean of companies classified as "Industrial" and "non-smoothers".

The p-value for the test of difference between the CoV means of the
two groups was low at 0.0088. Thus, H15 could be rejected with a high level of confidence. This implied the CoV mean of "smoothers" was significantly different from the CoV mean of "non-smoothers" among "industrial" companies. Thus, the data set for this thesis appeared to be able to confirm that the CoV has the capacity to detect profit smoothing manipulation.

**Table 19**
A Comparison between "smoother" versus "non-smoother" companies with the condition that they are 'Mining' companies

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>smoother</td>
</tr>
<tr>
<td>CoV Mean</td>
<td>5.43</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>2</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.4777</td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>3.26</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td></td>
</tr>
</tbody>
</table>

The F-test results summarized in Table 19 showed a p-value of 0.5596. This indicated that the difference in the CoV variances for "smoothers" and "non-smoothers" was insignificant. Consequently, the usual two-sample t-test was adopted.

From Table 19 (i.e. combination (4)), the CoV mean of "smoothers" was observed to be lower than the CoV mean of "non-smoothers". It is expected as indicated earlier, if the CoV is to be an adequate indicator of profit smoothing manipulation, that the CoV
mean of "smoothers" should be significantly lower than the CoV mean of "non-smoothers". The results seemed to support this expectation. The new null hypothesis was presented as:

**H16**: the CoV mean of companies classified as "Mining" and "smoothers" is not significantly different from the CoV mean of companies classified as "Mining" and "non-smoothers".

The p-value for the test of difference between the CoV means of the two groups was 0.4777. Thus, **H16** could not be rejected. This implied that no significant difference was observed between the CoV means of "smoothers" and "non-smoothers" among "mining" companies. Since the CoV has been proven so far to be a useful indicator for detecting the practice of profit smoothing manipulation, the contradictory results in **Table 19** could only mean that the impact of company type on the practice of profit smoothing manipulation could not be verified.

In conclusion, only two of the Craig and Walsh (1989) six hypothesis tests were conducted. The results based on their **H2** (refer to **Table 10**) did appear to provide some helpful initial evidence that the CoV has the ability to detect "smoothing" behaviour in both Australia and Singapore. The data set for this thesis, however, was not able to verify that company size has an impact on the practice of profit smoothing manipulation. Alternative hypotheses (i.e. **H9** to **H16**) were therefore adopted in this thesis to analyze the impact of company size, as well as the impact of company type, on the practice of profit smoothing manipulation. These alternative hypotheses were also
simultaneously used to further verify whether the CoV is a useful indicator for detecting the practice of profit smoothing manipulation.

The results for analyzing the impact of company size (refer Tables 12 to 15 in relation to H9 to H12, respectively), as well as the impact of company type (refer Tables 16 to 19 in relation to H13 to H16, respectively), on profit smoothing manipulation appeared to be in coherence with the view that the CoV has the ability to detect the "smoothing" behaviour. Due to data limitations, tests for Singapore could not be conducted for H9 and H11. However, the Craig and Walsh (1989) view that there is a relationship between company size and the propensity to profit smooth still remained unconfirmed (refer to results of Table 12 to 15).

It must be borne in mind that there were some inherent limitations in the data which could affect the statistical testing and inferences drawn therefrom. These inherent limitations were:

1. The final sample sizes for Australia and Singapore were relatively small (30 and 20 respectively). Further necessary sub-divisions involved dealing with even smaller sample sizes.

2. Some of the Singaporean companies had the problem that their RNP for a particular year contained a profit figure for a period longer or shorter than 12 months due to a change in financial period. In order to ensure that the RNP contained a profit figure for a 12 months period, a method of annualization was adopted to adjust the RNP figure.

3. It was noted that the conversion of RNP figures from Malaysian currency to Singaporean currency (refer to Section 5.4.3) may add some sort of variability movements to the already fluctuating RNPs.
(4) Artificial CoVs, calculated from forecasted RNPs, were used to overcome the distortion of the basic standard normal distribution.

(5) To examine the impact of company size, Australian companies were categorized as "Top 150"/"Non-Top 150", whereas Singaporean companies were categorized as "Top 30"/"Non-Top 30". Note that this method of segregating big from small companies is a discretionary choice. This implies that the results obtained for the two countries could be rather different if the cut-off point for big companies were either increased or decreased.

6.6 A Comparison of the variability of yearly movements in RNP (CoV) between Australia and Singapore

The results drawn so far appear to confirm that the CoV has the ability to detect the "smoothing" behaviour. This will help facilitate a comparison between Australia and Singapore in order to deduce which country shows a higher tendency to manipulate profit smoothing.

As mentioned earlier, the sample of Australian companies comprised both "industrial" and "mining" companies. In contrast, in the sample of Singaporean companies were only "industrial" companies. In order to facilitate a comparison between these two countries, the nine Australian "mining" companies were first omitted. Hypotheses H7a and H7b (refer to Section 5.1.2) were then implemented to ensure that the CoV can serve as a useful indicator for cross-cultural comparison purposes.

In testing H7a, the F-test was first carried out to investigate the difference between the CoV variances of Australian "smoothers" and Singaporean "non-smoothers". The result in Table 20 was a low p-value
of 0.023, allowing the use of the two-sample approximate t-test. From Table 20, the CoV mean of Australian "smoothers" was observed to be much lower than the CoV mean of Singaporean "non-smoothers". If the CoV is to be an adequate tool for cross-cultural comparison purposes, Singaporean "non-smoothers" would be more likely to have higher fluctuating RNPs than Australian "smoothers". The p-value of the two-sample approximate t-test was low at 0.004. Thus, H7a could be rejected. This meant that Singaporean "non-smoothers" would be more likely to have fluctuating RNPs than Australian "smoothers".

<table>
<thead>
<tr>
<th></th>
<th>Australian smoother</th>
<th>Singaporean non-smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>3.41</td>
<td>9.32</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.0040</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>1.68</td>
<td>5.16</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td>0.023</td>
<td></td>
</tr>
</tbody>
</table>

For H7b, the F-test was similarly carried out to investigate the differences between the CoV variances of Australian "non-smoothers" companies and Singaporean "smoothers". The results in Table 21 gave a low p-value of 0.0133, allowing the use of the two-sample approximate t-test. From Table 21, the CoV mean of Australian "non-smoothers" was
observed to be much higher than the CoV mean of Singaporean "smoothers". Similarly, if the CoV is to be an adequate tool for cross-cultural comparison purposes, Singaporean "smoothers" would be less likely to have fluctuating RNP's than Australian "non-smoothers". The p-value of the two-sample approximate t-test was reasonably low at 0.0711. Thus, H7b could be rejected. This meant that Singaporean "smoothers" would be less likely to have fluctuating RNP's than Australian "non-smoothers".

<table>
<thead>
<tr>
<th></th>
<th>Australian non-smoother</th>
<th>Singaporean smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>8.08</td>
<td>5.00</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.0711</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>5.58</td>
<td>2.22</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td>0.0133</td>
<td></td>
</tr>
</tbody>
</table>

The results for both H7a and H7b confirmed that the CoV mean of "smoothers" is significantly lower than the CoV mean of "non-smoothers", irrespective of which country the practice of profit smoothing manipulation is taking place in. These two sets of results therefore appeared to support the view that the CoV is an adequate and unbiased tool in facilitating a cross-cultural comparison between Australia and Singapore. Hence, H8a and H8b (refer Section 5.1.2) were
then tested to compare the degree of profit smoothing manipulation practised in these two countries. To conduct a two-sample t-test, the critical level of significance for testing both H8a and H8b was selected to be at twenty percent. Since the data sets for Australia and Singapore were limited in size, this twenty percent significance level was selected to decrease the probability of accepting a null hypothesis when it was false.

For H8a, the F-test was similarly carried out to investigate the differences between the CoV variances of Australian "smoothers" and Singaporean "smoothers". The results in Table 22 showed a p-value of 0.5553, allowing the use of the usual two-sample t-test. From Table 22, the CoV mean of Australian "smoothers" was observed to be lower than the CoV mean of Singaporean "smoothers". If the proposition that Australia practises more profit smoothing manipulation than Singapore is true, then it is expected that the CoV mean of Australian "smoothers" will be significantly lower than the CoV mean of Singaporean "smoothers". The p-value of the usual two-sample t-test was 0.1615. Adopting a critical significance level of twenty percent, H8a could be rejected. That is, a relatively high probability of 83.85 percent that there could be a higher tendency for Australian companies to practise profit smoothing manipulation than Singaporean companies.
Table 22
A Cross-cultural Comparison between Australian "smoothers" versus Singaporean "smoothers"

<table>
<thead>
<tr>
<th></th>
<th>Australian smoother</th>
<th>Singaporean smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>3.41</td>
<td>5.00</td>
</tr>
<tr>
<td>No. of Cos.</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.1615</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>1.68</td>
<td>2.22</td>
</tr>
<tr>
<td>p-value of F-test</td>
<td></td>
<td>0.5553</td>
</tr>
</tbody>
</table>

Similarly, for H8b, the F-test was carried out to investigate the differences between the CoV variances of Australian "non-smoothers" and Singaporean "non-smoothers". The results in Table 23 showed a p-value of 0.8183, allowing the use of the usual two-sample t-test. From Table 23, the CoV mean of Australian "non-smoothers" was observed to be relatively close to the CoV mean of Singaporean "non-smoothers". This indicated that a similar comparison between the two countries may be unnecessary when profit smoothing manipulation is not practised. The p-value of the usual two-sample t-test was 0.5706, meaning H8b could not be rejected. This implied that no significant difference was observed between the CoV means of Australian "non-smoothers" and Singapore "non-smoothers". Thus, this result complemented the view that the CoV is an adequate indicator of profit smoothing manipulation behaviour.
Table 23
A Cross-cultural Comparison between Australian 'non-smoothers' versus Singaporean 'non-smoothers'

<table>
<thead>
<tr>
<th></th>
<th>Australian non-smoother</th>
<th>Singaporean non-smoother</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoV Mean</td>
<td>8.08</td>
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</tr>
<tr>
<td>No. of Cos.</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>p-value of two-sample t-test</td>
<td>0.5706</td>
<td></td>
</tr>
<tr>
<td>CoV Standard Deviation</td>
<td>5.58</td>
<td>5.16</td>
</tr>
<tr>
<td>p-value F-test</td>
<td></td>
<td>0.8183</td>
</tr>
</tbody>
</table>

6.7 Empirical Evidence for the Impact of National Culture on Profit Smoothing Manipulation in Australia and Singapore

Based on the results in Section 6.6, there appeared to be a tendency for the CoV mean of Australian "smoothers" to be lower than the CoV mean of Singaporean "smoothers". This observed tendency is consistent with the view that profit smoothing manipulation is higher in Australia than in Singapore. In other words, that profit smoothing manipulation may be conditioned by the differing societal norms of these two countries.

As mentioned earlier in Section 5.2, the unknown factor is the effect of foreign cultures on the compliance behaviour of the corporate directors of multinational corporations. This could especially be so if they were expatriates posted to these positions from other countries. The extent of this factor could not be determined within the boundaries of this thesis. All that can be concluded is that there is an apparent
tendency for Australian companies to practise more profit smoothing manipulation than for Singaporean companies (refer to Table 22), which supports (though not conclusively) the proposition that national culture shapes or influences the compliance behaviour of corporate directors in these countries.
CHAPTER 7
CONCLUSION

7.1 Culture as it relates to Accounting Practice

When confronting a culture other than your own, the impact of culture becomes obvious. It is often not even apparent that an individual, tribe or nation has a distinct culture, if there has been no exposure to other peoples of different ways. When at the interface between two cultures, culture can be seen to affect virtually every aspect of life. This is as true for what one eats and how one dresses as it is for management approaches and accounting practices.

That culture influences accounting practice has only recently been acknowledged in the accounting literature. Modern improvements in transport and communication technology have caused a paradigm shift towards the concept and reality of the world being a global community. This has had significant implications for accounting practice. Among them is the realization of the importance of understanding how culture affects accounting practice worldwide so that a common accounting "language" can be developed facilitating the communication of financial information internationally.

Business no longer just occurs within a nation with trade occurring between nations. Politics and business have been internationalised. What is happening now outside your doorstep if often now more important than what is happening within your household. Within the context of this new "unity", understanding and dealing with
the "diversity" is now more important.

What is culture? Many have attempted explanation but, to date, there has been no definitive answer. Hofstede's (1980) definition and framework for the analysis of culture have been useful in previous studies of culture in an accounting context. His work and the application of it to the accounting arena is affirmed in this thesis. He defined culture as "the collective programming of the mind which distinguishes the members of one human group from another" and emphasized societal norms as the value systems shared by the majority in a society. Burnett (1990) has succinctly summarized these ideas describing culture as an outward expression of a shared framework of concepts and presuppositions that provide people with their basic assumptions about reality. A person's perception of reality is thus shaped by their consciously-held (or even unconsciously-held) values and presuppositions about reality.

Common values and presuppositions are held collectively and this distinguishes one people/tribe/nation from another. The term "national culture" has been used to indicate the predominant societal norms and value systems of a nation, recognizing that cosmopolitan or multi-racial populations in nations today are common.

How does culture impinge upon accounting practice? Cultural influences on two major aspects of accounting organization have been studied in this thesis. They are accounting regulation and financial reporting.
Accounting regulation has to do with the structuring and maintenance of the accounting profession, its standards of practice and their use in the business and management spheres. It has to do with standards setting as well as measures to ensure compliance. Most economies are some mix of government involvement and free market enterprise. Similarly, the approach to accounting regulation varies from country to country. In some countries, government has a decisive role with centralized economic planning and accounting regulation. This is termed a "legalistic" or "bureaucratic" approach to accounting regulation. In other countries, professional accounting bodies play a greater role in accounting standards setting with government taking more of a back seat. This is termed the "professional" approach to accounting regulation.

It may be simply that political circumstances or ideologies dictate which approach to accounting regulation is taken. Alternatively, underlying cultural values may shape observed practice. In order to assess the existence or otherwise of a link between culture and accounting regulation behaviour and the implications of any link, a comparative study of the cultures and accounting regulation practices of Australia and Singapore has been conducted. Australia and Singapore have similar roots as former British colonies but have distinctly different national cultures. Singapore, being predominantly Chinese, has eastern, Confucianistic/Buddhist/Taoistic roots with possible Malay, Hindu and European influences. Australians have been predominantly of
British/Irish stock and thus have a combination of Judeo-Christian and Enlightenment Humanism roots with indigenous Aboriginal and later southern European and Asian multicultural influences. Singapore is observed to follow a "legalistic" approach to accounting regulation, whilst Australia practices "professionalism".

Using Hofstede's (1980) framework for analyzing culture, and Gray's (1988) and Harrison and McKinnon's (1986) application of it to the accounting arena, cultural features have been discerned which seem to explain the observed differences in accounting regulation behaviour in these two countries. Singaporeans value past traditions and are loathe to depart from what has worked in the past. They are collective in their mentality, relationships and organization of society. The individual finds identity only as a part of the family or collective grouping. Confucianistic values dictate that each has a particular place in society and must behave accordingly. "Shame" or "loss of face" is a powerful social tool which is used to encourage compliance with collective norms. Singaporeans defer to authority and even prefer strong governmental leadership. There is a strong work ethic and a desire for financial security and well-being. Singaporeans are industrious, seeking social mobility and status through material success. Thus according to Hofstede's cultural dimensions, Singapore is classified as "collectivist", "feminine", and as having a "large power distance" with a "family" classification of national behavioural norms.

In contrast, Australia is classified as having a "village market"
norm, being a society without a decisive hierarchy. Australia is regarded as "individualistic" and "masculine" with a "small power distance". Australians are individualists and value self-sufficiency and independence. They are pioneering people who have had to adapt to and cope with new and changing circumstances. They are pragmatic and innovative. Because of historical factors they are generally suspicious of authority and have tried to put in place a system of checks and balances to limit the power of government and protect individual rights. Family ties are weaker in Australia, than in Singapore, with individuals preferring to find their own way rather than to conform to the expectations of others. Egalitarianism, mateship and sticking with your friends, however, are highly valued in the culture and explain the easygoing cooperation in interpersonal relations and support of one another especially in times of crisis.

Not much weight was placed on Hofstede's (1980) "uncertainty avoidance" dimension except to note that both Australia and Singapore have been categorized as "weak uncertainty avoidance" countries. In this thesis, the "uncertainty avoidance" dimension was related to how the two countries adapt to changes (refer to Section 2.6.1 for explanation). Singapore was viewed as clinging more to traditions and the past. Whilst Australia was seen as relatively ready to challenge the unknown.

According to Gray's (1988) accounting values model, Singapore was classified as practising "statutory control" and being less "flexible", less "optimistic" and less "transparent". In contrast, Australia was seen as
practising "professionalism" and being more "flexible", more "optimistic" and more "transparent".

Harrison and McKinnon’s (1986) model was able to provide further insights into cultural differences through the study of system responses to intrusive events. It could be seen that Singapore has tended to hold onto British accounting regulatory standards much more than Australia and that Australians have taken more initiative and been more assertive and innovative in setting their own standards. More recently Singapore has tended to more readily accept the International Accounting Standards than has Australia. The Singaporean accounting profession has been more accepting of bureaucratic government, whilst the Australian accounting profession has striven to maintain its autonomy and prerogative in accounting regulation, resisting government intervention.

These three studies when applied to the accounting regulation systems of Australia and Singapore seemed to provide support for there being a link between culture and accounting practice. The cultural characteristics alluded to seemed to explain why Singapore is more "legalistic" in approach, whilst Australia is more "professional" in approach. They also seemed to indicate that perceptions of the government’s role and government intervention influence the outcome of any government intervention in a democratic society. In Singapore, government intervention is an accepted norm, whilst in Australia it is resisted, unless it is seen to serve the independent interests of the
general community. Differences in culture seem to be instrumental in
determining these differences in outcome.

As culture is seen to influence accounting regulation so, too,
would it be expected to influence financial reporting.

7.2 Implications of the Impact of National Culture on the Practice of
Profit Smoothing Manipulation

The specific focus of this thesis was to study the effect of national
culture on the practice of manipulative profit smoothing (by the use of
extraordinary items adjustments) in financial reporting. This practice by
some corporate directors is an attempt to give a certain (deceptive)
picture of a company's profitability and financial status in order to
support a particular advantageous strategy or objective.

Note that it was not the objective of this thesis to propose a way
of resolving the problem of profit smoothing manipulation. Rather, the
observed differences in this behaviour between Australia and Singapore
were simply to provide further evidence for there being a link between
culture and this facet of accounting organization and to give some
understanding of the nature of this link.

The assumption underlying the theoretical framework (refer to
Figures 7 and 8, Chapter 4) was that, where there exists two facets of
accounting organization (e.g. accounting regulation and financial
reporting) sharing in common the predominant national culture, similar
behaviour responses are expected from both. Thus, from the study of
cultural parameters as they appear to influence accounting regulation
behaviour, the prediction was made that manipulative profit smoothing would be greater in Australia than in Singapore. Whether or not corporate directors would engage in manipulative profit smoothing was thought to depend on how they perceived their moral obligations and social responsibilities.

The "deference to authority" and "peer pressure to conform with societal expectations" characteristics of Singaporean culture should mediate in the direction of there being more pressure to conform with regulatory standards and government directives. In contrast, Australians' individualism, suspicion of authority and reliance on voluntary fulfilling of individual obligation in a more relaxed, creative accounting environment would indicate a potential for less compliance and possibly more manipulative profit smoothing.

An empirical analysis was conducted to confirm the viability of a particular measuring instrument for the detection of manipulative profit smoothing and to either confirm or reject the prediction drawn from the qualitative theoretical framework.

7.3 The Outcome of the Empirical Analysis

The measuring instrument selected to detect the practice of manipulative profit smoothing was the CoV (i.e. the coefficient of variation of the relative change in the reported net profit figures). The results (refer to Tables 12 to 19 in Chapter 6) of the alternative hypotheses tests (i.e. H9 to H16) adopted in this thesis supported the
findings of the Craig and Walsh (1989) study that CoV is an adequate indicator of this behaviour. The higher the CoV value the less the degree of manipulative profit smoothing. However, the Craig and Walsh (1989) conclusion that there is a relationship between company size and the propensity to practice profit smoothing manipulation could not be supported using the data set of this thesis.

Before conducting the cross-cultural comparison of this behaviour in Australia and Singapore, two additional hypotheses (i.e. H7a and H7b in Chapter 5) were adopted to gauge whether CoV can serve as an unbiased indicator for cross-cultural comparison purposes. The results of these two hypothesis tests (refer to Tables 20 and 21 in Chapter 6) jointly indicated that the CoV can serve as an unbiased indicator, irrespective of the country in which such manipulation is practised.

The results of the cross-cultural comparison between Australia and Singapore (refer to Table 22 and H8a) were found to be consistent with the prediction that the propensity to manipulate profit figures would be greater in Australia than in Singapore. This consistency, consequently, also affirms the existence of a link between cultural values and corporate director perceptions and behaviour.

In addition, the empirical results also provided support for the theoretical framework of this thesis. That is irrespective of whether people belong to the accounting profession or whether they are corporate directors both share the fundamental underlying cultural values of their particular nation.
Certain externalities (especially in the case of Singapore) hindered the process of data collection thus limiting the size of the data set. The time frame for the data collection was restricted to be 1972 to 1989 in order to parallel the Craig and Walsh (1989) study. The Singapore Stock Exchange was set up only in May 1973, dramatically restricting suitable data in the earlier years of the sample period. In addition, a number of Singaporean companies had to be subsequently excluded from the sample due to such factors as changes in company operation, failure to prepare consolidated financial statements, limitations in the company mix, no extraordinary items adjustments being made for the financial year ended 1989 or RNP figures not existing throughout the sample period. This was in order to meet the selection procedure requirements of the Craig and Walsh (1989) study.

Fluctuations in the RNP figures were apparent and thought to be due to the international stock market crash of Oct 1987 (and, in the case of Singapore, to the 1973 and 1979 oil crises as well). The conversion of accepted Singaporean RNPs from Malaysian currency to Singaporean dollars may have contributed additional volatility to the already fluctuating RNP figures. It was noted that the data selection procedures themselves may contribute to a bias towards the expected results. This could not be confirmed one way or the other. A further unknown factor was the effect of foreign cultures on foreign multinational corporate director compliance behaviour.

Ideally, this analysis should be conducted again perhaps in 1999.
(i.e. extending the time frame a further 10 years) on further extended data set. At this stage all that can be said in this thesis is that the data and the associated analysis indicate the conclusions drawn. Application of a more direct measuring instrument through a survey of company corporate directors would be useful to provide supportive evidence for the conclusions of this thesis.

7.4 Implications of this Work

The findings of this thesis indicate that national culture influences behaviour in the accounting sub-culture - specifically in accounting regulation and financial reporting. Accounting is therefore not culture-free and cultural factors and their influence must be understood in order to tailor accounting practices to best suit a particular country's needs and in order to facilitate international understanding and harmonization of accounting practice.

The effectiveness or otherwise of government intervention in accounting regulation is seen as being nation-specific depending on local perceptions of what should be the role of government and the role of the accounting profession itself. The degree of manipulative profit smoothing practised will influence the credibility of financial information. This serves to highlight the difficulties differences in culture present to the understanding and standardisation of financial information.

The two-dimensional analytical framework of this thesis should
be a useful starting point for future studies of other aspects of accounting behaviour in differing cultural contexts. No doubt there is ample scope for further development and refinement.

The pressure for international harmonization of accounting practice and for financial information that can be universally understood will be likely to increase. With current trends towards ethnicity and nationalism in seeking to define national identities and towards globalism in seeking international cooperation, an understanding and respect of cultural differences will be instrumental in meeting the challenge of allowing "diversity" in the context of a "unity".
List of twenty companies in the Singaporean data set:

(1) Sunshine Allied Investments Ltd.
(2) QAF Limited
(3) Ganda Holdings Bhd.
(4) Summa Investments Ltd.
(5) Cycle and Carriage Ltd.
(6) Jack Chia - MPH Ltd.
(7) Boustead Holdings Bhd.
(8) Fraser & Neave Ltd.
(9) Robinson & Co. Ltd.
(10) Wearne Brothers Ltd.
(11) Goodwood Park Hotel Ltd.
(12) Pan Malaysia Cement Works Bhd.
(13) Alexandra Holdings Ltd.
(14) Hume Industries (M) Bhd.
(15) General Corporation Bhd.
(16) Tongkak Holdings Bhd.
(17) Construction & Supplies House Bhd.
(18) United Industrial Coporation Ltd.
(19) Khong Guan Flour Milling Limited
(20) Pegi Malaysia Bhd.
List of thirty companies in the Australian data set:

(1) Adelaide Brighton Cement Holdings Ltd.
(2) Coal & Allied Industries Ltd.
(3) Evans Deakins Industries Ltd.
(4) Gowing Brothers Ltd.
(5) Garratt's Ltd.
(6) ICI Australia Ltd.
(7) Leighton Holdings Ltd.
(8) McDonald Besser Industries Ltd.
(9) Pioneer Concrete Services Ltd.
(10) Westfield Holdings Ltd.
(11) Australia Oil and Gas Corporation Ltd.
(12) Endeavour Resources Ltd.
(13) Muswellbrook Energy and Minerals Ltd.
(14) Amalgamated Holdings Ltd.
(15) Smith (Howard) Ltd.
(16) Weston (George) Foods Ltd.
(17) Email Ltd.
(18) P.A.L. Holdings Ltd
(19) S.A. Brewing Holdings Ltd.
(20) Petroleum Securities Australia Ltd.
(21) Woodside Petroleum Ltd.
(22) Amatil Ltd.
(23) Bond Corporation Holdings Ltd.
(24) CSR Ltd.
(25) Chatham Investment Company Ltd.
(26) Coles Myer Ltd.
(27) Peters (W.A.) Ltd.
(28) Centaur Mining & Exploration Ltd.
(29) Dominion Mining Ltd.
(30) Consolidated Exploration Ltd.
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