A CROSS-CULTURAL STUDY OF ACCOUNTING CONCEPTS APPLIED IN INTERNATIONAL FINANCIAL REPORTING STANDARDS

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DECLARATION

I, Foo Yin Fah, declare that the PhD thesis entitled A Cross-cultural Study of Accounting Concepts Applied in International Financial Reporting Standards is no more than 100,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

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ABSTRACT

The aim in this study was to explore a different approach to examine the influence of culture on accounting practice by adapting Schwartz's (1992) universal structure of individual-level human motivational values to the domain of accounting. A mail survey was conducted on accountants in Malaysia to obtain their attitudes, beliefs and opinions about their motivational goals, and their interpretations and judgments in financial reporting. The results reveal a set of individual-level accounting motivational values that is a more comprehensive and theoretically valid representation of the accounting sub-culture compared to the Hofstede-Gray framework. Significant relationships were found linking the accountants' motivational values with their interpretations and judgments in financial reporting. Empirical evidence of cultural diversity within the accounting sub-culture was also found. Although the low response rate was a problem, the consistency of the respondents' demographic profile with the population and the insignificant non-response bias suggest that the results are generalisable.

The discovery of the accounting motivational values has contributed to the understanding of the depth, richness and complexity of the accounting sub-culture and its effects on accounting practice. As an individual-level construct, the motivational values can be applied to explain the influence of culture on judgments and decisions in accounting. The existence of cultural diversity within the accounting sub-culture provides evidence of the importance of intra-country cultural variations. The knowledge of the accounting motivational values and its effects on judgments and decisions have important implications to the global drive for convergence in accounting and auditing practices, as well as the formulation of accounting education and professional development strategies.

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LIST OF ABBREVIATIONS

AASB	Australian Accounting Standards Board
AARF	Australian Accounting Research Foundation
ACCA	Association of Certified Chartered Accountants
ANOVA	Analysis of Variance
CPAA	Certified Practicing Accountants of Australia
et al.	and others
FASB	Financial Accounting Standards Board
H_1	Hypothesis 1
H_2	Hypothesis 2
H_3	Hypothesis 3
H_4	Hypothesis 4
H_5	Hypothesis 5
MANOVA	Multivariate Analysis of Variance
MASB	Malaysian Accounting Standards Board
MIA	Malaysian Institute of Accountants
MICPA	Malaysian Institute of Certified Public Accountants
IAASB	International Auditing and Assurance Standards Board
IAS 41	International Accounting Standards 41: Agriculture
IASB	International Accounting Standards Board
IASCF	International Accounting Standards Committee Foundation
ibid	in the same passage
ICAA	Institute of Chartered Accountants in Australia
ICAEW	Institute of Chartered Accountants in England and Wales
ICANZ	New Zealand Institute of Chartered Accountants
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
PVQ	Portrait Values Questionnaire
SPSS	Statistical Package for the Social Sciences
U.S.A.	United States of America
U.K.	United Kingdom

CHAPTER 1: INTRODUCTION

1.1. Background to the research

> Globally consistent and uniform financial systems provide cost-efficiencies to business and greater safeguards to the public. The public is entitled to have confidence that, regardless of where a business activity occurs, the same high quality standards were applied. It is widely recognised that investors will be more willing to diversify their investments across borders if they are able to rely on financial information based on a similar set of standards. Thus, adherence to international standards, such as those developed by the International Accounting Standards Board (IASB) and the International Auditing and Assurance Standards Board (IAASB), can ultimately lead to greater economic expansion. (Wong, 2004, p.4)

According to Wong (2004), the growing globalisation of businesses and markets has resulted in a greater recognition among both the private and public sectors of the benefits of having 'a commonly understood financial reporting framework supported by a strong globally accepted auditing standards' (p.1). Consequently, there have been concerted efforts by international organisations such as the International Federation of Accountants (IFAC) and the International Accounting Standards Committee Foundation (IASCF) to push for the international convergence of a single set of globally accepted high quality financial reporting and auditing standards. In light of recent high profile corporate failures, this drive for the convergence of financial reporting and auditing standards has become a necessary step towards rebuilding public confidence in the financial reporting system (IFAC, 2003).

According to the latest report by the IASCF (2006), more than one hundred countries throughout the world have adopted the international accounting standards issued by the IASB. However, global acceptance of international accounting and auditing standards need not necessarily translate into a reduction in diversity of accounting and auditing practices. Tay and Parker (1990) distinguish between *de jure* and *de*

facto uniformity. The promulgation of accounting and auditing standards may result in *de jure* uniformity, which is the uniformity of regulations, but it does not ensure that there will be uniformity in the application of these standards or *de facto* uniformity.

> Now that IFRS is being used in so many countries around the world, the challenge is to ensure it is applied as consistently as possible – by preparers, auditors, regulators and others involved in the financial reporting process. … consistency does not mean uniformity. The IFRS standards are principles-based and require judgment to apply them. In some cases the standards allow for the use of alternatives. And every company has different facts and circumstances. Consistency means an acceptable interpretation in every case – it does not mean an identical application and interpretation in each case. (Forum of Firms, 2007, p.4)

Accounting practice being a human activity is affected by the interpretations and judgments in the application of accounting concepts and principles. According to Perera (1989), this human element of accounting is influenced by environmental factors particularly culture. Culture is described by Doupnik and Salter (1995) as having a pervasive influence on accounting practice through the norms and values held by members of the accounting system. Different cultural groups in accounting would result in different interpretations and judgments of accounting relationships and concepts (Belkaoui & Picur, 1991). This cultural relativism of accounting (Belkaoui, 1995) would influence the consistent interpretations and judgments in the applications of accounting and auditing standards. According to Doupnik and Tsakumis (2004), accountants from different cultural groups may interpret and apply accounting and auditing standards differently even though the standards have been consistently adopted across these groups. An understanding of how culture affects the interpretations and judgments of accountants would, therefore, contribute to the efforts of reducing *de facto* diversity in accounting and auditing practices.

The study of cultural relativism in accounting has relied heavily on Gray's (1988) accounting value dimensions that represent the accounting sub-culture. Gray

postulated the existence of an accounting sub-culture within the larger society. He then hypothesised a set of accounting values held by members of the accounting sub-culture that were derived from Hofstede's (1980) work-related national cultural values. However, the Hofstede-Gray framework of the influence of culture on accounting practice has been argued to be conceptually inadequate to explain the depth, richness and complexity of culture (Gernon & Wallace, 1995; Chow *et al*., 1999; Harrison & McKinnon, 1999). There is, therefore, an opportunity to explore an alternative approach to the conceptualisation of the accounting sub-culture so that the influence of culture on accounting practice can be more effectively explained.

In the remainder of this chapter, the research problem together with the justification for the research is introduced. In addition, the research method adopted is also briefly described.

1.2. Research questions and aims of the study

The main aim in this study is to explore a more comprehensive and refined approach to the conceptualisation of the accounting sub-culture that would more adequately explain the effect of culture on the interpretations and judgments of accountants. Adopting a values-based perspective of culture, the theory of the universal human motivational values postulated by Schwartz (1992) is applied to the domain of accounting. The universal human values represent desirable goals that guide the way people conduct their lives. These goals are based on the basic needs of human existence and are, therefore, argued to be a more comprehensive and refined representation of the complex construct that is culture as compared to the Hofstede-Gray framework. As a consequence, Schwartz's values framework provides an opportunity to empirically explore the cultural relativism of accounting (Doupnik & Tsakumis, 2004). Drawing on Schwartz's theory, it is possible to extrapolate the

universal motivational values to the domain of accounting and consequently develop a unique set of motivational values that represent the goals that guide how accountants would behave in the accounting environment. According to Doupnik and Tsakumis, the explicit identification of the motivational values of accountants is important to prove the existence of the accounting sub-culture and its influence on accounting practice.

In order to ensure the validity of the motivational values' influence on accounting practice, there is a need to establish a theoretical link with the accountants' interpretations and judgments. Belkaoui and Picur (1991) postulated the cognitive functioning perspective of culture where different cultural groups create different cognitions or systems of knowledge. Chambers (1966) describes accounting, or more specifically external financial reporting, as an information and communication system that is influenced by the mental processes and cognitive abilities of the accountants. Consequently, culture influences accounting practice through its effect on the accountants' interpretations and judgments. An examination of the effects of the motivational values of the accountants on their interpretations and judgments in external financial reporting would represent a means to test the validity of the motivational values to explain accounting practice.

In addition, studies have also shown that different sub-groupings of accountants within the accounting sub-culture may project different accounting behaviours. Diversity within the accounting sub-culture due to differences in ethnicity (Tsui, 2001; Haniffa & Cooke, 2002), religion (Hamid *et al.*, 1993), language (Belkaoui, 1980; Doupnik & Richter, 2003), gender (Hofstede, 2001) and age (Matsumoto & Juang, 2004) have been argued to result in differences in accounting behaviour. If the accountants' motivational values represent their sub-culture, then diversity within this sub-culture would result in differences in these motivational values. An examination

of the influence of accountants' membership of different sub-groups within the accounting sub-culture on their motivational values would, therefore, assist in further understanding the effects of cultural diversity on accounting practice.

On the basis of the above aim of this study, the following main research objective has been identified to investigate the validity of the set of motivational values of accountants to explain the influence of culture on accounting practice.

Do the motivational values of accountants affect their interpretation and judgment in external financial reporting?

Drawing from this main research question, several research objectives have been identified. The following objectives investigate the association between the motivational values of the accountants in Malaysia and their interpretations and judgments in financial reporting in order to establish the theoretical link between culture and accounting practice. The existence of cultural diversity within the accounting sub-culture in Malaysia and its effect on accounting practice is also examined.

1. *Whether membership of different sub-groups within the accounting sub-culture affect the motivational values of accountants in Malaysia.*

2. *Whether there is any association between the motivational values of accountants in Malaysia and their interpretation of concepts in external financial reporting.*

3. *Whether there is any association between the motivational values of accountants in Malaysia and their judgment in external financial reporting.*

To provide further focus on the research question and objectives, five hypotheses are posed in Section 5.2.

1.3. Justification for the research

This study is important because it contributes to the understanding of the cultural relativism model of accounting by exploring an alternative approach to the conceptualisation of the accounting sub-culture. The application of the Schwartz (1992) universal human values to explicate a set of motivational values in accounting would provide a more theoretically comprehensive and refined representation of the accounting sub-culture compared to the Hofstede-Gray framework. The Schwartz values framework is derived from a wider sample of respondents and is argued to be more generalisable to the domain of accounting (Doupnik & Tsakumis, 2004). Consequently, the motivational values in accounting that is based on the Schwartz framework would provide an opportunity to better understand the nature and complexity of the accounting sub-culture.

This study is also significant because it aims to associate explicitly the motivational values that represent the accounting sub-culture with the interpretations and judgments of accountants in financial reporting. This approach has been argued by Doupnik and Tsakumis (2004) as essential in establishing the validity of the cultural relativism of accounting. The results from this study would provide a clearer understanding of the nature of the influence of culture on accounting practice. A more theoretically refined set of motivational values to represent the accounting sub-culture and a clearer understanding of the influence of these values on the interpretations and judgments of the accountants would be an important contribution to the global efforts to bring about convergence in international financial reporting and auditing practices. An understanding of the nature of the accountants'

motivational values and the manner in which it affects their interpretations and judgments would enable appropriate strategies to be implemented to bring about greater consistency in the application of accounting and auditing standards.

1.4. Research methods

As the aim in this study is to examine the attitudes, beliefs and opinions of the accountants about their motivational goals, and interpretations and judgments in accounting, a survey research approach is adopted to obtain the data necessary for the testing of the relevant hypotheses. Many similar studies (Chanchani & Willett, 2004; Ngaire, 2006; Tsakumis, 2007) examining the perceptions of accountants have applied the survey research method.

The target population for this study is the professional accountants living and working throughout Malaysia. In order to reach this large pool of respondents, the self-administered mail survey is considered an appropriate approach for data collection. Malaysia is considered a suitable location to conduct this study because it comprises three main ethnic groups of Malays, Chinese and Indians. This multi-cultural setting provides an ideal environment to examine the effect of cultural diversity on the motivational values of the accountants.

The approach taken in this study is to adapt the universal human motivational values discovered by Schwartz (1992) to the domain of accounting. Therefore, Schwartz *et al.*'s (2001) Portrait Value Questionnaire (PVQ) instrument would be incorporated into this study to capture the motivational values of the accountants in Malaysia. The PVQ comprises forty short verbal portraits of an hypothetical person's goals, aspirations or wishes that point implicitly to the importance of a particular value. The validity and reliability of the PVQ has been tested in many diverse cultures and is

considered appropriate for this study. Since this study involves research on the attitudes and beliefs of human subjects, approval of the Human Research Ethics Committee of the Faculty of Business and Law, Victoria University was obtained in 2006 before the mail surveys were conducted.

The data collected were analysed using the statistical analysis software Statistical Package for the Social Sciences (SPSS) Version 14.0. The data were subjected to parametric and non-parametric tests where appropriate, including multivariate analysis of variance (MANOVA).

1.5. Definitions

The terms culture and values, which were discussed in the preceding paragraphs, represent key constructs in this study. These terms are defined in the following sections.

1.5.1. Culture

According to Matsumoto and Juang (2004), culture is a rich and complex concept that is embedded in many aspects of life and living. The definition of culture adopted in this study is from a socio-psychological perspective, examining the mental processes and behavioural characteristics of groups of individuals.

> Culture is a dynamic system of rules, explicit and implicit, established by groups in order to ensure their survival, involving attitudes, values, beliefs, norms, and behaviours, shared by a group but harboured differently by each specific unit within the group, communicated across generations, relatively stable but with the potential to change across time. (Matsumoto & Juang, 2004, p.10)

1.5.2. Values

Culture is, therefore, a representation of the shared values, attitudes, beliefs and behaviours among a group of people. According to Smith and Schwartz (1997), values are a central element in the study of culture. Schwartz and Bilsky (1987) provided a conceptual definition of values as beliefs about desirable goals that guide a person's behaviour. These goals are ordered in relative importance and transcend specific situations.

1.6. Outline of the thesis

This study is organized as follows. Chapter 2 provides a review of the literature on the cultural relativism theory of accounting including the concept of the accounting sub-culture postulated by Gray (1988). The general reliance of cultural studies in accounting on the Hofstede-Gray framework is critically examined. The Schwartz's (1992) universal structure of human motivational values is examined in Chapter 3. The elements of the individual-level values are reviewed and adapted to the domain of accounting to extrapolate a set of accounting motivational values. Theories explaining the influence of culture on the mental processes and cognitive abilities of the accountants are examined in Chapter 4. The literature on information processing and communications are examined in order to understand the manner in which accountants interpret information and make judgments in financial reporting.

The research method employed in this study is described in Chapter 5. This includes details of the sample selection and the data collection method. Definitions of variables and the construction of the measurement instrument are also outlined. Details of the pre-testing of the instrument are provided in this chapter. The statistical techniques employed to test the hypotheses are also explained.

The analysis of data is presented in Chapter 6. Data were collected from the questionnaires relating to individual accountants' motivational value preferences and interpretations and judgments in financial reporting. In this chapter the reliability and validity of the data, as well as non-response bias are discussed. The associations between the study variables based on the data obtained from the respondents are also discussed in this chapter.

In the final chapter, the contributions made by this study to the understanding of the cultural relativism model of accounting are discussed. This chapter includes an overview of the research question, research objectives and a summary of the research outcomes. Implications of the research outcomes are presented. Suggestions are made for future research on the application of the accounting motivational values and the influence of culture on accounting practice.

1.7. Summary

This chapter outlines the composition of this study. It introduces the background and the aims of this research as well as the research questions. This chapter also provides the justification of this study and its significance in extending the cultural relativism model of accounting. The organisation of this dissertation into seven chapters is also explained. In the next chapter, the cultural relativism model of accounting and the reliance of cultural studies in accounting on the Hofstede-Gray framework are critically examined.

CHAPTER 2: CULTURAL RELATIVISM OF ACCOUNTING

2.1. Introduction

The role of cultural diversity in the development of different accounting systems and practices has been given a lot of attention by accounting researchers (Doupnik & Salter, 1995; Gray, 1989; Harrison & McKinnon, 1986) especially in this era of globalisation and internationalisation of business and markets. With increasing global efforts towards a single set of uniform and consistent accounting standards, the effects of culture on the interpretation and application of accounting concepts grows in importance. The argument that culture influences accounting practice has been supported by many researchers. However, due to the complexity of culture, empirical studies examining the influence of culture on accounting have produced mixed results. Cultural studies in accounting have often been criticised for their failure to operationalise and measure adequately the construct of culture. As a result, the nature of the influence of culture has not been effectively observed and verified.

Researchers have often relied on Hofstede's (1980) theory of cultural differences among nations to examine the influence of culture. Hofstede's seminal work on the national cultural dimensions has been criticised for its inability to explain satisfactorily the influence of culture on accounting (Chow *et al*., 1999; Gernon & Wallace, 1995; Harrison & McKinnon, 1999). Another influential study in accounting is by Gray (1988) who proposed a framework that identifies accounting as an intervening sub-culture that links the national culture and the development of accounting systems in practice. Gray's framework relied on Hofstede's national cultural dimensions to postulate a set of accounting value dimensions. However, due to the subjectivity in the manner in which Gray developed his framework, its usefulness in explaining the

influence of culture on accounting practice has been questioned (Baydoun & Willett, 1995). As a result of the weaknesses in the existing framework in examining culture in accounting, there is an opportunity to explore alternative approaches that would be able to adequately capture this complex construct that is culture.

The extant literature is reviewed Section 2.2 of this chapter to explicate the nature and implications of the influence of culture on accounting practice. The existence of accounting as a sub-culture within the larger society is also explained. The complexity of culture as a socio-psychological concept is then examined in Section 2.3 with a view to determining the relevance of using a values-based approach in operationalising the accounting sub-culture. The extant cultural studies in accounting and their reliance on the work of Hofstede (1980) and Gray (1988) are critically reviewed in Sections 2.4 and 2.5 with a view to identifying a possible alternative approach to examining cultural relativism in accounting.

2.2. The cultural relativism of accounting

Belkaoui (1995) has stated that:

> … culture in essence determines the judgment/decision process in accounting … culture, through its components, elements and dimensions, dictates the organisational structure adopted, the micro-organisational behaviour, and the cognitive functioning of individuals, in such a way as to ultimately affect their judgment/decision process when they are faced with an accounting and/or auditing phenomenon. (p.3)

Belkaoui (1995) promotes the idea that culture determines the manner in which institutions are structured and managed, the behaviour of individuals within these organisations as well as how these individuals think. Ultimately, culture affects the judgments and decisions made by individuals. Therefore, the outcome of the judgment and decision process is relative to the culture in which it is made. Belkaoui

describes the influence of culture on the judgment and decision process as cultural relativism. He argues that cultural relativism exists in the domain of accounting.

This cultural relativism perspective of accounting is supported by Hofstede (2001).

> The less an activity is determined by technical necessity, the more it is ruled by values and thus influenced by cultural differences. Accounting is a field in which the technical imperatives are weak. Historically based conventions play a more important role in it than do laws of nature. So it is logical for the rules of accounting and the ways they are used to vary along national cultural lines. (Hofstede, 2001, p.383)

Hofstede (2001) suggests that accounting is an activity that requires judgment. As a consequence, the practice of accounting is ruled by values and thus influenced by cultural differences.

Harrison and McKinnon (1986) view accounting as a social system. They examined the influence of culture on accounting practice in Japan by studying the process of corporate reporting regulation and accounting change during the period between the nineteenth century and 1982. Harrison and McKinnon found that culture affects accounting practice through its influence over the norms and values held by individuals and groups within the social system.

Gray (1988) extended the ideas of Hofstede (1980) and Harrison and McKinnon (1986) by proposing that accounting exists as a sub-culture within the national culture or social system. Accountants are considered as a separate and independent profession within the larger society. To become a professional accountant, an individual requires specialised education and work experience. This special professional education and training indoctrinates the individual with attitudes and values that are unique to the accounting profession. The individual learns the special language of accounting and adopts principles and traditions that are unique to

accounting. Gray postulated that these accounting attitudes and values that make-up the accounting sub-culture, have an effect on the authority for and the enforcement of the accounting system as well as the system's measurement and disclosure characteristics.

Perera (1989, p.42-43) argues that culture influences accounting practice because accounting is a human activity and not merely a physical process.

> … culture is often considered to be one of the powerful environmental factors affecting the accounting system of a country. This consideration is based on the broad premise 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. (Perera, 1989, p.42-43)

The physical aspect of accounting that relates to the process of bookkeeping for example, may be considered culture free. But accounting also involves judgments and decisions on the choice of accounting policies and methods as well as the extent and manner of disclosure of information. This human element in accounting will affect the output of the bookkeeping process. Perera (1989) therefore opines that accounting is culture dependent because the human element in accounting is influenced by environmental factors which include culture. Consequently, culture is an important factor in explaining differences in accounting practice.

Doupnik and Salter (1995) stress the significance of culture in explaining differences in accounting practice. According to them, culture has a pervasive influence on accounting practice in a particular country.

> Culture permeates the various systems that constitute the institutional structure, impacting on accounting practice through norms and values held by members of the

> accounting system and norms and values held by members of other systems with which the accounting system interacts. (Doupnik & Salter, 1995, p.193)

Culture interacts in a complex manner with a country's institutional structure such as its legal and financing system to influence accounting practice (Doupnik & Salter, 1995; Nobes, 1998). Doupnik and Salter attempted to theorise a general model of accounting development to explain the diversity in accounting practice across countries.

> There are three elements which appear to determine a nation's accounting development: (1) the external environment, which affects both a society's culture and its institutional structure and provides external stimuli (intrusive events) that initiate change; (2) cultural values, which affect institutional structure, and which govern the interactions between components of the institutional structure in evaluating suitable responses to external stimuli; and (3) the institutional structure within which responses are made. (Doupnik & Salter, 1995, p.192)

The cultural relativism theory of accounting is further supported by the cognitive functioning view of culture adopted by Belkaoui and Picur (1991). Belkaoui and Picur argued that different cultural groups in accounting create different systems of learning and thinking that would lead to different understanding of accounting relationships and concepts. This difference in perception will then influence the way accounting is practised.

> Using a cognitive emphasis, national cultures act as networks of subjective meanings or shared frames of reference that members of each culture share to varying degrees and which, to an external observer, appear to function in a rule-like, or grammar-like manner. Relating this to accounting and the cultural determinism thesis in accounting, we assume that different cultural groups in accounting create different cognitions or systems of knowledge for intracultural communications and/or intercultural communications. (Belkaoui & Picur, 1991, p.119)

Since accounting is culture dependent, it is important to understand which aspects of culture affect accounting practice and how the influence occurs. Doupnik and Salter

(1995) suggest that the understanding of how culture affects cross-national accounting diversity can contribute to efforts to reduce that diversity and enhance comparability of accounting information worldwide.

> An understanding of how external environment, institutional structure, and cultural factors affect cross-national accounting diversity can be useful in efforts to reduce that diversity and enhance the comparability of accounting information worldwide. (Doupnik & Salter, 1995, p.190)

With the current drive by the International Accounting Standards Board for the convergence of national accounting standards to a single set of global financial reporting standards, the issue of reduction in diversity of accounting practice and comparability of accounting information is becoming of great importance. According to Doupnik and Tsakumis (2004), even if all countries were to adopt a single set of financial reporting standards, there may still be differences in the application of these standards by individual accountants that are influenced by cultural factors. A recent study conducted by Tsakumis (2007) provided evidence to suggest that cultural differences may influence the disclosure of information made by accountants in financial statements. Such differences in disclosure judgment could hinder the comparability of financial statements across countries. Empirical evidence on the relative importance of the elements of culture can therefore inform accounting regulators as to where convergence efforts need to be intensified and offer insight as to the feasibility of adopting a single set of global standards.

From a wider perspective, Gray (1989) suggests that the understanding of the influence of culture on accounting practice may help explain the potential impact on accounting development and change resulting from the growing internationalisation of markets and corporations as well as the drive for economic integration and development.

> Culture, or societal values, at the national level may be expected to permeate through to organisational and occupational sub-cultures though with varying degrees of integration. If accounting and accountants can be incorporated in this framework with accounting systems and practices influenced by and reinforcing societal values, as proposed by Gray (1988), then not only may we understand why there are differences between national systems of accounting, applied in a variety of contexts, but we may also appreciate the potential impact of changes arising from international factors. (Gray, 1989, p.293)

Culture, which Gray (1989) equates with societal values, is therefore a compelling construct in explaining and predicting accounting behaviour. But there seems to be a diverse view of what constitutes culture. Culture is often associated with nations (Hofstede, 1980; Harrison & McKinnon, 1986; Gray, 1988; Doupnik & Salter, 1995). Studies such as Tsui (2001) and Haniffa and Cooke (2002) have viewed culture from the perspective of ethnicity. Doupnik and Richter (2003) examined the relationship between language and culture. Religion has also been associated with culture (Hamid *et al*., 1993). Men and women have also been argued to have different cultures (Hofstede, 1980). In order to examine effectively the effect of cultural differences on accounting practice, there is a need to define 'who is in' and 'who is out' (Ross, 2004, p.41) of a specific culture. There is a need for an *a priori* decision of what is meant by culture (ibid).

2.3. Concept of culture

Psychologists, Matsumoto and Juang (2004, p.7), described culture as 'a complex concept embedded in many aspects of life and living'. Their conception of culture is that of an abstraction.

> Culture itself cannot be seen, felt, heard, or tasted. What is concrete and observable to us is not culture per se but differences in human behaviour – actions, thoughts,

> rituals, traditions, and the like. We see manifestations of culture, but we never see culture itself. (Matsumoto & Juang, 2004, p.7)

As a consequence of the behavioural manifestations of culture, Matsumoto and Juang (2004) view culture as an explanatory concept to describe observed differences in behaviour. They constructed a comprehensive definition of culture as:

> … a dynamic system of rules, explicit and implicit, established by groups in order to ensure their survival, involving attitudes, values, beliefs, norms, and behaviours, shared by a group but harboured differently by each specific unit within the group, communicated across generations, relatively stable but with the potential to change across time. (Matsumoto & Juang, 2004, p.10)

Culture is therefore a representation of the average tendencies in the values, attitudes, beliefs and behaviours that are shared among a group of people. Hofstede (2001) describes culture as 'the interactive aggregate of common characteristics that influence a human group's response to its environment' (p.10). Therefore, culture can be viewed as a socio-psychological construct because the values, attitudes, beliefs, and behaviours that are shared across people are psychological phenomena (Matsumoto & Juang, 2004). Hofstede uses the term 'the collective programming of the mind' (p.9) to describe this shared psychological aspect of culture. But culture is also an individual psychological construct as explained by Matsumoto and Juang (p.14):

> To some extent, culture exists in each and every one of us individually as much as it exists as a global, social construct. Individual differences in culture can be observed among people in the degree to which they adopt and engage in the attitudes, values, beliefs and behaviours that, by consensus, constitute their culture. If you act in accordance with those shared values or behaviours, then that culture resides in you; if you do not share those values and behaviours, then you do not share that culture.

The definitions of culture adopted by Matsumoto and Juang (2004) and Hofstede (1980) focus on the subjective rather than the objective components. Attitudes,

beliefs and values cannot be seen or touched and as such are considered subjective manifestations of culture. Cultural manifestations can also be in the form of symbols, heroes and rituals that are visible to the outside observer (Hofstede). These are referred to by Matsumoto and Juang as the objective physical manifestation of culture. It is the subjective elements of culture that Matsumoto and Juang deem more important in the understanding of cultural influences on behaviour. Many empirical studies in accounting, such as Jaggi and Low (2000), Tsui (2001), Haniffa and Cooke (2002), Hope (2003) and Patel (2003), have focused on the subjective components of culture.

2.3.1. Values and culture

The subjective element of values is considered by Smith and Schwartz (1997) as an important mediating variable that could be used to explain how ecological and socio-political factors may lead to cultural adaptation that influences the behaviour and characteristics of individuals.

> … the value priorities prevalent in a society are a key element, perhaps the most central, in its culture, and the value priorities of individuals represent central goals that relate to all aspects of behaviour. On the other hand, values are directly influenced by everyday experiences in changing ecological and socio-political contexts. Values are therefore well-suited for examining the ongoing processes of cultural and individual change in response to historical and social changes. They can also be used to differentiate among the cultural and sub-cultural groups that have emerged as human communities have evolved in different directions in response to their unique experiences. (Smith & Schwartz, 1997, p.79-80)

The accountants as a profession could possibly represent such a sub-cultural group as described by Smith and Schwartz (1997). The President of the International Federation of Accountants (IFAC) has suggested that members of the accounting profession subscribe to a common set of values.

> Ours is a profession of people. What unites us is not simply shared technical expertise, but rather a shared commitment of people: professional accountants, to a common set of values, common objectives and a mission to serve the public interest. (Ward, 2006, p.4)

Based on the 'functioning of psychological processes' (Matsumoto & Juang, 2004, p.16), the accountants' psychology would make them unique and different. Consequently, they may be viewed as a group with different values, beliefs and attitudes from other groups within the society.

This idea of values being a central element in the study of culture is supported by Hofstede (2001) when he placed values at the core of culture and refers to it as 'broad tendencies to prefer certain states of affairs over others' (p.5). Schwartz and Bilsky (1987, p.551) provided a more detailed definition of values.

> … values are (a) concepts or beliefs, (b) about desirable end states or behaviours, (c) that transcend specific situations, (d) guide selection or evaluation of behaviour and events, and (e) are ordered by relative importance.

Schwartz and Bilsky's (1987) conception of values is based on the view of values as a criterion that people use to select and justify their actions and to evaluate themselves and others as well as events. These values may be acquired early in life and remain unknown to those who hold them. They cannot be discussed, or can they be directly observed by outsiders. Values can only be inferred from the way people act under various circumstances. Therefore, a professional accountant would possess a set of values that has been acquired through interaction with the environment including education, family and friends. These values influence the way the accountant acts in different situations including the judgments and decisions that are made. Consequently, values may represent an important motivating factor in

examining the interaction between the human and technical aspects of accounting (Perera, 1989).

Schwartz and Bilsky (1987) further postulated that the values adopted by individuals are derived from their basic universal human needs.

> Values are cognitive representations of three types of universal human requirements: biological based needs of the organism, social interactional requirements for interpersonal coordination, and social institutional demands for group welfare and survival. (Schwartz & Bilsky, 1987, p.551)

In meeting these universal human requirements, individuals develop a set of motivational goals. For example, a basic biological need of the organism is to survive physically and avoid threats to its integrity (Schwartz & Bilsky, 1987). Demands for social interaction and institutional functioning would also require that groups such as the family and nation remain secure. From these human requirements, Schwartz and Bilsky suggest that the individual's actions and behaviour would be motivated by the need to attain inner harmony, family security, national security and a world at peace. Values are therefore representative of the motivational goals that serve as guiding principles in the lives of individual persons.

If values are at the core of culture, there is a need to understand how values can be used to explain culture.

> 'When values are used to characterise cultures, what is sought is the socially shared, abstract ideas of what is good, right and desirable in a society or other bounded cultural group' (Williams, 1968 as cited in Smith & Schwartz, 1997 p. 83).

Cultural values therefore represent the motivational goals or values that are shared among members of a cultural group or society. According to Smith and Schwartz

(1997), these shared cultural value priorities would in turn be reflected by the goals of societal institutions and the way they function. Smith and Schwartz further explicate that when people carry out their roles in social institutions, they draw upon cultural values to decide what behaviour is appropriate and to justify their choices to others. This reciprocal relationship between the values of the individual and the cultural values of the social institutions in which they belong is also suggested by Matsumoto and Juang (2004, p.8) as follows:

> Just as similarities within groups and differences between groups give rise to culture as an abstract concept, that abstract concept feeds back on those behaviours, reinforcing our understanding of those similarities and differences. Culture helps to reinforce, promulgate, and strengthen the behavioural similarities and differences that produced it in the first place, producing a cycle of reciprocity between actual behaviours and our theoretical understanding of them as culture.

Matsumoto and Juang (2004) argued that as a consequence of the reciprocal relationship between culture and its components such as values, it is a dynamic and changing construct. But at the same time, there is a great deal of consistency and stability in culture over time as a result of cross-generational education and transmission of cultural values and behaviours.

Therefore, although an individual accountant may possess a unique set of values based on the nature of the early education and personal experiences, these values may begin to change when an individual undertakes an accounting education at the university and professional levels. The individual would acquire specific values that are promoted in accounting such as being conservative and prudent. These values would be reinforced by the institutions that subsequently employ the individual as well as by the individual's professional affiliations. The individual accountant would then possess the values that are shared within the institutions and professional

associations. These shared or cultural values would now influence the accountant's behaviours and actions.

2.3.2. Appropriate level of analysis of values

Cultural values therefore represent the motivational goals of social institutions. Consequently, as explained by Smith and Schwartz (1997), relations among the different cultural values reflect the social dynamics of conflict and compatibility that emerge as social institutions pursue their goals. Values at the individual level, however, have to be interpreted differently. At the individual level, values represent the motivational goals that serve as guiding principles in the lives of individual persons (Schwartz & Bilsky, 1987). Consequently, relationships between different values at the individual level reflect the psychological dynamics of conflict and compatibility that individuals experience when pursuing values in everyday life (Smith & Schwartz).

Since the relationships among value priorities at the individual level differ from the cultural level, Smith and Schwartz (1997) explain that the underlying dimensions that organise values at the individual and cultural level will also differ. According to Smith and Schwartz, cultural-level, or ecological-level (Hofstede, 1980) dimensions must be derived from the correlations among value priorities that characterise cultural groups by taking the group as the unit of analysis. In addition, for a cultural-level analysis to be meaningful, a large number of cultures will have to be sampled (Leung, 1989). Individual-level dimensions, on the other hand, are derived from the inter-correlations among the value ratings made by individual persons.

With differences in the underlying dimensions in which individual values and cultural values are organised, it is important to determine the appropriate choice of analysis in cross-cultural studies. According to Smith and Schwartz (1997, p.84):

> … the choice of appropriate level depends upon the type of questions asked: If it is about relations of individual differences in value priorities to variation on other individual attributes, individual-level dimensions should be used, even when individuals from different cultural groups are studied. If the question is about relations of cultural differences in prevailing values to variation across cultures on other variables, culture-level value dimensions should be used, even if these other variables are frequencies of individual behaviour.

If the research question examines the association of the values of accountants with their individual perceptions and behaviours with regards to accounting phenomena, then the individual-level dimensions would be appropriate. But if the values of accountants are being compared to institutional characteristics such as the financial reporting framework, it is more appropriate to apply the cultural-level dimensions of values. Therefore, in examining culture from a values perspective, it is important that the appropriate underlying dimension for organising values is applied.

The concept of values is an important mediating variable in examining the influence of culture (Hofstede, 1980; Smith & Schwartz, 1997) in accounting. The idea of culture being shared values (Williams, 1968) is useful in rationalising accounting as a sub-culture within the larger society (Gray, 1988). But accounting may not be the only cultural group that exists within the larger society. There are many other categories of people that can be considered as sub-groups within a particular culture such as race or ethnicity, nationality, gender and religious beliefs. These groups may also exist within the sub-culture of accounting. Accountants of different genders may possess different values. Consequently, other than considering the level of analysis in

examining culture, there is also a need to consider how sub-groups within a particular culture should be identified.

2.3.3. Diversity of culture

Culture is defined as the shared values, attitudes, beliefs and behaviours among groups of people (Hofstede, 1980; Matsumoto & Juang, 2004). Consequently many categories of people may be considered as cultural groups. The categories of people that have often been identified as sharing a common culture include race or ethnicity, nationality, gender and religious beliefs.

Cultural studies in accounting (Tsui, 2001; Haniffa & Cooke, 2002) have often identified culture along ethnic lines by grouping respondents according to their race. Although there may indeed be cultural differences between ethnic groups, this may not necessarily be because of one's ethnicity.

> Race is not culture, although many people use the terms interchangeably. Two people of the same race may be very similar or very different in their cultural dispositions and their actual behaviours, thoughts and feelings. People of the same racial heritage may share the same socialisation processes and thus be enculturated in similar ways. But it is also true that there need not be a one-to-one correspondence between race and culture. Just because you are born with certain physical or biological characteristics defined as "race" does not necessarily mean you adopt the culture that is stereotypic of that race. Culture is a learned behaviour; race is not. (Matsumoto & Juang, 2004, p.16)

The idea that culture is a learned behaviour and not necessarily as a result of the ethnicity one is born into is also supported by Hofstede (2001). He described how the mental programming of an individual is partly unique and partly shared. The part of the mental programming that is shared, termed as the collective level, is learned because it is shared with 'people who have gone through the same learning

processes but who do not have the same genetic makeup' (Hofstede, p.3). In a society that has various ethnic groups mixing freely and harmoniously together, their shared values may make it difficult to differentiate them along racial lines. This argument could be extended to the accounting sub-culture. Accountants of different races may share the same values that have been indoctrinated through education and professional training. Therefore in adopting a psychological functioning perspective of culture, Matsumoto and Juang (2004) argue that it is the cultural norms and values that will provide more meaningful information to describe differences between groups of people.

Nationality has also often been associated with culture in studies such as Bagranoff *et al*. (1994), Schultz and Lopez (2001) and Patel *et al*. (2002). Most of these studies have used the national work-related cultural value dimensions developed by Hofstede (1983). Associating culture with nationality may be an oversimplification of a complex construct. Matsumoto and Juang (2004) argued that equating nationality with culture is problematic in that it ignores the possibility of multiple and equally important cultures coexisting within a nation. Therefore it may not be appropriate to assume that in multicultural countries like Malaysia and Australia, everyone would share the same values or mental programming. This supports the argument that it is the underlying cultural values affecting individual and group psychology that is more important than citizenship (Matsumoto & Juang). Hofstede & Hofstede (2005) argue that nations should not be equated with societies which are organically developed forms of social organisation. Rather the concept of common culture should strictly be applicable to societies rather than nations.

Gender differences have also been associated with cultural differences. Gender is defined by Matsumoto and Juang (2004, p.19) as 'the behaviours or patterns of activities that a society or culture deems appropriate for men and women'. In

societies where men and women are treated differently, it is likely that they will have different values and consequently different behaviours.

> Gender differences arise because of differences in the psychological cultures transmitted to men and women. Gender differences are thus cultural differences, and men and women can be said to belong to different cultures. (Matsumoto & Juang, 2004, p. 19)

This idea of men and women having different values has been empirically supported by Hofstede (2001). He discovered the cultural dimension of masculinity versus femininity which refers to 'the division of emotional roles between men and women' (p.29). Hofstede (p.279) observed that:

> … almost universally women attach more importance to social goals such as relationships, helping others, and the physical environment, and men attach more importance to ego goals such as careers and money.

Religion is another factor that has been associated with studies that examine the effect of culture on accounting practice. In Hamid *et al*. (1993), Islamic philosophies and practices were contrasted with the prevalent Judaic-Christian traditions in the context of accounting policies and practices.

> Compliance with the Islamic traditions transcends national boundaries. Unlike the nationality driven cultural elements which have dominated prior discussions of the impact of culture on accounting, religions such as Islam impose a code of ethics upon their followers transcending national boundaries. The potential influence of Islam on accounting policies and practices could inject analyses of national accounting difference with a cultural dimension more profound than that emanating from the impact of indigenous secular laws, general custom and commercial habit. (Hamid *et al*., 1993, p.147)

The arguments presented by Hamid *et al*. (1993) seek to highlight that Islam, as a religion, has prescriptive requirements for the conduct of business and economic

affairs. As such, Islamic philosophies and principles would influence behaviour beyond national cultural boundaries. In the field of cultural psychology, the effect of religion on society is viewed from the perspective of a socialisation process. Socialisation is defined by Matsumoto and Juang (2004, p.134) as 'the process by which we learn and internalise the rules and pattern of behaviour that are affected by culture'. Socialisation leads to enculturation which is the internalisation of 'the subjective, underlying, psychological aspects of culture' (Matsumoto & Juang, p.134). Therefore religion, especially if it has a pervasive influence over the lives of its followers such as Islam, may be a confounding element in the study of cultural differences.

Belkaoui (1980) examined how language differences may result in different interpretations of accounting concepts. Belkaoui's proposition was that different language groups create different linguistic codes which affect the perceptual cognitive processes and, consequently, will influence the understanding and interpretation of accounting concepts. Doupnik and Richter (2003) adopted the linguistic relativism perspective of culture. They studied the effect of language-culture and speakers of different languages may have differing interpretations of verbal uncertainty expressions found in the international accounting standards.

> Culture and language are intimately related. Culture influences the structure and functional use of language, and language can be thought of as the result or manifestation of culture … Language also influences and reinforces our cultural values and worldview, thus feeding back onto them. (Matsumoto & Juang, 2004, p.263)

Matsumoto and Juang (2004) view language as a manifestation of culture. The way an individual views the world depends on the language used.

Therefore, culture is a complex variable that exists at many different levels. Culture is a compelling construct in the understanding of accounting practice. In order to logically examine the influence of culture on accounting, Perera (1989) proposed a framework that requires the identification of a set of specific cultural values which are likely to be directly associated with accounting practice, and the manner in which the association between cultural values and accounting practices occurs. Perera identified the work by Gray (1988) as a significant attempt at developing a model for examining the mechanism by which cultural values may affect accounting practice.

2.4. The accounting sub-culture

It was suggested in Section 2.3.1 that a value-based conceptualisation of culture is appropriate in examining the effect of culture on accounting practice. This is because accounting may exist as a sub-culture within the larger society. Accountants possess a unique set of values that differentiates them from other groups within society. These values have been indoctrinated in the specialised education and professional training that accountants go through. Gray (1988) was perhaps the first study to hypothesise the existence of an accounting sub-culture and a set of accounting value dimensions in which cross-cultural comparisons can be performed. In attempting to establish a relationship between culture and accounting systems and practice, Gray drew on the work of Hofstede (1980) to hypothesise particular accounting attitudes or values that may be held by accountants.

2.4.1. Hofstede's national work-related cultural values

Hofstede (1981) describes the formation of culture in the context of nations.

> In the centre is a system of societal norms consisting of the value systems (the mental programs) shared by most of the population. Their origins are a variety of ecological factors (in the sense of factors affecting the physical environment). The societal norms

> have led to the development and pattern maintenance of social institutions with a particular structure and way of functioning. These include the family, education systems, politics, and legislation. These institutions, once they have become facts, reinforce the societal norms and the ecological conditions that led to them. (Hofstede, 1981, pp.24-25)

Hofstede (1980) theorises the origins of a national culture, or what he termed as societal values, through the influence of the physical and social environment of a nation such as its geography, history and demography. According to Hofstede, the national culture or societal values in turn establish the structure and functioning of institutions in the society such as its political, legislative and educational system. These national institutions would subsequently reinforce the culture, physical and social conditions of the nation. Hofstede argues that the national culture or societal value system would remain relatively stable unless there are interferences from external factors such as forces of nature or international trade and investment.

Hofstede (1980) examined the work-related value patterns of a matched sample of employees obtained from two rounds of surveys conducted by one of the world's largest multi-national organisations, International Business Machines Corporation (IBM), from 1967 to 1973. The surveys involved over 116,000 questionnaires that were sent to the employees of IBM located in 50 countries and three multi-country regions. The questionnaire represents an employee attitude survey that comprises 63 questions. Most of these questions used a five-point ordinal scale and covered aspects of the employee's job satisfaction, perception of the work environment and personal goals and beliefs concerning general work related issues.

Hofstede's (1980) cultural-level or ecological study was based on the mean score of each item on the questionnaire for each national group as the unit of analysis. Hofstede intended to examine the work-related value differences among countries. Therefore, only questions with mean country scores between the first and second

round surveys that showed relatively stable Spearman rank correlations exceeding 0.50 were retained. Through a process of theoretical reasoning and statistical correlation analysis, Hofstede identified four national culture dimensions of power distance, uncertainty avoidance, individualism versus collectivism and masculinity versus femininity. Hofstede's subsequent factor analysis uncovered three dimensions that explained 49% of the total variance. One factor combined power distance and low individualism, one corresponded to uncertainty avoidance and another to masculinity. For conceptual reasons, Hofstede separated the dimensions of power distance and individualism.

Hofstede (2001) later reported the existence of a fifth national culture dimension which was labelled as long-term orientation. This dimension came about as a result of the recognition that the four dimensions discovered earlier may be a product of a Western bias. The dimension of long-term orientation was discovered based on a study that used a questionnaire that was developed from a Chinese perspective. Hofstede's (1980; 2001) five national culture dimensions and the work-related values that they represent are summarised in Table 2.1.

Table 2.1 Hofstede's national cultural value dimensions

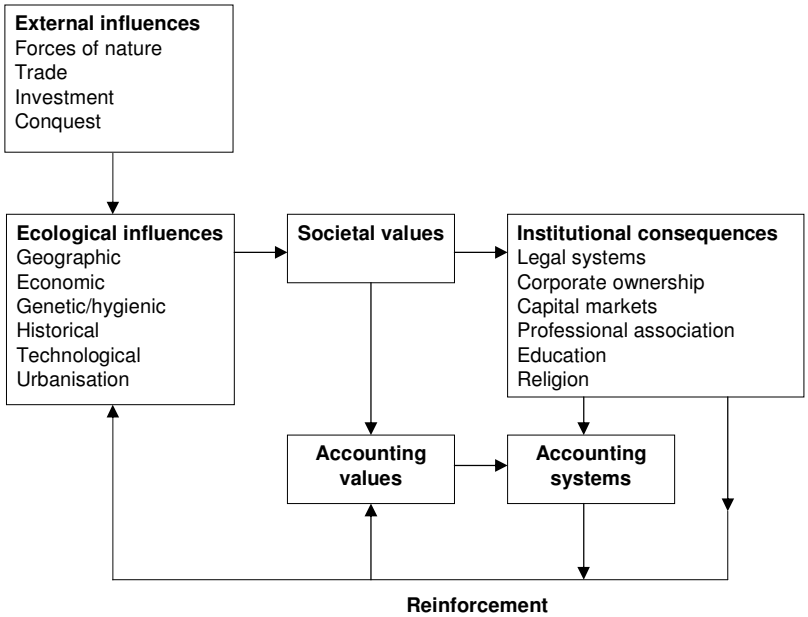
Dimension	Description
Individualism versus collectivism	The degree of interdependence a society maintains among individuals.
Large versus small power distance	How a society handles inequalities among people when they occur.
Strong versus weak uncertainty avoidance	How a society reacts on the fact that time only runs one way and that the future is unknown: whether it tries to control the future or let it happen.
Masculinity versus femininity	The way in which a society allocates social roles to the sexes.
Long-term versus short-term orientation	Persistence and thrift to personal stability and respect for tradition.

Source: Hofstede (1980; 2001)

2.4.2. Gray's accounting value dimensions

Gray (1988) proposed a model that identifies accounting as an intervening sub-culture that links Hofstede's (1980) national culture or societal values and the development of accounting systems in practice. Gray argued that accounting exists as a component of and is derived from societal values. Therefore accounting is a sub-culture existing within the larger national culture. According to Gray, the value systems or attitudes of accountants that could be derived from societal values would then impact on the development of accounting systems. Gray adapted Hofstede's model for the formation and stabilisation of national culture patterns and suggested that the interactions between the societal values and the institutions of a nation with the accounting sub-culture would explain the influence of culture on accounting practice.

Figure 2.1 Culture, societal values and the accounting sub-culture



Source: Hofstede, 1980 and Gray, 1988

Gray's (1988) hypothesis of the interaction between the societal values, institutional structure and accounting practice is shown in Figure 2.1. The idea of such an interaction was explored by Susela (1999) in the study of the conflicts and tensions within the Malaysian accounting profession and the power struggle to dominate the accounting standard setting institution in Malaysia. In an analysis of the historical events and comments from interviews, Susela found that the interest of self-protection of various groups has affected the standard setting process and consequently influenced accounting practice through the standards that were issued. Susela viewed interests as conceptions of social and historical process. Interests also reflect the value priorities (Schwartz, 1992) of members of the accounting profession in Malaysia. Consequently, Gray's hypothesis of the interaction between societal values and the accounting sub-culture is therefore supportable.

Based on his hypothesis for the existence of the accounting sub-culture, Gray (1988) proceeded to suggest a set of accounting values that were based on the national work-related cultural values developed by Hofstede (1980). Gray's hypotheses focus on aspects of accounting practice that relate to corporate financial reporting systems, more specifically with regards to the authority of accounting systems, their force of application, the measurement practices used, and the extent of information disclosed. The accounting values hypothesised by Gray are summarised in Table 2.2.

Table 2.2 Gray's accounting value dimensions

Dimension	Description
Professionalism versus statutory control	A preference for the exercise of individual professional judgment and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control
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
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
Secrecy versus transparency	A preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach

Source: Gray, 1988, p.8

According to Gray (1988), the dimension of professionalism versus statutory control is related to the notion that accountants are 'perceived to adopt independent attitudes and to exercise their individual professional judgments to a greater or lesser extent everywhere in the world' (p.8). Gray identified professionalism with issues concerning the regulation and control over the accounting profession in particular countries. He also linked the professionalism dimension to the preference for principle-based versus rules-based accounting regulations. A principles-based accounting regulation would arguably permit the exercise of professional judgment whereas a rules-based system would encourage a 'box ticking' mentality.

The dimension of uniformity versus flexibility is consistent with the qualities of consistency and comparability adopted by the IASB Framework for financial reporting. According to Gray (1988), the uniformity versus flexibility dimension addresses the issue of whether there should be inter-company and inter-temporal uniformity and consistency or whether flexibility of accounting practices is allowed to

suit the circumstances of individual companies. A preference for uniformity therefore implies a predilection for inflexible rules and regulations, which according to Baydoun and Willett (1995) is an inverse quality to professionalism.

Perhaps the most fundamental accounting value dimension according to Gray (1988) is conservatism versus optimism. Conservatism is referred to as 'prudence in asset measurement and the reporting of profits' (p.10). 'Conservatism's influence on accounting practice has been both long and significant' (Watts, 2003, p.208).

The secrecy versus transparency dimension relates to the quantity of information to be disclosed and is considered by Gray (1988) as a fundamental accounting issue. Gray argued that the secrecy versus transparency dimension is closely related to the conservatism versus optimism dimension in that both imply a cautious approach to corporate financial reporting. But Gray considered secrecy as related to disclosure issues while conservatism is associated with measurement issues.

2.4.3. The Hofstede-Gray framework

In developing his accounting values, Gray (1988) hypothesised an association between accounting practice and Hofstede's (1980) initial four national work-related cultural value dimensions. Table 2.3 summarises the relationships between Hofstede's (1983) national work-related cultural value dimensions and Gray's (1988) accounting value dimensions.

Table 2.3 Hypothesised relationships between Gray's accounting values and Hofstede's cultural dimensions

Cultural values (Hofstede)	Accounting values (Gray)			
	Professionalism	**Uniformity**	**Conservatism**	**Secrecy**
Power distance	Weak negative correlation	Weak positive correlation	Indeterminate	Strong positive correlation
Uncertainty avoidance	Strong negative correlation	Strong positive correlation	Strong positive correlation	Strong positive correlation
Individualism	Strong positive correlation	Strong negative correlation	Weak negative correlation	Strong negative correlation
Masculinity	Indeterminate	Indeterminate	Weak negative correlation	Weak negative correlation

Source: Gray (1988); Baydoun and Willett (1995)

Gray (1988) hypothesised an association between the cultural value dimensions of individualism, uncertainty avoidance and power distance with professionalism. A preference for independent professional judgment is consistent with an individualistic society where there is emphasis on 'independence, a belief in individual decisions and respect for individual endeavour' (p.9). Professionalism is also consistent with a weak uncertainty avoidance society where there is a focus on practice rather than rules, and there is a greater tolerance of variations in professional judgment. Small power distance societies would also tend to be more inclined towards professionalism rather than statutory control as there would be a greater acceptance of the opinion of others.

Uniformity is hypothesised by Gray (1988) to be consistent with a strong uncertainty avoidance society which would be concerned with the conformity of rigid laws and regulations and the search for ultimate, absolute truths and values. The preference for uniformity is also argued by Gray to be consistent with a collectivistic society where there is a 'tightly knit social framework, a belief in organisation and order, and

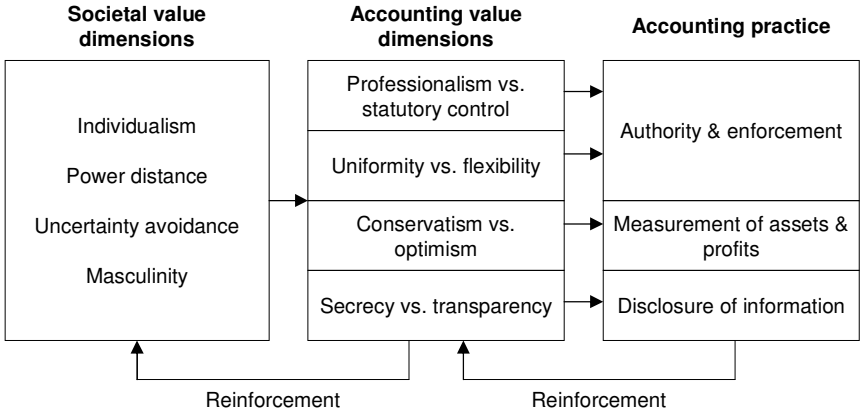
respect for group norms' (p.10). Gray also suggested a possible weak link between uniformity and a large power distance society where the imposition of laws and regulations would be more likely to be accepted.

As for the fundamental accounting value of conservatism, Gray (1988) argued that the most closely linked national cultural value dimension is uncertainty avoidance. A high uncertainty avoidance society would be expected to be highly consistent with a preference for a more conservative, hence, more cautious approach to the measurement of profits to cope with the uncertainty of future events. Gray further argued that there is a less strong link between high levels of individualism and masculinity in a society and the preference for conservatism. In societies where individual achievement and performance is emphasised, it is likely that a less conservative measurement approach will encouraged.

Gray (1988) argued that preference for secrecy is consistent with a strong uncertainty avoidance society where there would be a need to restrict information disclosure to avoid disagreements and misunderstandings and to preserve security. In a high power distance society there is likely to be a preference to restrict disclosure of information to preserve power structures. Secrecy is also considered to be associated with a collectivistic society where there is more concern for those closely involved with the firm rather than external parties. Therefore, in a collectivistic society there would be a tendency to keep information within members of the firm rather than disclosing it to external parties. A less important link is between a low masculinity society and the preference for more transparency. According to Gray, a less masculine society would likely be more caring and emphasise quality of life, people and the environment. Consequently, a less masculine society may be more open to the disclosure of information.

Considering the hypothesised strength of these relationships, Gray (1988) concluded that the most important cultural values affecting the accounting sub-culture are uncertainty avoidance and individualism. Masculinity appears to be the least important and may only have a weak association with conservatism and secrecy values. Gray attempted to summarise the effects of the hypothesised accounting values by linking them to attributes of accounting practice that he identified as authority, enforcement, measurement and disclosure as shown in Figure 2.2.

Figure 2.2 Gray's hypothesised relationship between societal values, accounting values and accounting practice



Source: Gray (1988); Baydoun & Willett (1995)

According to Gray (1988), the accounting values that are most relevant to the professional or statutory authority for accounting systems and their enforcement would be the professionalism and uniformity dimensions. These accounting values were concerned more with the social and political structure of accounting. This association is arguably a direct application of Hofstede's (1980) theory of the institutional consequences of societal values (Baydoun & Willett, 1995). On the other hand, the conservatism and secrecy dimensions were argued by Gray to be

associated more with the measurement practices and the extent of information disclosed. According to Baydoun and Willett, this latter association relates to the impact of the social dimension of accounting on the technical or physical attributes of financial reports.

2.4.4. Criticisms of the Hofstede-Gray framework

The usefulness of Gray's (1988) accounting values in explaining diversity in accounting practice has been criticised by Baydoun and Willet (1995, p.82):

> … it is not entirely clear whether, to the extent that they are meant to be cultural attributes of social groups rather than physical attributes of the technology of accounting, his accounting values serve any useful purpose as intervening explanatory variables between Hofstede's basic cultural dimensions and the characteristics one might expect to find in accounting practice.

The concern expressed by Baydoun and Willett (1995) with regards to the hypothetical framework postulated by Gray (1988) is the lack of theoretical rigour in the development of the linkage between cultural values and accounting practice vis-à-vis the accounting values as intervening explanatory variables. As such, the ability of the Hofstede-Gray framework to explain existing accounting practice is questionable.

According to Gray (1988), the preference for independent professional judgment and flexibility in accounting rules and regulations are consistent with an individualistic and weak uncertainty avoidance society. However, it would be difficult to apply Gray's hypotheses in explaining the situation of the U.S.A., a country which is highly individualistic and low on uncertainty avoidance (Hofstede, 1983). Schipper (2003) noted that accounting standards in the U.S.A. have complex and detailed guidance so that there is a reduction in the effects of professional judgment and consequently,

greater comparability is achieved through uniform rules. Corporate governance and financial reporting practices in the U.S.A. are also highly regulated especially with the introduction of the Sarbanes-Oxley Act of 2002, indicating a preference for statutory control rather than professionalism. Therefore, Gray's hypothesised relationship between professionalism and uniformity with individualism and uncertainty avoidance is debateable.

The lack of theoretical rigour in Gray's (1988) hypothetical framework is further evidenced by his attempt at linking Hofstede's (1980) uncertainty avoidance dimension with the accounting value of professionalism. Gray hypothesised that a strong uncertainty avoidance society would prefer to have greater control over the profession through rules and regulations. But establishing such a connection between uncertainty avoidance and professionalism may be considered superfluous (Baydoun & Willett, 1995). This is because uncertainty avoidance itself is conceptually related to the 'authority of rules' (Hofstede, p.147). According to Hofstede, one of the ways societies cope with an uncertain future is through the imposition of laws and regulations to guide social behaviour. Hence, the concept of uncertainty avoidance and statutory control, the inverse of professionalism, is arguably analogous.

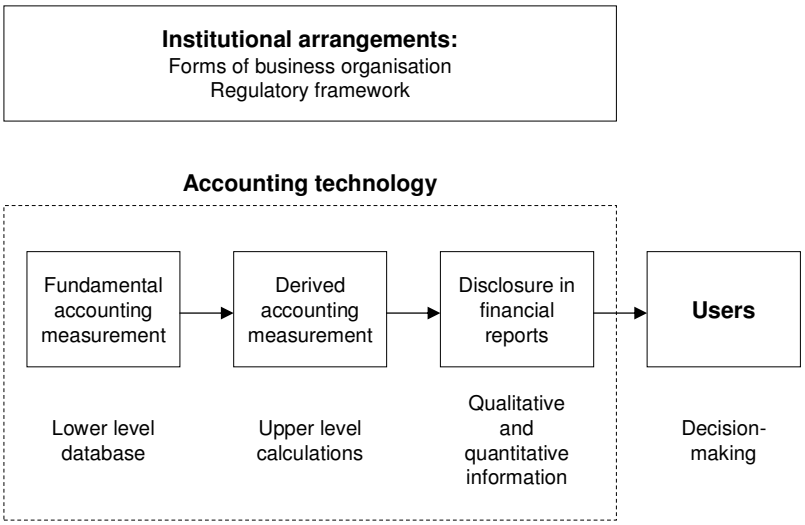
The main weakness in Gray's (1988) hypothesis of the effect of cultural values on accounting practice lies in the failure to invoke an appropriate framework to examine the influence of culture on the technical dimension of accounting. Consequently, Gray's hypothesis on facets of accounting practice relating to the measurement and disclosure of corporate financial information that are affected by cultural values is incomplete. For example, Gray argues that the accounting values of conservatism and secrecy are more influential in determining measurement practices and disclosure of information. But Baydoun and Willett (1995) dispute this by suggesting

that the accounting value of uniformity could possibly have a significant influence over the consistency of the form and content of financial statements which conservatism and secrecy do not cover.

> Consequently, Gray's theory seems, on the one hand, to overlook some important accounting effects of culture, and on the other hand, to say less than it could about some important aspects of the form and content of financial statements. (Baydoun & Willett, 1995. p.83)

According to Baydoun and Willett (1995), the extent of the influence of culture on the technical dimension of accounting may vary depending on the distinction between measurement and disclosure issues in accounting. The main features of this distinction are presented in Figure 2.3.

Figure 2.3 The accounting environment



Source: Baydoun and Willett (1995) and Willett *et al.* (1997)

Baydoun and Willett (1995) argued that culture is likely to be irrelevant at the level of fundamental measurements where accounting is purely technical and would involve the direct assignment of numbers to objects or events. It is at the higher levels of derived measurement and disclosure that culture becomes relevant. Baydoun and Willett argued that a derived measurement such as the calculation of depreciation and market values, are decision-specific and therefore is more likely to be viewed differently in different cultures. At the interface between accounting and users, the disclosure filtering mechanism is also considered to be highly culturally relevant.

Based on the nature of the influence of culture on the technology of accounting described above, a more comprehensive framework to examine the effect of culture on accounting practice can be developed. According to Baydoun and Willett (1995), such a framework should address the issue of how culture may affect judgments relating to the measurement and disclosure of information in financial statements. Such judgments can be examined within the context of meeting the decision useful needs of users from different cultural groups. Consequently, Baydoun and Willett suggest that a framework that examines the influence of culture on accounting practice could incorporate an assessment of the qualitative characteristics of financial statements such as those prescribed by the IASB Framework.

Table 2.4 Relationship between Gray's (1988) accounting values, the qualitative characteristics and the form and content of financial reports

Accounting dimensions		Qualitative characteristics	Form and content of financial reports
Uniformity		Uniform content and presentation: Consistency Comparability	Standardised accounts Accounting policies
Secrecy	Conservatism	Quality of information: Timeliness Materiality Objectivity Verifiability Reliability Neutrality Substance over form	Normal publication date Cost versus market value Cash flow accounting Lower of cost and market
		Amount of information: Accountability Decision usefulness	Extent of disaggregated data: Number of items disclosed Group accounts Supplementary statements

Source: Baydoun and Willett (1995)

Table 2.4 illustrates Baydoun and Willett's (1995) proposed framework that links Gray's (1988) accounting values with the qualitative characteristics of financial statements and the resultant effects on the form and content of financial reports. Three of Gray's value dimensions, namely, uniformity, conservatism and secrecy, were hypothesised to be associated with the uniformity of the content and presentation of financial reports, the quality of this information as well as the amount and scope of information included. Baydoun and Willett argued that such a framework would provide a more rigorous approach to examine the cultural relevance of accounting practice.

Perhaps Gray's (1988) approach of subjectively conceptualising a set of accounting values and then deductively hypothesising relationships with Hofstede's (1980)

cultural dimensions is not a valid approach to explicate the influence of culture on accounting practice. It was established in Section 2.2 that such a theoretical linkage between culture and accounting practice should consider the human aspect of accounting and its interaction with the technical aspects of accounting. It is the human aspect of accounting that is culturally dependent. Willet *et al*. (1997) argue that in examining the influence of culture on accounting practice, there is a need to consider the behaviour of the individuals that make-up the accounting sub-culture.

> While the institution is the complex social structure of interest in the cultural study of accounting and the individual response to a specific questionnaire item is the atom of enquiry, the modal personality is the basic unit of theoretical and empirical analysis. Researchers have little choice in examining a system of beliefs but to observe and record the behaviour and attitudes of individuals as their basic datum. Willett *et al*. (1997, p.414-415).

Without the consideration of individual responses, the theoretical and empirical analysis would not be able to account for the complexities inherent in culture. Hofstede (1980) and Matsumoto and Juang (2004) have described culture as a shared psychological construct. It is therefore important that in developing a set of value dimensions for a sub-cultural group like the professional accountants, values at the individual-level should be examined. From these individual-level values, what is shared among members of this group would then be interpreted as the cultural traits of that group. Therefore, an approach to identify the accounting values held by accountants should begin by examining their individual values and subsequently deriving a set of relevant accounting values that are shared among these accountants.

2.5. Cultural studies in accounting

Culture is considered a compelling environmental factor influencing accounting practice and has been used as an independent variable in examining differences in accounting practice. But cultural studies in accounting have been characterised by an *a priori* analytical approach to the identification of culture without empirically operationalising and measuring the culture construct. Many studies have used surrogates such as ethnicity and nationality to represent culture. There is also a pattern of reliance on the cultural models developed by Hofstede (1980) and Gray (1988) in studying the influence of culture on accounting practice. Consequently, cultural studies in accounting have neglected the depth, richness and complexity of culture and failed to obtain an empirical understanding of which aspects of culture influence accounting practice (Harrison & McKinnon, 1999). A review of the current studies on the effects of culture on accounting practice is conducted to identify other issues that have to be taken into account in constructing a more robust framework to examine cultural relativism of accounting.

2.5.1. Studies using ethnicity as proxy for culture

In studies of the effect of culture on accounting behaviour, ethnicity has been used as a proxy for culture. Two such studies by Tsui (2001) and Haniffa and Cooke (2002) are discussed to highlight some issues that emerge from such a treatment of culture. Tsui studied whether cultural differences between Chinese and Caucasian managers of companies in China affected their attitude towards budgetary participation. The Chinese sub-unit managers were selected from manufacturing companies in Xian, China, while Caucasian managers were sampled from manufacturing companies in Hong Kong. Tsui theoretically justified that the cultures of the Chinese and

Caucasian managers are expected to be different based on Hofstede's (1980) national work-related cultural value dimensions.

Tsui (2001) found evidence that managers from different cultural backgrounds, as represented by their ethnicity, have different attitudes towards management accounting systems and budgetary participation. Without measuring the values held by the Chinese and Caucasian managers, Tsui's results do not explain what aspects of the cultures of the managers influenced their behaviour. As a consequence, the findings can only provide a superficial understanding of the influence of culture and may result in inappropriate stereotyping based on ethnicity. In addition, Tsui's application of an ecological framework like Hofstede's (1980) cultural dimensions may not be appropriate when examining perceptions and behaviour at the individual level.

In a study to examine the effects of the cultural characteristics of Malaysian companies on the voluntary disclosure of financial information, Haniffa and Cooke (2002) similarly identified culture with reference to the ethnicity of members of the board of directors. Haniffa and Cooke's study examined the effect on disclosure of voluntary information in the annual reports of Malaysian companies of cultural differences between the Malay and non-Malay directors in Malaysian companies. They similarly relied on the cultural value dimensions discovered by Hofstede (1980) as well as Gray's (1988) accounting values. Haniffa and Cooke found that the higher the ratio of Malay directors in Malaysian companies, the higher the level of voluntary disclosure in annual reports of these companies. The results were however contrary to the Hofstede-Gray framework which suggests that Malay directors would have a higher preference for secrecy rather than transparency. Haniffa and Cooke concluded that disclosure practices are therefore not culture free. In fact, they postulated that religion may also have played an intervening role because the Malay

directors were all Muslims and the Islamic business ethics that they would have practised, would encourage more transparency in business reporting.

The conflicting results from Haniffa and Cooke's (2002) study provides evidence of the complexity of culture and the problems of reliance on the Hofstede (1980) cultural dimensions. Similarly to Tsui (2001), the weakness of Haniffa and Cooke's study is the failure to measure the cultural values of the directors. Hypothesising the manner in which culture affects the level of voluntary disclosure in annual reports may result in inappropriate conclusions. Haniffa and Cooke's reliance on information contained in annual reports to examine cultural values is also flawed. Although the directors are responsible for the annual reports, the report is influenced by many other parties such as auditors, regulators and accountants. Therefore, when examining cultural values it is important to recognise that the individual person should represent the basic datum of investigation (Willet *et al*., 1997).

As a result of their use of ethnicity as a proxy for culture, the validity of the conclusions by Tsui (2001) and Haniffa and Cooke (2002) regarding the relevance of culture are questionable. Harrison and McKinnon (1999) argued against treating cultural value dimensions superficially through 'assuming a uniformity and unidimensionality for each dimension that is neither sustainable nor valid' (p.502). Tsui's assumption was that the Chinese and Caucasian managers in her sample would subscribe to the same cultural value dimensions as those discovered by Hofstede (1980). The same criticism can also be levelled at Haniffa and Cooke's (2002) assumption regarding the Malay and non-Malay directors. Without actually measuring the cultural value dimensions held by the Chinese/Caucasian managers and the Malay/non-Malay directors, Tsui and, Haniffa and Cooke did not provide empirical support for the relevance of culture to the behaviours that were being examined. In addition, in relying on Hofstede's value dimensions without specifically

measuring them, Tsui and, Haniffa and Cooke also failed to consider the complexity of culture and the possibility of 'differential centrality or intensity of cultural norms and values across societies' (Harrison & McKinnon, p.502). Using ethnicity to represent culture ignores the possibility that people with the same ethnic background may not necessarily share the same cultural traits (Matsumoto & Juang, 2004).

2.5.2. Studies using nationality as proxy for culture

Using nationality to represent culture may also create problems in interpreting the association between culture and accounting practice. Patel (2003) conducted a cross-cultural study on the effects of culture on the acceptance by professional accountants of engaging in whistle-blowing as an internal control mechanism. Patel sampled the professional accountants from the Big Six accounting firms (at the time of the study) in Australia, India and Malaysia. The Malaysian samples were intended to be targeted at Chinese Malaysian accountants. But only two out of the four Malaysian firms sampled could confirm that only ethnic Chinese accountants participated in the study. Patel found that Australian professional accountants were more inclined to engage in whistle-blowing than their Indian and Chinese-Malaysian counterparts.

In theorising the relevance of culture, Patel (2003) relied largely on the national work-related cultural value dimensions of Hofstede (1980). It is arguable whether Hofstede's ecological dimensions are appropriately applied in Patel's study since they were developed by using nations as a unit of analysis. Patel examined whether individual accountants from Australia, India and Malaysia, representing different cultural environments, would systematically perceive whistle-blowing differently. Patel's study can be described as a study that 'use countries as vehicles for investigating the context in which accounting operates' (Wallace & Gernon, 1991,

p.238). As discussed in Section 2.3.2, when the goal is to examine variations in individual attributes such as the perception of whistle-blowing, individual level dimensions of values should be used rather than cultural level dimensions. There is therefore a need to be sensitive to the level of analysis in cultural research. Wallace and Gernon opined that only studies primarily concerned with understanding how institutional establishments and accounting practices are systematically related to variations in national characteristics, may require the use of nations as the unit of analysis.

In Patel's (2003) study, the cultural characteristics of the three countries were validated through the application of Hofstede's (1980) Values Survey Questionnaire. However, only the measures of power distance and individualism were obtained from the samples. Patel concluded that the Australian accountants' lower power distance and higher individualism scores were driving their judgments regarding the acceptance of whistle-blowing. Although Patel theoretically justified the choice of using power distance and individualism in his study, he did not empirically prove that the other cultural dimensions were irrelevant. According to Harrison and McKinnon (1999), there is a need to consider in totality the cultural domain and not omit any dimensions.

Larger studies, such as Jaggi and Low (2000) and Hope (2003), have examined the association between culture and the level of corporate financial disclosures of companies in many countries by operationalising culture using Hofstede's (1980) national work-related cultural values as independent variables. Jaggi and Low examined the impact of cultural values on corporate financial disclosures in common and code law countries. Jaggi and Low's study was based on the 1991 financial data of 401 companies from six countries. The common law countries sampled were Canada, U.K. and U.S.A. while the code law countries comprised France, Germany

and Japan. Jaggi and Low assumed that companies from a single country would have the same cultural values as measured by the Hofstede's study in 1980. The regression analysis revealed that cultural values have no significant effect on the financial disclosures of firms in common law countries while Hofstede's dimension of individualism was found to have a significant influence in code law countries.

Hope (2003) conducted a similar study to examine the role and relative explanatory power of legal systems and national culture in explaining variations in annual report disclosures. Based on a much larger sample of over 1,800 firms from 42 different countries, Hope found that both culture and legal systems have an effect on the financial information disclosure levels and could not find any evidence to support the argument that legal systems have a stronger explanatory power than culture or vice versa. Both studies by Hope and, Jaggi and Low (2000) assume that all companies within a particular country will share a common culture as suggested by Hofstede (1980). Studies such as these have produced mixed results as to whether culture, defined by national citizenship, influences accounting practice.

Lenartowicz *et al*. (2003, p.100) argued against equating nation states with culture,

> … simply because national boundaries are easy to identify does not make them an appropriate variable for segmenting behaviour. Differences in behaviour that are culturally based would exist even if the world were not organised into nation states.

Many countries in the world are multi-cultural. It would therefore be erroneous to assume cultural homogeneity in cross-cultural studies. There are many cultures and ethnicities within each nation. Lenartowicz *et al*. (2003) found evidence to support the existence of sub-cultures within a nation which may result in intra-country cultural variations. 'Neglecting sub-cultural variations can lead to non-significant cross-national differences' (Lenartowicz *et al*. p.1000).

2.5.3. Reliance on Hofstede's national work-related cultures

The preceding discussions have shown that there has been a considerable reliance on the work-related cultural values construct developed by Hofstede (1980). Hofstede's taxonomy of work-related national cultures has often been used to develop predictions of accounting phenomena. Harrison and McKinnon (1999) suggested that the depth, richness and complexity of culture may be neglected by focusing on the work-related cultural value dimensions postulated by Hofstede.

> Future studies using the value dimensional lens are, therefore, clearly warranted. However, such studies need to become more precise in their theoretical understanding and methodological operationalisation of culture, and to address the greater complexity and diversity of culture than has typified research relying on Hofstede. (Harrison & McKinnon, 1999, p.503)

Hofstede's (1980) definition of each cultural dimension may be insufficiently precise to guide consistent applications across studies (Chow *et al*. 1999).

> Instead of simply conducting yet more studies which rely indiscriminately on Hofstede's taxonomies, future research needs to test its limits and compare it to alternate ways of operationalising or structuring national culture. (Chow et al., 1999, p.456)

Gernon and Wallace (1995) and Doupnik and Tsakumis (2004) have questioned the ability of Hofstede's cultural dimensions to predict the cultural values of accountants and other professionals because Hofstede's findings are limited to particular locations and organisations and the ability to generalise it to other populations is.

> The ability of a formula developed from a study of the world-wide employees of a multinational company (IBM) to predict the cultural values of accountants and other professionals is rather suspect for at least two reasons. First, employees of IBM have

> in most cases self-selected themselves to work for IBM and may not typify the rest of the people in their countries of birth and/or domicile. Second, the formula may be useful for policy-related decisions of IBM but not for other organisations. (Gernon & Wallace, 1995, p.90)

In addition, Doupnik and Tsakumis (2004) also doubt the applicability today of Hofstede's cultural dimension indices that were developed twenty years ago.

2.5.4. Reliance on Gray's accounting values

Arguments of the lack of depth and scope of the conception of culture can be similarly levelled at the accounting sub-culture values postulated by Gray (1988), which is derived from Hofstede's culture dimensions.

> Because of the parsimony of the Hofstede-Gray framework, Gray's theory lends itself more readily than other theories to hypotheses formulation and consequently to the operationalisation of its variables. However, the gains made by simplifying the complex concepts of cultural dimensions and accounting sub-cultural values into a four by four matrix may be offset by loss of the richness of the constructs of culture. (Chanchani & MacGregor, 1999, p.25)

In fact the validity of Gray's (1988) theory has been tested in subsequent studies with mixed results. Salter and Niswander (1995) found little support for Gray's hypothesis of the association between accounting values and Hofstede's (1980) work-related values. In their study, Salter and Niswander did not empirically measure accounting values but instead used surrogates that represent the expected outcomes associated with each accounting value. Based on the results of their study, the only cultural dimension that is significant in explaining accounting values is uncertainty avoidance.

Gray (1988) hypothesised the existence of an accounting sub-culture where accountants share a unique set of value system and attitudes. This accounting sub-culture is derived from the larger societal values and would act as an intervening

variable that links the societal culture and accounting practice. According to Doupnik and Tsakumis (2004), Gray's hypothesis can only be proven with the explicit measurement of the accounting values held by the members of the accounting sub-culture. However, studies such as Salter and Niswander (1995) and Sudarwan and Fogerty (1996), that have attempted to test Gray's hypothesis, have not been able to prove the existence of the accounting sub-culture as none of these studies have actually attempted to identify these accounting values.

Chanchani and Willet (2004) attempted to test the validity of Gray's (1988) accounting value constructs by operationalising and empirically measuring these values. Chanchani and Willett developed a sixteen-item accounting values survey which was sent to users and preparers of accounting reports in New Zealand and India. A total of 1,614 responses were received. Table 2.5 shows the sixteen items used in Chanchani and Willett's accounting value survey and the dimensions that they are intended to measure. Respondents were required to indicate the extent of their agreement to each of the sixteen items using a seven-point scale. The results obtained by Chanchani and Willett were, however, inconclusive.

Table 2.5 Accounting value survey items

Dimensions	Item description
Uniformity	Financial statements of all companies should have standardised formats
	The level of detailed standardisation in financial statements should be increased.
	Accounting policies once chosen should not be changed.
	Depreciation rules should be set externally specifically for separate groups of assets.
Secrecy	Financial statements should be available to the general public rather than just shareholders and managers.
	Management forecasts should be included in financial statements.
	Only a minimum amount of detailed data should be included in financial statements.
	Information about management and owners should not be included in financial statements.
Professionalism	Professional accountants are the best judges of what to disclose in financial statements.
	Professional accountants should be the best judges of how to measure a firm's financial position and performance.
	Accounting profession should be self-regulated.
	Professional accountants should maintain high standards of ethical conduct.
Conservatism	Market values should be generally used instead of historical costs.
	Market values are generally less relevant than historical costs.
	Profits and assets should be valued downwards in case of doubt.
	In times of rising prices, LIFO instead of FIFO should be used in calculation of estimates.

Source: Chanchani and Willett (2004)

Factor analysis of the data revealed a structure of five dimensions rather than Gray's (1988) hypothesised four accounting value dimensions. Factor analysis identifies the underlying structure of a set of variables by measuring the inter-correlations between these variables (Hair *et al*., 2006). Chanchani and Willet (2004) were able to confirm three of Gray's dimensions of uniformity, professionalism and secrecy. The conservatism dimension was, however, not clearly reflected in the data. Instead of a single conservatism dimension, Chanchani and Willett found two separate components which were labelled as conservatism in disclosure and conservatism in measurement. These five dimensions explained 49% of the variations in the data.

In attempting to triangulate the results, Chanchani and Willett (2004) also performed cluster analysis on the data. Cluster analysis is similar to factor analysis except that the underlying structure of the data is determined by grouping variables on the basis of their proximity (Hair *et al*., 2006). The results of the cluster analysis revealed three distinct groupings. The first group comprised predominantly items that measured professionalism. Another group comprised items that measured uniformity and the transparency aspects of secrecy. The final group included items that measured the disclosure aspects of conservatism as well as the level of detail aspects of secrecy. The data did not reveal a clear grouping for the measurement aspects of conservatism.

One of the problems that Chanchani and Willett (2004) faced was the operationalisation of Gray's accounting value constructs. This was evident from the relatively low Cronbach's alpha internal reliability measures of between 0.18 and 0.60 obtained for the combination of items that made up Gray's (1988) accounting value dimensions. Chanchani and Willett acknowledged the inherent weakness in the accounting values survey.

> One problem with the approach taken to instrument development in this paper, however, is that it could bias the results in favour of Gray's theory. There was no attempt to look for the existence of other accounting values, for example … there could be other, as yet unrecognised, accounting value dimensions. An alternative, more empirical approach to questionnaire design would be appropriate to investigate this possibility. (Chanchani & Willett, 2004, p.148)

2.6. Summary

Cultural studies in accounting have been confounded by the inability to identify and operationalise effectively the accounting sub-culture. The reason for this stems

largely from the inability of researchers to break away from the Hofstede-Gray paradigm. Gray's (1988) attempt at linking Hofstede's (1980) national work-related cultural value dimensions to accounting practice vis-à-vis a set of accounting sub-cultural values offers a means of examining the effect of culture on accounting. But Gray's approach to the theorising of the accounting sub-cultural value dimensions is arguably deficient. The reliance on Hofstede's national work-related cultural value dimensions to predict accounting values is questionable because Hofstede's findings are limited to particular locations and organisations. As such, there is a need for a more rigorous and comprehensive examination of how culture, through the value preferences held by members of the accounting profession, affect accounting practice.

A different approach to conceptualising culture by examining the values held by members of the accounting sub-culture from a more fundamental perspective may produce more valid and consistent results. Schwartz's (1992) universal values may therefore provide an alternative approach to conceptualising culture that could reveal the depth, richness and complexity of this compelling construct.

CHAPTER 3: UNIVERSAL HUMAN VALUES

3.1. Introduction

Accounting is a socio-technical activity involving both human and technical aspects. The human facet of accounting and its interaction with the technology of accounting would explain why accounting is culturally dependent. In Section 2.2, it was argued that accounting exists as a sub-culture within the larger society. Through their professional education and training, accountants possess a unique set of values that differentiates them from other groups within society. In examining the influence of culture on accounting practice, it is important to consider the values of the individual accountants that make-up the accounting sub-culture. This is because values are at the core of culture. Values influence the way accountants act in different situations including the judgments and decisions that they make. Consequently, values represent an important explanatory factor in examining the interaction between the human and technical aspects of accounting.

Cultural studies in accounting have relied heavily on the Hofstede-Gray framework. But Gray's (1988) subjective conceptualisation of a set of accounting values has been argued to lack theoretical rigour and consequently has not been able to adequately explain the diversity of accounting practice. The reliance on Hofstede's (1980) national work-related cultural value dimensions by Gray and other researchers has been criticised because Hofstede's findings are limited to particular locations and organisations and the ability to generalise it to other populations is questionable. As a result, the depth, richness and complexity of culture may be neglected by focusing on the work-related cultural value dimensions postulated by Hofstede. Therefore, there is an opportunity to consider a more integrative and

universal theory of values to explain the influence of culture on accounting practice. Schwartz's (1992) structure of human values is based on the universal requirements of human existence. As a result, Schwartz's universal values may offer a more comprehensive approach to operationalise the complex cultural construct.

In Section 3.2 and 3.3 of this chapter, the Schwartz (1992) individual-level universal human values are critically examined with the view of extrapolating a set of unique motivational values that can be applied within the domain of accounting and can be used to describe the attributes of the accounting sub-culture. The reliability and validity of Schwartz's survey instrument is critically evaluated in Section 3.4. Finally, Schwartz's (1999) cultural-level values are briefly explained in Section 3.5.

3.2. Schwartz's universal values

According to Schwartz (1992), the universal human values are the subjective beliefs and attitudes about desirable goals that guide people's lives. This concept of values was based on the initial theorising by Schwartz and Bilsky (1987) and is the cognitive representation of three types of universal requirements of human existence:

a) biological needs;
b) requirements for coordinated social interaction; and
c) social institutional demands for group welfare and survival.

The concept of values was later elaborated upon by Smith and Schwartz (1997, p.80) as follows:

1. Values are beliefs. But they are not objective, cold ideas. Rather, when values are activated, they become infused with feelings.
2. Values refer to desirable goals (e.g. equality) and to the modes of conduct that promote these goals (e.g. fairness, helpfulness).

3. Values transcend specific actions and situations. Obedience, for example, is relevant at work or in school, in sports or in business, with family, friends or strangers.
4. Values serve as standards to guide the selection or evaluation of behaviour, people, and events.
5. Values are ordered by importance relative to one another. The ordered set of values forms a system of value priorities. Cultures and individuals can be characterised by their systems of value priorities.

The conception of values as subjective beliefs of desirable goals that guides how people conduct their lives, therefore, provides a compelling construct to examine the accounting sub-culture. If accountants do possess a unique and different set of values as a result of their specialised education and professional training discussed in Section 2.3.1, then these values would manifest in the accountants' attitudes and behaviours. These values would have been ingrained in the accountants through their education and training as standards of behaviour. But because values may transcend actions and situations, the diversity of cultural groups within the accounting profession such as ethnicity, gender and religion, may result in variations of attitudes and behaviours. Consequently, there can be diversity in the beliefs of desirable goals within the accounting sub-culture which can be identified through the level of importance placed on certain values over others. Differences in these value priorities within the accounting sub-culture would therefore result in diversity of accounting practice.

In developing his universal structure of values, Schwartz (1992) sampled mainly school teachers from 20 countries representing 'cultures on every inhabited continent', '13 different languages' and 'eight major religions as well as atheists' (p.18). Approximately 200 teachers were sampled from each country. The school teachers were required to express their opinion on the importance of a set of 56 different values as guiding principles in their lives using a nine-point rating scale. These values were developed by Schwartz based largely on the seminal work of

Rokeach (1973) and taking into consideration other cultures and religions as well as Hofstede's (1980) work-related values. School teachers were chosen as appropriate samples in Schwartz's study as they best represent their respective cultural groups.

> They (grade school teachers) play an explicit role in value socialisation, they are presumably key carriers of culture, and they are probably close to the broad value consensus in societies rather than at the leading edge of change. (Schwartz, 1992, p.18)

Schwartz's (1992) analysed the intercorrelations matrix of Pearson's correlations between the importance ratings of the 56 different values by using the Guttman-Lingoes Smallest Space Analysis, a multi-dimensional scaling technique for structural analysis of similarity data.

> This technique represented the values as points in multidimensional space such that the distances between the points reflected the empirical relations among values as measured by the correlations between the importance ratings. The greater the conceptual similarity between two values, the more related they should be empirically, and hence the closer their locations should be in the multidimensional space. (Schwartz, 1992, p.21)

Schwartz (1992) argued that when people pursue the goals that represent their values, the universal aspects of the human social condition will lead to cross-culturally consistent psychological, practical and social consequences. As a result, consistent relationships among different values emerge across various cultural groups, reflecting the psychological dynamics of conflict and compatibility between these values. These relationships were used by Schwartz to develop a universal structure of human values represented by a set of value types that reflect different motivational goals.

The dimensions of the universal structure of values are dependent on whether the importance ratings of the different values were analysed at the individual or cultural level. The structure of values at the individual and cultural level reflects different dynamics of conflict and compatibility among the values. The structure of cultural-level values represent the motivational goals of social institutions and the relationships among the different cultural-level values reflect the social dynamics of conflict and compatibility that emerge as social institutions pursue their goals (Schwartz, 1999). The structure of values at the individual level, however, represents the motivational goals that serve as guiding principles in the lives of individual persons (Schwartz, 1992). Relationships between different values at the individual level reflect the psychological dynamics of conflict and compatibility that individuals experience when pursuing values in everyday life.

It was highlighted in Section 2.5.2 that cultural studies in accounting should be sensitive to the level of analysis of the values construct. If the objective of the study is to examine the individual attributes and behaviours of accountants in different cultural environments, the accountants' individual-level value dimensions should be applied. But if the values of accountants are being compared to institutional characteristics of different cultures such as the financial reporting regulatory framework, it is more appropriate to apply the cultural-level dimensions of values. A review of the structure of values at both the individual and cultural level is conducted in the following sections.

3.3. Individual-level values

According to Schwartz (1992), the universal structure of values held by individuals is represented by ten motivational value types of self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence and universalism.

The generality of Schwartz's individual-level motivational value type structure is supported by the consistency of the results from the 1992 study. Schwartz found evidence to show that people do implicitly distinguish the ten types of motivational values as guiding principles in their lives and these motivational values are quite close to universal values. Nevertheless, Schwartz warns of the pitfalls of indiscriminately generalising the motivational value structure to new samples given that any single value structure is unlikely to be truly universal.

3.3.1. Types of motivational values

Schwartz's (1992) ten individual-level motivational value types of self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence and universalism are described in Table 3.1. The association of each of these motivational value types with accounting practice is examined in this section.

Table 3.1 Definition of individual-level motivational types of values

Value types	Motivational goals
Self-direction	Independent thought and action
Stimulation	Excitement, novelty and challenge in life
Hedonism	Pleasure and sensuous gratification of oneself
Achievement	Personal success through demonstrating competence according to social standards
Power	Attainment of social status and prestige, control or dominance over people and resources
Security	Safety, harmony, and stability of society, of relationships, and of self
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms
Tradition	Respect, commitment, and acceptance of the customs and ideas that one's culture or religion impose on the individual
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact
Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature

Source: Schwartz (1992, pp.5-12)

The motivational goal of self-direction incorporates a set of values that include 'creativity, freedom, choosing own goals, curious' and 'independent' (Schwartz, 1992, p.7). According to Schwartz and Bilsky (1987, p.552), 'values in the self-direction domain refer to reliance on and gratification from one's independent capacities for decision-making, creativity, and action'. Self-direction values in accounting can refer to the desire of accountants to exercise their professional judgment in carrying out their duties without being restricted by rules and regulations. In making these professional judgments, accountants would be able to satisfy their need for independence of thought and action. Therefore, the motivational goal of self-direction can be associated with Gray's (1988) professionalism value to the extent of the accountants' preference to be allowed to exercise professional judgment rather than adhere to strict rules and regulations.

According to Schwartz (1992), the motivational goal of stimulation includes values that are derived from 'the presumed organismic need for variety and stimulation in order to maintain an optimal level of activation' (p.7). The motivational goal for stimulation is the pursuit of 'excitement, novelty, and challenge in life' and the values that the goal incorporates include 'a varied life, an exciting life' and 'daring' (p.8). As a result, the accountants' preference for stimulation values may manifest in the propensity to take on more risk, for example, in the recognition, measurement and disclosure of financial information. A preference for stimulation values will therefore be in conflict with the principles of conservatism.

The motivational goal of hedonism was explained by Schwartz (1992) to be derived from 'the pleasure associated with satisfying' physiological needs (p.8). The pursuit of 'pleasure or sensuous gratification for oneself' (ibid) represents the motivational goal for hedonism. The values incorporated in hedonism are 'pleasure' and 'enjoying life' (ibid). The hedonism value by itself does not appear to have any obvious

manifestation in accounting practice other than the obtainment of material enjoyment and pleasure from the challenging work that accountants do or the status and prestige of the accountants' position.

The defining goal for achievement includes striving for 'personal success through demonstrating competence according to social standards' (Schwartz, 1992, p.8). The achievement values include being 'ambitious, successful, capable', and 'influential' (ibid). The motivational goal of achievement is reflected in the accountants' effort to maintain a high level of professional competence in the work that they do. This is demonstrated by the IFAC issuing standards on the education and practical work experience (IFAC, 2003a) of professional accountants as well as their continuing professional development (IFAC, 2004) to meet the increasing demands placed on the profession by society.

Power refers to the goal of the 'attainment of social status and prestige, and control or dominance over people and resources' (Schwartz, 1992, p.9). According to Schwartz, the desire for power stems from the importance of 'status differentiation' (p.8) in the functioning of social institutions. The values included in the goal of power are 'authority, wealth, social power, preserving my public image' and 'social recognition' (p.9). The motivational goal of power is consistent with the accountants' desire for professional self-regulation rather than be subjected to public regulation and statutory control (Gray, 1988). In addition, professional associations like the Malaysian Institute of Accountants and the Malaysian Institute of Certified Public Accountants have constantly branded the accounting profession based on status and prestige.

According to Schwartz (1992), the motivational goal of security incorporates the desire for 'safety, harmony, and stability of society, of relationships, and of self' (p.9).

This motivational goal is derived from the basic requirement of protecting the individual or the group. The goal of security is embodied in the values of 'social order, family security, national security, reciprocation of favours, clean, sense of belonging' and 'healthy' (p.9). In the context of accounting, the motivational goal of security would incorporate the desire for certainty, stability and integrity in the practice of accounting and the conduct of the profession. The preference for security values would result in accountants adopting conservative and prudent attitudes, practising due care and diligence as well as placing importance on reliability and dependability. A desire for security would also mean an aversion to volatility, resulting in a preference for uniformity and consistency. Hence, the motivational goal of security encompasses elements of Gray's (1988) uniformity and conservatism values.

Schwartz (1992, p.9) describes the motivational goal for conformity as 'restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms'. The goal of conformity is derived from the requirement that 'individuals inhibit inclinations that might be socially disruptive if interaction and group functioning are to run smoothly' (ibid). Conformity incorporates values of 'obedient, self-discipline, politeness, honouring parents and elders' (p.10). Pursuing the goal of conformity, in the context of accounting practice, refers to the propensity to comply with rules and regulations set by organisations and regulatory bodies. Conformity values, therefore, are closely related to Gray's (1988) statutory control values.

Tradition is a motivational goal that is closely related to conformity. According to Schwartz (1992), the motivational goal of tradition includes the 'respect, commitment, and acceptance of the customs and ideas that one's culture or religion imposes on the individual' (p.10). The goal of tradition incorporates the values of 'respect for tradition, humble, devout, accepting my portion in life' and 'moderate' (ibid). The

distinguishing feature between tradition and conformity may lie in the object to which one subordinates the self as explained by Schwartz (p.40):

> Conformity values entail subordination to persons with whom one is in frequent interaction – parents, teachers, and bosses. Tradition values entail subordination to more abstract objects – religious and cultural customs and ideas. As a corollary, conformity values exhort responsiveness to current, possibility changing expectations, whereas tradition values demand responsiveness to immutable expectations set down in the past.

Therefore, while the pursuit of conformity values in accounting refer to the adherence of rules and regulation prescribed by the relevant organisations and regulatory bodies, tradition values refer to the inclination of accountants to follow generally accepted accounting conventions and practices such as the traditional transaction-based historical cost accounting.

The motivational goal of benevolence refers to the 'preservation and enhancement of the welfare of people with whom one is in frequent personal contact' (Schwartz, 1992, p.11). Benevolence stems from the 'need for positive interaction in order to promote the flourishing of groups' and the 'organismic need for affiliation'. Benevolence incorporates the values of being 'helpful, loyal, forgiving, honest, responsible, true friendship' and 'mature love' (ibid). In accounting, the motivational goal of benevolence can be interpreted to refer to the need to safeguard or enhance the interest of the organisation or institution in which the accountants belong.

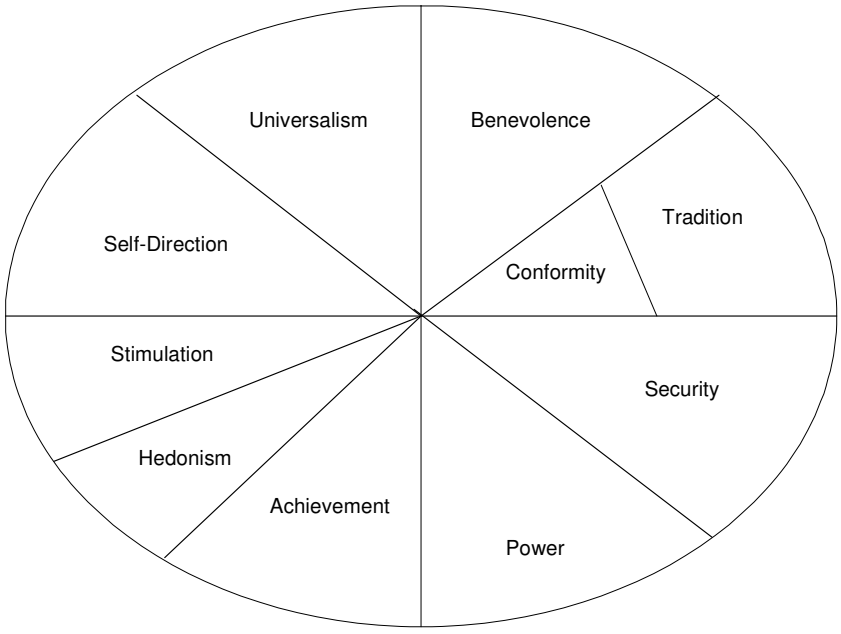
Universalism, however, has a broader focus than benevolence. The motivational goals for universalism are 'understanding, appreciation, tolerance, and protection for the welfare of all people and for nature' (Schwartz, 1992, p.12).

> The motivational goal of universalism values can be derived from those survival needs of groups and individuals that become apparent when people come into contact with those outside the extended primary group and become aware of the scarcity of natural resources. (ibid)

Universalism incorporates the values of 'broad-minded, social justice, equality, world at peace, world of beauty, unity with nature, wisdom' and 'protecting the environment' (p.12). In the context of accounting practice, the motivational goal of universalism is most closely related to the accounting profession's responsibility to act in the interest of the public (IFAC, 2005).

From the results of his structural analysis of the data using multi-dimensional scaling, Schwartz (1992) was able to confirm the theoretical structure of the dynamic relationship between the motivational goals or value types as depicted in Figure 3.1.

Figure 3.1 Structure of motivational values



Source: Schwartz (1992)

According to Schwartz (1992), the array of values in the universal structure represents a circular continuum of motivations.

> Because the array of values represents a continuum of motivations, the precise locations of the partition lines are arbitrary. Values found near a partition line express a combination of the related motivational goals associated with the value types on both sides of that partition line. (Schwarz, 1992, p.45)

Therefore, the motivational differences between value types are seen as continuous rather than discrete.

3.3.2. Conflict and compatibility of motivational values

Schwartz (1992) found that the order of regions around the circular structure of values supports his theory of the dynamic relationship between the ten motivational goals or value types. He argued that actions taken in the pursuit of each value type have psychological, practical, and social consequences that may be compatible or may conflict with the pursuit of other value types. Adjacent value types, as shown in the circular structure of motivational values in Figure 3.1, are postulated to be most compatible. Increasing distance around the circular order indicates decreasing compatibility and greater conflict. Value types that are in the opposing locations are postulated by Schwartz to be in greatest conflict.

Table 3.2 Compatibilities of value types

Value types	Compatibilities
1. Power and achievement	Desire for social superiority and esteem.
2. Achievement and hedonism	Egoistic self-indulgence.
3. Hedonism and stimulation	Desire for affectively pleasant arousal.
4. Stimulation and self-direction	Intrinsic motivation for mastery and openness to change.
5. Self-direction and universalism	Reliance on one's own judgment and comfort with the diversity.
6. Universalism and benevolence	Enhancement of others and transcendence of selfish interests.
7. Tradition and conformity	Self-restraint and submission.
8. Conformity and security	Protection of order and harmony in relations.
9. Security and power	Control of uncertainty.

Source: Schwartz 1992

Table 3.2 presents pairs of value types that are compatible. According to Schwartz (1992), both power and achievement values have the same focus on social esteem. Achievement values in accounting are reflected in the desire of members of the accounting profession to be recognised for their professional and technical competence. Power values are manifested in the accounting profession's need to be respected as an independent self-regulating institution. The difference between power and achievement, however, lies in the object to which it relates.

> … achievement values refer more to striving to demonstrate competence in every day interaction (e.g., ambitious), whereas power values refer more to the abstract outcomes of action in the form of status in the social structure (e.g., wealth). Moreover, achievement values refer to the striving of the individual alone, whereas power values also refer to the hierarchical organisation of relations in society. (Schwartz, 1992, p.40)

Schwartz (1992) argued that hedonism possesses duality of meaning because of its close proximity to stimulation and achievement values. Depending on the location of hedonism relative to achievement and stimulation values, it serves to accentuate behaviours related to either the achievement of professional competence or the stimulation or excitement in undertaking risky decisions. Therefore the interpretation

of hedonism in accounting would depend on whether it is more strongly correlated with stimulation or achievement. If hedonism is more strongly correlated with stimulation, the accountants have a tendency to obtain greater pleasure and excitement from the challenge of undertaking risky decisions and consequently are more inclined to take on more risk. However, if hedonism is more strongly correlated with achievement, the accountants obtain greater satisfaction from the recognition by society of their professional and technical competence. The accountants would therefore be more inclined to demonstrate their knowledge and competence in the work that they do.

Schwartz (1992) postulated that the motivational values of power, achievement and hedonism represent a common need for people 'to enhance their own personal interests (even at the expense of others)' (p.43). Schwartz classified these three motivational goals in terms of a higher order value type which he named as self-enhancement. Therefore, accountants that rate these goals as important in their lives would have a tendency to behave in a manner that would enhance their own self interest.

The pursuit of stimulation values is compatible with self-direction values as both involve a 'motivation for mastery and openness to change' (Schwartz, 1992, p.14). According to Schwartz, these values 'motivate people to follow their own intellectual and emotional interests in unpredictable and uncertain directions' (p.43). Therefore, in the context of accounting, the desire to make independent and creative decisions through exercising professional judgment in the pursuit of self-direction goals is attuned to the willingness to operate within a challenging, unpredictable and uncertain environment that is consistent with the goal of stimulation. Schwartz identified the combined motivational goals of self-direction and stimulation in terms of a higher order value type which he named openness to change.

The motivational goal of self-direction is also compatible with universalism values. According to Schwartz (1992), a person who obtains satisfaction from exercising independent judgment and thought would be more accepting and tolerant of diversity of opinion. Therefore, the accountants' desire to exercise professional judgment rather than being constrained by rigid rules and regulations would be associated with the willingness to accept differences of opinion, a trait that is consistent with universalism values.

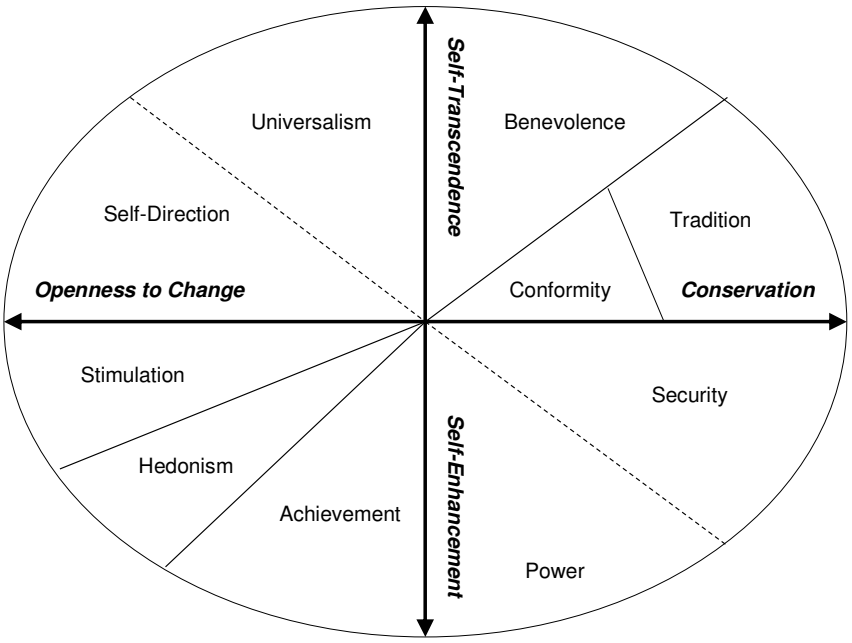
However, the motivational goal of universalism was found by Schwartz (1992) to be even more compatible with benevolence values. Both values of universalism and benevolence motivate people 'to transcend selfish concerns and promote the welfare of others, close and distant, and of nature' (p.44). The pursuit of benevolence and universalism values in accounting, reflected in the need to preserve organisational and public interests respectively, represents a desire to serve the interest of others rather than the self. According to Schwartz, the two motivational values of benevolence and universalism represent another higher order value type called self-transcendence.

The motivational goals of tradition and conformity were described in Section 3.3.1 as values that are closely related. According to Schwartz (1992), tradition and conformity values share the same motivational goal of 'subordination of self in favour of socially imposed expectations' (p.40). In accounting, the pursuit of tradition and conformity values would reflect the common need for self-restraint in making decisions and not to 'rock the boat' or challenge the system. Schwartz found support for the commonality of tradition and conformity values as they were usually located on the same wedge of the circular structure of values as shown in Figure 3.1.

Schwartz (1992) also found that the motivational goals of conformity and tradition were compatible with security values. These values motivate people to 'preserve the status quo and the certainty it provides in relationships with close others, institutions and traditions' (p.43). These three motivational goals represent the higher order value type which Schwartz termed as conservation. Therefore, the preference for conservation values in accounting would manifest in the need to adhere to rules, regulations and conventions such as prudence and conservatism so that an environment of certainty, stability and integrity is maintained.

Schwartz (1992) found that the security values were also compatible with the motivational goal of power. Both values reflect the need to 'control uncertainty' (p.43). In the context of accounting practice, the preference for a strong and independent profession could be viewed as an important requirement to preserve the certainty, stability and integrity in the practice of accounting.

Figure 3.2 Higher order value dimensions



Source: Schwartz 1992

While motivational values that are located in adjacent regions within the circular structure of values were argued to be compatible, values in opposing regions would produce a strong psychological and social conflict. Schwartz's (1992) examination of these conflicts revealed a simpler two-dimensional view of the structure of values. This two-dimensional structure comprise the four higher order value types that form two bi-polar conceptual dimension as shown in Figure 3.2. The first dimension arrays values that represent the higher order motivational goal of openness to change against those that make-up the goal of conservation. Therefore, the preference in accounting to exercise professional judgment within a challenging and uncertain environment will be in conflict with the need to adhere to uniform rules, regulations and conventions to create an environment of certainty, stability and integrity. The second bi-polar dimension arrays values that promote the higher order goal of self-enhancement versus the goal self-transcendence. As a result, the accountants' desire to enhance their own self interest would be in conflict with the need to preserve the interests of the organisation and the general public.

In addition to the conflicts within the two bi-polar dimensions of the higher order value types, Schwartz (1992) also found that the location of certain motivational goals toward the periphery of the circular structure of values would indicate a more significant negative correlation with the goals opposite to them on the structural map. The motivational goals of tradition and power were frequently found to be located at the outer edge of the circle relative to the other value types. Consequently, Schwartz argued that the goals of tradition and power are more entrenched and are likely to be more in conflict with the opposing value types. In the context of accounting, the influence of traditional conventions and practices would likely be more ingrained in the behaviour of accountants and as a result difficult to change. The importance of power values, manifested in the need to preserve the independence and status of the

accounting profession, would also be likely to have a strong influence over the behaviour of accountants.

The order of regions around the circular structure of individual-level values, as shown in Figure 3.2, depicts the psychological and social compatibilities and conflicts among the ten motivational goals and the four higher order value types. Hofstede (1980) has argued that the major dimension of values differentiation at the societal level is in the relative emphasis in the values that serve individualistic interests as opposed to collectivistic interests. According to Schwartz and Bilsky (1987), at the individual-level, people's experience of the conflicts and compatibilities of values are influenced by whether the values serve the interests of some person or group. This interest served distinction of values is also supported by Triandis (1994) in his work on values differentiation at the individual-level.

3.3.3. Individual and collective interest

Schwartz (1992) postulated that an important distinction between the different motivational goals in the structure of values is the interest that is served by their attainment.

> If values are viewed as goals, then their attainment must serve the interests of the individual and/or of some collectivity. Values that serve individual interests are postulated to be opposed to those that serve the collective interests. (Schwartz, 1992, p.13)

From the structural analysis of his data, Schwartz (1992) found that the five value types of power, achievement, hedonism, stimulation and self-direction serve primarily individual interests. These value types form a contiguous region as shown in Figure 3.2. In the context of accounting, the preference for these values would suggest that

accountants are more inclined to place their own interest over the interest of others. On the other hand, the motivational goals of benevolence, tradition and conformity, are value types that serve primarily collective interests and they form another contiguous region opposite the region for the individual interests. The preference for these values in accounting would be manifested in the accountants' selfless need to serve the interest of others.

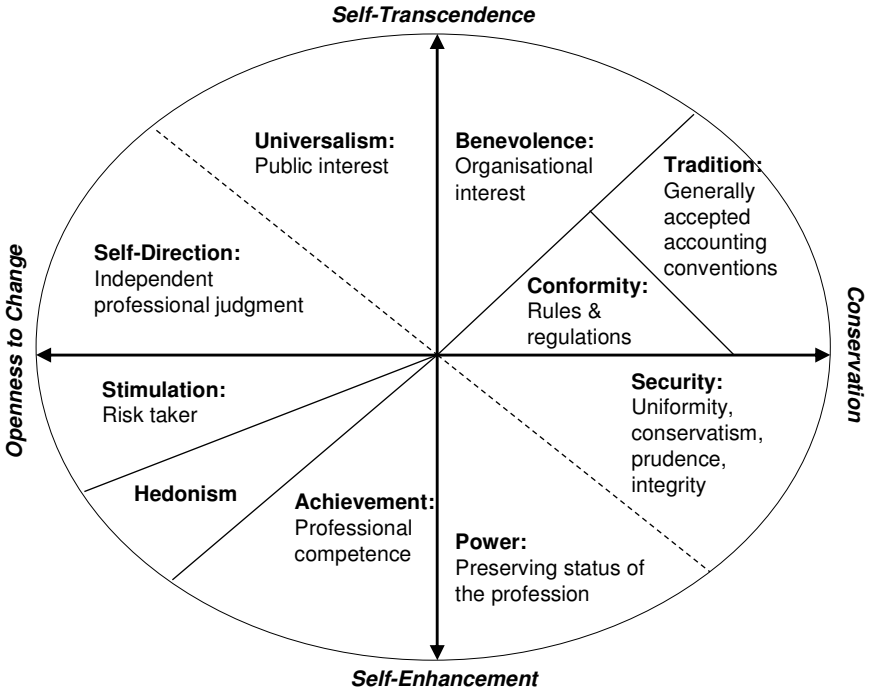
Schwartz (1992) postulated that the motivational goals of universalism and security, located on the boundaries between the two regions, serve both individual and collective interests. As discussed in Section 3.3.2, the motivational goal of universalism is compatible with benevolence in respect of the need to rise above selfish concerns and promote the interests of others rather than the self. Embracing the values of universalism would also result in a more mature, tolerant and broadminded outlook. Consequently, there would be a greater acceptance of diverse opinions arising from the exercise of professional judgement that serves mainly individual interests.

It was suggested in Section 3.3.1 that the motivational goal of security is derived from the basic need to protect the individual or the group. Schwartz (1992) found that depending on the location of the security values on the multidimensional map, it may be possible to distinguish whether security for self or the collectivity is more important. Security values that serve collective interests were found to be located closer to motivational goals of conformity and tradition, while those that serve individual interests were found nearer to power. Schwartz's analysis, however, revealed that individual and group security values are closely related because the group is often viewed as an extension of the self. Therefore, security values may be treated as a single motivating goal.

3.3.4. Motivational values in accounting

Schwartz's (1992) universal structure of individual-level values has been described in the preceding paragraphs. The psychological and social conflicts and compatibilities among the motivational goals and the interests in which the values serve were analysed and discussed within the context of accounting practice. Drawing from Schwartz's theory of the universal structure of values, it is possible to hypothesise the application of the motivating goals of individuals in the domain of accounting. The theorised relationships between Schwartz's motivational goals and accounting behaviour enable the development of a set of motivational values in accounting. This theorised structure of motivational values in accounting, as shown in Figure 3.3, would provide a compelling framework to examine accounting values at the individual level.

Figure 3.3 Structure of motivational values in accounting



The structure of the motivational values in accounting represents the psychological and social consequences of pursuing the accounting values that are derived from the universal human values held by individual accountants. Serving the organisational interest of corporations or institutions as well as the wider interest of the general public represents the manifestation of benevolence and universalism values in accounting. These values would reflect the need for accountants to transcend their personal self-interest in favour of the needs of others. These self-transcendent values would directly conflict with the accountants' need to demonstrate their professional competence and maintain the influence and status of the accounting profession, which are manifestation of power and achievement values. These power and achievement values are motivated by the need to enhance the individual interests of the accountants.

The need to conform to rigid rules and regulations as well as follow traditionally accepted accounting conventions are motivated by the accountants' desire to safeguard the status quo and maintain an environment that is stable, certain and of integrity. These are values that are associated with conformity, tradition and security goals. These conservation goals are in conflict with values that motivate accountants to exercise their own independent professional judgment in a dynamic and uncertain environment. These stimulation and self-direction values reflect the accountants' openness to changes and uncertainties.

The motivational goal of hedonism is not expected to be manifested in any specific accounting behaviour but would help accentuate the accountants' willingness to accept an uncertain and dynamic environment if it was found to be strongly correlated to stimulation values. On the other hand, hedonism would highlight the accountants' desire to demonstrate their professional competence, if the values were found to be strongly correlated with the motivational goal of achievement.

The structure of motivational values in accounting offers a more rigorous approach to examine the influence of culture on accounting practice. These motivational values are able to capture the complexity of the culture construct and, consequently, would be a more valid representation of the values held by individual accountants that make up the accounting sub-culture.

3.4. Portrait values questionnaire

Although Schwartz (1992) found support for the universal structure of individual-level values in many diverse countries, there were still deviations especially in the less developed and non-Western countries like India and Malaysia as well as those from sub-Saharan Africa (Schwartz *et al.* 2001). One of the reasons cited by Schwartz *et al.* for the deviations is that the survey instrument employed demanded a high level of abstract thought and evaluation of abstract concepts. This was because Schwartz's (1992) original values survey comprises 56 single value items, which make up the ten universal value types. Respondents were required to rate the importance of each value item as a guiding principle in their lives.

According to Schwartz *et al.* (2001), the weakness of this approach is that it does not provide respondents with any specific life context in which to make their judgement regarding the value items. Most people may not normally spend time evaluating and quantifying the guiding principles in their lives and as a result may find the task novel and intellectually demanding. In addition, Peng *et al.* (1997) also highlighted the possibility that using highly abstract and general phrases about values may affect the validity of the instrument. Peng *et al.* cautioned that differences in importance ratings of values described in highly abstract phrases may be influenced by variations in the conception of the meaning of the abstract phrases rather than reflecting behavioural differences.

Therefore in order to improve the validity of the theory of universal values, Schwartz *et al.* (2001) developed a different instrument that employs short verbal portraits of a hypothetical person's goals, aspirations or wishes that point implicitly to the importance of a particular value. These portraits capture a person's values without explicitly identifying values as the topic of investigation. For each portrait, respondents are asked "How much like you is this person?" They then tick one of the six boxes labelled: very much like me, like me, somewhat like me, a little like me, not like me, and not like me at all. Respondents' values are inferred from their self-reported similarity to people described implicitly in terms of particular values. In order to focus the similarity judgments to the value-relevant aspects of these portraits, respondents are asked to compare the portraits to themselves rather than themselves to the portraits. The instrument, called the Portrait Values Questionnaire (PVQ), is also less cognitively complex. As a result it can be applied to a more diverse group of people. Schwartz *et al.* found significant support in the ability of the PVQ to identify the universal value structure in both developed and developing countries. Tables 3.3 and 3.3a list the portraits with their corresponding ten motivational value types.

Table 3.3 Verbal portraits and motivational value types

Value Type	Portrait
Conformity	▪ He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching. ▪ It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong. ▪ He believes he should always show respect to his parents and to older people. It is important to him to be obedient. ▪ It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.
Tradition	▪ He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have. ▪ Religious belief is important to him. He tries hard to do what his religion requires. ▪ He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned. ▪ It is important to him to be humble and modest. He tries not to draw attention to himself.
Benevolence	▪ It's very important to him to help the people around him. He wants to care for their well-being. ▪ It is important to him to be loyal to his friends. He wants to devote himself to people close to him. ▪ It is important to him to respond to the needs of others. He tries to support those he knows. ▪ Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.
Universalism	▪ He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life. ▪ It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them. ▪ He strongly believes that people should care for nature. Looking after the environment is important to him. ▪ He believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him. ▪ He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society. ▪ It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.
Self-Direction	▪ Thinking up new ideas and being creative is important to him. He likes to do things in his own original way. ▪ It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself. ▪ He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things. ▪ It is important to him to be independent. He likes to rely on himself.

Source: Schwartz *et al*. (2001)

Table 3.3a Verbal portraits and motivational value types - continued

Value Type	Portrait
Stimulation	▪ He thinks it is important to do lots of different things in life. He always looks for new things to try. ▪ He likes to take risks. He is always looking for adventures. ▪ He likes surprises. It is important to him to have an exciting life.
Hedonism	▪ He seeks every chance he can to have fun. It is important to him to do things that give him pleasure. ▪ Enjoying life's pleasures is important to him. He likes to 'spoil' himself. ▪ He really wants to enjoy life. Having a good time is very important to him.
Achievement	▪ It's very important to him to show his abilities. He wants people to admire what he does. ▪ Being very successful is important to him. He likes to impress other people. ▪ He thinks it is important to be ambitious. He wants to show how capable he is. ▪ Getting ahead in life is important to him. He strives to do better than others.
Power	▪ It is important to him to be rich. He wants to have a lot of money and expensive things. ▪ It is important to him to be in charge and tell others what to do. He wants people to do what he says. ▪ He always wants to be the one who makes the decisions. He likes to be the leader.
Security	▪ It is important to him to live in secure surroundings. He avoids anything that might endanger his safety. ▪ It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without. ▪ It is important to him that things be organized and clean. He really does not like things to be a mess. ▪ He tries hard to avoid getting sick. Staying healthy is very important to him. ▪ Having a stable government is important to him. He is concerned that the social order be protected.

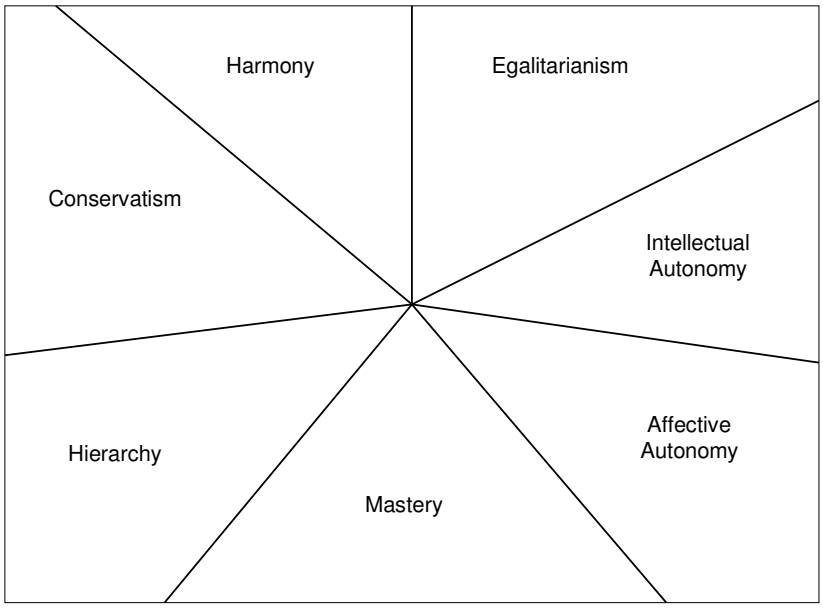
Source: Schwartz *et al*. (2001)

3.5. Cultural-level values

Cultural-level values represent the motivational goals of social institutions and the relationships among the different cultural-level values reflect the social dynamics of conflict and compatibility that emerge as social institutions pursue their goals. Schwartz (1999) re-analysed the data obtained by Schwartz (1992) by computing the correlations between the mean importance ratings of each value across the sample groups that is representative of separate cultural groups. The objective of Schwartz's (1999) study was to examine the culture-level dimensions of the universal value

types. The results of Schwartz's analysis revealed seven types of values, as shown in Figure 3.4, in which cultures can be compared.

Figure 3.4 Structure of cultural-level value types



Source: Schwartz (1999, p.29)

Schwartz's (1999) seven cultural-level value types were determined based on the argument that the value priorities of a society may be inferred from the aggregate of the value priorities of the individual members of that society.

> Shared cultural values in a society help to shape the contingencies to which people must adapt in the institutions in which they spend their time. As a result, the members of each cultural group share many value-relevant experiences and they are socialised to accept shared social values. Of course, within cultural groups there is individual variation in value priorities due to the unique experiences and personalities of different individuals. However, the average priorities attributed to different values by societal members reflect the central thrust of their shared enculturation. Hence, the average priorities point to the underlying, common cultural values. (Schwartz, 1999, pp.25-26)

Schwartz (1999) derived the seven cultural-level value types, expressed in three bi-polar cultural dimensions, from three issues that were argued to confront all societies. The first issue confronting societies is the nature of the relationship between the individual and the group, which is analogous to Hofstede's (1980) description of the individualistic and collectivistic society. In responding to this issue, Schwartz argued that it is important to consider the extent that individuals are autonomous or embedded in their groups. This would give rise to the critical cultural dimension of conservatism versus intellectual or affective autonomy. Conservatism represents the cultural value of maintaining 'the status quo, propriety, and restraint of actions or inclinations that might disrupt the solidarity of the group' (Schwartz, p.27). Intellectual and affective autonomy describe cultures where the individuals are recognised for their uniqueness and independence. Intellectual autonomy refers to independence of ideas and thought, whereas affective autonomy refers to the freedom to pursue own feelings and emotions.

The second issue confronting society is to guarantee responsible behaviour that will preserve the social fabric. Schwartz (1999) argued that the resolution of this issue lies between using power differences in a hierarchical system of ascribed roles to ensure socially responsible behaviour or, alternatively, to induce societal members to recognise one another as moral equals who share basic interests as human beings. This solution is expressed in the cultural-level dimension of hierarchy versus egalitarianism. The value of hierarchy emphasises 'the legitimacy of an unequal distribution of power, roles and resources' (p.27). Egalitarianism, on the other hand, emphasises values that 'promote the welfare of others' (p.28).

The third issue faced by society is the relationship of humankind to the natural and social world. The response to resolve this issue is to actively master and change the world or, alternatively, to accept the world as it is. This resolution, according to

Schwartz (1999), will give rise to the cultural dimension of mastery versus harmony. Mastery reflects a culture that emphasises 'getting ahead through active self-assertion' (p.28). A society that possesses the culture of harmony would emphasise 'fitting harmoniously into the environment' (ibid).

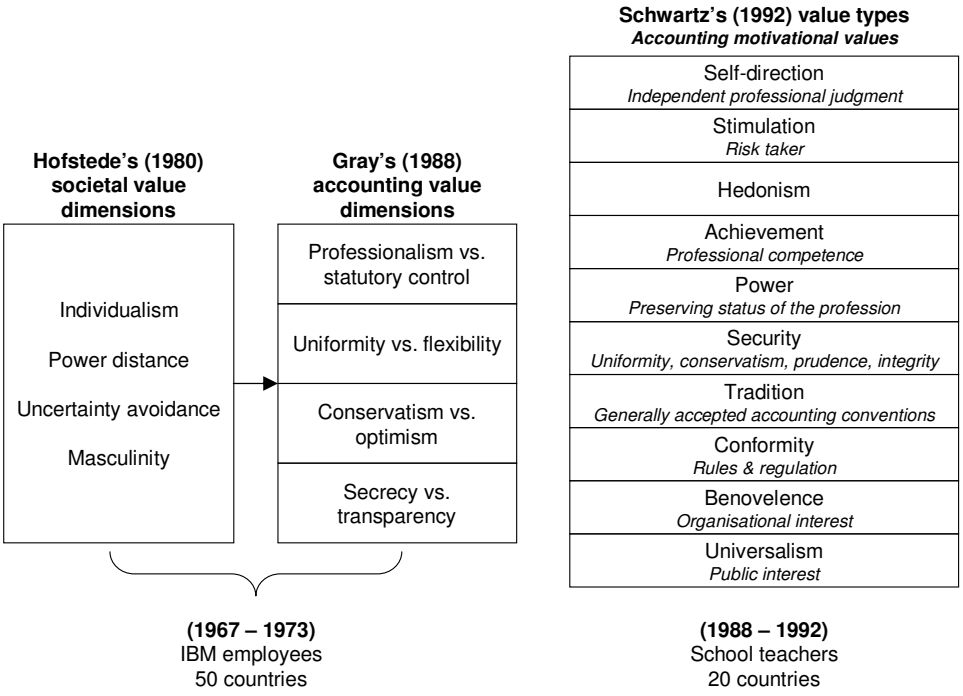
Based on Hofstede's (1980) theory that cultural or societal values have institutional consequences, it is suggested in this thesis that Schwartz's (1999) three cultural value dimensions would affect the domain of accounting by influencing the structure and functioning of relevant institutions in accounting. In a society that emphasises values of conservatism and hierarchy, the laws governing financial reporting by companies would be highly codified. In contrast, common law societies that prescribe the principle of true and fair view in financial reporting would likely be associated with values of autonomy. The particular emphasis of corporate performance in a particular society may also be affected by the prevalent cultural value dimensions. A society that subscribes to values of mastery may focus more on the economic performance of corporations. On the other hand, a society that emphasises values of harmony may be more sensitive to the social and environmental impact of corporate activities. Therefore, cultural-level values are appropriate when examining issues relating to the structure and functioning of institutions in accounting.

3.6. Summary

In examining the influence of culture on accounting practice, it is important to consider the interaction between the human element of accounting with the technology of accounting. The human aspect of accounting involves subjective judgments that are affected by the values held by the individual accountants that make up the accounting sub-culture. Schwartz's (1992) individual-level universal values structure represents a valid and useful approach to examine the influence of

values on the judgment of individual accountants and consequently would provide a better understanding of how culture affects accounting practice. As shown in Figure 3.5 below, the Schwartz model provides a more refined and comprehensive representation of culture. In addition, the Schwartz value structure is derived from teachers and, therefore, more representative of the culture of a society. Consequently, it is more generalisable to specific sub-groups within the larger society such as the accounting sub-culture.

Figure 3.5 Comparison of the Schwartz and Hofstede-Gray framework



> We have operationalised values at the broadest possible contextual level. This followed logically from our definition of values as transsituational, and it permitted the study of all the types of values together. However, because values are expressed in specific context, much will be gained from alternative methods that embed values in concrete and varied everyday situations. … Studies combining our abstract level of measurement with contextually specific measures would increase our understanding of how values enter into concrete decision-making. (Schwartz, 1992, pp.46-47)

Schwartz's (1992) individual-level values structure is based on the universal requirements of human existence and has been confirmed using samples from diverse cultural backgrounds. The universal values transcend specific situations and therefore it is possible to hypothesise the manifestation of these values in the domain of accounting. In order to examine the manner in which the universal values affect accounting behaviour, there is a need to identify a specific context within the domain of accounting in which the interaction between the human element of accounting and the technology of accounting can be observed.

CHAPTER 4: ACCOUNTING AND THE COGNITIVE FUNCTIONING VIEW OF CULTURE

4.1. Introduction

The extant literature has provided considerable support for the argument that culture, conceptualised as a socio-psychological construct of shared values, is a compelling variable in explaining and predicting accounting behaviour. This is because accounting is a socio-technical activity. Consequently, the judgments and decisions of accountants are influenced by the values that motivate the way they live their lives. In Chapter 3, it was argued that Schwartz's (1992) universal structure of individual-level human values provides a useful approach to examine the effect of the accountants' motivational values on their behaviour. Based on the universal needs of human existence and empirically tested on a culturally diverse group of people, Schwartz's value structure provides a more comprehensive and representative approach to operationalise the values construct.

According to Schwartz (1992), the behavioural manifestation of the universal human values is dependent on specific circumstances. Therefore, in examining the manner in which the universal values affect accounting behaviour, there is a need to identify a particular context within the domain of accounting where the interaction between the human and technical aspects of accounting can be observed. Gray (1988) attempted to hypothesise the effect of cultural values on accounting practice within the context of external corporate financial reporting systems, but he failed to invoke an appropriate theoretical framework to explain the influence of the accountants' values on the technical dimensions of external financial reporting. Baydoun and Willett (1995) suggest that such a framework should consider the judgments of

whether the information included in the external financial reports provide useful information to users.

The nature and domain of accounting are examined in Section 4.2 to explicate how the human aspect of accounting interacts with the technology of accounting, specifically within the context of external financial reporting. An in-depth understanding of the nature of this interaction would assist in establishing the association between the accountants' motivational values and accounting behaviour. Based on Belkaoui and Picur's (1991) cognitive functioning view of culture, a theoretical framework is developed in Section 4.3 that would explain the manner in which the accountants' motivational values affect their subjective judgments regarding the usefulness of the information provided by the external financial reporting systems. Adopting a decision-usefulness perspective within the context of accounting as an information processing and communication system, the extant literature in the field of information science is reviewed in Section 4.4 to identify a set of attributes that can be used to examine how accountants evaluate the usefulness of information provided in financial reports. In Section 4.5 of this chapter, the effect of the accountants' interpretation of the meaning of accounting concepts and principles as an intervening variable in the influence of their motivational values on their subjective decision-usefulness judgment is examined. An appropriate external financial reporting concept that would have an effect on the accountants' decision-usefulness judgment is then identified in Section 4.6.

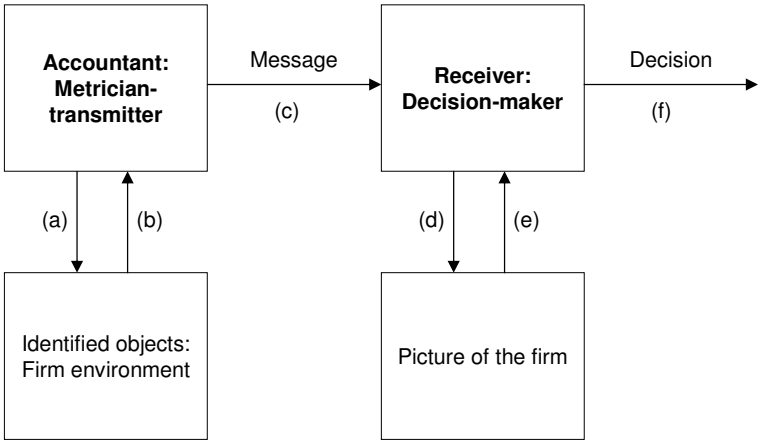
4.2. Socio-technical view of accounting

> All activities in the domain of accounting involve human behaviour. Observation, measurement, message preparation, message interpretation and decision-making are all aspects of human behaviour. The study of accounting is, therefore, the study of some specific aspects of human behaviour. Research in accounting is not concerned with inanimate objects as is the case of physics, chemistry, geology or astronomy, but with the behaviour of groups of people. (Henderson *et al*., 1998, p.27)

It was explained in Section 2.2 that culture influences accounting practice because accounting is a human activity and not merely a technical or physical process. The interaction between the human and technical aspects of accounting is therefore influenced by the motivational values that are held by the accountants. In order to understand the manner in which the human aspect of accounting interacts with the technical dimensions of accounting and how the motivational values influence this interaction, there is a need to examine the nature and domain of accounting.

One of the earliest attempts at formally defining the nature and domain of accounting was by the American Accounting Association (1966 as cited in Sterling, 1967) wherein accounting was defined as 'the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information' (Sterling, p.104). Sterling represented this conception of accounting diagrammatically as a measurement and communication system as shown in Figure 4.1.

Figure 4.1 Sterling's measurement and communication system



Source: Sterling (1967, p.104)

The following is Henderson *et al.*'s (1998, p.27) description of Sterling's (1967) model.

> The accountant observes the transactions and events of the firm (a) and measures them in a way which is conducive to the preparation of a message in the form of a financial report (b). After the transactions and events have been measured, the accountant prepares a message in the form of a financial report. This message is designed to convey an image of the firm in its environment to the receiver of the message (c). The receiver interprets the message (d) and obtains an image of the firm (e), which is then used as the basis for the decisions (f).

As a measurement and communication system, Sterling's (1967) model describes the accountant as a measurer and transmitter of information to a recipient, who is the user and decision-maker. The act of observing and measuring events, subsequently preparing a message in the appropriate form and content, involves an interaction between the technical and human aspects of accounting (Perera, 1989). The technical aspect of accounting refers to the physical accounting systems used by the

accountants such as the ledgers, journals and computerised processing systems. The manner in which the accountants decide on the events and transactions to be recognised, the appropriate measurement methods to be applied as well as the manner and extent of the disclosure of information in the financial statements, represent the human aspect of accounting.

Chambers (1966) elaborated on the nature of the interaction between the human and technical aspects of accounting.

> Communication, as a physical process, takes place when signs or signals are transmitted from a source to a receiver through a channel linking the source with the receiver. In our present context, the source is a series of economic events and effects. The signs or signals are representations of properties of those events and effects. The channel is the whole process of observing, describing, recording, and summarising descriptions of a particular aspect of those events and of transmitting the result. The receiver is an actor. But communication may not be considered simply as a physical process. An actor has no use for signs as such; he has use for signs having meaning or significance in the circumstances in which he finds himself. Communication between persons is a matter of transmitting significances, of establishing in the mind of another what one has observed, or the product of what one has observed, recorded, and otherwise processed. In view of the personal element inherent in all perceptions, interpretations, and evaluations it is necessary to demonstrate that transmission is possible. (Chambers, 1966, pp.166-167)

In describing accounting as an information processing and communication system, Chambers (1966) argued that the physical process of accounting involves the transmission of signs or signals that represent properties of the economic events and transactions. This physical aspect of accounting is affected by how the accountants perceive, interpret and evaluate the signs or signals and, consequently, influence the manner in which these signs or signals are communicated.

Accounting is therefore a socio-technical activity because the communication of the physical and technical aspects of accounting is influenced by the mental processes

or cognitive abilities of the accountants. The mental processes of the accountants would determine how they observe, interpret and evaluate the effects of events that unfold and consequently affect the manner information is communicated to the users.

4.3. Cognitive functioning view of culture

Chambers' (1966) postulated that the mental processes of accountants are influenced by their knowledge, experience and environment. The accountants operate in an environment that comprises institutions and groups such as corporations, regulatory bodies, investors, bankers, social and environmental interest groups and the general public. In interacting with this environment, the accountants develop appropriate behaviours and responses. As discussed in Section 2.3, the manner in which accountants behave and respond to their environment is influenced by their values, attitudes and beliefs. These shared values have been indoctrinated and reinforced through the accountants' specialised education, training and working experience. Therefore, the accounting profession represents a unique sub-culture within the larger society.

As Gray (1988) suggests, the accounting sub-culture, represented by a set of accounting values, interacts with societal or cultural values and institutional structures to influence accounting practice. Drawing on Chambers' (1966) arguments, the accountants' shared values would affect accounting practice through the influence over their mental processes. These accounting values would influence the way accountants observe, interpret and evaluate events and how these events are communicated to users. Hence, the motivational values that guide the way accountants live their lives would act as independent variables influencing the interaction between the human and technical aspects of accounting practice.

The notion that societal or cultural values influence the mental processes of accountants is supported by Belkaoui and Picur's (1991) cognitive functioning perspective of culture.

> Using the cognitive emphasis, national cultures act as networks of subjective meanings or shared frames of reference that members of each culture share to varying degrees and which, to an external observer, appear to function in a rule-like, or grammar-like manner. (Belkaoui & Picur, 1991, p.119)

Belkaoui and Picur's (1991) description of culture as a network of subjective meanings or shared frames of reference is congruent with Hofstede's (1980) depiction of culture as the collective programming of the mind and Matsumoto and Juang's (2004) socio-psychological construction of culture. This theory of the influence of culture on the interpretation, perception, judgment and decision-making of accountants is further supported by Ross' (2004) cognitive theory of culture.

> Culture describes all the mental processes that are (or can be) subject to social transmission, as well as other elements of human behaviour (including material goods) that help establish and form our mental processes. These different elements (mental, behavioural, and material) can often only be understood as a set of interrelated features, one causing and forming the other, and are in constant relation with the (social, historical, and natural) environment. (Ross, 2004, p.61)

If the accountants' motivational values interact with societal or cultural values to influence accounting practice through their mental processes, then accountants from different cultural groups would develop different psychological responses. Consequently, accountants from different cultural groups would observe, interpret and evaluate events differently and may result in differences in the communication of information to users.

The argument that accountants from different cultural groups have different perceptions of accounting events was empirically examined by Belkaoui and Picur (1991). Their study involved the examination of the perception of accounting concepts by partners and managers of a large international accounting firm. 87 partners and managers from the offices in Chicago, London and Toronto were surveyed to represent three different national cultures while controlling for the potential impact of organisational culture and linguistic relativism.

Table 4.1 Concepts of relevance to accounting theory

Underlying accounting assumptions	Generally accepted accounting principles
1. Going concern	5. Cost principle
2. Entity	6. Revenue principle
3. Stable monetary unit	7. Matching principle
4. Periodicity	8. Objectivity principle
	9. Consistency principle
	10. Full disclosure principle
	11. Materiality principle
	12. Conservatism principle

Source: Belkaoui and Picur, 1991, p.121

Belkaoui and Picur (1991) examined the conceptual perception of respondents' based on their similarity ratings among 12 accounting concepts relevant to accounting theory as shown in Table 4.1. Applying the multi-dimensional scaling technique, Belkaoui and Picur studied the recognition of shared or linked characteristics in the accounting concepts (stimulus generalisation) or the recognition of shared differences (stimulus discrimination). The following is Belkaoui and Picur's description of their findings.

> Basically the different cultural groups in accounting created different cognitions or systems of knowledge for the perception of accounting concepts that share common perceptual characteristics (conjunctive concepts), or that are linked by some fixed

> relationships (relational concepts). The cognitive structure was not different among the three groups for the accounting concepts that differ on the basis of one or more characteristics (disjunctive concepts). (Belkaoui & Picur, 1991, p.124)

According to Hunt and Hovland (1960), in the learning of different types of concepts, individuals apply a system of classification that distinguishes these concepts on some logical basis. Conjunctive concepts share one or more common features. For example, matching principle and stable monetary unit assumption are considered conjunctive concepts because the former is defined in terms of the existence of revenue with expenses and the latter includes nominal value and monetary unit. Materiality and conservatism principles, on the other hand, are considered relational concepts because these concepts are related to some other circumstances. An item is material when it exceeds a certain threshold and conservatism is applied when there is uncertainty in a measurement task. Conservatism can also be considered a disjunctive concept as it can occur on several possible circumstances. Conservatism can occur when assets are understated or when liabilities are overstated.

Belkaoui and Picur (1991) found the accountants from the three different cities distinguished the twelve concepts based on three dimensions that corresponded with Hunt and Hovland's (1960) concept classifications of conjunctive, disjunctive and relational. This shows that accountants adopt different approaches in learning and understanding different concepts. Consequently, the accountants' mental processes do interact with the technical aspect of accounting through the perception of concepts and principles applied. From an analysis of variance of the similarity ratings of pairs of concepts, Belkaoui and Picur found evidence of differences in the classification of the concepts along two of the three dimensions in the three cities. The resulting conclusion was that there was a cultural effect on the accountants' perception of those accounting concepts.

Belkaoui and Picur (1991) did not identify which aspect of culture affected the differences in perception by the three national groups, but they found some evidence to suggest that there were differences in the mental processes among the accountants in the manner concepts were related and differentiated. Consequently, Belkaoui and Picur concluded that accountants from the three cultural groups would have different understanding of accounting concepts. Belkaoui (1995) further postulated that because of the resultant differences in cognitions, culture would also affect the judgment and decision process in accounting.

> … culture, through its components, elements and dimensions, dictates the organisational structures adopted, the micro-organisational behaviour, and the cognitive functioning of individuals, in such a way as to ultimately affect their judgment/decision process when they are faced with an accounting and/or auditing phenomenon. (Belkaoui, 1995, p.3)

Therefore, Belkaoui and Picur's (1991) cognitive functioning view of culture provides theoretical support for the argument that the accountants' shared motivational values, as described in Section 3.3.4, would act as intervening variables in the interaction between the human and technical aspects of accounting practice. The influence of these motivational values occurs at the psychological level involving the mental processes and cognitive abilities of the accountants. In addition, the results of Belkaoui and Picur's study suggest that accountants from different cultural groups would have different mental processes or cognitive abilities due to differences in motivational values. Therefore, accountants' from different cultural groups observe, interpret and evaluate events differently, resulting in differences in accounting behaviour.

4.4. Decision-usefulness judgments

In the context of external financial reporting, the nature and domain of accounting was described in Section 4.2 as an information processing and communication system. Within this system, accountants observe, interpret and evaluate events or transactions and communicate the information to users. This process was described as a socio-technical activity and is affected by the motivational values of the accountants as a result of the cognitive functioning view of culture.

In order to examine the association between the accountants' motivational values and their mental processes or cognitive abilities within the context of external financial reporting, Baydoun and Willett (1995) suggested incorporating the subjective judgments of whether the information provided in financial reports is useful to users. Such a framework to examine the cultural relativism of accounting would require a critical evaluation of the decision-usefulness objective of financial reporting and the nature of the related subjective judgments.

> The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to wide range of users in making economic decisions. (IASB Framework, 1989, para.12)

The IASB Framework (IASB, 1989) adopts a decision-usefulness perspective in prescribing that the objective of preparing financial statements is to provide information that is useful for the decision making needs of users. This objective can be linked to the definition of accounting as an information and communication system postulated by Chambers (1966) and Sterling (1967). The decision-usefulness perspective is derived from the reasoning that, for information to be successfully communicated, it should meet the needs of users.

The decision-usefulness perspective adopted in the IASB Framework (IASB, 1989) is premised on the assumption that information provided in financial reports should serve the needs of users in making economic decisions. Gray *et al*. (1996) suggest that the acceptance of such a role of accounting is premised on the argument that the maximisation of economic efficiency would maximise the well-being of society. Such a conventional economic view of accounting, according to Gray *et al*., may be restrictive and may not represent reality.

However, if accounting exists as a sub-culture within the larger society as discussed in Section 2.4, the corollary argument is that accountants share a unique set of values that have been indoctrinated through their education and professional training. Regardless of the validity of the conventional economic view of the objective of financial reporting, such a perspective of the role of accounting would have been cultivated in the psyche of the accountants through their years of education and training.

Therefore, notwithstanding the criticism of the decision-usefulness perspective, the accountants' decision about the appropriate accounting treatment for a business transaction or event is guided by the need to provide useful information for users to make economic decisions (IASB Framework, 1989, para.12). Although the IASB Framework itself would not be normally used as mandatory regulation, the principles prescribed in the framework are applied in the international financial reporting standards. Consequently, in applying the respective standards, the accountant is guided by the principles contained within the framework as stated in para.1(d):

> … assist preparers of financial statements in applying International Accounting Standards and in dealing with topics that have yet to form the subject of an International Accounting Standard.

Specific provisions in the accounting standards prescribe the compliance with the decision-usefulness principle contained within the IASB Framework (IASB, 1989). An example of such references to the IASB Framework is in IAS 1 Presentation of Financial Statements (IASB, 2005) where the form and content of financial statements are stated to be structured to meet the decision-usefulness objective of financial statements as prescribed in the framework.

> The objective of general purpose financial reports is to provide information about the financial position, financial performance, and cash flows of an entity that is useful to a wide range of users in making economic decisions. (IAS 1, 2005, para. 7)

In IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (IASB, 2003), any changes in accounting policies must be made in accordance with the requirements of any standards or interpretations. Change in accounting policies can also be made if it results in the provision of more relevant and reliable information.

> An entity shall change an accounting policy if the change:
> a) is required by a standard or interpretation, or
> b) results in the financial report providing reliable and more relevant information about the effects of transactions, other events or conditions on the entity's financial position, financial performance or cash flows. (IAS 8, 2003, para. 14)

Relevance and reliability are part of the four principal qualities prescribed in the IASB Framework (IASB, 1989) that are used as criteria in determining the characteristics of information that would be useful for users to make their economic decisions.

> Qualitative characteristics are the attributes that make the information provided in the financial statements useful to users. The four principal qualitative characteristics are understandability, relevance, reliability and comparability. (IASB Framework, 1989, para. 24)

These qualitative characteristics are criteria that should be used when making judgments and decisions about the appropriate accounting treatment of business transactions and events so that the information transmitted by the accountants would be useful to users in meeting their information need. These criteria are applied in determining the manner in which events and transactions are measured and disclosed in the financial statements.

> In practice a balancing, or trade-off, between qualitative characteristics is often necessary. Generally the aim is to achieve an appropriate balance among the characteristics in order to meet the objective of financial statements. The relative importance of the characteristics in different cases is a matter of professional judgment. (IASB Framework, 1989, para. 45)

The accountants' judgment regarding the relative importance of competing qualities of useful information, such as relevance versus reliability, would influence the accounting policies and methods applied in preparing financial reports. These judgments are affected by the accountants' mental processes and cognitive abilities as discussed in Section 4.2. The accountants' mental processes and cognitive abilities are, in turn, influenced by their motivational values, based on the cognitive view of culture discussed in Section 4.3. Therefore, the accountants' professional judgment regarding the trade-off between competing qualities of useful information would provide a valid approach to examine the effect of the accountants' motivational values on accounting practice, specifically within the context of external financial reporting. This approach is consistent with Baydoun and Willet's (1995) argument that the culturally dependent aspect of financial reporting involves the judgment of whether financial statements contain information that will be able to meet the needs of users.

4.4.1. The cognitive concept of subjective relevance

In order to study the accountants' judgment process in evaluating the trade-off between competing qualities of decision-useful information, an appropriate theoretical framework that would comprehensively explicate the attributes of useful information needs to be developed. The IASB Framework (IASB, 1989) prescribes a set of qualitative criteria or attributes of useful information comprising understandability, relevance, reliability and comparability. However, these attributes have been criticised for lack of clarity and consistency in providing guidance to accounting practice (Loftus, 2003; Walker & Jones, 2003).

The domain of accounting is conceptualised as an information processing and communication system by Chambers (1966) and Sterling (1967). Therefore, ideas and concepts from the field of information science and information retrieval would provide a useful approach to develop an appropriate theoretical framework to examine the accountants' judgment regarding the attributes of useful information provided in financial reports. According to Saracevic (1975, p.323), information science is 'a field and a subject that is concerned with problems arising in communication of knowledge in general', while Schamber *et al*. (1990) describe information retrieval as 'a communication process in which a message is transferred from a source (the system) to a destination (the user)' (p.756). These conceptions of information communication systems are analogous to Chambers' (1966) and Sterling's (1967) description of accounting.

According to Schamber *et al*. (1990) the effectiveness of the information retrieval process is evaluated by employing a relevance judgment.

> From the beginning, information scientists and practitioners have used relevance as a measure in the design and evaluation of information systems and in empirical studies of human information behaviour. (Schamber *et al.*, 1990, p.755)

Therefore relevance is a central concept in human communication.

> In the most fundamental sense, relevance has to do with effectiveness of communication. Underlying all information systems is some interpretation of the notion of relevance. (Saracevic, 1975, p.321)

Although there are many definitions and conceptions of relevance in information retrieval and information science, the subjective and cognitive user-orientated definition (Borlund, 2003) is considered most applicable to the domain of accounting. According to Borlund, subjective relevance is a user-orientated definition that considers the usefulness of retrieved information on the basis of the subjective mental processes of the assessor or user.

> The types of relevance within this class (subjective or user-based relevance) are concerned with the aboutness and appropriateness of a retrieved information object and refers to the various degrees of intellectual interpretations carried out by human observers – whether assessors or users. The subjective class of relevance may, as a generic concept, refer to the aboutness, usefulness, usability, or utility of information objects in relation to the fulfilment of goals, interests, work tasks, or problematic situations intrinsic to the user. It is context dependent. (Borlund, 2003, p.915)

The cognitive conception of subjective user-orientated relevance is congruent with Chambers' (1966) theory that the mental processes of the accountants influence their interpretation, perception, judgment and decision with regards to the information included in the financial report. The subjective user-orientated relevance is, therefore, a useful approach to examine how accountants exercise their judgments concerning the type of information that should be included in financial reports that would meet the needs of users. In addition, as a cognitive concept, subjective user-orientated relevance would be influenced by the cognitive functioning view of culture. Thus, the

accountants' subjective relevance judgments would be affected by the motivational values.

According to Borlund (2003), subjective relevance is concerned with the 'aboutness' and appropriateness of the information to the perceived needs of the user. 'Aboutness' concerns the conceptual relatedness or the 'fit between concepts in information need and concepts in information' (Schamber *et al*., 1990, p.759). In the domain of accounting, the notion of conceptual relatedness could be associated with the need to provide information about the 'financial position, performance and changes in financial position' of the business to users for making economic decisions (IASB Framework, 1989, para.12).

> The economic decisions that are taken by users of financial statements require an evaluation of the ability of an enterprise to generate cash and cash equivalents and of the timing and certainty of their generation. Users are better able to evaluate this ability to generate cash and cash equivalents if they are provided with information that focuses on the financial position, performance and changes in financial position of an enterprise. (IASB Framework, 1989, para.15)

Utility of information is another important factor in determining subjective relevance (Borlund, 2003). The significance of utility is highlighted by Saracevic (1975, p.334).

> … it is fine for IR systems to provide relevant information, but the true role is to provide information that helps to directly resolve given problems, that directly bears on given actions, and/or that directly fits into given concerns and interests.

Therefore, accounting information should not only be conceptually related to the ability to generate cash and cash equivalents, but also have utility or practical relevance. In the context of accounting, the utility of information would encompass the qualities of understandability, relevance, reliability, and comparability, prescribed by the IASB Framework (IASB, 1989) as attributes that make information useful.

Accounting information possesses utility when it is 'readily understandable by users' (para.25). Information would have the quality of relevance when it enables users to 'evaluate past, present or future events or confirming, or correcting, their past evaluations' (para.26). The quality of reliability exists when information 'can be depended upon by users' (para.31). Information should also be prepared 'in a consistent way throughout an enterprise and over time for that enterprise and in a consistent way for different enterprises' (para.39) to enable users to make comparative analysis.

Thus, the cognitive concept of subjective user-orientated relevance has similar applications in the domain of accounting and can be applied to examine the accountants' judgment regarding the competing qualities of useful information as well as the influence of their motivational values. In further identifying and operationalising a set of attributes for useful information that can be applied in the domain of accounting, reference is made to the fundamental theory of human communication postulated by Grice (1989).

> Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged. (Grice, 1989, p.26)

Grice (1989) postulates a general principle for effective human communication called the Cooperative Principle. Grice's principle can be interpreted to mean that when 'we communicate with other people, we normally expect them only to make relevant utterances' (Hjerland & Christensen, 2002, p.962). Grice argues that what is important when people communicate is the expression of the intention or purpose. A communication is successful when the parties involved are cooperative in making their intentions and purpose clear. This notion of effective communication is consistent with Chambers' (1966) description of accounting as a communication

system that is affected by the mental processes or cognitive abilities of the accountants and users. Chambers' argued that 'in view of the personal element inherent in all perceptions, interpretations, and evaluations it is necessary to demonstrate that transmission (of information between accountants and users) is possible' (p.167). In order to ensure that communication is cooperative or effective, Grice posits four maxims that should be considered comprising quantity, quality, relation and manner. These four maxims, therefore, would provide a theoretical framework to identify and operationalise a set of attributes for useful information that would ensure effective communication in the context of external financial reporting.

In the following sections, Grice's (1989) four maxims of effective human communication are examined to develop a set of attributes for useful information that can be applied to study the accountants' subjective relevance judgment. Grice's maxims are examined within the context of external financial reporting by exploring associations with the qualities of useful information prescribed in the IASB Framework (IASB, 1989).

4.4.1.1. Sufficiency and completeness

Grice's (1989) maxim of quantity relates to 'the quantity of information to be provided' (p.26). Two sub-maxims follow from the maxim of quantity of information.

1. Make your contribution as informative as is required (for the current purpose of the exchange).
2. Do not make your contribution more informative than is required. (Grice, 1989, p.26)

The maxim of quantity implies that information provided should be sufficient for the purpose of which it is intended. Chen and Xu (2005) describe the quantity of

information from the perspective of the scope of the information should be suitable to the needs of the users. The scope of the information provided is important to meet the users' need for 'thorough and complete view' (Barry, 1994, p.153) of the topic of interest. Miranda and Saunders (2003), in examining information sharing and decision-making in social groups, conceptualise information sharing along the two dimensions of breadth and depth of interpretations. Miranda and Saunders hypothesise that the breadth and depth of information sharing would lead to richer interpretation of the information and consequently would result in a quality decision. However, too much information may result in information overload and impede information sharing.

In the domain of accounting, the issue of quantity may be associated with the sufficiency or completeness of the information provided in the financial statements. Referring to Sterling's (1967) Measurement and Communication model, the maxim of quantity would be related to the need for the accountant to observe and measure all the relevant transactions and events that would portray a thorough image of the firm so as to ensure that there is an effective communication with the users. The IASB Framework (IASB, 1989) prescribes completeness as an important criterion in ensuring that the appropriate quantity of information is provided.

> To be reliable, the information in financial statements must be complete within the bounds of materiality and cost. An omission can cause information to be false or misleading and thus unreliable and deficient in terms of its relevance. (IASB Framework, para. 38)

According to the IASB Framework (IASB, 1989), the information provided in the financial statement should be complete 'within the bounds of materiality' (para. 38). Materiality is defined as follows:

> Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements. Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement. Thus materiality provides a threshold or cut-off point rather than being a primary qualitative characteristic which information must have if it is to be useful. (IASB Framework, 1989, para. 30)

Materiality provides a conceptual 'threshold or cut-off point' in determining the breadth and depth of information provided in the financial statements. Such a threshold, however, would depend on the nature and quantum of the information of concern. Although materiality is a subjective measure of the quantity of information to be provided, it is nevertheless closely associated with the notion of completeness.

Grice's (1989) maxim of quantity can therefore be applied within the domain of accounting with reference to the scope of the information provided in the financial statements. Scope may be measured in terms of the breadth and depth of the information. Information contained in the financial statements should be sufficiently broad to show a complete picture of the business' financial position and performance. In addition, the information should be of sufficient detail to provide an in-depth view of the financial position and performance of the business.

4.4.1.2. Reliability and credibility

The maxim of quality is defined by Grice (1989) as 'try to make your contribution one that is true' (p.27). There are two sub-maxims that follow quality.

1. Do not say what you believe to be false.
2. Do not say that for which you lack adequate evidence. (Grice, 1989, p.27)

The maxim of quality is associated with the users' demand for information that is 'accurate, correct and valid' (Barry, 1994, p.154). Chen and Xu (2005) viewed the

maxim of quality from the perspective of credibility and reliability of the information provided. The credibility and reliability of the information would be enhanced by its verifiability against other sources of information, especially if it is from a reputable source (Barry). Grice (1989) placed great importance on the maxim of quality when positing that 'other maxims come into operations only on the assumption that this maxim of quality is satisfied' (p.27). Information that lacks credibility and reliability would therefore severely compromise the relevance of the information in the communication process.

In the domain of accounting, credibility or reliability of the information provided is an important criterion as users depend on the information to make economic decisions. The IASB Framework (IASB, 1989) prescribes that information needs to be reliable if it is to be of use.

> To be useful, information must also be reliable. Information has the quality of reliability when it is free from material error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent. (IASB Framework, 1989, para. 31)

In addition to the notions of accuracy and correctness of the information, neutrality is prescribed in the IASB Framework (IASB, 1989) as a necessary criterion in determining the reliability of financial information.

> To be reliable, the information contained in financial statements must be neutral, that is, free from bias. Financial statements are not neutral if, by the selection or presentation of information, they influence the making of a decision or judgment in order to achieve a predetermined result or outcome. (IASB Framework, 1989, para. 36)

Neutrality therefore implies impartiality and objectivity. In information retrieval, the notion of objectivity incorporates ideas of generalisability as well as validity of the

information (Barry, 1994). In the domain of accounting, validity is incorporated under the notion that financial statements should represent faithfully the underlying economic events or transactions. This perhaps stems from the need to present an accurate image of the firm. The concept of faithful representation is associated with the principle of substance over form. Meyer (1976) provides an explanation of the principle of economic substance prevailing over legal form in preparing financial statements.

> These instances are characterised by a need to account differently from the legal form used in given past events and circumstances. The basis for a deviation in accounting is the existence of either (1) events and circumstances whose financial statements disclosure is influenced by substantive effective ownership characteristics perceived to be in effect at present or (2) by events and circumstances whose financial statement disclosure is affected by the substance of expected outcome characteristics, i.e., assumed to occur in the future. (Meyer, 1976, pp.80-81)

Meyer (1976) provides two interpretations of the principle of substance over form. The first interpretation refers to the recognition of effective control rather than legal ownership of a resource existing at the reporting date. An example is the recognition of finance leases as assets on the balance sheet if at the balance sheet date substantially all of the risks and rewards incident to ownership of the asset have been transferred to the lessee although legal title remains with the lessor. The second interpretation refers to the appropriate valuation of a resource that would reflect the substance of the expected future outcomes. An example of this situation is where assets are valued based on current rather than historical prices. Current prices would reflect the substance of the expected future outcomes of the assets while historical prices are reflective of the past.

The criterion of the valid representation of the underlying facts is contained within the IASB Framework (IASB, 1989) where information should be presented using the perspective of economic substance over legal form (para. 35).

> If information is to represent faithfully the transactions and other events that it purports to represent, it is necessary that they are accounted for and presented in accordance with their substance and economic reality and not merely their legal form. The substance of transactions or other events is not always consistent with that which is apparent from their legal or contrived form.

There is, however, one particular criterion, prudence, that makes up the concept of reliability in the IASB Framework (IASB, 1989) that is peculiar to the domain of accounting.

> Prudence is the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated. (IASB Framework, 1989, para. 37)

The concept of prudence refers to the need to exercise due care and caution when accounting for uncertainties in estimations when preparing the financial statements. These uncertainties, if they are not prudently estimated, may impinge on the reliability or credibility of the information.

Grice's (1989) maxim of quality is operationalised within the domain of accounting by incorporating Chen and Xu's (2005) criterion of reliability and credibility. The reliability criterion is modified to include the concept of prudence which is peculiar to the accounting domain. In order to ensure that information contained in the financial statements is reliable, credible and of quality, the information should accurately represent the events and transactions that occurred. To represent these events and transactions objectively, the information contained in the financial statements should

not be biased or sway the user's decision to a predetermined outcome. The financial statements should present a valid picture of the business that reflects economic reality rather than merely the legal form of the events and transactions. Finally, the prudence concept should be incorporated to ensure that a cautious approach is adopted in presenting information that is uncertain.

4.4.1.3. Relevance and relatedness

The maxim of relation is tersely described by Grice (1989) as 'be relevant' (p.27). In attempting to explain the maxim of relations, Grice applied concepts of 'different kinds and focuses of relevance' and the 'subjects of conversation'. What Grice was referring to were concepts of 'aboutness' (Borlund, 2003) and conceptual relatedness (Schamber *et al*., 1990). These issues cover the appropriateness of the information to the perceived needs of the user.

Chen and Xu (2005) associated the maxim of relation to topicality, which measures 'the extent to which the retrieved document is related to a user's current topic of interest' (p.5). In other words, topicality refers to how the information contained in a document matches the topic of interest to the users. In the domain of accounting, determining the interest of users could represent a problem. This is because of the varied range of users that can be assumed to be interested in the information contained within the financial statements. The IASB Framework (IASB, 1989) prescribes the users of financial statements as 'present and potential investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies and the public' (para.9). These users are presumed to have different needs for information. Financial statements are therefore intended to meet the 'needs which are common to all users' (para.10). However, the FASB (1978)

suggests that the main focus of financial reporting is on the needs of users for investment and credit decisions.

> Thus the objectives in this Statement are focused on information for investment and credit decisions for reasons that are largely pragmatic, not to narrow their scope. The objectives need a focus to avoid being vague or highly abstract. Investors and creditors and their advisors are the most obvious prominent external group who use the information provided by financial reporting and who generally lack the authority to prescribe the information they want. Their decisions and their uses of information have been studied and described to a much greater extent than those of other external groups, and their decisions significantly affect the allocation of resources in the economy. In addition, information provided to meet investors' and creditors' needs is likely to be generally useful to members of other groups who are interested in essentially the same financial aspects of business enterprises as investors and creditors. (CON1, 1978, para. 30)

The focus on investment and credit decisions by the FASB (1978) is arguably narrow and ignores an important area of financial reporting of corporate social and environmental performance. However, by adopting this narrow perspective, this thesis hopes to be able to examine the influence of culture on one aspect of financial reporting. The focus on investment and credit decisions is perhaps consistent with the focus on financial reporting of companies listed on the international capital markets by the IASB.

In the context of the IASB Framework (IASB, 1989), the maxim of relation as operationalised by the criterion of topicality can be associated with the Framework's narrow conception of relevance.

> To be useful, information must be relevant to the decision-making needs of users. Information has the quality of relevance when it influences the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations. (IASB Framework, 1989, para. 26)

The definition of relevance as a separate criterion in the IASB Framework (IASB, 1989) focuses on information that possesses predictive and confirmatory value. Investors and creditors are assumed to require information that could predict future economic performance and confirm past evaluations of economic performance.

Content novelty is described by Barry (1994) as 'the extent to which information provided by the document was novel to the user' (p.155). Novelty refers to something new or original within the document that the user has not encountered before. The relevancy of the novel information is that it sheds a new perspective on the topic of interest to the user and therefore may influence the user's decision. In the domain of accounting, the notion of novelty could be associated with information provided in the financial statement that gives a new and different perspective of the business that will have an impact on the user's investment or credit decision. Although novelty is included by Chen and Xu (2005) as part of the maxim of quantity of information, novelty is perhaps more appropriately classified as part of the maxim of relation. This is because the novelty of the information is relevant only to the extent that it is related to the needs of the user.

Recency of the information is another criterion that can be associated with novelty. Barry (1994) defined recency as 'the extent to which information provided by the document was recent and up-to-date' (p.154). Recent and timely information would be able to offer something new about the topic of interest to the user. Timeliness is an important factor in determining the relevance of information reported in the financial statements. The IASB Framework (IASB, 1989) stipulates that 'if there is undue delay in the reporting of information it may lose its relevance' (para. 43).

Grice's (1989) maxim of relations can be operationalised using the topicality and novelty criteria. The information provided in the financial statements should be

related to the decision-making needs of the user. Adopting the narrow perspective of investment decisions, the information included in the financial statements needs to be related to the investment decision of the user. The usefulness of the information would be enhanced by the ability to influence the user's decision as well as improving the user's ability to make an appropriate investment decision. If the information is new and timely as well as providing something unique and different about the company, it would be able to enhance the knowledge of the user about the company and therefore enable them to make a more informed decision.

4.4.1.4. Clarity and consistency

Grice's (1989) final communication maxim is manner. This maxim relates more to how information is transmitted than the form and content of the information. According to Grice the maxim of manner refers to the need to 'be perspicuous' (p.27). Manner comprises the following sub-maxims.

1. Avoid obscurity of expression.
2. Avoid ambiguity.
3. Be brief (avoid unnecessary prolixity).
4. Be orderly (Grice, 1989, p.27)

The maxim of manner refers to the need for clarity in the information being transmitted to ensure effectiveness of the communication process. Chen and Xu (2005) associate manner with the need for information to be easy to read and understandable to the user. According to Chen and Xu, understandability refers to the need for clarity in the language used and avoidance of technical jargon that may be confusing to the user. Clarity is defined by Barry (1994) in terms of the need for information to be presented in a 'clear and readable manner' (p.154).

Understandability is therefore an important criterion for relevance as it enables the message to be effectively conveyed to the user.

In the domain of accounting, understandability is also considered an important criterion in the communication and decision-making process.

> In information and communication theory, information exists only if the datum: (1) is relevant (i.e. reduces the amount of uncertainty associated with a decision), and (2) is understood (i.e. it is correctly deciphered by the observer [user] of the datum). If we substitute datum for information in the definition of relevance, financial accounting datum is relevant if it bears on – reduces the uncertainty associated with – the economic decisions for which it is used. Relevance, therefore, is defined not in terms of the economic decision maker per se, but rather, in terms of the decision model. The decision maker is contemplated by the understandability objective. … accounting datum, assuming it meets the criteria for relevance, is useful only if it is intelligible to the decision maker. (Morton, 1974, pp.288-289)

Morton (1974) argues that understandability is associated with the relevance of the information. Lack of understandability in the information communicated will reduce the relevance of the information as it may result in the information being incorrectly interpreted by the user. Therefore understandability is prescribed in the IASB Framework (IASB, 1989) as 'an essential quality of the information provided in financial reports' (para. 25).

The maxim of manner may also be associated with the quality of comparability prescribed by the IASB Framework (1989, para. 24). The IASB Framework prescribes that financial statements should be prepared on the basis of consistent policies and procedures to enable the comparison between different enterprises or within a single enterprise over time.

> Users must be able to compare the financial statements of an enterprise through time in order to identify trends in its financial position and performance. Users must be able

> to compare the financial statements of different enterprises in order to evaluate their relative financial position, performance and changes in financial position. Hence, the measurement and display of the financial effect of like transactions and other events must be carried out in a consistent way throughout an enterprise and over time for that enterprise and in a consistent way for different enterprises. (IASB Framework, 1989, para. 39)

The qualities of comparability and consistency highlight the need for information to be presented in an orderly manner so as to enable users to evaluate trends and relative performance required in making their economic decisions. Comparability could also be argued to be analogous to understandability. The application of consistent policies in the preparation of financial statements will enable the users to comprehend the performance of the business relative to other periods or other businesses. Changes in policies, if not adequately disclosed, may cause confusion and misinterpretation of the information. Therefore, comparability should be incorporated into the maxim of manner.

Grice's (1989) communication maxim of the manner in which information is conveyed can therefore be operationalised by incorporating the criteria of understandability and comparability. In order to present information that is useful for decision-making, financial statements need to be clear and understandable. Information presented in the financial statements should not create confusion and ambiguity. Understandability of the information presented in the financial statements is important to ensure that the communication process is effective. The manner information is provided in the financial statements should also help in evaluating trends and relative performance.

4.4.1.5. Cost versus benefit constraint

The IASB Framework (IASB, 1989) prescribes that the provision of relevant information may be constrained by the need to consider the trade-off between the cost of providing the information and the benefits that can be derived there from.

> The balance between benefit and cost is a pervasive constraint rather than a qualitative characteristic. The benefits derived from information should exceed the cost of providing it. The evaluation of benefits and costs is, however, substantially a judgmental process. (IASB Framework, 1989, para. 44)

The costs benefit trade-off does not fit into any of Grice's (1989) four maxims of human communication. But in the field of information science, the cost benefit trade-off is an important issue in determining pragmatic relevance (Saracevic, 1975). Pragmatic relevance highlights the utility perspective of relevance based on an economic rationale. Therefore, the benefit to be derived from the information obtained should exceed the cost of obtaining that information. In the field of information retrieval, the cost and benefit evaluation is normally conducted from the perspective of the user.

In the domain of accounting, specifically in external financial reporting, the users very often incur minimal or zero cost because the preparation of financial statements is regulated and mandatory for companies. There is therefore a mismatch in the analysis of cost versus benefits. If the analysis is viewed entirely from the perspective of the accountant, it may result in relevant information not being made available if the cost to be incurred exceeds the perceived benefits. Cost benefit consideration is nevertheless an important factor in determining the nature and extent of information to be included in the financial statements. Consequently, the cost benefit trade-off should be incorporated as an important constraining criterion in evaluating the subjective relevance of information to be reported in the financial statements.

4.4.2. Relevance versus reliability trade-off judgments

The objective of this study is to examine the influence of culture, as represented by the motivational values of accountants, on accounting practice, specifically in the context of external financial reporting. Relying on the cognitive functioning view of culture discussed in Section 4.3, the accountants' motivational values would influence their judgments regarding the trade-off between competing qualities used in evaluating the usefulness of information reported in financial statements.

In attempting to develop a theoretical framework to examine the accountants' judgment process and operationalise the attributes of useful information in the preparation of financial statements, references were made to the IASB Framework (IASB, 1989) as well as the theories of information retrieval, information science and human communication. It is argued that the theories from information retrieval, information science and human communication are applicable to the domain of accounting because of the existence of several convergent ideas and concepts.

The cognitive concept of subjective user-orientated relevance is found to be consistent with the description of accounting as a socio-technical information and communication system that is influenced by the mental processes and cognitive abilities of the accountants. In Section 4.4.1, the concept of subjective user-orientated relevance was found to incorporate many of the prescriptive requirements for useful information found in the IASB Framework (IASB, 1989). As a result, subjective relevance can be invoked to explain the manner in which accountants make their judgments regarding the trade-off between the qualities of useful information.

In developing a set of qualities or attributes to evaluate the usefulness of information, Grice's (1989) theory of Cooperative Principle for effective human communication is considered a suitably broad and fundamental approach to adopt. Grice's general principle was adapted to the qualities of useful information prescribed by the IASB Framework (IASB, 1989) to produce a set of attributes that can be specifically applied in evaluating the usefulness of information contained within the financial statements.

Figure 4.2 Framework of the relevance vs. reliability trade-off judgment

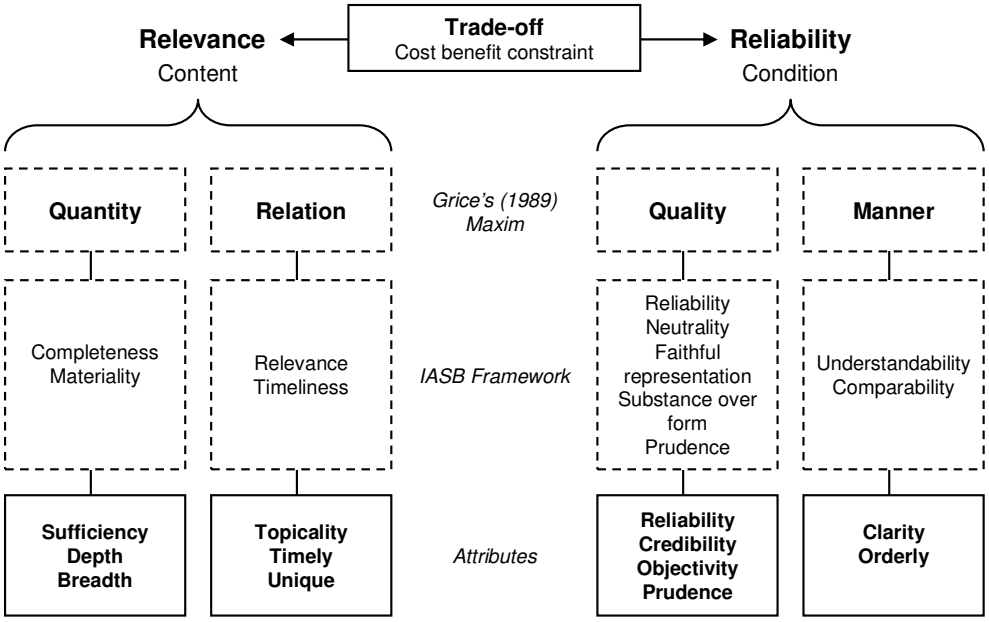


Figure 4.2 presents the adapted sets of attributes that can be applied to evaluate the usefulness of information reported in financial statements. The first set of attributes comprising sufficiency, depth and breadth of information, were associated with Grice's (1989) maxim of quantity. These attributes measure the adequacy and scope of information and incorporate the qualities of completeness and materiality prescribed in the IASB Framework (IASB, 1989). The attributes of topicality, timeliness and uniqueness, which were derived from Grice's maxim of relation,

assess the relatedness of the information to the needs of the users. These attributes incorporate the qualities of relevance and timeliness from the IASB Framework. Both these sets of attributes evaluate the sufficiency and relatedness of the content of the information and have been labelled as 'relevance'.

The other two sets of attributes describe the condition of information rather than its content. They comprise the characteristics of reliability, credibility, objectivity, prudence, clarity and orderliness which satisfy Grice's (1989) maxims of quality and manner. These attributes are consistent with the qualities of reliability, neutrality, faithful representation, substance over form, prudence, understandability and comparability that are prescribed in the IASB Framework (IASB, 1989). Consequently, these attributes are labelled as 'reliability'.

The two main groups of attributes labelled as relevance and reliability would therefore provide a basis to examine the accountants' judgment of the usefulness of information provided in financial reports. Relevance focuses on whether the content of the information fits into the needs of the users while reliability refers to whether the condition of the information will be able to enhance its utility. Although both criteria of relevance and reliability are desirable in evaluating the usefulness of information, the satisfaction of both criteria simultaneously may not always be possible.

> A figure may be verifiable but irrelevant and therefore completely useless. On the other hand, an unverified guess at a relevant figure may be quite useful. If the guess is erroneous it may lead to erroneous decisions … Different degrees of accuracy, different tolerance of errors, are required for different decisions … Verification may make us more confident of the accuracy of the figure because the measurement has been repeated and it makes deliberate misrepresentation more difficult. Verifiability is therefore highly desirable but relevance is indispensable. (Sterling, 1967, p.102)

Therefore, in attempting to satisfy both criteria, there is often a need to trade-off one for the other. The relevance and reliability trade-off is illustrated by considering the appropriate measurement basis for an item of asset. A current valuation of an asset may be considered more relevant to the decision of the user, but current prices may not be reliably determined. Consequently, the accountant exercises professional judgment in determining how much reliability to forego, by estimating the current market price, for example, to provide what is assumed to be more relevant information. Accountants that are motivated to pursue conservation values such as tradition, conformity and security described in Section 3.3.4, will be more inclined to place more importance on the need for reliable measurements. On the other hand, accountants who are motivated by openness to change values such as stimulation and self-direction will tend to be more willing to forego some reliability in order to provide relevant but volatile market information.

The relevance versus reliability trade-off is often influenced by cost benefit considerations. Therefore, the accountants' judgment regarding the trade-off between relevance and reliability would be constrained by considerations of the cost to be incurred in providing the information versus the benefits that can be derived. The accountants' relevance versus reliability judgments will provide an opportunity to examine the influence of culture, as operationalised by the accountants' motivational values, on accounting practice.

4.5. Concept perceptions and interpretations

The extant literature presented in Section 2.3.1 suggests that accountants, existing as a sub-culture within the larger society, share a unique set of motivational values due to their education and professional training. As a result of the cognitive functioning view of culture discussed in Section 4.3, these shared motivational values

of accountants affect their mental processes and cognitive abilities. Since the mental processes of accountants interact with the technical aspects of accounting, the corollary argument is that the motivational values of accountants affect the physical output of accounting. In the context of external financial reporting, Baydoun and Willett (1995) suggest that the culturally relevant aspect of accounting is the subjective judgments of whether financial reports contain information that meet the decision needs of users. Consequently, the accountants' motivational values would influence their judgment process in balancing the competing attributes of relevance versus reliability of information provided in financial reports.

However, Belkaoui and Picur (1991) found that accountants from different cultural backgrounds learn and understand accounting concepts differently. This suggests that the influence of the accountants' motivational values on their judgment process may be moderated by their interpretation and perception of the meaning of accounting concepts and principles. In the following sections, the significance of the meaning of concepts and principles in the domain of accounting is examined. The influence of culture on the interpretation of the meaning of accounting concepts and principles as well as the effect this has on the accountants' judgment process are also explored.

4.5.1. Culture and concept interpretation

In order to understand how culture influences the interpretation and perception of the meaning of accounting concepts, there is a need to revisit Chambers' (1966) hypothesis of accounting as an information processing and communication system. According to Chambers, the accountant observes events and transactions that occur and based on his knowledge, experience and environment, the accountant will interpret the events accordingly. The accountant then translates his interpretation of

these events in the form of a message. This message will be subsequently communicated in the form of a report to the users.

> An observed event or thing (the designatum) is associated with a sign … which is a product of learning and memory provoked by direct apprehension. The sign, in conjunction with the environment and other memories of the processor, organises responses in the latter; the processor translates what he observes into statements capable of treatment in the system he operates – for example, an automobile purchased by an actor is treated by his accountant as an asset; its style, horsepower, and other properties, not being amenable to translation into accounting signs, are disregarded. (Chambers, 1966, p.167)

Therefore the message that the accountant constructs based on his interpretation of events and transactions are made up of signs. In accounting these signs are comprised of words and numbers to designate the 'time of occurrence of an event, to designate its character, and to denote the magnitude of its monetary properties' (Chambers, 1966, p.169). These signs are constructed following semantic and syntactic rules necessary for effective communication.

The interpretation and perception of the meaning of these signs refer to how sign-using organisms such as accountants and users, psychologically respond to sign-stimuli such as accounting terms and concepts (Osgood *et al*., 1957). How accountants and users perceive and interpret accounting concepts and terms are described by Bagranoff *et al*. (1994) as connotative meaning. Connotative meaning refers to a person's emotive response to a term or concept, while denotative meaning is the literal definition of a term or concept. The accountants' and users' perception and interpretation of terms and concepts would be influenced by their values and experiences while denotative meaning is derived from the intellectual capacity of the individual. As a consequence, it is the connotative meaning of concepts and terms that would be influenced by the motivational values of the individual and therefore culturally relevant.

Another facet of the interpretation of the meaning of concepts is Osgood *et al*.'s (1957) conception of the association between the sign and the thing that the sign signifies.

> The vast majority of signs in ordinary communication are what we may term as assigns – their meanings are literally "assigned" to them via association with other signs rather than via direct association with the objects signified. (Osgood *et al*., 1957, p.8)

The term 'plant and machinery' could therefore be associated with the objects that it signifies. Therefore there may not be much difference in the connotative meaning that accountants and users have of the sign 'plant and machinery'. However, terms like 'assets' may be considered as 'assigns' because they are associated with other signs such as 'future economic benefits' and 'resources'. According to Osgood *et al*. (1957), such assigns may produce a greater variation in meaning since their representational processes depend entirely on the samples of other signs with which they occur. If the accountants and users are exposed to similar representation processes through their learning experiences, then possibly there would be greater similarity in their understanding and perception of these assigns. On the other hand, the subjectivity in the interpretation of these assigns may result in a greater influence by the motivational values of the individual and consequently be more culturally relevant.

4.5.2. Consistency of concept interpretation

The consistent interpretation or shared meaning of concepts and terms are essential in the domain of accounting to ensure that the communication process between the accountants and users is effective. Semantic problems concerning the precision with

which signs or symbols used convey the desired meaning (Haried, 1973), will result in the failure of the communication process.

> Potential semantic problems exists in external accounting communication, two of the major contributing factors being (1) attempts to assign technical meanings to words that convey different meanings in ordinary usage or in other fields, and (2) insufficient standardisation of the terms used in financial reports. (Haried, 1972, p.376)

It can be argued that semantic problems become significant when viewed from the perspective of whether the signs and symbols used by the accountant when conveying his message are interpreted correctly by the users. This is especially so when the transmitter of the message and the receiver are specialists from different fields. When terms used in the message have different meanings in different fields, the communication process may breakdown (Chambers, 1966). The breakdown in the communication process within the context of financial reporting could possibly lead to a financial reporting expectation gap as explained by Ngaire (2006, p.207):

> If terms such as 'true and fair view' and 'present fairly' have different meanings for different participants in financial accounting, they may contribute to an expectations gap. This gap is defined here as the difference between the perception and expectations users have of general purpose financial statements' quality and meaning, and the quality and meaning of general purpose financial statements the accounting profession prepares (and audits).

Many studies have been conducted to examine the interpretation of concepts and terminologies used in accounting practice specifically in financial reporting. Some of these studies (Haried, 1973; Houghton, 1987; Houghton, 1998) have focused on examining the existence of a financial reporting expectations gap by studying shared meaning of accounting terms and concepts between the accountants as preparers of financial statements and the users of financial statements. The results from these studies show evidence that a financial reporting gap may exist between the

accountants and users. This gap was generally due to the different level of sophistication in the understanding of accounting concepts and terms between accountants and users. Non-accountants were found to view accounting concepts more naively (Houghton, 1987; Houghton, 1998).

In Chapter 2, it was argued that accountants exist as a sub-culture within society and as a result share a unique set of knowledge and values due to their common education and professional training. It is therefore expected that there would be consistency in the interpretation of accounting concepts among accountants themselves. But the results of several studies (Chevalier, 1977; Belkaoui & Picur, 1991; Bagranoff *et al*., 1994; Houghton & Houghton, 2001) that have investigated the consistency of interpretation or shared meaning of accounting concepts among accountants have revealed evidence to the contrary. The results from these studies suggest that accountants from different cultural groups may not have a consistent interpretation of accounting concepts.

4.5.3. Cultural influence on concept interpretation

An early study by Chevalier (1977) examined the influence of culture on perceptions based on the argument that people tend to perceive things and objects according to their needs and values. Chevalier's study focused on the differences in the perceived usefulness of financial information such as financial ratios and management data between two cultural groups in accounting. These cultural groups comprise graduate students undertaking a professional accounting examination coaching course. 70 students were French Canadians and 54 students were English Canadians representing two different cultural groups. Chevalier found that the two groups have statistically significant differences in their perception of the importance of several types of accounting information. Thus, Chevalier's study provided some early

evidence to support the argument that the interpretation of accounting concepts is influenced by culture as operationalised by ethnicity.

Belkaoui and Picur (1991) examined the perception of the meaning of twelve generally accepted accounting concepts and principles using multi-dimensional scaling. The study examined the perception and understanding of accounting concepts from the perspective of only the preparers, the professional accountants. Belkaoui and Picur sampled a total of 87 professional accountants of three different nationalities, namely, Canadian, American and British. The theoretical justification for their study was derived from the cognitive functioning view of culture. The cognitive functioning view posits that different cultural groups would create different systems of understanding and knowledge. As a consequence, professional accountants of different cultural backgrounds will have different perceptions of accounting phenomena. Belkaoui and Picur operationalised culture based on the nationality of the accountants.

Using the multi-dimensional scaling technique, Belkaoui and Picur (1991) found three dimensions in which the twelve accounting concepts are perceived by the three groups of accountants. They also found that there were significant differences in the weights of two of the three dimensions between the three groups of accountants. The study undertaken by Belkaoui and Picur provides some evidence to suggest that even among accountants there may be different perceptions and understanding of accounting concepts. These differences may have resulted from their different cultural backgrounds.

Bagranoff *et al.* (1994) conducted a study on connotative meaning in accounting by focusing only on one accounting term, namely, extraordinary items. Similar to the study by Belkaoui and Picur (1991), Bagranoff *et al.* also examined connotative

meaning from a cross-cultural perspective. Extraordinary items were specifically chosen because it was 'a concept which was a financial statement term with a denotative meaning which differed due to a variance in accounting standards in different international cultures' (p.42). Bagranoff *et al*.'s experiment was based on a sample of 84 U.S.A and 96 Australian accounting practitioners. In order to measure the connotative meaning of extraordinary items held by these two groups of respondents, Bagranoff *et al*. applied Osgood *et al*.'s (1957) semantic differential scales that were adapted to the domain of accounting by Haried (1972; 1973). The semantic differential scales comprise pairs of adjectival antonyms that are used to evaluate the connotative meaning of concepts. Consequently, a factor analysis of the intercorrelations of the respondent's ratings on these scales would reveal a cognitive structure that represents the dimensions in which the meaning of the concepts is held in an abstract semantic space.

Bagranoff *et al*. (1994) found differences in the cognitive structure of accountants in Australia and the U.S.A with regards to their interpretation of the term 'extraordinary items'. Bagranoff *et al*. found that the Australian accountants held the meaning of extraordinary items on the basis of the three semantic dimensions of evaluative, potency and activity postulated by Osgood *et al*. (1957). The U.S.A accountants, however, held the meaning of extraordinary item over five semantic dimensions.

> Hence, any measurement of meaning with respect to the placements of these concepts within their respective structures would be meaningless. There is, then, no clear evidence on which one can compare placements of meanings for each of the two subject groups. (Bagranoff et al., 1994, p.49)

Consequently, Bagranoff *et al*. (1994) concluded that they could not determine whether there were differences in how extraordinary item were interpreted by Australian and U.S.A accountants due to the differences in cognitive structures or

mental processes. This suggests that the semantic differential approach may not be appropriate in examining differences in meaning between groups from different cultures.

Most of the studies examining the influence of culture on the interpretation of accounting concepts were plagued by problems of small sample sizes and as a consequence their results may not be generalisable. Nevertheless, the findings from these studies do suggest that culture, as operationalised by ethnicity and nationality may have an effect on the interpretation of accounting concepts. However, in order to establish that the cultural values of accountants would affect their accounting behaviour, there is a need to examine whether differences in the interpretation of the meaning of accounting concepts will influence the accountants' judgment process.

4.5.4. Culture, concept interpretation and judgment

Hronksy and Houghton (2001) examined the association between the connotative meanings of extraordinary item and the resultant decision outcomes. Hronsky and Houghton specifically examined whether a change in the definition of the term extraordinary items in Australia had affected the interpretation of the meaning of extraordinary items. They examined the extent of any changes to the interpretation of the meaning of extraordinary item have resulted in differences in the classification decisions that were made on the basis of the definitions. Hronsky and Houghton found evidence to suggest that there is a systematic relationship between the perceived meaning and the subsequent classification decision outcome. Their experiment was conducted on a small group of 80 experienced Australian auditors. The measurement of the meaning of extraordinary items was carried out using the Osgood *et al.*'s (1975) semantic differential technique that was adapted by Haried (1972; 1973). Therefore, the results of Hronsky and Houghton's study support the

argument that differences in the understanding of accounting concepts by accounting practitioners have a significant influence over their resultant judgment.

In summary, there is evidence to suggest that the interpretation of the meaning of accounting concepts may be an intervening variable in explaining the influence of culture on accountants' judgment and decision. In the context of accounting as an information and communication system, the manner in which accounting concepts and terms are interpreted and perceived would have an effect on the resultant judgment process. While there may not be any significant difference in how the denotative or literal meaning of concepts is held by accountants due to their common education and professional training, the connotative or affective meaning of concepts and terms would be influenced by the motivational values of the accountants. As a result, accountants from different cultural groups, presumably possessing different motivational value preferences, may interpret and perceive accounting concepts and terms differently. Therefore, in studying the influence of culture, as operationalised by the accountants motivational values, on their trade-off judgment of the relevance versus reliability of information provided in the financial reports, there is also a need to examine how the accountants' perceive particular accounting concepts that are related to those judgments.

4.6. Concepts in financial reporting

It was argued in Section 4.4 that the decision-usefulness objective of financial reporting prescribed by the IASB Framework (IASB, 1989) is an appropriate approach to examine the influence of the accountants' motivational values on accounting behaviour within the context of external financial reporting. Such an approach would be able to justify the argument that the culturally dependent aspect of the accountants' behaviour is their judgment regarding the trade-off between the

relevance and reliability of information provided in financial reports. If the accountants' interpretation of accounting concepts represents an intervening variable in the influence of the accountants' motivational values on their relevance and reliability judgment, there is a need to identify a particular concept that would be significant within the context of providing decision-useful information.

Based on Sterling's (1967) measurement and communication system discussed in Section 4.2, accounting is a process in which information regarding a firm is communicated in the form of a message to users so that an appropriate image of the firm is obtained. In constructing this message in the form of financial statements, accountants are trained to group events and transactions according to their economic characteristics.

> Financial statements portray the financial effects of transactions and other events by grouping them into broad classes according to their economic characteristics. These broad classes are termed the elements of financial statements. The elements directly related to the measurement of financial position in the balance sheet are assets, liabilities and equity. The elements directly related to the measurement of performance in the income statement are income and expenses. (IASB Framework, 1989, para. 47)

In defining the elements that make up the financial statements, the IASB Framework (IASB, 1989) appears to focus on assets and liabilities.

> a) An asset is a resource controlled by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise.
> b) A liability is a present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits. (IASB Framework, 1989, para. 49)

The description of the other elements is very much integrated to assets and liabilities. Equity is defined in terms of the 'residual interest in the assets' (IASB Framework,

1989, para. 49). Income is defined as 'inflows or enhancements of assets or decreases in liabilities' and expenses are 'outflows or depletion of assets or incurrences of liabilities' (para. 70). The approach to defining the elements of financial statements by the IASB is described by Munter and Ratcliffe (1980) as the asset/liability approach. In the asset/liability approach, the 'assets and liabilities are first defined and the definitions of revenues and expenses result from their functional relationship to assets and liabilities' (p.120). Such an approach would have a direct implication to earnings measurement, as the amount of earnings reported in the financial statements would depend on the measurement and recognition of assets and liabilities.

In the asset/liability approach adopted by the IASB Framework (IASB, 1989), assets represent resources that are used in the business to conduct its activities and to generate profits. Liabilities represent claims to these resources. Therefore, resources as represented by assets are crucial to the existence and survival of the business. Consequently, it can be argued that asset is an important concept in external financial reporting. How assets are measured and reported will affect users' assessments of the ability of the business to generate profits and its solvency position.

As discussed in Section 4.5.1, assets are 'assigns' (Osgood *et al.*, 1957) where their meaning is associated with other signs. The meaning of assets is associated with the meaning of terms such as economic benefits and control. As an 'assign', there is a possibility of greater variability in the meaning of assets due to the possibility of the subjectivity in its interpretation. This is demonstrated by the comments made by Walter P. Schuetze, the Chief Accountant of the Securities and Exchange Commission of the U.S.A. in 1993 (Schuetze, 1993, p.67):

> I was taken by the lack of agreement on basic concepts about financial accounting and reporting. One of those conceptual issues is the definition of an asset. It is clear that one of the major roadblocks to resolving issues here in the United States is the lack of agreement on the definition of an asset. As work on international standards proceeds, that may be a problem as well.

In a study by Houghton (1998), differences were found in the way bankers and accountants viewed the connotative meaning of assets. Bankers were considered to have similar financial knowledge although arguably not as sophisticated as accountants. But the findings of Houghton's study seem to provide some support to the argument of the lack of agreement on the definition of assets by Schuetze (1993). As a result of the subjective and emotive aspect in the interpretation of the meaning of assets, it is likely to be influenced by the motivational values of accountants.

Therefore, the concept of assets applied in external financial reporting can be considered a significant and relevant concept in examining the influence of culture on accounting practice. In examining the consistency in which the concept of assets is interpreted and perceived by accountants, it is important to identify the characteristics or attributes of assets that may create semantic problems in communication.

4.6.1. Attributes of assets

The IASB Framework (IASB, 1989) sets out the definition of the elements that represents the fundamental building blocks by which financial statements are constructed. These elements are groups of transactions and events categorised according to their economic characteristics as assets, liabilities, equity, income and expenses. Assets are defined in the IASB Framework as 'a resource controlled by the enterprise as a result of past events and from which future economic benefits are expected to flow' (para. 49).

The definition of assets prescribed by the IASB Framework (IASB, 1989) reveals several essential attributes. An asset represents an economic resource to the business enterprise. This resource possesses the capacity to generate future economic benefits. The resource is controlled by the enterprise as a result of past events. The following sections critically discuss these attributes with a view to explicate the possible interpretations of the concepts of assets.

4.6.1.1. Resource that generates economic benefits

The IASB Framework (IASB, 1989) describes assets as a resource that generates future economic benefits. This definition identifies the nature of the input, a resource, which represents the asset. The definition of assets as resources describes the nature of assets from which future economic benefits are expected to be derived. The IASB Framework does not provide a clear description of a resource although it does make reference to the notion of an economic resource when describing the type of information that should be presented in a financial statement.

> The financial position of an enterprise is affected by the economic resources it controls … Information about the economic resources controlled by the enterprise and its capacity in the past to modify these resources is useful in predicting the ability of the enterprise to generate cash or cash equivalents in the future. (IASB Framework, 1989, para. 16)

Tollington (2000, p.92) provided a more descriptive definition of resources as 'capital, land and labour (including intellectual property) or combinations thereof, that is, the economic factors of production'. These economic resources are expected to generate future economic benefits for the business entity. Future economic benefit is defined in the IASB Framework (IASB, 1989) as cash or cash equivalents that will flow into the enterprise in the future as a result of utilising the service potential embodied within the resource that is the asset (para. 53-54).

> The future economic benefit embodied in an asset is the potential to contribute, directly or indirectly, to the flow of cash and cash equivalents to the enterprise. The potential may be a productive one that is part of the operating activities of the enterprise. It may also take the form of convertibility into cash or cash equivalents or a capability to reduce cash outflows, such as when an alternative manufacturing process lowers the costs of production. (IASB Framework, 1989, para. 53)

In a survey of 117 professional accountants in the U.K., Tollington (2000) found that there may be some interpretation problems related to the concept of future economic benefits. 65% of the respondents' disagreed that assets should be confined to the capacity to generate cash or cash equivalents as the benefits can also be obtained through bartering. 79% of the respondents could not differentiate whether the term 'future economic benefit' referred to revenue generated from capital expenditure or revenue expenditure. This implies that the respondents were confused as to whether assets refer to current or future economic benefits. These differences in the interpretation of future economic benefits have been argued by Schuetze (1993) to be due to the use of abstract terms to describe assets.

> Real things such as trucks can be sold. Real things can be pledged as collateral. Real things can be given to charity. Abstract probable future economic benefits cannot be sold, pledged, or given away. The definition would not accommodate a cost as being an asset. Losses would not fit into that definition. Exchangeability is a critical element in that definition. (Schuetze, 1993, p.69)

Schuetze (1993) suggested a simpler and clearer definition of resources as 'cash, contractual claims to cash or services, and items that can be sold separately for cash' (p.69). He rationalised that it is important for assets to show something that is real based on the perception of the type of information ordinary investors would demand.

> I think ordinary people who are not accountants think that when they see an asset on the balance sheet that asset is something real, and that it represents value, that is, if it is not cash or a claim for cash, that it can be sold separately for cash. Accounting should not be done for the benefit of accountants. Accounting should result in financial statements that ordinary people will understand and therefore be able to use to make investment and credit decisions. (Schuetze, 1993, p.70)

Such a definition of assets based on foundations in reality and pragmatism suggests the motivation to protect the interest of the general investing community. Schuetze (1993) argued that complex and abstract rules benefit only the accountants rather than the investing public. This implies that accountants that are motivated by self-transcendent values such as universalism and benevolence described in Section 3.3.4 will be inclined to agree with Schuetze. A concept of assets that is grounded on something real and easily understood will be likely to prevent too many judgmental decisions on the part of the accountants. As a consequence, the financial statements would be more objective and useful to the users. Such a perspective, however, may not be supported by accountants that are motivated by self-direction values as it will not allow them the freedom to exercise their own independent professional judgment in a dynamic and uncertain environment.

Schuetze's (1993) suggestion for assets to represent something real may imply the need for assets to possess a physical form. Physical form is, however, not an essential attribute for assets as prescribed in the IASB Framework (IASB, 1989, para. 56):

> Many assets, for example, property, plant and equipment, have a physical form. However, physical form is not essential to the existence of an asset; hence patents and copyrights, for example, are assets if future economic benefits are expected to flow from them to the enterprise and if they are controlled by the enterprise.

The exclusion of physical form as an essential characteristic of assets in the IASB Framework (IASB, 1989) may be appropriate to cover resources that represent claims to cash and services such as debtors and prepaid rents. It however appears that the intention was more to accommodate the recognition of intangible assets such as goodwill. The recognition of goodwill in the financial statements benefits the companies by improving its net asset value. In contrast, Tollington (2000) opined that perhaps the requirement for physical substance is an archaic view of reality as the business environment today has changed considerably.

> One wonders whether the real asset in future societies will be the intellectual capacity to stay ahead of the competition rather than the capacity of some factory machine. (Tollington, 2000, p.93)

Therefore, accountants who are motivated by values of openness to change rather than conservation of old ideas and ways of doing things as described in Section 3.3.4, will be more acceptable of the fact that business assets are evolving to incorporate more intangible elements. As a consequence, they would be more inclined to reject notions of assets as a resource with physical form.

Schuetze's (1993) definition of assets precludes the recognition of expenditure or cost as an economic resource.

> There is a close association between incurring expenditure and generating assets but the two do not necessarily coincide. Hence, when an enterprise incurs expenditure, this may provide evidence that future economic benefits were sought but is not conclusive proof that an item satisfying the definition of an asset has been obtained. Similarly, the absence of a related expenditure does not preclude an item from satisfying the definition of an asset and thus becoming a candidate for recognition in the balance sheet. (IASB Framework, para. 59)

Expenditures have been capitalised as assets based on arguments that such expenditures generate future service potential or benefits to the firm. Consequently, the expenditure should be deferred to future periods when the benefit will be earned and the expenditure can be charged out to 'match' with the revenue. Tollington (1998) cites the example of expenditures on advertising campaigns to secure greater market share and enhance profitability. Tollington argued whether such advertising expenditures actually constitute a separate economic resource. Such expenditures are often inseparable from the product or service that it is trying to promote. Proponents for the capitalisation of expenditures as assets may do so to manage the earnings of the business enterprise by relying on the traditional accounting practice of matching expenses incurred with revenue (Tollington).

> The dominance of the matching concept means that companies trade-off accuracy in the recognition of their balance sheet assets, for the ability to 'smooth' reported profits over a number of years. (Tollington, 1998, p. 449)

Schuetze (1993) describes the phenomenon of recognising the cost incurred as assets rather than the resource or the future economic benefit that can be derived from the asset.

> What generally happens in practice … is that assets are not recognised unless the reporting enterprise acquires them by paying cash or agreeing to pay in the future or someone contributes something to the reporting enterprise in return for an ownership interest in the enterprise. Then an asset is said to have a cost. We accountants sometimes think of the asset and talk about it in terms of its cost, not in terms of the asset itself or the future benefit that may flow from it. That is, the asset is the cost, or the cost is the asset. (Schuetze, 1993, p.68)

As a consequence, financial statements have been found to recognise as assets labour cost for software development, cost of oil and gas exploration and purchased goodwill (Tollington, 1998). Schuetze's (1993) argument against such a definition is

that very often, the cost incurred bears little relationship to the economic benefit that can be generated. Consequently, the amount shown as assets is misleading and irrelevant. Such costs are termed ‘sunk costs’ by Chambers (1980).

The matching concept, income smoothing and the recognition of expenditure and costs as assets are dominant principles in accounting. Accountants that are motivated to follow tradition and generally accepted accounting principles described in Section 3.3.4 will find these principles very much ingrained within their psyche. As such, these accountants’ view of assets will be difficult to change. However, accountants who are motivated to pursue self-directional goals of independent thought and actions, may be more willing to accept different perspectives of viewing assets such as those described by Schuetze (1993) and Booth (2003).

Schuetze’s (1993) suggestion for assets to be defined as ‘cash, contractual claims to cash or services, and items that can be sold separately for cash’ is perhaps taken from Chambers’ (1980) perspective that the wealth of a business should be calculated by reference to the money equivalent or net selling prices. Adopting the perspectives of Chambers and Schuetze necessitates the assumption that assets are separable and exchangeable. Unidentifiable intangible assets such as goodwill are therefore excluded from such a definition of assets as it cannot be separately identified and sold. Such notions of assets, however, ignore the fact that many assets are exclusively used in a particular business and, therefore, may not have any saleable value beyond the business itself.

Perhaps a more cogent description of the nature of assets is as a right or entitlement from which an entity may expect to derive future economic benefits (Booth, 2003). Booth’s conception of assets as rights from which an entity can expect to derive future economic benefits can perhaps cover assets that represent claims to cash or

services. Although such a definition of assets would preclude the inclusion of unidentifiable intangibles. 'Market penetration and superior operating team are not rights, which could be described as being controlled by an entity' (Booth, p.311).

4.6.1.2. Resource controlled as a result of past events

The IASB Framework (IASB, 1989) also prescribes that the resource representing the asset should be controlled by the entity as a result of a past event. No specific definition for control is provided, but control need not be as a result of a legal title or ownership (para. 57).

> Many assets … are associated with legal rights, including the right of ownership. In determining the existence of an asset, the right of ownership is not essential; thus, for example, property held on a lease is an asset if the enterprise controls the benefits which are expected to flow from the property. Although the capacity of an enterprise to control benefits is usually the result of legal rights, an item may nonetheless satisfy the definition of an asset even when there is no legal control. (IASB Framework, 1989, para. 57)

AARF (1995) provides a definition of control that refers to the ability of a business to deny or regulate the access of others to an asset.

> … the capacity of the entity to benefit from the asset in the pursuit of its objectives and to deny or regulate the access of others to that benefit. (AARF, 1995, para.24)

Control therefore provides the business the right or entitlement to use the asset. Such rights or entitlements do not necessarily arise from legal ownership as in the case of a finance lease. Such a definition of control is an operation of the principle of economic substance over legal form. Meyer (1976) applied the term substantive effective ownership where a business may treat the asset in a manner consistent with ownership although the business does not have legal ownership.

It is however unclear whether the criterion of control refers to the economic resource or the future economic benefits to be derived thereof. In para.49 of the IASB Framework (IASB, 1989), it is clearly prescribed that it is the resource that should be controlled by the entity. But para. 57 seems to imply that control should be in relation to the benefits expected to be derived from the resource (para. 57).

> The only benefits controlled by an entity are the current economic benefits at that date. The equivalent economic benefits of a right at the reporting date, plus the potential incremental economic benefits to be derived from the use or exploitation of the right, are the future economic benefits to be derived from the control of that right. The incremental economic benefits, which may be derived from the future exploitation of a right, are not derived through control of the right at the reporting date. The incremental benefits are derived through the future economic benefits sacrificed in any production, marketing and administration activities subsequent to the reporting date. At a reporting date, it is difficult to understand how an entity can control the potential incremental benefits at that date. It would seem rather that, at a reporting date, an entity is unable to control probable future economic benefits, but is able to control only the 'rights' to current economic benefits at that date. (Booth, 2003, p.312)

Booth's (2003) argument suggests that having control over a right or resource does not necessarily result in control over the economic benefit from the future use of the right or resource. In other words, a machine may be controlled at the balance sheet date but the revenue to be generated from the future use of the machine cannot be controlled at the balance sheet date. This is because a business does not have control over the future condition of the market, the economy and consumer sentiments. Control should exist in the present and not in the future (Tollington, 2000).

However, Tollington (2000) found that the 117 professional U.K. accountants that he surveyed were largely unable to differentiate between current and future control of the economic resource. Although 79% of the respondents agreed that the past

cannot be controlled, only 34% agreed that the future cannot be controlled. Only 16% of the respondents felt that it is not possible to control a future-based economic benefit while 38% agreed that control can only be exercised in present day terms.

The IASB Framework (IASB, 1989) further requires that the resource that represents the asset should be controlled by the enterprise as a result of past events.

> The assets of an enterprise result from past transactions or other past events. Enterprises normally obtain assets by purchasing or producing them, but other transactions or events may generate assets. (IASB Framework, para.58)

Therefore, a resource must be controlled by the entity at the balance sheet date. Such control should have occurred as a result of a transaction or event. Control that will only result from a transaction or event that will occur in the future is excluded. What is unclear is the definition of a transaction or event. Booth (2003) suggests that transaction is a sub-set of events.

> Transactions are often distinguished from events on the basis of their effect on financial statements. The effect of an event, which enables an entity to control a right, may or may not be recognised. If the effects are recognised, the event is called a transaction. (Booth, 2003, p.312)

Such a distinction between transactions and events seem overly complicated and does not appear to be consistent with the meaning used in the IASB Framework (IASB, 1989). Tollington (1998) did not make any distinction between transactions and events but highlighted the general weakness in adopting such a restrictive definition.

> A serious impediment to the recognition of an internally created or home-grown intangible asset is the definitional restriction imposed on them to be the result of a 'transaction or event'. This relates to a specific business circumstance, typically a purchase for goods or services, which nowadays fails to fully reflect the dramatic

> technological changes in general business circumstance over the past couple of decades. These are circumstances in which assets are intellectually and/or artistically created internally within a business and which are not necessarily the result of a 'transaction or event'. (Tollington, 1998, p.453)

Tollington (1998) highlights the notion that for an asset to exist there needs to be a past exchange transaction that involves a purchase of goods or services. Such a definition would exclude the recognition of internally generated intangible assets such as internally created brands, software and patents. These assets were argued by Tollington to be important assets in today's business organisations. Therefore, the definition of an asset applied in the IASB Framework (IASB, 1989) adopts a transaction-based approach. A transaction-based approach is unable to recognise assets that arise not as a result of an exchange transaction but are due to conditions or circumstances that exist in the business. Tollington suggests that the definition of assets should be expanded to cover not only assets that arise as a result of past transactions and events but also to cover conditions or circumstances. The argument is that assets such as internally created brands and software do generate future economic benefits for the business. Such an argument is supported by the evidence found in Tollington's (2000) study where 74% of the respondents agreed that internally generated brands and software are assets irrespective of whether they arose from a transaction or event.

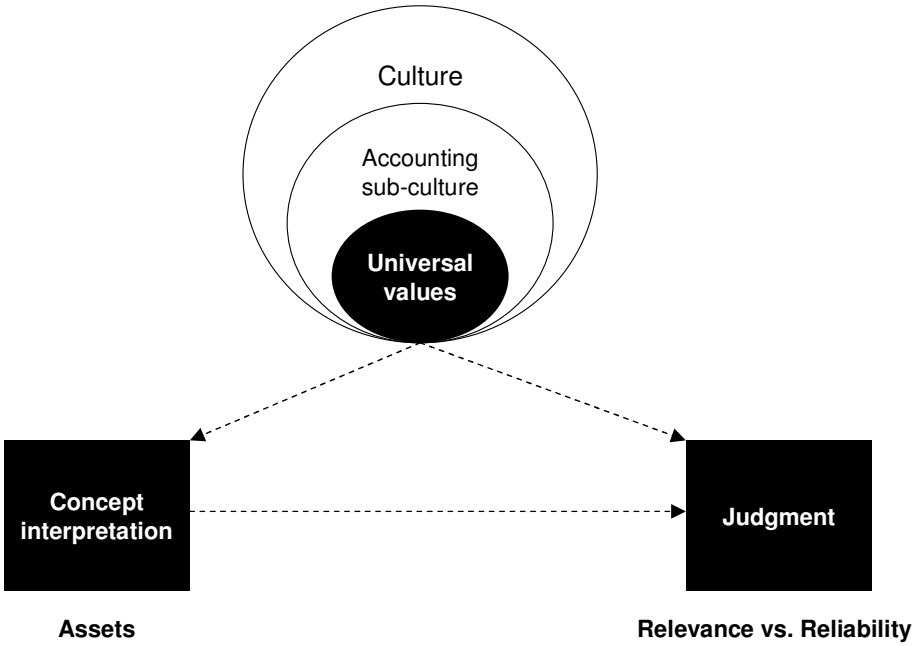
A transaction-based perspective of recognising assets may be preferred by accountants who are strongly motivated by conservation values as discussed in Section 3.3.4. The requirement that assets arise because of an exchange transaction is consistent with values that promote a prudent and conservative approach to accounting. This generally accepted transaction-based approach to accounting may also be supported by accountants that are strongly motivated by tradition values.

In summary, despite prescriptive definitions in the IASB Framework (IASB, 1989) of the essential attributes of assets, there may be possible differences in the interpretation and understanding of the concept. These differences in the interpretation and perception of what assets represent could be as a result of abstract terms used in its description. These interpretations and perceptions have been shown to be influenced by the accountants' motivational values.

4.7. Summary

Accounting was identified as a socio-technical information communication system that involves the interaction between the human and technical aspects of accounting. Consequently, accounting is affected by the mental processes and cognitive abilities of the accountants. Adopting the cognitive functioning view of culture, the accountants' cultural values, as operationalised by their individual-level universal motivational values (Schwartz, 1992), will influence their mental processes and cognitive abilities. As a result, the accountants' motivational values will affect their interpretation and perception of accounting concepts. Differences in the interpretation and perception of accounting concepts would in turn influence the accountants' judgments and decisions. Consequently, culture would influence the behaviour of accountants.

Figure 4.3 Framework of the influence of culture on accounting practice



Focusing specifically on external financial reporting, the accountants' judgment regarding the choice of accounting policies that would meet the decision-useful needs of users provide an opportunity to examine the influence of culture on accounting practice. The accountants' judgment would involve the trade-off between providing relevant versus reliable information in the financial reports. The accountants' interpretations and perceptions of the concept of assets, an important element in external financial reporting, will be an intervening variable in the influence of culture on the accountants' relevance and reliability trade-off judgment. Figure 4.3 presents a framework that explains the influence of culture on the interpretation of the concept of assets and the trade-off judgment between relevance and reliability. This framework is argued to be able to meet the aim in this study of finding empirical evidence to support the cultural relativism hypothesis of accounting.

CHAPTER 5: RESEARCH METHOD

5.1. Introduction

The purpose of this research project is to extend the understanding of cultural relativism in accounting by exploring an alternative conceptualisation of the accounting sub-culture. The extant cultural studies in accounting, reviewed in Chapter 2, have relied heavily on the Hofstede-Gray framework to operationalise the concept of the accounting sub-culture. The dimensions of the accounting sub-culture that were based on the Hofstede-Gray framework were argued to lack theoretical rigour and consequently may not be able to explain adequately the relationships between culture and accounting practice.

The current research project is intended to explore an alternative approach to the operationalisation of the accounting sub-culture by applying the Schwartz (1992) universal structure of human motivational values discussed in Chapter 3. The relationships between the accountants' motivational values and their judgments and decisions relating to external financial reporting will provide a framework to discover a more comprehensive and refined representation of the structure of the accounting sub-culture. This project will not only be able to provide empirical evidence of cultural relativism in accounting but also identify which aspects of culture, as indicated by the accountants' motivational values, influencing the accountants' behaviour.

The broad aim in this chapter is to provide the rationale for the research method used to investigate whether the motivational values of accountants will be able to explain and predict the accountants' judgments made in the context of external financial reporting. The research hypotheses derived from the objectives identified in Chapter

1 are discussed in Section 5.2. The source of the data, the characteristics of the sample group and the sample selection procedure are described in Section 5.3. This is followed by an explanation of the choice of the data collection method in Section 5.4. Details of variables to test the hypotheses and the questionnaire design are explained in Section 5.5 while the results of the pre-testing of the questionnaire are reported in Section 5.6. Details of the administration of the questionnaire are reported in Section 5.7. Procedures relating to ethics and confidentiality necessary to protect the rights and safety of participants are explained in Section 5.8. Finally, the techniques used to analyse the data are identified in Section 5.9.

5.2. Research questions and hypotheses

The main aim in this study is to explore a more comprehensive and refined approach to the conceptualisation of the accounting sub-culture by applying Schwartz's (1992) universal human values to derive a set of unique motivational values for accountants that would explain the influence of culture on accounting practice. As presented in Section 1.2, the main research question is, therefore, to investigate whether the motivational values of accountants affect their interpretations and judgments in external financial reporting. Drawing from this main research question, several research objectives were formulated.

The first research objective examines whether the membership of different cultural groups affects the motivational values of accountants. Gray (1988) hypothesised that accountants exist as a sub-culture within the larger society. The accountants share a unique set of accounting values that has been inculcated through their specialised education and training. If accountants possess a common set of accounting values, the corollary assumption is that they would behave similarly in the context of particular accounting phenomenon.

However, empirical studies have shown that different sub-groupings of accountants within the accounting sub-culture may project different accounting behaviours. Studies by Bagranoff *et al*. (1994), Schultz and Lopez (2001), Patel *et al*. (2002) and Patel (2003) have found differences in accounting practice of accountants from different nationality groups. Tsui (2001) and Haniffa and Cooke (2002) found that differences in ethnicity of accountants may be associated with differences in accounting practice. Membership of religion (Hamid *et al*., 1993) and language (Belkaoui, 1980; Doupnik & Richter, 2003) groups have also been associated with behavioural differences in accounting. Hofstede (2001) suggests that people of different gender groups may have different values and consequently behave differently. According to Matsumoto and Juang (2004), the process of internalising the norms, attitudes, values and belief systems takes a long period of time where the individual is integrated into their own society and culture. As a consequence, the accountants' age may have a bearing on their values and behaviour. These studies suggest that although accountants may share a set of common accounting values, these values may be affected by the existence of different sub-groups within the accounting sub-culture. Therefore, the first hypothesis is stated as follows:

H_1: *Accountants from different sub-groups within the accounting sub-culture in Malaysia possess different motivational values.*

The second research objective examines whether there is an association between the motivational values of accountants and their interpretations of concepts in external financial reporting. According to Belkaoui and Picur's (1991) cognitive functioning perspective of culture, different cultural groups create different systems of thinking and learning. Therefore, accountants as a sub-culture may possess a common system of thinking and learning as a result of their shared motivational

values. However, studies by Belkaoui and Picur and Bagranoff *et al*. (1994) have provided empirical evidence to suggest that different sub-groups within the accounting sub-culture may result in differences in the interpretation and understanding of accounting concepts.

This, therefore, leads to the following hypotheses:

H_2: *The Malaysian accountants' motivational values are associated with their interpretations of concepts in external financial reporting.*

H_3: *Accountants from different sub-groups within the accounting sub-culture in Malaysia have different interpretations of concepts in external financial reporting.*

The final research objective extends the argument that culture does not only affect the understanding and interpretation of accounting concepts but also influences the resultant judgment (Belkaoui, 1995). Therefore, the research question examines whether there is an association between the motivational values of accountants and their judgment in external financial reporting. Bagranoff *et al*. (1994) found evidence to suggest that different perceptions and understandings of accounting concepts between different sub-groups within the accounting sub-culture would affect the decision patterns of group members. As a result, membership of different sub-groups within the accounting sub-culture will affect the accountants' judgment in external financial reporting. This leads to the following hypotheses:

H_4: *The Malaysian accountants' motivational values are associated with their judgments in external financial reporting.*

H_5: *Accountants from different sub-groups within the accounting sub-culture in Malaysia have different judgments in external financial reporting.*

Hypotheses H_1 examines the existence of diversity in the motivational values of accountants that represent the accounting sub-culture. The results would provide evidence that societal values, as represented by the different sub-groups within the accounting sub-culture, influences the accounting values. Hypotheses H_2 and H_4 examines the influence of the motivational values of accountants on their interpretation and judgments in financial reporting. Hypotheses H_3 and H_5 examines the existence of diversity within the accounting sub-culture in respect of the accountants' interpretation and judgment in accounting. Consequently, the results of the study would provide evidence that the accounting motivational values act as an intervening variable between the societal values and the accountants' interpretation and judgment in accounting.

5.3. Data source

The objective of this study is to discover a more refined and comprehensive representation of the accounting sub-culture by applying Schwartz's (1992) universal structure of human values in order to extrapolate a set of unique motivational values for accountants. It was argued in Section 2.3.1 that the accountants as a profession can be considered a sub-culture as they share a common set of accounting values. Therefore, the appropriate subjects for this study are the members of the accounting profession. Malaysia, being a multi-cultural nation with three main ethnic groups comprising Malays, Chinese and Indians, provides a useful environment to examine the effect of sub-groups within the accounting sub-culture on the motivational values of the accountants. Hence, the target population for this study is professional accountants in Malaysia.

All accountants in Malaysia are required by authority of the Accountants' Act 1967 to be members of the Malaysian Institute of Accountants (MIA). Therefore, the MIA membership represents a population that embodies the accounting sub-culture in Malaysia. Based on the latest annual report of the MIA for the year ended 30 June 2005, the membership was 21,289. The initial research plan involved the use of the membership list of the MIA as a sampling frame. An official application was lodged with the MIA in April 2006 to obtain permission to use their membership list. However, the MIA rejected the application on the basis that they did not believe the study would get much support from its members.

Consequently an alternative data source was identified. The Malaysian Institute of Certified Public Accountants (MICPA) is another professional accounting body in Malaysia. Members of the MICPA are also members of the MIA. Therefore, the MICPA membership offered a suitable alternative source of obtaining a sub-set of the accounting sub-culture in Malaysia. Based on the latest annual report of the MICPA for the year ended 31 December 2005, the total membership was 3,082. The MICPA membership database was available on their official website.

5.4. Data collection

In order to achieve the aim of this study, information regarding the attitudes, beliefs and opinions of professional accountants in Malaysia about their motivational goals and accounting judgments would have to be obtained. Consequently, a survey research approach is adopted.

> Surveys are appropriate for research questions about self-reported beliefs or behaviours. They are strongest when answers people give to questions measure variables. (Neuman, 2000, p.247)

According to Whitley Jr. (2002), survey research is conducted to estimate population parameters and to test hypotheses of relationships between respondents' characteristics and their attitudes and behaviours. Several studies in accounting that examined accountants' attitudes and opinions have adopted the survey research approach. Tsakumis (2007) surveyed U.S. and Greek accountants' to obtain their judgment regarding the disclosure of contingent assets and contingent liabilities. Ngaire (2006) adopted the survey approach to examine the perception by accountants and other groups of the meaning of the concept of true and fair view. Chanchani and Willett (2004) surveyed accountants in New Zealand and India to examine Gray's (1988) hypothesised accounting values.

According to Sekaran (1992), there is a variety of ways that survey data can be collected. Data collection methods may include personal interviews and self-administered mail questionnaire surveys. Personal interviews give the researcher the flexibility to clarify and adapt the questions but have cost, time and geographical limitations. On the other hand, self-administered mail surveys have the advantage of enabling a wider geographical coverage and would therefore be able to reach a larger pool of respondents. Mail surveys would be most effective in obtaining responses from a representative sample of the total population of accountants living and working in Malaysia. Chanchani and Willett (2004) used mail surveys to reach a large group of accountants in New Zealand and India. Mail surveys also offer respondents anonymity and avoid interviewer bias (Neuman, 2000; Whitley Jr., 2002). Therefore, the mail questionnaire survey is considered an appropriate approach to collecting data for this study as it would be a more efficient means of obtaining responses from accountants located throughout Malaysia.

However, a weakness of the self-administered mail survey approach is the inability of respondents to clarify any possible ambiguities in the questions (Sekaran 1992). To overcome this problem, the questionnaire was pre-tested on subjects that were representative of the target population. Another potential problem with mail surveys is the typically low response rates. Sekaran suggests that response rates may be improved by sending follow-up letters, providing respondents with self-addressed, stamped return envelopes and keeping the questionnaire as brief as possible.

5.5. Questionnaire design and development

The objective of the questionnaire is to obtain data that would provide empirical evidence of a common set of motivational values held by accountants and that these motivational values would have an influence over the accountants' judgments in external financial reporting. The literature review in Chapter 3 revealed that the Schwartz's (1992) universal structure of human values would be a valid and reliable approach to operationalise the accounting sub-culture. The universal structure of human values comprises ten motivational value types that represent guiding principles in people's lives. These ten motivational value types were hypothesised in Section 3.3.4 to have implications to the domain of accounting. It was argued in Section 3.4 that the Schwartz *et al.* (2001) Portrait Value Questionnaire (PVQ) would be an effective instrument to capture the motivational values of individual accountants. The PVQ comprise forty short verbal portraits of a hypothetical person's goals, aspirations or wishes that point implicitly to the importance of a particular value. The reliability of the PVQ has been tested in many diverse cultures and, consequently, the verbal portraits are adapted in this study to extrapolate a set of accounting motivational values.

The literature reviewed in Chapter 4 indicated that the influence of the accountants' motivational values in external financial reporting can be examined by observing the accountants' judgment of the trade-off between the qualities of useful information provided in financial statements. In Section 4.4.2, these qualities were found to comprise the criteria of relevance and reliability. Based on the theories of information science, human communication and the normative principles prescribed in the IASB Framework (IASB, 1989), a set of attributes was developed to measure the relevance and reliability criteria.

It was also discovered in Section 4.5.4 that the influence of the accountants' motivational values on their trade-off judgment between relevance versus reliability is moderated by how the accountants' interpret and perceive particular accounting concepts that are related to those judgments. It was argued in Section 4.6 that assets represent a significant concept in external financial reporting. Several important attributes of assets emerged from the literature. These attributes were found to be subject to the interpretation and perception of accountants.

Table 5.1 Questionnaire classification

Section	Hypotheses reference	Description	Number of questions
A	H_2 & H_3	Interpretation of the concept of assets in financial reporting	17
B & C	H_4 & H_5	Judgment involving the trade-off between the qualities of relevance and reliability of information reported in financial statements.	44
D	H_1	Motivational values	40
E	H_1, H_3 & H_5	Demographics	12
Total			113

The verbal portraits of a person's goals, relevance and reliability judgment criteria and attributes of assets provided a basis to develop a series of questions to be

incorporated in the survey questionnaire. The questionnaire comprises 113 questions categorised into five sections as presented in Table 5.1. According to Sekaran (1992), a good questionnaire design should focus on the wording of the questions, the appropriate measurement of the variables and the general appearance of the questionnaire.

Most of the questions in the questionnaire were closed format with three open-ended questions designed to extract qualitative information from respondents. According to Sekaran (1992), closed questions may facilitate respondents' completion of the questionnaire. Close-ended questions are quicker and easier for the respondents to complete but may result in a loss of important information to the researcher (Neuman, 2000). Neuman suggests that mixing some open-ended with close-ended questions would be able to provide data that are richer in detail.

The variables in this study were measured using a multi-item scale. A multi-item scale comprises two or more items that measure the same variable (Whitley Jr., 2002). According to Whitley Jr., multi-item scales provide a more sensitive measurement of the variables. Each item uses a six-point rating scale with no neutral responses. DeVellis (2003) suggests that researchers may want to avoid neutral responses if it is felt that respondents have a tendency to avoid making a choice.

The layout of the questionnaire was organised systematically to avoid confusing respondents (Neuman, 2000). Based on Whitley Jr.'s (2002) recommendation, the questionnaire begins with questions about the accountants' opinion regarding the attributes of assets. These questions are considered important and would be interesting for respondents to answer. Demographic questions were reserved to the end of the questionnaire as they are considered less important and less interesting.

The sequencing of the sections of the questionnaire was deliberately done to allow some context effect to take place. Whitley Jr., (2002) describes context effect as a phenomenon where completing scores on one variable influence the scores on another variable. In designing the questionnaire for this study, it was decided that the section eliciting the accountants' motivational values would be included after the respondents completed the sections on the interpretation of the concept of assets and the judgment decision on relevance versus reliability. This is to ensure that when the accountants provide responses regarding their motivational goals, they are considered within the context of the accounting environment.

In order to improve response rates (Sekaran, 1992), the length of the questionnaire was kept to a comfortable level. The final version of the questionnaire covered nine pages. Neuman (2000) suggests that a questionnaire of between 10 to 15 pages would be acceptable for highly educated respondents such as professional accountants.

The following paragraphs explain the development of each of the five sections in the questionnaire. The multi-item scales used to measure the variables in each section are discussed. The manner in which the variables in each section relate to the research questions and hypotheses developed in this study are explained.

5.5.1. Concept interpretation in financial reporting

Section A of the questionnaire requires respondents to consider a series of statements describing the attributes of assets reported in financial statements. The attributes of assets were measured using a set of 16 statements, as shown in Table 5.2.

Table 5.2 Attributes of assets

Key components	Questionnaire reference	Attributes of assets
Economic resource	A2	Represents a deferred expenditure.
	A3	Represents an entitlement to future cash or goods and services.
	A4	The cost or expenditure represents the asset.
	A5	Must have a physical or tangible form.
	A7	Must be separable and has a separate disposal value.
	A9	Represents scarce goods and services.
	A11	Represents something that is real.
	A13	Cost or expenditure must have been incurred.
	A16	Represents something that can be used to be exchanged for cash or other goods and services.
Future economic benefit	A10	Represents something that can generate other things that can be exchanged for cash in the future.
	A12	Represents something that can generate cash in the future.
Control	A1	Ability to prevent others from using the asset at present.
	A8	Ability to prevent others from obtaining the cash or goods and services from the future use of the asset.
	A15	Must be legally owned and enforceable.
Past event	A6	Must be an outcome of a past exchange transaction.
	A14	Must be an outcome of a past condition that may not involve an exchange transaction.

These statements of the attributes of assets were obtained from the literature review in Section 4.6.1. These attributes make up the four key components of assets, as prescribed by the IASB Framework (IASB, 1989), comprising economic resource, future economic benefit, control and past event. Respondents were required to rate the extent to which they agree or disagree with these statements based on a six-point rating scale.

The aim of this section of the questionnaire is to address the research objective if investigating whether there is an association between the motivational values of accountants and their interpretation of concepts in external financial reporting. The respondents' opinion regarding the attributes of assets would provide an indication of their interpretation of the concept of assets. An open-ended question was included to enable respondents to provide their views of other characteristics or features of assets reported in financial statements. In order to ensure that the respondents'

opinions are based on their own perception of what assets should be, a specific instruction was included for respondents to ignore the conception of assets described in accounting texts and literature.

Data obtained from this section would provide empirical evidence to support or reject two relevant hypotheses in this study. The first hypothesis is that the accountants' motivational values are associated with their interpretation of the concept of assets in financial reporting (H_2). The other is the hypothesis that accountants from different sub-groups within the accounting sub-culture would have different interpretations of the concept of assets (H_3).

5.5.2. Judgment in financial reporting

The aim of Sections B and C in the questionnaire is to elicit data from the respondents to address the research objective of investigating whether there is an association between the motivational values of accountants and their judgment in external financial reporting. In order to observe the accountants' judgment process regarding the trade-off between the qualities of relevance versus reliability of information provided in financial reports, a scenario or vignette was used.

According to Wason *et al*. (2002) scenarios or vignettes, which contain 'short descriptions of a person or a social situation' (Alexander & Becker 1978 p. 94), allow for the examination of respondents' decision-making in a situational context that approximates real life. Wason *et al*. argue that scenarios focus respondents to a common stimulus which enhances measurement reliability and internal as well as construct validity. They described an approach to scenario-based studies called the constant variable value vignette where all respondents are presented with identical scenarios. The constant variable value vignette, however, has some important

limitations that, if not properly addressed, may impede its usefulness. The scenario should provide sufficient information to enable respondents to evaluate the alternatives appropriately. This will ensure that all respondents have a common point of reference, and will not bring their own perception of the available alternatives.

In the selection of an appropriate scenario to observe the respondents' judgment process, consideration was given to identifying a circumstance that would be able to generate diversity of opinions. The application of the IASB (2001) International Accounting Standard on Agriculture (IAS 41) was eventually selected for this study based on several important reasons. The standard was one of the earliest to prescribe the recognition of assets using the fair value measurement approach which was a controversial departure from historical cost (Elad 2004). This standard also addresses the issue of accounting for 'living assets' that possess the unique characteristic of natural biological growth that traditional transaction-based historical cost accounting is unable to cope with (Herbohn *et al*. 1998). The Malaysian Accounting Standards Board (MASB) has not adopted IAS 41 although the IASB standard was effective from 1 January 2003. This, therefore, provides an opportunity to evaluate the respondents' acceptance of the requirements of IAS 41.

IAS 41 (IASB, 2001) prescribes the recognition and separate disclosure of biological assets in the financial statements (para. 10). A biological asset is a 'living animal or plant' (para. 5) that is related to agricultural activity (para. 1). Agricultural activity involves the 'management by an enterprise of the biological assets for sale, into agricultural produce, or into additional biological assets' (para. 5). IAS 41 prescribes that biological assets should be measured at initial recognition and at each balance sheet date at its fair value less point of sale costs (para. 12). Gain or loss arising from the change in fair value of biological assets should be recognised in the net profit or loss for the period (para. 26). The major concerns about IAS 41 are regarding the

need to determine the fair value of biological assets and the recognition of fair value changes in the net profit or loss for the period (Herbohn & Herbohn, 1999, Herbohn *et al*., 1998). These issues were, therefore, incorporated in the vignette included in the questionnaire as shown in Table 5.3

Table 5.3 Vignette for judgment in financial reporting

'*X*' is an experienced accountant at *ABC Berhad*, a public listed company involved in the cultivation of oil palm for the production of crude palm oil and palm kernel. The company has substantial plantation area located throughout Malaysia. *ABC Berhad* is a profitable company and has been reporting healthy growth in profits over the past five years.

Currently, the plantations are reported in the financial statements as plantation land under property, plant and equipment, and are measured at cost. The costs incurred in land clearing for new planting activities until the point of harvest are capitalised as plantation development expenditure and classified as part of property, plant and equipment. These plantation expenditures are not amortised. Costs incurred in replanting old planted areas are charged to the income statement in the period it is incurred.

'*X*' is of the opinion that historical cost is not an appropriate valuation method for the oil palm plantation. Historical cost does not reflect the natural growth of the oil palm trees. As a result, it is unable to provide useful information about the value of the oil palm plantations. '*X*' suggests that the oil palm plantations should reflect the current market value of the oil palm trees. In addition, '*X*' feels that since the growth of the oil palm trees reveals management's ability to manage the plantation, any increase or decrease in the current market value of these oil palm trees should be included in the net profit or loss in the period the increase or decrease occurs.

The examination of respondents' judgment regarding the accounting treatment of the biological assets in the vignette was conducted by asking respondents the extent to which they agree or disagree with the recognition of the assets as prescribed by IAS 41 (IASB, 2001). Section B required respondents to give their opinion regarding the appropriateness of measuring biological assets at fair value and Section C required respondents' opinion of whether changes in fair value of these assets should be reported in the income statement.

Respondents were asked to make their judgments based on a set of criteria that measures the quality of the information provided by the prescribed accounting treatment of the biological assets. These criteria involved a trade-off between the relevance and reliability of the information. Based on the literature reviewed in

Section 4.4.2, a set of attributes to measure relevance and reliability were developed. These attributes comprise 20 statements that make up two sets of multi-item scales that measure relevance and reliability as shown in Table 5.4 and Table 5.5.

Table 5.4 Criteria for relevance

Attributes of relevance	Questionnaire reference	Statements
Topicality, timely & unique	B21, C1	The information has the capacity to influence investors' decision.
	B4, C19	The information is related to investment decisions.
	B18, C4	The information provides something new and timely about the company.
	B3, C18	The information provides something unique and different about the company.
	B16, C6	The information adds to investors' knowledge about the company.
	B6, C16	The information improves investors' ability to make an appropriate decision.
	B1, C21	The information is useful for investment decisions.
Sufficiency, depth & breadth	B5, C17	The information is necessary to show a complete picture of the company.
	B17, C5	The information is necessary to show an in depth picture of the company.

Table 5.5 Criteria for reliability

Attributes of reliability	Questionnaire reference	Statements
Reliability, credibility, objectivity & prudence	B15, C7	The information is credible.
	B9, C13	The information accurately represents the facts.
	B13, C9	The information meets the need for a cautious approach.
	B11, C11	The information is of quality.
	B12, C10	The information reflects economic reality.
	B7, C15	The information does not sway the decision to a predetermined outcome.
Clarity & orderly	B10, C12	The information is easy to understand.
	B14, C8	The information is not confusing.
	B8, C14	The information is effective.
	B20, C2	The information is not ambiguous.
	B19, C3	The information will help in evaluating trends and relative performance.

In addition to these attributes, it was concluded in Section 4.4.2 that, in providing relevant and reliable information, accountants are normally constrained by cost

versus benefit considerations. Consequently, an additional statement was added to both Section B (B2) and C (C20) that requires respondents to consider whether the benefits derived from the information justify the cost to obtain it. Respondents were required to rate the extent to which they agree or disagree with these statements based on a six-point rating scale. Open-ended questions were also provided in both Section B and C to elicit any other opinions that respondents may have concerning the appropriateness of the accounting treatment prescribed by IAS 41 (IASB, 2001).

Data obtained from Section B and C would provide empirical evidence to support or reject the two hypotheses related to the accountants' judgment in financial reporting. The hypotheses are that the accountants' motivational values are associated with their judgment process (H_4) and that accountants from different sub-groups within the accounting sub-culture would make different judgments relating to the accounting treatment of biological assets (H_5).

5.5.3. Motivational values of accountants

The main aim of this study is to explore an alternative approach to the conceptualisation and operationalisation of the accounting sub-culture by using the universal human values (Schwartz, 1992) as a basis to develop a set of accounting motivational values. These motivational values of accountants would be used to address the research objectives of examining whether different sub-groups within the accounting sub-culture would influence the accountants' motivational values and whether these motivational values affect their interpretation and judgment in external financial reporting. As discussed in Section 2.3.2, the association of the values of accountants with their individual perceptions and behaviours with regards to accounting phenomena are examined in this study and as a consequence, the individual-level dimensions of the universal human values would be applied.

Table 5.6 Motivational values of accountants

Motivational values of accountants	Value types	Questionnaire reference
Safeguard public interest	Universalism	D3, D8, D19, D23, D29 & D40
Protect organisational interest	Benevolence	D12, D18, D27 & D33
Compliance with rules & regulations	Conformity	D7, D16, D28 & D36
Generally accepted accounting conventions	Tradition	D9, D20, D25 & D38
Uniformity, conservatism, prudence & integrity	Security	D5, D14, D21, D31 & D35
Preserving status of profession	Power	D2, D17 & D39
Professional competence	Achievement	D4, D13, D24 & D32
None	Hedonism	D10, D26 & D37
Risk taker	Stimulation	D6, D15 & D30
Independent professional judgment	Self-direction	D1, D11, D22 & D34

The instrument that is used to measure the universal individual-level human values is the PVQ (Schwartz *et al*., 2001). As explained in Section 3.4, the PVQ comprises 40 short verbal portraits of a hypothetical person's goals, aspirations or wishes. These 40 verbal portraits make up a set of multi-item scales that measure the ten individual-level universal motivational value types explained in Section 3.3.1. The verbal portraits that are incorporated in Section D of the questionnaire and the corresponding motivational value types are shown in Table 5.6. Each verbal portrait requires respondents to rate "How much like you is this person?" using a six-point rating scale.

The manifestation of the universal value types in the domain of accounting as motivational values of accountants are also indicated in Table 5.6. The structure of the accountants' motivational values would provide empirical evidence to support or reject the hypothesis that membership of different sub-groups within the accounting sub-culture would result in differences in the motivational values of accountants (H_1).

The accountants' motivational values structure would also provide evidence to support or reject the hypotheses that the accountants' interpretation of accounting

concepts and their resultant judgments are associated with their motivational values (H_2 & H_4).

5.5.4. Demographics

The final section of the questionnaire, Section E, contains 12 demographic questions about the background of the respondents. The objectives of these questions are to obtain information concerning the respondents' membership of the relevant sub-groups within the accounting sub-culture that are important to test the various hypotheses in this study and to determine that the respondents are indeed part of the target population of interest.

Table 5.7 Cultural diversity

Questionnaire reference	Questions
E1	What is your age range?
E2	What is your gender?
E3	Which race or ethnic group do you belong to?
E4	What is your religion?
E5	Please state the languages and dialects that you speak fluently.

Table 5.7 presents five questions (E1 to E5) that ask for respondents' age, gender, race, religion and language. As discussed in Section 5.2, membership of different sub-groups within the accounting sub-culture identified by the respondents' age, gender, race, religion and language are hypothesised to influence their motivational values (H_1), and consequently, would also affect their interpretations of accounting concepts and judgments in financial reporting (H_3 & H_5).

The remaining questions in Section E address an important issue in cross-cultural research which is equivalence.

> Equivalence in cross-cultural research can be defined as a state or condition of similarity in conceptual meaning and empirical method between cultures that allows comparison to be meaningful. In its strictest sense, if any aspect of the cross-cultural study is not entirely equivalent in meaning or method across the cultures being compared, then the comparison loses its meaning. Lack of equivalence in a cross-cultural study creates the proverbial situation of comparing apples and oranges. (Matsumoto & Juang, 2004, pp.32-33)

In achieving the aim of this study, the accounting sub-culture in Malaysia is specifically examined. It is therefore important that the respondents are representative of this particular national culture. The respondents should be a product of a similar socialisation process so that the subjective, underlying psychological aspects of the Malaysian culture become internalised in all of them. According to Matsumoto and Juang (2004), the lack of equivalence or the existence of bias in the theoretical framework and hypotheses or the method of data collection, management and analysis is likely to result in a meaningless cross-cultural study.

Table 5.8 Background of respondents

Questionnaire reference	Questions
E6	Where did you complete your primary school education (or its equivalent)?
E7	Where did you complete your secondary school education (or its equivalent)?
E8	Where did you obtain your undergraduate university education (or its equivalent)?
E9	How many years have you worked in public accounting firms?
E10	How many years have you worked in organisations other than public accounting firms?
E11	Which professional accounting association are you a member of?
E12	What is your current job title in your organisation?

Table 5.8 presents the questions that address the issue of equivalence. Matsumoto and Juang (2004) argue that the most important institution where the socialisation process occurs is in a society's educational system. Therefore, the individual may

possess the cultural values of the place in which he or she is educated because it is the place where the socialisation experience was the most intense. Questions E6, E7 and E8 ask respondents to provide the location in which they completed their school and undergraduate education. In order to represent the Malaysian culture, the respondents should complete their education in Malaysia. The remaining questions address the possible influence of organisational, occupational and managerial culture on the mental processes and cognitive abilities of the accountants (Belkaoui & Picur 1991).

5.6. Questionnaire pre-testing

A pre-test of the questionnaire was conducted to ensure that the operational aspect of the questionnaire had been adequately addressed. The format of the questionnaire, the clarity of the questions and respondents' consistency in interpreting questions, as well as the data analysis procedures and the complete research design, were tested in this process. A combination of cognitive interviewing approach and self-administered questionnaire was adopted to provide qualitative data on the ability of the questionnaire to produce data that can be used to achieve the research objective of this study.

The test was conducted on nine selected respondents. The test respondents comprised academic and practising accountants that were selected to reflect the heterogeneous nature of the sample of the target population. The respondents comprised a Director of Finance, a Financial Controller, a Head of Programme, and four academic staff. In addition, two experienced senior researchers, who are not accountants, were consulted as to the appropriateness of the questionnaire.

The average time taken to complete the nine page questionnaire was approximately 30 minutes. This ranged from 22 minutes to 41 minutes. Most of the test respondents either did not complete the open-ended questions or only made very brief comments. If respondents were to complete the open-ended questions in a thoughtful manner, the time taken to complete the questionnaire would be longer.

The test respondents were asked to provide feedback on the clarity of the questions included in the questionnaire. Based on the responses, minor adjustments were made to some questions to improve their clarity. The results of the test revealed concerns on whether respondents were answering the questions from Sections A, B and C (shown in Table 5.1) based on their own opinion or on what they had learned from their educational background and experiences. These questions were intended to examine respondents' interpretation of the term assets, and their application of the relevance and reliability criteria in evaluating an accounting problem. Therefore, it is important that the questions are answered based on the respondents' own points of view. To address this potential problem, the instructions for these sections were amended to inform the respondents clearly that there were no correct answers and that they should rely on their own opinions rather than what are stated in the accounting literature.

There was also a concern connected to the decision required from respondents in Sections B and C (shown in Table 5.1). Some test respondents signalled that it was not clear whether respondents were being asked to decide on the appropriateness of valuing assets from the perspective of the preparer or the user of financial statements. Therefore, the instructions for these sections were amended to clarify that respondents were being asked to provide their responses from the perspective of the preparer of financial statements.

Results from the pre-test revealed that respondents were generally marking on a narrow range of the original five-point rating scale adopted in the questionnaire design. Accordingly the five-point scale was expanded to a six-point scale to improve the sensitivity of the survey instrument.

5.7. Questionnaire administration

The nine page questionnaire (Appendix 20) was mailed out to 2,760 of the 3,082 members of the MICPA because the addresses of the remaining 322 members could not be obtained. The questionnaires were mailed out together with a covering letter of introduction and a stamped self-addressed reply envelope. According to Sekaran (1992), a proper introduction would be able to motivate respondents to respond more willingly to the survey. The letter of introduction (Appendix 17) explained the purpose of the research project and assured respondents of the confidentiality of their responses.

The initial mail-out was conducted over a period of 14 days from 23 May 2006 to 5 June 2006. The members were given a deadline of 15 June 2006 to respond to the survey. On expiry of the deadline, only 83 questionnaires were received while 3 were returned undelivered. A follow-up letter (Appendix 18) was mailed out from 16 June 2006 to 25 June 2006 to remind members of the survey and to inform them that another copy of the questionnaire could be obtained if required. A further 126 questionnaires were received following the reminder letter. A final reminder was sent via electronic mail (Appendix 19) from 15 July 2006 to 18 July 2006. This produced another 35 replies.

The total replies received were 244 representing a response rate of 8.8%. Response rates are always a major problem in mail questionnaires. According to Neuman

(2000), a response rate of 10 to 50 percent is common for mail surveys. Chanchani and Willett (2004), who conducted a survey of accountants in New Zealand and India, obtained a response rate of 44 and 18 percent from the New Zealand and Indian accountants, respectively. Poor response rates appear to be more acute among accountants in Asian countries. Despite the low response rate in this study, it is argued that the respondents are representative of the MICPA membership. This is based on the finding that 84% of the respondents were ethnic Chinese and the remaining 16% were from other ethnic groups. An analysis of the MICPA membership, from its 31 December 2005 annual report, revealed that ethnic Chinese make up 85% of the total population. The remaining 15% comprise ethnic Malays, Indians and other racial groups. As a result of the consistency of the ethnic profile of the respondents with that of the target population, it is argued that the results of this study are still be generalisable despite the low response rate.

5.8. Rules on ethics and confidentiality

This study involves research on the attitudes and beliefs of human subjects. Consequently, there are ethical issues that should be considered in relation to the privacy and other rights of the human subjects (Neuman, 2000). Therefore, before conducting the mail survey, approval of the Human Research Ethics Committee of the Faculty of Business and Law, Victoria University was obtained in March 2006. The approval was granted based on the considerations of any potential risks to the human subjects, the existence of procedures to obtain informed consent and to ensure privacy and confidentiality.

The research project involves the collection of factual data and personal views of the individual subjects. The data collected cannot be identified to any particular individual or organisation and are treated confidentially. As a result there is no risk to human

life or to the continuing amenity of the subjects in their workplace or personal environment.

Informed consent was obtained by a brief description of the purpose and procedure of the research in the letter of introduction (Appendix 8) accompanying the survey questionnaire. The subjects were informed that their participation in the research project is completely voluntary. The subjects were assured of the anonymity and confidentiality of their responses as the results of the research will be used only in an aggregated form. The completed questionnaire will be securely stored and made available only to the researcher and the project supervisor. Access to any coding of information in the questionnaire will also be restricted to the researcher and the project supervisor.

The names and contact information of the researcher and the project supervisor were provided in the letter of introduction. In addition, the subjects were informed that they could contact the university directly to obtain information concerning their rights or questions about the study.

5.9. Data analysis techniques

Quantitative and qualitative data are collected from the respondents using the survey questionnaire. Quantitative data are in the form of responses to the six-point rating scale while qualitative data are obtained from the open-ended questions. Analysis of the data and the testing of the hypotheses are conducted using the statistical analysis software Statistical Package for the Social Sciences (SPSS) version 14.0.

In order to test the hypothesis of the significant differences between the different sub-groups within the accounting sub-culture with regards to the motivational values held

by the accountants (H_1), multivariate analysis of variance (MANOVA) is used. According to Hair *et al*. (2006), MANOVA is a dependence technique that measures the differences for two or more metric dependent variables based on a set of non-metric categorical variables acting as independent variables. The mean scores of each of the components of the accountants' motivational values are used as the metric dependent variables in MANOVA. The non-metric independent variables comprise the accountants' membership of the various sub-groups of interest. Analysis of variance (ANOVA) and t-test, techniques to measure differences for a single metric dependent variable based on two or more categorical independent variables (Dancey & Reidy, 2002), are then used to identify which particular dependent variables have contributed significantly to the mean difference between the sub-groups.

Frequency distributions are applied to describe the data concerning the demographics of the respondents. It is also used to analyse how the accountants interpret the concept of assets and how they evaluate their judgment regarding the appropriateness of the accounting treatment for biological assets. The frequency distributions would help determine a pattern in the concept interpretation and judgment in financial reporting that can then be associated with the motivational values of the accountants (H_2 & H_4). In order to test the hypotheses that there are significant differences in the accountants' interpretation and judgment in financial reporting between the different sub-groups within the accounting sub-culture (H_3 & H_5), non-parametric Pearson Chi-square test for independence is applied.

5.10. Summary

This chapter describes the research methods used in the current study. Five hypotheses that addressed the objectives of this study were discussed. H_1 examines

whether there are any differences in the motivational values of accountants between different sub-groups within the accounting sub-culture. H_2 and H_3 examine the association between the accountants' motivational values and their interpretation of accounting concepts in financial reporting. The association between the accountants' motivational values and their judgment in financial reporting is addressed by H_4 and H_5.

A survey research approach is adopted in this study whereby a self-administered mail questionnaire was distributed to members of the MICPA, a population that represents the accounting sub-culture in Malaysia. The questionnaire comprises a series of closed questions that uses a six-point rating scale. Several open-ended questions were also incorporated to provide richer detail in the data. The questionnaire was pre-tested to confirm its clarity and consistency prior to data collection.

Since the research project involves human subjects, procedures related to the ethical considerations of the potential risks to the subjects, informed consent and the assurance of privacy and confidentiality have been incorporated. The data analysis approach using SPSS has been planned to provide evidence to test the hypotheses relating to the influence of the accountants' motivational values on the interpretation and judgment in financial reporting. The results and findings from the data analysis are provided in the next chapter.

CHAPTER 6: ANALYSIS OF DATA

6.1. Introduction

It was discussed in Chapter 5 that the survey research approach is appropriate in this study of the accountants' motivational values and their interpretations and judgments in financial reporting. A mail survey questionnaire was sent to 2,760 members of the Malaysian Institute of Certified Public Accountants (MICPA), representing the accounting sub-culture in Malaysia. A total of 244 completed questionnaires was returned, generating a response rate of 8.8%.

In this chapter, the data collected from questionnaires are analysed and discussed. Problems relating to non-response bias and the generalisability of the data are addressed in Section 6.2. In Section 6.3 the respondents' demographic profiles are analysed. This is followed by the presentation and discussion of the statistical analyses to test the five hypotheses established in Chapter 5. The results relating to the identification of the motivational values of accountants are discussed in Section 6.4. The discussion of the results relating to the influence of the accountants' motivational values on their interpretation of the accounting concept of assets and their judgment concerning the relevance and reliability trade-off are reported in Sections 6.5 and 6.6, respectively.

6.2. Non-response bias

According to Neuman (2000), response rates are an important concern in survey research.

> If a high proportion of the sampled respondents do not respond, researchers become cautious about generalizing from the results. If the non-respondents differ from those who respond, low response rates can create bias and weaken validity. (Neuman, 2000, p.266)

As reported in Section 5.7, the response rate achieved in this study was 8.8%. Despite the relatively low response rate, it is argued that non-response bias is not likely to exist in the data. Non-response bias was tested using a similar approach taken by Bebbington *et al*. (1994) whereby the responses from the first mailings of the survey questionnaire and those from the subsequent reminders were compared to determine any significant differences. This approach is based on the argument by Rogelberg and Luong (1998) that the late respondents would have been non-respondents if the survey deadline was observed.

In this study, the first mailings of the survey questionnaire produced 83 replies while the balance of 161 replies was received after the subsequent reminders were sent out. As a result, a Mann-Whitney U Test was conducted to determine whether there were significant differences in the response ratings between the two groups. Mann-Whitney U Test was used to test responses from Sections A, B, C and D of the questionnaire. Since the data comprise categorical and not continuous variables, the non-parametric Mann-Whitney U Test was considered to be appropriate.

The results of the Mann-Whitney U Test are presented in Appendix 1, 2, 3 and 4. From the total of 98 questions in Sections A, B, C and D, the Mann-Whitney U Test found statistically significant difference ($p < 0.05$) in the mean ratings of only four questions. It is therefore concluded that there are no major differences in the earlier responses compared with the later responses.

In order to corroborate this conclusion, the respondents' demographic profile was compared with the characteristics of the population (Bebbington *et al.*, 1994). The results of this comparison, as discussed in Section 6.3 that follows, revealed considerable consistency in the respondents' age, gender, ethnicity and religion profiles with those of the overall population. As a result of the negligible non-response bias and the representativeness of respondents' demographic profile, it is argued that the results obtained from the analysis of the data would be generalisable to the population of interest.

6.3. Respondents' demographic profile

Questions regarding the demographic profiles of the respondents were covered in Section E of the questionnaire. As discussed in Section 5.5.4, the objectives of these questions are to ascertain the sub-groupings of the respondents for subsequent hypotheses testing and to ensure that there is equivalence in the data for comparison between the sub-groups. The respondents' demographic profiles are presented and discussed in the following sections.

6.3.1. Age

As shown in Table 6.1, 94% of the respondents were older than 29 years. Therefore, the majority of the respondents would have at least 10 years of working experience. In addition, 66% of the respondents are from the age range of between 30 and 49 years. Thus, most of the respondents would still be actively involved in their careers and hence, would be aware of current developments in the accounting profession.

Table 6.1 Respondents' age groups

Age group	Frequency	%
29 and below	15	6.1
30 - 39	94	38.5
40 - 49	66	27.0
50 - 59	40	16.4
60 and above	29	11.9
Total	244	100.0

Table 6.2 MICPA membership by age group

Age group	Frequency	%
21 - 30	139	5
31 - 40	1,125	36
41 - 50	992	32
51 - 55	243	8
56 and above	583	19
Total	3,082	100.0

Source: MICPA (2005)

The structure of the respondents' age groups is consistent with the membership structure of the MICPA as at 2005 presented in Table 6.2. Therefore, the respondents' age profile is representative of the membership of the MICPA. The membership by age group for the MIA could not be obtained. As a result, it could not be ascertained whether the respondents' age profile is representative of all the accountants in Malaysia.

6.3.2. Gender

Table 6.3 shows that the respondents' gender profile is made up of 70% male and 30% female. The MICPA membership, as at 2005, comprised 35% female and 65%

male (MICPA, 2005). The respondents' gender profile is therefore representative of the MICPA membership.

Table 6.3 Respondents' gender profile

Gender	Frequency	%
Male	171	70.1
Female	73	29.9
Total	244	100.0

The MIA membership by gender as at 17 February 2006 comprised 57% male and 43% female (T. Meyyappan 2006, pers. comm., 20 June). The membership of MIA is open to graduates from the public universities in Malaysia. These public university graduates are able to join the MIA without obtaining a post-qualifying professional accounting qualification. The majority of the university graduates are female. Consequently, it is to be expected that the MIA gender demographics would have a higher proportion of female members. However, it is argued that the respondents' gender profile is consistent with the profile of the professionally qualified accountants in Malaysia, as represented by the membership of the MICPA.

6.3.3. Race or ethnicity

As shown in Table 6.4, 84% of the respondents are ethnic Chinese. The rest of the respondents comprised Malay Bumiputra, Indian and other ethnic groups.

Table 6.4 Respondents' ethnic profile

Ethnic groups	Frequency	%
Chinese	204	83.6
Malay Bumiputra	19	7.8
Indian	17	7.0
Others	3	1.2
Undisclosed	1	0.4
Total	244	100.0

Table 6.5 Registered accountants by ethnic groups in 2005

Ethnic groups	Accountants		Professionals	
	Number	%	Number	%
Chinese	15,892	73.6	13,541	87.9
Malay Bumiputra	4,498	20.8	961	6.2
Indian	941	4.4	798	5.2
Others	258	1.2	102	0.7
Total	21,589	100.0	15,402	100.0

Source: Ninth Malaysia Plan (The Economic Planning Unit 2006 p. 335)

The respondents' ethnic profile mirrored the demographic of accountants in Malaysia. Table 6.5 shows that 73.6% of the 21,589 registered accountants in 2005 were ethnic Chinese (The Economic Planning Unit 2006). These accountants were registered with the MIA. From these total registered accountants, 15,402 possessed a professional qualification such as MICPA, Association of Certified Chartered Accountants (ACCA) and Certified Practising Accountants of Australia (CPA Australia). The rest of the registered accountants were graduates with an accounting degree from local universities but did not possess any professional accounting qualification. Most of these local accounting graduates were ethnic Malay Bumiputras (Susela 1999).

Consequently, ethnic Chinese make up a larger proportion of the professionally qualified accountants at 88%. Therefore, the ethnic profile of the respondents, who are members of the MICPA, is consistent with the profile of professionally qualified accountants in Malaysia.

6.3.4. Religion

More than half of the respondents stated their religion as Buddhism as shown in Table 6.6. This is followed by Christianity at 26.2%. This profile is consistent with the ethnicity profile of the respondents, where 83.6% were Chinese. This is because most of the ethnic Chinese are either Buddhists or Christians.

Table 6.6 Respondents' religion

Religion	Frequency	%
Buddhism	126	51.6
Christianity	64	26.2
Islam	21	8.6
Hinduism	12	4.9
None	12	4.9
Others	8	3.3
Undisclosed	1	0.4
Total	244	100.0

6.3.5. Language

As shown in Table 6.7, all of the respondents indicated that they spoke English fluently while only 65% indicated that they are fluent in Bahasa Malaysia, despite the latter being the national language. This is typical of the situation in Malaysia as English is the 'lingua franca' of business.

Table 6.7 Respondents' language group

Language group	Frequency	%
English	244	100.0
Bahasa Malaysia	159	65.2
Mandarin	99	40.6
Others	17	7.0

Almost 41% of the respondents indicated that they speak Mandarin fluently. These are typically the ethnic Chinese accountants who have undertaken their education in the Chinese vernacular school system that is separate from the national schools. The medium of instruction in Chinese vernacular schools is Mandarin, while Bahasa Malaysia is used in the national schools.

6.3.6. Educational background

Respondents were asked the country in which they had obtained their primary, secondary and tertiary education to determine the location in which their cultural socialisation process occurred.

Table 6.8 Respondents' educational background

	Primary Education		Secondary Education		Tertiary Education	
Country	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Malaysia	236	96.7	226	92.6	174	71.3
Singapore	2	0.8	5	2.0	1	0.4
India	-	-	1	0.4	-	-
United Kingdom	-	-	3	1.2	20	8.2
United States	1	0.4	1	0.4	1	0.4
Australia/New Zealand	4	1.6	3	1.2	26	10.7
Overseas - Not stated	1	0.4	5	2.0	21	8.6
Undisclosed	-	-	-	-	1	0.4
Total	244	100	244	100	244	100

As indicated in Table 6.8, more than 90% of the respondents obtained their primary and secondary education in Malaysia. In addition, 71% of the respondents obtained their tertiary education or professional qualifications in Malaysia. Thus, the majority of the respondents obtained their education in Malaysia. The respondents' socialisation process occurred mainly in the Malaysian environment and consequently they would have been enculturated with the Malaysian cultural values. As such, there is equivalence in the data which would facilitate comparisons between cultural groups.

6.3.7. Professional affiliations

The analysis of the professional affiliations of respondents in Table 6.9 indicates that 88.5% are members of the MIA and MICPA. As discussed in Section 6.3.5, the majority of these respondents have been educated and trained in Malaysia. Only a small percentage of the respondents are members of other overseas associations such as the ACCA/ICAEW from the U.K. or CPA/ICAA from Australia.

Table 6.9 Respondents' professional affiliations

Affiliations	Frequency	%
MIA/MICPA	216	88.5
ACCA/ICAEW	46	18.9
CPAA/ICAA/ICANZ	37	15.2
Others	20	8.2

Therefore, it is concluded that any influence from the overseas affiliations would not have a significant effect on the behaviour of the respondents.

6.3.8. Current job title

Table 6.10 Respondents' job title

Job title	Frequency	%
Finance position in commerce and industry	104	42.6
General management/Director	47	19.3
Senior/Manager/Partner in accounting firm	46	18.9
Retired	18	7.4
Self employed	9	3.7
Academic	5	2.0
None given	15	6.1
Total	244	100.0

The respondents were required to provide their current job title which is presented in Table 6.10. This question is to establish whether the respondents are practising

accountants. The analysis of the respondents' job title shows that 61.5% (42.6 + 18.9) are currently working as professional accountants in either public practice or commerce. Consequently, the average opinions of the respondents can be concluded to representing accounting practitioners.

6.3.9. Summary

The demographic profile of the respondents indicates that the majority of them have at least 10 years of working experience in the accounting profession. The respondents' are typically English speaking Chinese males. The majority of the respondents are Buddhists or Christians. The analysis of the respondents' demographic profile shows considerable consistency with the characteristics of the MICPA membership. This indicates that the respondents' sub-group membership is representative of the MICPA membership and consequently is generalisable to the population of professional accountants in Malaysia.

It is also concluded that the respondents were mainly educated and trained in Malaysia. Therefore, there is equivalence in the data obtained from the respondents. This would enhance the validity of comparisons between the cultural groups.

6.4. Motivational values of accountants

As explained in Section 5.2, the first hypothesis (H_1) addresses the research objective of whether the membership of different sub-groups within the accounting sub-culture affects the motivational values of accountants. In order to test this hypothesis, data from Section D of the questionnaire were used to measure the accounting motivational values of the respondents. These data comprise the respondents' ratings of a set of 40 multi-item scales obtained from Schwartz *et al.*'s

(2001) PVQ, representing the manifestation of Schwartz's (1992) ten universal motivational value types in the domain of accounting.

The internal reliability of the multi-item scales was tested before the descriptive statistics of the respondents' ratings were analysed to reveal the accounting motivational value structure. Pearson product-moment correlations were conducted to examine Schwartz's (1992) theory of the psychological conflicts and compatibilities among the ten motivational value types. Finally, MANOVA was applied to test the hypothesis that accountants from different sub-groups within the accounting sub-culture possess different motivational values (H_1). In addition, the particular motivational value types that were significantly affected by the sub-group membership were also identified.

6.4.1. Reliability of the motivational values scale

A set of accounting motivational value types was hypothesised in Section 3.3.4 that was drawn from Schwartz's (1992) universal human value structure. The accounting motivational values comprising ten different motivational goals of accountants were measured using the 40 multi-item scale verbal portraits that were developed by Schwartz *et al*. (2001). The validity of the universal human value structure and the PVQ instrument has been tested in many different cultural environments by Schwartz and Schwartz *et al*. However, the reliability of the scales may be affected by the particular sample being examined (Pallant, 2005).

The internal reliability of the accounting motivational value scales was determined using Cronbach's Alpha statistic and the mean inter-item correlation of the scales. According to Briggs and Cheek (1986), the Alpha statistic tends to be low when the constructs being measured are conceptually broad. The Alpha is also influenced by

the inter-item correlations of the variables that make up the scale as well as the number of variables used. Briggs and Cheek suggest that the mean inter-item correlation would be a better indicator of the variables' homogeneity because it is not influenced by the number of variables that make up the scale. Briggs and Cheek recommend that the optimal mean inter-item correlation should be from 0.2 to 0.4.

Table 6.11 Internal reliability of the accounting motivational value scales

Accounting motivational value type	Cronbach's Alpha	Mean inter-item correlation
Safeguard public interest	0.7337	0.3266
Protect organisational interest	0.6306	0.3111
Compliance with rules & regulations	0.6071	0.2970
Generally accepted accounting conventions	0.4406	0.1737
Compliance with rules & conventions*	0.6837	0.2332
Uniformity, conservatism, prudence & integrity	0.6624	0.2905
Preserving status of profession	0.5856	0.3204
Professional competence	0.7240	0.3957
Hedonism	0.7861	0.5508
Risk taker	0.7622	0.5185
Independent professional judgment	0.6953	0.3711

* Combined scale of compliance with rules and regulations, and generally accepted accounting conventions

The detailed results of the test for internal reliability are presented in Appendix 5 and 5a. A summary of the Cronbach's Alpha and mean inter-item correlations of the ten accounting motivational scales are shown in Table 6.11. The results indicate that most of the motivational scales achieved the acceptable Alpha of 0.7 (Pallant, 2005) or have a mean inter-item correlation of between 0.2 and 0.4. The exceptions are in respect of the values of hedonism and compliance with generally accepted accounting conventions. Although the Cronbach's Alpha for hedonism achieved an acceptable score of 0.79, its mean inter-item correlation, at 0.55, was beyond the optimal range recommended by Briggs and Cheek (1986). According to Briggs and Cheek, this indicates that the hedonism scale may be redundant and the construct being measured is too specific. The value of hedonism was explained in Section 3.3

to have no obvious manifestation in the domain of accounting and is only meaningful when interpreted in relation to other related values such as taking risk or professional competence. Consequently, it is decided that the hedonism value should be retained.

The other exception reported is with the value of compliance with generally accepted accounting conventions, which had an Alpha value of 0.44 and a mean inter-item correlation of 0.17. According to Schwartz (1992), both the values of compliance with rules and regulation and with generally accepted accounting conventions share the same motivational goals of the observance and conformity to regulations and traditions. The only difference being that the motivation to comply with accounting conventions may be more abstract and therefore more ingrained in the psyche of the accountants. Therefore, the two value scales were combined to represent the scale of compliance with rules and conventions. The mean inter-item correlation of the combined scale at 0.23 is within the optimal range. As a result, the modified nine accounting motivational value scales have good internal consistency.

Table 6.12 Internal reliability of the higher order value scales

Higher order accounting value type	Cronbach's Alpha	Mean inter-item correlation
Openness to change	0.8068	0.3725
Conservation	0.7493	0.2017
Self-enhancement	0.8121	0.3019
Self-transcendence	0.8031	0.3017

As discussed in Section 3.3.2, the conflicts and compatibilities within the original ten motivational value types produces a simpler two dimensional structure that comprise four higher order value types as shown in Table 6.12. The detailed results of the test for internal reliability of these higher order values are presented in Appendix 6 and 6a. The summary of the Cronbach's Alpha and mean inter-item correlations of the

four higher order value scales presented in Table 6.12 indicate that internal reliability of these scales is good.

6.4.2. The accountants' motivational value structure

The accountants' motivational value structure would, therefore, comprise the nine motivational value types discussed in the preceding section. The total scores for each of the nine value types were calculated by adding up respondents ratings on a six-point scale for the relevant questions that make up that dimension. This total rating is then divided by the number of questions making up that dimension. Table 6.13 presents the descriptive statistics of scores for each of the nine motivational values for all the respondents taken as a whole.

Table 6.13 Descriptive statistics for accountants' motivational values

Motivational goals	N	Minimum	Maximum	Mean	Std. error	Skewness	Kurtosis
Safeguard public interest	242	2.6667	6.0000	4.6288	0.0430	-0.2154	-0.1801
Protect organisational interest	243	2.5000	6.0000	4.5617	0.0426	-0.2940	0.0177
Compliance with rules & conventions	241	2.3750	5.7500	4.1442	0.0417	-0.2393	-0.2519
Uniformity, conservatism, prudence & integrity	243	2.8000	6.0000	4.7111	0.0430	-0.4610	0.0816
Preserving status of profession	244	1.0000	5.3333	3.2514	0.0552	0.1057	-0.5066
Professional competence	243	1.5000	6.0000	3.9897	0.0575	0.0441	-0.4338
Hedonism	241	1.0000	6.0000	3.6999	0.0699	0.0220	-0.7090
Risk taker	243	1.3333	6.0000	3.4678	0.0665	0.3239	-0.5469
Independent professional judgment	243	2.2500	6.0000	4.6368	0.0470	-0.3103	-0.1415

The distribution of the scores is found to be quite representative of the population given the low standard error for the mean. A test of normality was conducted and the scores were found to be reasonably normal. The following paragraphs analyses the descriptive statistics to reveal the motivational value structure of the accountants examined in this study.

The descriptive statistics reveal that, on the average, the respondents believe very much in the responsibility of accountants to safeguard the interest of the general public. The mean rating of 4.63 for the value of safeguarding public interest and the negative skewness indicates that the majority of the respondents have an affinity toward the 'understanding, appreciation, tolerance, and protection for the welfare of all people and for nature' (Schwartz, 1992, p.12). The negative kurtosis, however, shows that the respondents' opinions are varied.

The statistics show that the respondents' also have a general concern for the narrower institutional or organisational interest. The respondents' mean rating for the protection of organisational interest is 4.56. This indicates that they are rather like people who have a 'concern for the welfare of close others in everyday interaction' (Schwartz, 1992, p.11). The small positive kurtosis value indicate a concentration of responses around the mean, suggesting that protecting the interest of the organisation is a more commonly held view than safeguarding the public interest, which has a small negative kurtosis.

The mean score for the combined motivational values of compliance with rules and generally accepted accounting conventions is 4.14. This indicates that respondents' are generally motivated by the need to follow prescribed rules and regulations as well as established ways of doing things. This stems from what Schwartz (1992) describes as a need to meet the expectations of society and not to create unnecessary disruptions in social interaction. As a result there is a tendency to follow tradition and established customs and procedures. The small negative kurtosis value, however, may indicate some diversity in the respondents' opinion of the importance of this goal.

The highest mean score is found for the values of uniformity, conservatism, prudence and integrity at 4.71. The relatively high negative skewness value appears to support the notion of accountants as generally conservative and prudent. Accountants are educated and trained to exercise due care and diligence in their work, to place importance on honesty and dependability and to avoid volatility and instability. The positive kurtosis indicates a general consensus among the respondents regarding the importance of this value.

The respondents' mean score for the preservation of the status of the profession is 3.25. The respondents, therefore, rated themselves as only a little or somewhat like people whose goals are the 'attainment of social status and prestige, and control or dominance over people and resources' (Schwartz, 1992, p.9). This finding suggests that accountants who are not in public practice do not have strong views about the status and prestige of the profession. It was reported in Section 6.3.8 that only 18.9% of the respondents are in public practice while the majority are in commerce and industry. The positively skewed distribution of the scores shows that many of the respondents in commerce and industry do not view that pursuing this particular motivating goal as very important. The negative kurtosis value, however, indicates that there are differences in the respondents' opinions.

The goal of professional competence, however, produced a relatively higher mean score at 3.99. Respondents felt that they are somewhat like people whose goal is to achieve 'personal success through demonstrating competence according to social standards' (Schwartz, 1992, p.8). Similar to the value of preserving the status of the profession, there are small positive skewness and negative kurtosis values. This indicates that many of the respondents' felt that the goal of professional competence is not that important to them but there are some diversity in their opinions. However, the comparison of the mean scores shows that respondents placed relatively more

importance on professional competence than on preserving the status of the profession. This finding suggests the accountants that are not in public practice, in addition to not being too concerned with preserving the status of the profession, also do not place high importance on demonstrating professional competence.

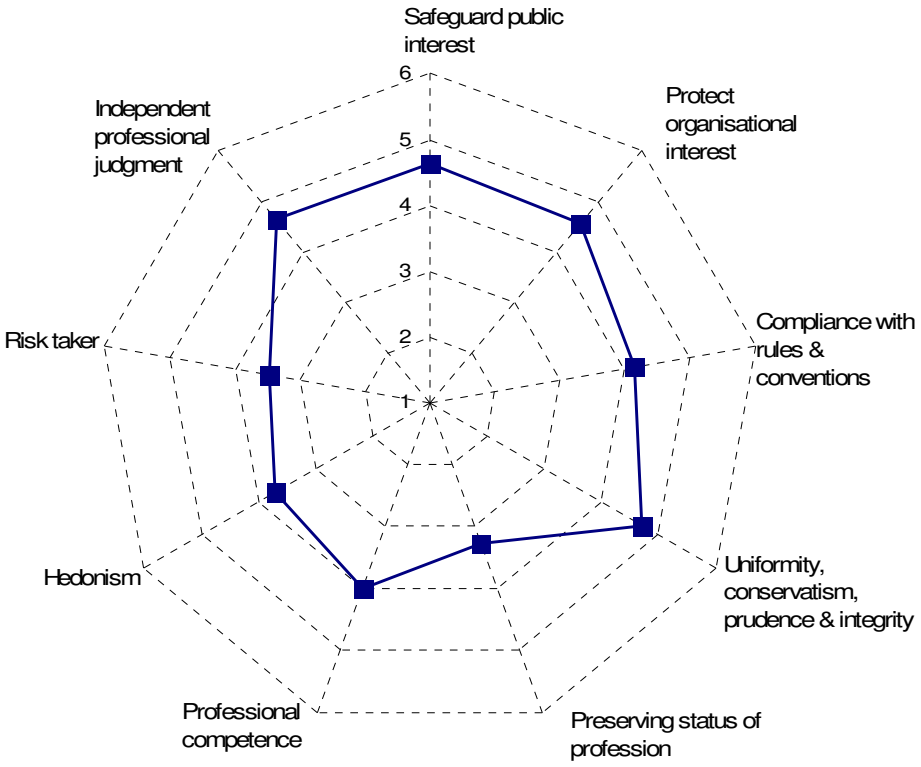
The respondents' mean score for hedonism is 3.70 indicating that they are only a little or somewhat like people whose goal is to seek pleasure and enjoyment in life. As discussed in Section 3.3.1, the motivational value of hedonism does not have an obvious manifestation in the domain of accounting. The interpretation of hedonism depends on its correlation with the goals of professional competence or being a risk taker, which is discussed in Section 6.4.3.

The mean score for the motivational goal of taking risks is 3.47 with a positive skewness value. This is an indication that the pursuit of 'excitement, novelty, and challenge in life' (Schwartz, 1992, p.8) is not considered an important goal in the lives of accountants. This shows that accountants have a propensity to avoid risky situations which is consistent with the higher score for conservatism and prudence reported earlier. The negative kurtosis, however, indicates that there is diversity in the respondents' opinion.

Finally, respondents' mean score for the goal of exercising independent professional judgment is 4.64. Therefore, despite the earlier reported high score for the goal of conformity with rules and conventions, the respondents also view 'creativity, freedom, choosing own goals, curious, independent' (Schwartz, 1992, p.7) as important goals. This indicates that accountants place a lot of importance on the ability to exercise their professional judgment so that they can satisfy their need for independent thought and action. However, there is diversity in the respondents' opinion on this value as shown by the negative kurtosis.

In summary, the descriptive statistics indicate that accountants in Malaysia generally consider the protection of the public and organisational interests as important goals. They feel the need to comply with rules and regulations to meet their social obligations and conform to traditions and generally accepted accounting conventions. The accountants also hold strongly to the values of conservatism, prudence, integrity and uniformity. But yet, they are also motivated by the need to exercise independent professional judgment. The accountants are, however, not too concerned with the status and prestige of their profession or the need to demonstrate their professional competence. They adopt a conservative outlook with an aversion to taking unnecessary risks.

Figure 6.1 Motivational values of accountants



Based on Schwartz's (1992) theory, the accountants' motivational values are arrayed in a circular continuum as illustrated in the form of a radar chart in Figure 6.1. The order of the values around the circular structure reflects the dynamic relationships between the motivational values, which are discussed in the following section.

6.4.3. Conflicts, compatibilities and interests served

In Section 3.3.2, it was discussed that there is a dynamic relationship between the motivational value types. Schwartz (1992) argued that actions taken in the pursuit of each value type have psychological, practical, and social consequences that may be compatible or may conflict with the pursuit of other value types. The relationships among the nine accounting motivational values were investigated using Pearson product-moment correlation coefficients.

The correlation matrix for the nine accounting motivational values is presented in Table 6.14. The value types are arranged in accordance with their position along the circular continuum of motivations (Figure 6.1). Reading each row of the matrix would reveal the correlation of each value with another, relative to their position along the circular continuum. The correlation would be expected to weaken the further apart the values. This pattern of correlation is found in the matrix which supports the theory of the conflict and compatibility of the value types.

Table 6.14 Correlation matrix for the motivational values of accountants

		Safeguard public interest	Protect organisational interest	Compliance with rules & conventions	Uniformity, conservatism, prudence & integrity	Preserving status of profession	Professional competence	Hedonism	Risk taker	Independent professional judgment
Safeguard public interest	Pearson Correlation	1.0000	**0.6014	**0.4101	**0.4855	**0.1842	**0.2608	**0.3284	**0.4216	**0.5702
	Sig. (2-tailed)		0.0000	0.0000	0.0000	0.0040	0.0000	0.0000	0.0000	0.0000
	N	242	242	240	242	242	242	240	242	242
Protect organisational interest	Pearson Correlation		1.0000	**0.4638	**0.4098	**0.1902	**0.2822	**0.3081	**0.4051	**0.4870
	Sig. (2-tailed)			0.0000	0.0000	0.0029	0.0000	0.0000	0.0000	0.0000
	N		243	241	243	243	243	241	243	243
Compliance with rules & conventions	Pearson Correlation			1.0000	**0.4027	*0.1322	0.1080	0.0777	0.0090	*0.1581
	Sig. (2-tailed)				0.0000	0.0403	0.0944	0.2305	0.8899	0.0140
	N			241	241	241	241	240	241	241
Uniformity, conservatism, prudence & integrity	Pearson Correlation				1.0000	**0.2396	**0.2883	**0.2346	0.0995	**0.4348
	Sig. (2-tailed)					0.0002	0.0000	0.0002	0.1221	0.0000
	N				243	243	243	241	243	243
Preserving status of profession	Pearson Correlation					1.0000	**0.6116	**0.3443	**0.3362	**0.3646
	Sig. (2-tailed)						0.0000	0.0000	0.0000	0.0000
	N					244	243	241	243	243
Professional competence	Pearson Correlation						1.0000	**0.3766	**0.3672	**0.3817
	Sig. (2-tailed)							0.0000	0.0000	0.0000
	N						243	241	243	243
Hedonism	Pearson Correlation							1.0000	**0.5542	**0.3893
	Sig. (2-tailed)								0.0000	0.0000
	N							241	241	241
Risk taker	Pearson Correlation								1.0000	**0.5750
	Sig. (2-tailed)									0.0000
	N								243	243
Independent professional judgment	Pearson Correlation									1.0000
	Sig. (2-tailed)									
	N									243

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Both the values of safeguarding public interest and protection of organisational interest have a strong positive correlation (r = +0.60, n = 242, p < 0.01). This is consistent with Schwartz's (1992) theory that both these values motivate people 'to transcend selfish concerns and promote the welfare of others, close and distant, and of nature' (p.44). There is also a strong positive correlation between the values of professional competence and preserving the status of the profession (r = +0.61, n = 243, p < 0.01). Both these values are motivated by the need to enhance personal interests.

Hedonism was argued to have no obvious manifestation in accounting. However, hedonism is found to be strongly correlated with the values of taking risk (r = +0.55, n = 241, p < 0.01). According to Schwartz (1992), the hedonism values, therefore, serve to accentuate the pleasure and enjoyment that accountants obtain from making risky decisions.

The motivational value of taking risks is also found to have a strong positive correlation with the motivation to exercise independent professional judgment (r = +0.58, n = 243, p < 0.01). According to Schwartz (1992), these values 'motivate people to follow their own intellectual and emotional interests in unpredictable and uncertain directions' (p.43). The desire to make independent professional judgment is consistent with the willingness to operate within a challenging, unpredictable and uncertain environment.

Exercising independent professional judgment and safeguarding public interest are strongly correlated (r = +0.57, n = 242, p < 0.01). Schwartz (1992) argued that a person who obtains satisfaction from exercising independent judgment and thought would be more accepting and tolerant of diversity of opinion. Tolerance of diversity is

a trait found in universalism, a universal human value underlying the goal of safeguarding public interest.

As discussed in Section 3.3.2, value types in opposing regions would produce a strong psychological and social conflict. From the examination of these conflicts, the motivational value types are classified into a simpler two dimensional bipolar structure comprising four higher order value types as shown in Table 6.15.

Table 6.15 Overall descriptive statistics for higher order value dimensions

Higher order dimensions	N	Minimum	Maximum	Mean	Std. Error	Skewness	Kurtosis
Openness to change	243	1.8571	6.0000	4.1358	0.0492	0.0820	-0.1488
Conservation	241	2.6154	5.5385	4.3642	0.0357	-0.2772	-0.4091
Self-enhancement	241	1.3000	5.5000	3.6830	0.0480	0.0811	-0.2752
Self-transcendence	242	2.9000	6.0000	4.6008	0.0385	-0.2190	-0.0654

The total score for each of the four components of the higher order dimensions was calculated by adding up respondents' ratings for all the portrait questions that make up each component. This total rating is then divided by the number of questions making up that component. Table 6.15 presents the descriptive statistics for scores for each of the four higher order components for all the respondents taken as a whole.

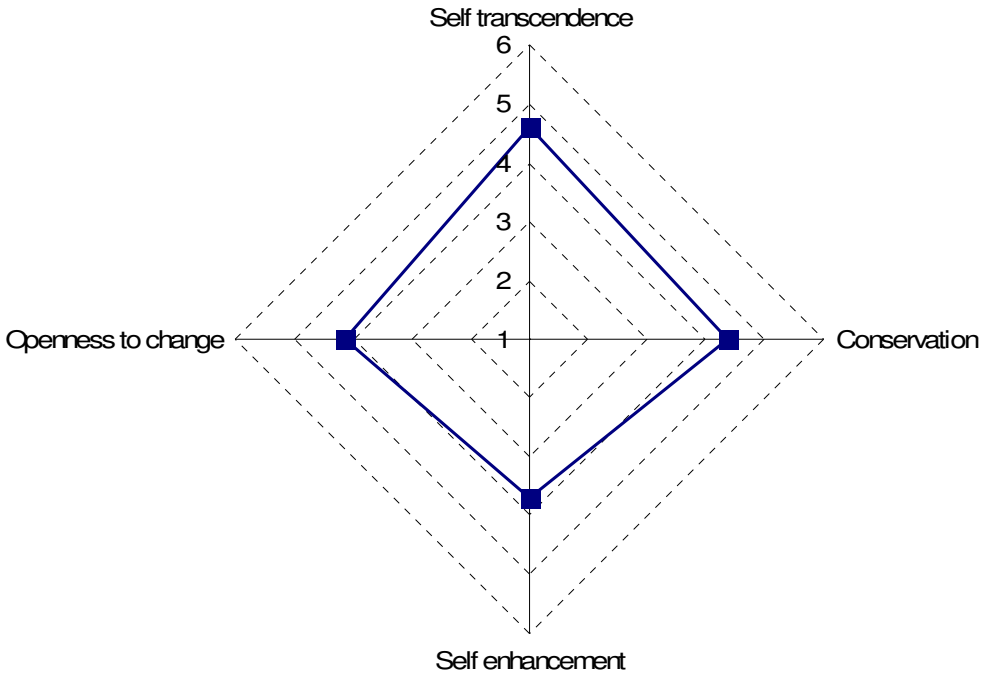
The mean scores for openness to change and conservation were 4.14 and 4.36 respectively. This indicates that on the average, respondents rated that they are rather like people who are motivated to follow unpredictable and uncertain directions as well as those who are motivated to preserve the status quo by maintaining certainty, stability and integrity. This is reflected by the high scores for the values of

uniformity, conservatism, prudence, and integrity, as well as the value of independent professional judgment discussed in Section 6.4.2.

A high rating in both openness to change and conservation would result in psychological conflict within the respondents. This conflict is reflected in only a moderate correlation between the values of uniformity, conservatism, prudence, and integrity, with the value of independent professional judgment (r = +0.43, n = 243, p < 0.01). The manifestation of this conflict may be in the accountants' opinion that measuring assets using current prices is appropriate but their ability to accept such an accounting treatment is tempered by the need to maintain an environment of certainty and stability. The positive skewness for openness to change and negative skewness for conservation shows that most respondents have a stronger inclination towards conservation values.

The respondents' mean scores for self-enhancement and self-transcendence are 3.67 and 4.60 respectively. This result indicates that the accountants are more inclined to pursue goals that serve the collective interests rather than individual interests. The relatively higher mean scores, reported in Section 6.4.2, for values that serve collective interests comprising safeguarding public interest and protection of organisational interest reflects this position. The positive skewness for self-enhancement and negative skewness for self-transcendence show that most respondents place more importance on values that serve collective interests.

Figure 6.2 Higher order accounting motivational values



In summary, the psychological conflicts and compatibilities, arising from the pursuit of the nine accounting motivational value types, is reflected in the two dimensional bipolar structure comprising the four higher order values. The higher order motivational values are illustrated in the form of radar chart in Figure 6.2.

The structure of the higher order motivational values indicate that accountants in Malaysia generally believe that collective interest is more important that the interest of the individual. The accountants feel it is more important to consider the interests of the public and the organisation rather than the status and prestige of the profession and to demonstrate their professional competence. However, it is interesting to note that the accountants place a lot of importance on exercising independent professional judgment, a goal that serves primarily individual interest. The pursuit of this goal appears to be balanced by the need to maintain an environment of certainty, stability and integrity. As a consequence, the accountants are generally inclined to

follow rules and traditions and to adopt a cautious approach to their work. This is perhaps influenced by the desire to ensure that interests of the public and organisation are not compromised by aggressive accounting and business transactions.

6.4.4. Diversity in the accounting sub-culture

The preceding sections have shown that a clear and consistent structure of the motivational values of accountants has emerged from the data. Generalising this structure to the population of accountants provides a description of the accounting sub-culture in Malaysia. However, it was argued in Chapter 2 that membership of different sub-groups within the accounting sub-culture may result in variations in the relative importance placed on the nine motivational values that make up the accounting sub-culture.

In order to test the hypothesis that accountants from different sub-groups within the accounting sub-culture possess different motivational values (H_1), a one-way between-groups multivariate analysis of variance (MANOVA) was used. The dependent variables, comprising the nine accounting motivational values, were separately tested against the independent variables that are made up of the respondents' gender, ethnicity, religion, language and age group. These sub-groups have been identified in Section 5.2 as factors that may influence the motivational values of the accountants. The results of the tests are presented in the following sections.

6.4.4.1. Gender influence

In examining the effect of gender, the descriptive statistics shown in Table 6.16 reveal differences in the mean score of all the nine accounting motivational values between male and female respondents.

Table 6.16 Descriptive analysis of gender and motivational values

Motivational values	E2 Gender	Mean	Std. deviation	N
Safeguard public interest	Male	4.7018	0.6466	166
	Female	4.4749	0.6943	73
	Total	4.6325	0.6683	239
Protect organisational interest	Male	4.6069	0.6844	166
	Female	4.4418	0.6046	73
	Total	4.5565	0.6642	239
Compliance with rules & conventions	Male	4.1792	0.6386	166
	Female	4.0291	0.6311	73
	Total	4.1334	0.6388	239
Uniformity, conservatism, prudence & integrity	Male	4.6867	0.7027	166
	Female	4.7808	0.5946	73
	Total	4.7155	0.6717	239
Preserving status of profession	Male	3.3534	0.8162	166
	Female	3.0365	0.9036	73
	Total	3.2566	0.8546	239
Professional competence	Male	4.0964	0.8571	166
	Female	3.8014	0.9071	73
	Total	4.0063	0.8813	239
Hedonism	Male	3.6988	1.1169	166
	Female	3.7215	1.0259	73
	Total	3.7057	1.0878	239
Risk taker	Male	3.5462	1.0349	166
	Female	3.3242	1.0452	73
	Total	3.4784	1.0409	239
Independent professional judgment	Male	4.6822	0.7305	166
	Female	4.5548	0.7327	73
	Total	4.6433	0.7320	239

The male respondents, had on the average, rated themselves higher in all the motivational values except for uniformity, conservatism, prudence and integrity, and hedonism. There is, however, greater dispersion in the ratings by the male respondents for the values of protection of organisational interest, compliance with

rules and conventions, uniformity, conservatism, prudence and integrity, and hedonism.

In order to test that the differences in the means between the gender groups are not due to chance, MANOVA was used. MANOVA also reduces the risk of inflating Type 1 error. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, and multicollinearity, with no serious violations noted. Hence, MANOVA is a valid procedure to examine the significance of the mean differences between the two gender groups.

There is a statistically significant difference in the linear combination of the nine motivational values between male and female groups: F (9, 229) = 3.0655; p = 0.0017; Wilks' Lambda = 0.8925; partial eta squared = 0.1075. Therefore, 10.75% of the variance in the overall motivational values can be explained by gender differences.

When the results for the dependent variables are considered separately (see Table 6.17), differences for three value types reached statistical significance ($p < 0.05$). These values are safeguarding public interest: F (1, 237) = 5.9376, p = 0.0153, partial eta squared = 0.0246, professional competence: F (1, 237) = 5.7957, p = 0.0168, partial eta squared = 0.0239, and preserving status of the profession: F (1, 237) = 7.1516, p = 0.0080, partial eta squared = 0.0293.

Table 6.17 Univariate test of between subject effects of gender and motivational values

Dependent variable	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared
Safeguard public interest	2.6109	1	2.6109	5.9673	*0.0153	0.0246
Protect organisational interest	1.3828	1	1.3828	3.1633	0.0766	0.0132
Compliance with rules & conventions	1.1424	1	1.1424	2.8214	0.0943	0.0118
Uniformity, conservatism, prudence & integrity	0.4487	1	0.4487	0.9946	0.3196	0.0042
Preserving status of profession	5.0914	1	5.0914	7.1516	**0.0080	0.0293
Professional competence	4.4129	1	4.4129	5.7957	*0.0168	0.0239
Hedonism	0.0260	1	0.0260	0.0219	0.8824	0.0001
Risk taker	2.4985	1	2.4985	2.3188	0.1291	0.0097
Independent professional judgment	0.8234	1	0.8234	1.5401	0.2158	0.0065

** Sig. $p < 0.01$; * Sig. $p < 0.05$

An inspection of the mean scores indicates that males reported slightly higher scores for the values of safeguarding public interest (M = 4.7018, SD = 0.6466), professional competence (M = 4.0964, SD = 0.8501) and preserving status of the profession (M = 3.3534, SD = 0.8162) than females. The results indicate that males tend to place relatively more importance on maintaining high standards of professional competence to meet the increasing demands by society on the profession. The males are also more concerned with the status and prestige of the profession. The results also show that the male accountants view their responsibility to act in the interest of the public more importantly than the female accountants.

6.4.4.2. Ethnic influence

It was found in Section 6.3.3 that ethnic Chinese make up almost 84% of the respondents. This is representative of the population of professional accountants in

Malaysia. As a consequence, it was decided that the comparison between ethnic groups would be conducted between the ethnic Chinese accountants and the total of the other ethnic groups.

Table 6.18 Descriptive analysis of ethnicity and motivational values

Motivational values	E3 Race	Mean	Std. deviation	N
Safeguard public interest	Chinese	4.6426	0.6607	201
	Non Chinese	4.5495	0.7004	37
	Total	4.6282	0.6663	238
Protect organisational interest	Chinese	4.5697	0.6554	201
	Non Chinese	4.4662	0.7124	37
	Total	4.5536	0.6640	238
Compliance with rules & conventions	Chinese	4.1393	0.6243	201
	Non Chinese	4.0912	0.7257	37
	Total	4.1318	0.6397	238
Uniformity, conservatism, prudence & integrity	Chinese	4.7373	0.6614	201
	Non Chinese	4.5784	0.7192	37
	Total	4.7126	0.6716	238
Preserving status of profession	Chinese	3.2521	0.8670	201
	Non Chinese	3.2793	0.8070	37
	Total	3.2563	0.8564	238
Professional competence	Chinese	3.9465	0.8792	201
	Non Chinese	4.3243	0.8455	37
	Total	4.0053	0.8830	238
Hedonism	Chinese	3.7231	1.0950	201
	Non Chinese	3.6036	1.0710	37
	Total	3.7045	1.0899	238
Risk taker	Chinese	3.4643	1.0557	201
	Non Chinese	3.5405	0.9793	37
	Total	3.4762	1.0425	238
Independent professional judgment	Chinese	4.6231	0.7315	201
	Non Chinese	4.7568	0.7442	37
	Total	4.6439	0.7335	238

The descriptive statistics in Table 6.18 show that the Chinese group rated higher in the motivational values of safeguarding public interest, protection of organisational interest, compliance with rules and conventions, and uniformity, conservatism, prudence and integrity, which serve primarily collective interests. While the non-Chinese rated higher in preserving status of the profession, professional

competence, taking risk and independent professional judgment values, which serve primarily individual interests. The only exception is that the Chinese group rated higher in hedonism. The Chinese group, however, has a greater dispersion in the values of preserving status of the profession, professional competence, hedonism and taking risk.

MANOVA was confirmed as a valid procedure to examine the significance of the mean differences between the two ethnic groups after preliminary assumption testing was conducted. There is a statistically significant difference in the linear combination of the nine motivational values between the Chinese and non-Chinese groups: F (9, 228) = 2.2184; p = 0.0218; Wilks' Lambda = 0.9195; partial eta squared = 0.0805. Therefore, 8.05% of the variance in the overall motivational values can be explained by ethnic differences.

Table 6.19 Univariate test of between subject effects of ethnicity and motivational values

Dependent variable	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared
Safeguard public interest	0.2707	1	0.2707	0.6086	0.4361	0.0026
Protect organisational interest	0.3343	1	0.3343	0.7574	0.3850	0.0032
Compliance with rules & conventions	0.0723	1	0.0723	0.1760	0.6752	0.0007
Uniformity, conservatism, prudence & integrity	0.7893	1	0.7893	1.7555	0.1865	0.0074
Preserving status of profession	0.0231	1	0.0231	0.0314	0.8595	0.0001
Professional competence	4.4603	1	4.4603	5.8367	*0.0165	0.0241
Hedonism	0.4458	1	0.4458	0.3743	0.5413	0.0016
Risk taker	0.1814	1	0.1814	0.1663	0.6838	0.0007
Independent professional judgment	0.5579	1	0.5579	1.0372	0.3095	0.0044

* Sig. $p < 0.05$

When the results for the dependent variables are considered separately (see Table 6.19), the only difference to reach statistical significance ($p < 0.05$) is in respect of professional competence: F (1, 236) = 5.8367, p = 0.0165, partial eta squared = 0.0241. An inspection of the mean scores indicate that the Chinese reported slightly lower professional competence (M = 3.2521, SD = 0.8789) values than non-Chinese. This indicates that the Chinese group do not view maintaining high standards of professional competence as an important goal as much as the non-Chinese group.

6.4.4.3. Religion influence

The analysis of the demographic profile of the respondents in Section 6.3.4 revealed that the main religion groups are Buddhism (52%) and Christianity (26%). The remaining 22% of the respondents are Muslims, Hindus and of other faiths. As Buddhists make up more than half of the respondents, it was decided to compare the religion groups between Buddhism and other religions.

The descriptive statistics in Table 6.20 show that the Buddhist group has on the average rated higher on the motivational goals of safeguarding public interest, protection of organisational interest, preserving status of the profession, hedonism and taking risk. With the exception of preserving the status of the profession, the dispersion of the value scores is lower for the Buddhist group. This could be attributable to the fact that the non-Buddhist group comprise respondents with varied religious beliefs.

MANOVA was confirmed as a valid procedure to examine the significance of the mean differences between the two groups of religion after preliminary assumption testing was conducted. However, the assumption of equality of variance is violated

for hedonism. A more conservative alpha level of 0.01 would have to be set for the hedonism value in the univariate F-test.

Table 6.20 Descriptive analysis of religion and motivational values

Motivational values	E4 Religion	Mean	Std. deviation	N
Safeguard public interest	Buddhism	4.6520	0.6521	125
	Others	4.6018	0.6837	113
	Total	4.6282	0.6663	238
Protect organisational interest	Buddhism	4.5540	0.6299	125
	Others	4.5531	0.7027	113
	Total	4.5536	0.6640	238
Compliance with rules & conventions	Buddhism	4.1120	0.5912	125
	Others	4.1538	0.6913	113
	Total	4.1318	0.6397	238
Uniformity, conservatism, prudence & integrity	Buddhism	4.7024	0.6543	125
	Others	4.7239	0.6930	113
	Total	4.7126	0.6716	238
Preserving status of profession	Buddhism	3.3360	0.8895	125
	Others	3.1681	0.8130	113
	Total	3.2563	0.8564	238
Professional competence	Buddhism	3.9680	0.8507	125
	Others	4.0465	0.9195	113
	Total	4.0053	0.8830	238
Hedonism	Buddhism	3.8587	0.9748	125
	Others	3.5339	1.1857	113
	Total	3.7045	1.0899	238
Risk taker	Buddhism	3.5707	1.0141	125
	Others	3.3717	1.0679	113
	Total	3.4762	1.0425	238
Independent professional judgment	Buddhism	4.6140	0.7230	125
	Others	4.6770	0.7468	113
	Total	4.6439	0.7335	238

There is a statistically significant difference in the linear combination of the nine motivational values between the Buddhist group and other religion groups: F (9, 228) = 2.0350; p = 0.0365; Wilks' Lambda = 0.9256; partial eta squared = 0.0744. Therefore, 7.44% of the variance in the overall motivational values can be explained by religion differences.

Table 6.21 Univariate test of between subject effects of religion and motivational values

Dependent variable	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared
Safeguard public interest	0.1497	1	0.1497	0.3363	0.5625	0.0014
Protect organisational interest	0.0000	1	0.0000	0.0001	0.9917	0.0000
Compliance with rules & conventions	0.1035	1	0.1035	0.2522	0.6160	0.0011
Uniformity, conservatism, prudence & integrity	0.0274	1	0.0274	0.0605	0.8059	0.0003
Preserving status of profession	1.6722	1	1.6722	2.2926	0.1313	0.0096
Professional competence	0.3654	1	0.3654	0.4675	0.4948	0.0020
Hedonism	6.2588	1	6.2588	5.3655	*0.0214	0.0222
Risk taker	2.3499	1	2.3499	2.1728	0.1418	0.0091
Independent professional judgment	0.2355	1	0.2355	0.4367	0.5094	0.0018

* Sig. $p < 0.05$

When the results for the dependent variables are considered separately, as shown in Table 6.21, none of the value types reached statistical significance ($p < 0.05$) except for hedonism: $p = 0.0214$. However, because the assumption of equality of variance for this variable is violated, applying a more conservative alpha level of 0.01 would result in hedonism not having achieved statistical significance. Therefore, although the difference in the overall motivational values between respondents of different religions is statistically significant, the difference could not be clearly attributable to any specific value type.

6.4.4.4. Language influence

As reported in Section 6.3.5, all the respondents speak English fluently. More than two thirds of the respondents also speak Bahasa Malaysia fluently. Most of these respondents would have undergone a similar national school system where the

medium of instruction is Bahasa Malaysia. However, respondents who speak Mandarin fluently would most likely be educated in the vernacular school system where Mandarin is the medium of instruction. Since a person's cultural socialisation process is strongest during the period of early education, it was decided that the comparison of language group would be between Mandarin and non-Mandarin speakers.

Table 6.22 Descriptive analysis of language and motivational values

Motivational values	E5 Language	Mean	Std. deviation	N
Safeguard public interest	Non Mandarin	4.6584	0.6786	141
	Mandarin	4.5952	0.6550	98
	Total	4.6325	0.6683	239
Protect organisational interest	Non Mandarin	4.5408	0.6877	141
	Mandarin	4.5791	0.6316	98
	Total	4.5565	0.6642	239
Compliance with rules & conventions	Non Mandarin	4.1321	0.6711	141
	Mandarin	4.1352	0.5925	98
	Total	4.1334	0.6388	239
Uniformity, conservatism, prudence & integrity	Non Mandarin	4.7376	0.6962	141
	Mandarin	4.6837	0.6370	98
	Total	4.7155	0.6717	239
Preserving status of profession	Non Mandarin	3.3097	0.8229	141
	Mandarin	3.1803	0.8969	98
	Total	3.2566	0.8546	239
Professional competence	Non Mandarin	4.0585	0.8219	141
	Mandarin	3.9311	0.9597	98
	Total	4.0063	0.8813	239
Hedonism	Non Mandarin	3.8061	1.0602	141
	Mandarin	3.5612	1.1160	98
	Total	3.7057	1.0878	239
Risk taker	Non Mandarin	3.5556	1.0302	141
	Mandarin	3.3673	1.0514	98
	Total	3.4784	1.0409	239
Independent professional judgment	Non Mandarin	4.7021	0.7121	141
	Mandarin	4.5587	0.7554	98
	Total	4.6433	0.7320	239

The descriptive statistics in Table 6.22 show that the Mandarin speaking group has on the average rated higher on the motivational goals of protection of organisational

interest and compliance with rules and conventions compared to the non-Mandarin group. MANOVA was found to be a valid procedure to examine the significance of the mean differences between the Mandarin and non-Mandarin speaking respondents. However, the difference in the linear combination of the nine motivational values between the two language groups is not statistically significant: F (9, 229) = 2.0350; p = 0.6624; Wilks' Lambda = 0.9714; partial eta squared = 0.0286.

This result suggests that for a country like Malaysia, language is not a significant factor in distinguishing the different cultures. Although people are allowed to speak their respective mother tongue, there is a national language that is taught in school. In addition, business is generally conducted in the English language. Therefore, Doupnik and Richter's (2003) linguistic relativism perspective of culture may not be so evident in Malaysia. Cultural differences may then be manifested through ethnic or religious differences.

6.4.4.5. Age influence

The descriptive statistics in Table 6.23 show that the lower age group generally rated higher in the motivational goals of safeguarding public interest, professional competence, hedonism and taking risk. But the lower age group also showed a greater dispersion in value scores for all the value types except for protection of organisational interest and independent professional judgment.

Table 6.23 Descriptive analysis of age and motivational values

Motivational values	E1 Age	Mean	Std. deviation	N
Safeguard public interest	39 and below	4.6358	0.7046	108
	40 and above	4.6298	0.6396	131
	Total	4.6325	0.6683	239
Protect organisational interest	39 and below	4.5069	0.6534	108
	40 and above	4.5973	0.6727	131
	Total	4.5565	0.6642	239
Compliance with rules & conventions	39 and below	4.0787	0.6486	108
	40 and above	4.1784	0.6294	131
	Total	4.1334	0.6388	239
Uniformity, conservatism, prudence & integrity	39 and below	4.6056	0.6695	108
	40 and above	4.8061	0.6624	131
	Total	4.7155	0.6717	239
Preserving status of profession	39 and below	3.2407	0.9282	108
	40 and above	3.2697	0.7922	131
	Total	3.2566	0.8546	239
Professional competence	39 and below	4.0648	0.9129	108
	40 and above	3.9580	0.8549	131
	Total	4.0063	0.8813	239
Hedonism	39 and below	3.9877	1.0706	108
	40 and above	3.4733	1.0500	131
	Total	3.7057	1.0878	239
Risk taker	39 and below	3.5648	1.1195	108
	40 and above	3.4071	0.9699	131
	Total	3.4784	1.0409	239
Independent professional judgment	39 and below	4.6042	0.7316	108
	40 and above	4.6756	0.7336	131
	Total	4.6433	0.7320	239

MANOVA was confirmed as a valid procedure to examine the significance of the mean differences between the two age groups after preliminary assumption testing was conducted. There is a statistically significant difference in the linear combination of the nine motivational values between the two age groups: F (9, 229) = 3.6675; p = 0.0003; Wilks' Lambda = 0.8740; partial eta squared = 0.1260. Therefore, 12.60% of the variance in the overall motivational values can be explained by age differences.

Table 6.24 Univariate test of between subject effects of age and motivational values

Dependent variable	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared
Safeguard public interest	0.0022	1	0.0022	0.0048	0.9448	0.0000
Protect organisational interest	0.4836	1	0.4836	1.0967	0.2961	0.0046
Compliance with rules & conventions	0.5888	1	0.5888	1.4458	0.2304	0.0061
Uniformity, conservatism, prudence & integrity	2.3809	1	2.3809	5.3745	*0.0213	0.0222
Preserving status of profession	0.0497	1	0.0497	0.0678	0.7948	0.0003
Professional competence	0.6752	1	0.6752	0.8688	0.3522	0.0037
Hedonism	15.6622	1	15.6622	13.9560	**0.0002	0.0556
Risk taker	1.4720	1	1.4720	1.3607	0.2446	0.0057
Independent professional judgment	0.3018	1	0.3018	0.5623	0.4541	0.0024

** Sig. $p < 0.01$; * Sig. $p < 0.05$

When the results for the dependent variables are considered separately (see Table 6.24), the only differences to reach statistical significance ($p < 0.05$) are uniformity, conservatism, prudence and integrity: F (1, 237) = 5.3745, $p = 0.0213$, partial eta squared = 0.0222, and hedonism: F (1, 237) = 13.9560, $p = 0.0002$, partial eta squared = 0.0556. An inspection of the mean scores indicates that the higher age group reported higher scores for uniformity, conservatism, prudence and integrity (M = 4.6056, SD = 0.6695). The lower age group, however, reported a higher hedonism (M = 3.9877, SD = 1.0706) value.

The results suggest that younger accountants have a tendency to enjoy life more than the older ones. Based on the higher correlation between hedonism and taking risk, this tendency would result in the younger accountants' willingness to take on more risky and challenging situations. On the other hand, older accountants prefer a more secure environment and will try to avoid uncertain and risky situations.

6.4.5. Influence of sub-groups on motivational values

The Malaysian accounting sub-culture was identified in this study where the accountants share a set of motivational accounting values. The structure of the motivational values indicate that the average accountant in Malaysia tend to subscribe to the goal of self-transcendence rather than self-enhancement. There is a greater preference to serve the interest of the public or organisation than the interest of the self. Consequently, the average accountant is inclined to pursue goals that preserve the status quo and not create unnecessary risk and uncertainty. There is a tendency to conform to rules and regulation as well as traditional accounting conventions and principles. However, these goals are in conflict with the accountants' desire to pursue independent thoughts and actions through exercising their professional judgment.

Consistent with the extant literature, the results reveal that membership of different sub-groups within the accounting sub-culture have a significant influence on the accountants' motivational values. Statistically significant differences are found in the linear combination of the nine motivational values when compared with the different gender, ethnicity, religion and age groups. The percentage of the variance in the motivational values that are explained by the respective sub-groups is as follows: gender, 10.8%; ethnicity, 8.1%; religion, 7.4%; and age, 12.6%. Language groups, however, do not appear to have a significant influence on the motivational values. According to Cohen (1988), a variance of 10% would be considered as a moderate effect in social science research. Consequently, the influence of sub-group differences on the motivational values is considered to have practical significance.

The results, therefore, support hypothesis H_1 that accountants from different sub-groups within the accounting sub-culture in Malaysia possess different motivational values.

6.5. Interpretation of concepts

The next research objective examines whether the cognitive functioning view of culture (Belkaoui & Picur, 1991) would result in an association between the motivational values of accountants and their interpretation of concepts in external financial reporting. As discussed in Section 5.2, the hypotheses are that the accountants' motivational values are associated with their interpretation of concepts in external financial reporting (H_2) and membership of different sub-groups within the accounting sub-culture would result in different interpretations of these concepts (H_3).

In order to test these hypotheses, data from Section A were used to obtain the respondents' opinions regarding the attributes of assets, which was argued in Section 4.6 to be an important concept in external financial reporting. The frequency distribution of the respondents' ratings on a six-point scale is analysed to obtain an understanding of the respondents' interpretation and perception of assets. The non-parametric Pearson Chi-square test of independence is applied to examine whether membership of different sub-groups would result in different interpretations of assets. The results of these analyses are presented in the following sections.

6.5.1. Attributes of assets

Five key issues identified in Section 4.6 to be culturally relevant were used to test the hypothesis that the accountants' motivational values influence their interpretation of

the concept of assets (H_2). These key issues regarding the attributes of assets include:

1. the recognition of deferred expenditure or cost as assets,
2. the requirement that assets should represent something real,
3. the recognition of intangible assets,
4. the importance of legal ownership of assets, and
5. the occurrence of a past exchange transaction.

Table 6.25 Summary of correlations between accounting motivational values and attributes of assets

Key issues	Motivational values	Statements of attributes	Spearman's rank order correlation
1. Deferred expenditure or cost	Compliance with rules & conventions	A2 Represents a deferred expenditure.	*rho* = +0.16, $p < 0.05$
		A4 The cost or expenditure represents the asset.	not significant
2. Something real	Safeguarding public interest	A3 Represents an entitlement to future cash or goods and services.	not significant
		A11 Represents something that is real.	*rho* = +0.15, $p < 0.05$
		A16 Represents something that can be used to be exchanged for cash or other goods and services.	*rho* = +0.18, $p < 0.01$
3. Intangibles	Independent professional judgment Risk taker Uniformity, conservatism, prudence & integrity	A5 Must have a physical or tangible form.	not significant
		A7 Must be separable and has a separate disposal value.	not significant
4. Legal ownership	Uniformity, conservatism, prudence & integrity	A15 Must be legally owned and enforceable.	*rho* = +0.22, $p < 0.01$
5. Exchange transaction	Compliance with rules & conventions	A6 Must be an outcome of a past exchange transaction.	not significant
	Uniformity, conservatism, prudence & integrity	A13 Cost or expenditure must have been incurred.	not significant

The relevant statements in Section A of the survey questionnaire that addresses these key issues are presented in Table 6.25. The respondents' ratings on these

statements are tabulated in a frequency distribution presented in Appendix 7. The frequency distribution was analysed to obtain the respondents' opinions regarding these key issues. The non-parametric Spearman's rank order correlation was used to test the strength of the relationships between the respondents' opinion regarding the key attributes of assets and their related motivational value. The results of this analysis are presented in Table 6.25 and are discussed in the following paragraphs.

One of the issues discussed in Section 4.6.1.1 relating to the concept of assets is whether assets should preclude the recognition of expenditure or cost as an economic resource. Chambers (1980), Schuetze (1993) and Tollington (1998) have argued against recognising expenditures or costs as assets as it bears little relationship to the economic benefits that can be generated. Proponents of the recognition of deferred expenditure or costs as assets have often supported their arguments using the generally accepted principles of matching and income smoothing.

It is interesting to note that 57.79% (23.77 + 29.51 + 4.51) of the respondents support the inclusion of deferred expenditure (A2). In addition, 72.95% (24.59 + 38.93 + 9.43) agree that the cost or expenditure represents the asset (A4). Such a result is, therefore, argued to reflect the deeply ingrained concept of matching revenues with expenditures that is inherent in the thinking of accountants. This would be consistent with the findings in Section 6.4.2 that the accountants are generally motivated by the goal of compliance with rules and generally accepted conventions in accounting. The result of the Spearman's rank order correlation, presented in Table 6.25, revealed that the motivational goal of compliance with rules and conventions has a significant positive correlation (rho = +0.16, n = 241, $p < 0.05$) with the definition of assets representing deferred expenditure (A2). No significant correlation was, however,

found in relation to the statement that the cost or expenditure represents the asset (A4).

It was also discussed in Section 4.6.1.1 that assets should be defined in terms of something real, for example, 'cash, contractual claims to cash or services, and items that can be sold separately for cash' (Schuetze, 1993, p.69). It was argued that such a concept of assets would be motivated by the need to protect the interest of the general investing community by providing a simpler and clearer definition. A more abstract definition would allow the accountants more freedom to exercise their own independent professional judgment.

The respondents concur with Schuetze (1993) as 75.81% (16.80 + 41.39 + 17.62) agree that assets should represent something real (A11). In addition, 92.22% (11.07 + 58.20 + 22.95) believe that assets should represent a claim to cash or goods and services (A3) while 93.45% (12.30 + 61.89 + 19.26) feel that assets should at least be exchangeable for cash or goods and services (A16). These results are consistent with the findings in Section 6.4.2 that accountants are generally motivated by the need to safeguard public interest. The Spearman's rank order correlation shows a significant relationship (*rho* = +0.15, n = 240, $p < 0.05$) between the motivational value of safeguarding public interest and the definition of assets as something real (A11). Safeguarding public interest is also found to be significantly correlated (*rho* = +0.18, n = 241, $p < 0.01$) with the need for assets to be exchangeable for cash or goods and services but no statistically significant correlation is identified with the definition of assets as a claim to cash or goods and services.

The ability of the definition of assets to include unidentifiable intangibles is another factor discussed in Section 4.6.1.1. With the increasing use of intellectual capital in the new business environment, the recognition of intangible assets is growing in

importance. The recognition of intangible assets, however, necessitates the exclusion of physical form as an attribute of assets. The inclusion of unidentifiable intangibles such as goodwill further requires the exclusion of separability in defining assets. Acceptance of these attributes of assets in the new business environment would entail accountants to be motivated by the goal of openness to change. This higher order motivational goal includes the values of independent professional judgment and the propensity to take risk.

The frequency distribution in Appendix 7 shows that the respondents agree that assets need not have a physical or tangible form with 54.11% (11.07 + 30.74 + 12.30) of the respondents disagreeing that physical or tangible form is an essential attribute of assets (A5). The results are consistent with the findings in Section 6.4.2 that the accountants, in general, do believe that it is important to exercise independent professional judgment although they may not be willing to take on unnecessary risks. The Spearman's rank order correlation, however, does not show any significant relationships between the two attributes of separability and physical form with the motivational values of independent professional judgment and taking risk.

Nevertheless, 74.99% (16.39 + 43.33 + 15.16) of the respondents agree that assets must be separable and have a separate disposal value (A7). This would indicate the exclusion of unidentifiable intangibles such as goodwill. The acceptance of intangible assets but the requirement for separability shows the conflict between the values of openness to change with conservation discussed in Section 6.4.3. The respondents' motivational value of uniformity, conservatism, prudence and integrity would influence the need to ensure assets can be separately identified and sold. The Spearman's rank order correlation, however, does not show any significant relationships between the attribute of separability with the conservation values.

It was discussed in Section 4.6.1.2 that it is not necessary to have legal ownership of an asset. As long as there is a right or entitlement to the use of an asset, the right of ownership is not necessary (IASB Framework, 1989). It is therefore interesting to note that 88.94% (8.20 + 45.08 + 35.66) of the respondents agree that there must be legal and enforceable ownership of an asset (A15). The explanation for such a strict requirement would be that the accountants place a lot of importance on the values of conservatism, prudence and certainty. The Spearman's rank correlation, shown in Table 6.25, between the motivational value of uniformity, conservatism, prudence and integrity with the attribute of legal ownership produced a significant positive relationship ($rho = +0.22$, $n = 243$, $p < 0.01$).

The traditional view of assets is that it should be as a result of a past exchange transaction. It was discussed in Section 4.6.1.2 that such a view does not reflect the new business environment where internally generated intangibles are growing in importance. Internally generated intangibles may not be as a result of an exchange transaction. In addition, living assets such as biological assets may result from the natural growth that would not involve an exchange transaction. Therefore, proponents of the recognition of assets based on the existence of a past exchange transaction would be influenced by tradition and conservative values.

The frequency distribution in Appendix 7 indicates that 71.72% (18.03 + 42.21 + 11.48) of the respondents are of the opinion that assets should result from a past exchange transaction (A6). In addition, 76.23% (24.59 + 41.39 + 10.25) agree that cost or expenditure should have been incurred (A13). These results are consistent with the accountants' motivational values of compliance with rules and conventions, and uniformity, conservatism, prudence and integrity, reported in Section 6.4.2. The Spearman's rank order correlation, however, did not reveal any significant

relationships between the tradition and conservatism values with the opinions that assets should be as a result of past exchange transactions.

In summary, most respondents believe that assets are represented by the expenditure or cost incurred. They feel it was important that assets represent something real, specifically cash or claims to cash or goods and services. Respondents' agree that assets would include intangibles but most feel that separability is also an important attribute. Legal ownership is also considered an essential attribute for assets. Finally, most respondents' agree that a past exchange transaction involving the incurrence of cost or expenditure is necessary for the recognition of assets.

The results indicate that there are relationships between the respondents' interpretation of the concept of assets and their motivational values. As summarised in Table 6.25, statistically significant correlations are found between the motivational value of compliance with rules and conventions with the interpretation of assets as deferred cost or expenditure. The motivational goal of safeguarding public interest is also found to be significantly correlated with the conception of assets as something real. Respondents' concept of assets as something that is legally owned is found to be significantly correlated with the value of uniformity, conservatism, prudence and integrity.

The Spearman's *rho* of 0.15 to 0.22 represents an effect size that is considered to be more than small but less than moderate (Cohen, 1988). According to Cohen, effects in social science research are often small because of the subtlety of the construct being examined. Consequently, the association between the motivational values and the respondents' interpretation of assets are considered to have sufficient practical significance.

The results, therefore, support hypothesis H_2 that the accountants' motivational values are associated with their interpretation of concept of assets in financial reporting

6.5.2. Consistency of interpretations between sub-groups

In order to test the hypothesis that membership of different sub-groups within the accounting sub-culture would result in different interpretations of the concept of assets (H_3), the non-parametric Pearson Chi-square test for independence was applied. Each of the statements of attributes identified in Section 6.5.1 to be influenced by the motivational values of the respondents was subjected to the Chi-square test of independence between the sub-groupings by gender, ethnicity, religion and age. These sub-groups were identified in Section 6.4 to have a statistical significant influence over the motivational values of the accountants.

The respondents' six-point rating scale for the statement of attributes was transformed into a four point scale. This was done because of the low frequency found in the extreme points of the scale comprising strongly disagree and strongly agree. The rating scales were reduced to four so as to ensure that there is an adequate expected count in each cell for the Chi-square test. The results of the overall Chi-square test on all of the relevant statement of attributes are presented in Appendix 8. The alpha level was set at 0.05. The following sections present a discussion of the particular attributes of assets that are found to be significantly different between the sub-groups.

6.5.2.1. Gender influence

In the comparison of the respondents' opinions of the attributes of assets by gender groups as reported in Appendix 8, significant differences were found for the following attributes:

A7 Must be separable and has a separate disposal value.

A11 Represents something that is real.

Table 6.26 Opinions of separability of assets by gender group

	A7 Must be separable and has a separate disposal value.			
	Disagree	**Disagree somewhat**	**Agree somewhat**	**Agree**
Male				
Count	25	23	21	102
Expected Count	21.11	21.11	28.15	100.63
% within Gender Group	14.62	13.45	12.28	59.65
Female				
Count	5	7	19	41
Expected Count	8.89	8.89	11.85	42.37
% within Gender Group	6.94	9.72	26.39	56.94
Total				
Count	30	30	40	143
Expected Count	30	30	40	143
% within Gender Group	12.35	12.35	16.46	58.85

Statement A7 relates to the issue of the recognition of intangible assets. As discussed in Section 6.4.1, the requirement of separability precludes the recognition of unidentifiable intangible assets such goodwill. An examination of Table 6.26 shows 71.93% (12.28 + 59.65) of the male respondents, as compared with 83.33% (26.39 + 56.94) of the female respondents, agree that assets should be separable and have a separate disposal value.

Table 6.27 Chi-square tests for opinions of separability of assets by gender groups

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.1776	3	0.0270
Likelihood Ratio	8.9910	3	0.0294
Linear-by-Linear Association	1.1681	1	0.2798
N of Valid Cases	243		

0 cells (.0%) have expected count less than 5. The minimum expected count is 8.89.

Table 6.27 indicates that there is a significant difference between the gender groups in respect of the opinion regarding the separability of assets. The asymptotic significance of 0.0270 is less than 0.05 and is, therefore, significant. The Cramer's V is found to be 0.194. Therefore, 3.8% of the variance in the respondents' ratings on statement A7 is as a result of gender differences.

Table 6.28 Opinions of assets representing something real by gender group

	A11 Represents something that is real.			
	Disagree	Disagree somewhat	Agree somewhat	Agree
Male				
Count	27	11	25	107
Expected Count	24.59	15.45	28.80	101.16
% within Gender Group	15.88	6.47	14.71	62.94
Female				
Count	8	11	16	37
Expected Count	10.41	6.55	12.20	42.84
% within Gender Group	11.11	15.28	22.22	51.39
Total				
Count	35	22	41	144
Expected Count	35	22	41	144
% within Gender Group	14.46	9.09	16.94	59.50

It was reported in Section 6.5.1 that the respondents' generally agree that assets should represent something real (A11) like cash or claims to cash. The frequency

distribution reported in Table 6.28 shows that 77.65%% (14.71 + 62.94) of the male respondents agree that assets should represent something real, but only 73.61% (22.22 + 51.39) of the female respondents agree with this opinion.

The results shown in Table 6.29 indicate that there is a significant difference between the gender groups with regards to defining assets as something real. The Chi-square test reveals an asymptotic significance of 0.0474 which is less than 0.05 and therefore statistically significant. Cramer's V is 0.191, indicating that 3.6% of the variance in the opinion that assets should represent something real is attributable to gender differences.

Table 6.29 Chi-square tests for opinions of assets representing something real by gender groups

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.9326	3	0.0474
Likelihood Ratio	7.5487	3	0.0563
Linear-by-Linear Association	0.4838	1	0.4867
N of Valid Cases	242		

0 cells (.0%) have expected count less than 5. The minimum expected count is 6.55.

In summary, statistically significant differences are found in the opinions of the respondents from different gender groups regarding the separability of assets and its definition in terms of something real. However, only a small percentage (3.6% & 3.8%) of the variance in these opinions is as a result of difference in gender group membership.

6.5.2.2. Ethnic influence

Significant difference is also found between ethnic Chinese and non-Chinese respondents on the requirement that assets must be an outcome of a past exchange transaction (A6). The frequency distribution reported in Table 6.30 shows that most of the non-Chinese respondents (30.77 + 56.41 = 87.18%) agree that a past exchange transaction is a pre-requisite for the existence of an asset as compared with only 69.31% (15.84 + 53.47) of the ethnic Chinese group.

Table 6.30 Opinions of past events of assets by ethnic group

	A6 Must be an outcome of a past exchange transaction.			
	Disagree	**Disagree somewhat**	**Agree somewhat**	**Agree**
Chinese				
Count	32	30	32	108
Expected Count	28.50	27.66	36.88	108.96
% within Ethnic Group	15.84	14.85	15.84	53.47
Non Chinese				
Count	2	3	12	22
Expected Count	5.50	5.34	7.12	21.04
% within Ethnic Group	5.13	7.69	30.77	56.41
Total				
Count	34	33	44	130
Expected Count	34	33	44	130
% within Ethnic Group	14.11	13.69	18.26	53.94

The Chi-square test shown in Table 6.31 indicate an asymptotic significance of 0.0476 which is less than 0.05 and, therefore, statistically significant. The Cramer's V, at 0.181, indicates that 3.3% of the variance in the respondents' opinions is as a result of differences in ethnic group membership.

Table 6.31 Chi-square tests for opinions of past events of assets by ethnic groups

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.9253	3	0.0476
Likelihood Ratio	8.2788	3	0.0406
Linear-by-Linear Association	2.6394	1	0.1042
N of Valid Cases	241		

0 cells (.0%) have expected count less than 5. The minimum expected count is 5.34.

Therefore, although ethnic group membership is found to influence the respondents' opinion that assets should result from a past exchange transaction, the size of the effect is very small.

6.5.2.3. Age influence

Membership of different age groups is also found to result in significant differences in the respondents' opinion on the following attributes of assets:

A2 Represents a deferred expenditure.

A11 Represents something that is real.

A16 Represents something that can be used to be exchanged for cash or other goods and services.

The frequency distribution presented in Table 6.32 shows that 65.18% (24.44 + 40.74) of the older group of respondents, as compared with only 48.63% (22.94 + 25.69) of the younger group, agree that assets should represent deferred costs or expenditures (A2).

Table 6.32 Opinions of deferred expenditure as assets by age groups

	A2 Represents a deferred expenditure.			
	Disagree	Disagree somewhat	Agree somewhat	Agree
30 and below				
Count	38	18	25	28
Expected Count	32.61	13.40	25.91	37.08
% within Age Group	34.86	16.51	22.94	25.69
40 and above				
Count	35	12	33	55
Expected Count	40.39	16.60	32.09	45.92
% within Age Group	25.93	8.89	24.44	40.74
Total				
Count	73	30	58	83
Expected Count	73	30	58	83
% within Age Group	29.92	12.30	23.77	34.02

Table 6.33 indicates that the difference in the opinion between the different age groups is statistically significant. The asymptotic significance of 0.0361 ($p < 0.05$) generated by the Chi-square test indicates that the association between the respondents' age group and their opinion of this statement is unlikely to have occurred as a result of sampling error. The Cramer's V is 0.187, indicating that 3.5% of the variance of the responses for this statement is due to the age group difference.

Table 6.33 Chi-square tests for opinions of deferred expenditure as assets by age groups

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.5363	3	0.0361
Likelihood Ratio	8.6077	3	0.0350
Linear-by-Linear Association	6.5207	1	0.0107
N of Valid Cases	244		

0 cells (.0%) have expected count less than 5. The minimum expected count is 13.40.

Statements A11 and A16 reflect the requirement that assets should represent something real like cash and claims to cash or goods and services. The results of the frequency distribution of the respondents' opinion presented in Tables 6.34 and 6.35 are conflicting. While a higher proportion (9.70 + 85.07 = 94.77%) of the older respondents agree that assets should be exchangeable for cash or goods and services, a lower proportion of them (9.70 + 65.67 = 75.37%) agree that assets should represent something real.

Table 6.34 Opinions of assets as something real by age groups

	A11 Represents something that is real.			
	Disagree	**Disagree somewhat**	**Agree somewhat**	**Agree**
30 and below				
Count	14	10	28	56
Expected Count	15.62	9.82	18.30	64.26
% within Age Group	12.96	9.26	25.93	51.85
40 and above				
Count	21	12	13	88
Expected Count	19.38	12.18	22.70	79.74
% within Age Group	15.67	8.96	9.70	65.67
Total				
Count	35	22	41	144
Expected Count	35	22	41	144
% within Age Group	14.46	9.09	16.94	59.50

Table 6.35 Opinions of exchangeability of assets by age groups

	A16 Represents something that can be used to be exchanged for cash or other goods and services.			
	Disagree	**Disagree somewhat**	**Agree somewhat**	**Agree**
30 and below				
Count	3	5	17	84
Expected Count	4.49	2.24	13.46	88.81
% within Age Group	2.75	4.59	15.60	77.06
40 and above				
Count	7	0	13	114
Expected Count	5.51	2.76	16.54	109.19
% within Age Group	5.22	0.00	9.70	85.07
Total				
Count	10	5	30	198
Expected Count	10	5	30	198
% within Age Group	4.12	2.06	12.35	81.48

Tables 6.36 and 6.37 show that there are significant differences in the opinions regarding these two statements between respondents from the different age groups. The Pearson Chi-square test reveals asymptotic significances of 0.0361 and 0.0267 for opinions regarding statement A11 and A16 respectively. These are less than the required alpha level of 0.05 and therefore statistically significant. The Cramer's V for the two statements is 0.218 and 0.195, respectively. This indicates that 4.8% of the variance in the respondents' rating for statement A11 and 3.8% of the variance in the respondents' rating for statement A16 is due to differences in age groups.

Table 6.36 Chi-square tests for opinions of assets as something real by age groups

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.5203	3	0.0092
Likelihood Ratio	11.5809	3	0.0090
Linear-by-Linear Association	0.3706	1	0.5427
N of Valid Cases	242		

0 cells (.0%) have expected count less than 5. The minimum expected count is 9.82.

Table 6.37 Chi-square tests for opinions of exchangeability of assets by age groups

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.2042	3	0.0267
Likelihood Ratio	11.0985	3	0.0112
Linear-by-Linear Association	0.7112	1	0.3991
N of Valid Cases	243		

3 cells (37.5%) have expected count less than 5. The minimum expected count is 2.24.

In summary, the results indicate some evidence to support the argument that membership of different age groups does exert influence on the respondents' opinions regarding the recognition of deferred cost or expenditure as assets and defining assets in terms of something real like cash or claims to cash. However, similar to the results from other sub-groups, the size of the influence (3.5% - 4.8%) is very small.

6.5.3. Influence of sub-groups on the interpretation of assets

The results from this section indicate that there are statistically significant differences in the respondents' interpretation of assets within the sub-groupings by gender, ethnicity and age. Female respondents are more likely to agree that separability is an

important attribute of assets while the male respondents are more likely to accept a definition of assets that reflect something real like cash or claims to cash or goods and services. The non-Chinese respondents are more likely to insist that assets should be as a result of a past exchange transaction compared to the ethnic Chinese respondents. The older respondents are more willing to accept deferred expenditure as an asset. No significant difference is found in the respondents from different religion groups as shown in the Chi-square test reported in Appendix 8.

The percentage of variance in the interpretation of assets that is explained by differences in sub-group membership ranged between 3.3% and 4.8%. This effect size is considered to be more than small (1%) but less than moderate (10%). It is, therefore, concluded that the influence of sub-group membership on the accountants' interpretation of the concept of assets has both statistical and practical significance.

The results, therefore, support hypothesis H_3 that accountants from different sub-groups within the accounting sub-culture in Malaysia have different interpretations of the concept of assets in financial reporting.

6.6. Decision usefulness judgment

The final research objective addresses the issue of whether culture influences the judgments and decisions of accountants (Belkaoui, 1995) and as a consequence, affects their accounting behaviour. As reported in Section 5.2, two hypotheses were developed to examine this issue. Hypothesis H_4 postulates that the accountants' motivational values are associated with their judgments in financial reporting, while hypothesis H_5 proposes that accountants from different sub-groups have different judgments in financial reporting.

Data from Sections B and C in the survey questionnaire were used to test the hypotheses. As explained in Section 5.5.2, the respondents' judgment process in financial reporting was examined within the context of their trade-off assessment of the relevance and reliability of the accounting treatment for biological assets prescribed in IAS 41. This accounting treatment was presented in the form of a vignette in the survey questionnaire. The respondents' were asked to provide their opinions of the requirement to measure biological assets at current market value in Section B. In Section C, the respondents' provided their opinions regarding the recognition of changes in the market value of these biological assets in the income statement. The respondents' ratings on a six-point scale for the 21 questions in Sections B and C represent their relevance versus reliability trade-off judgment.

The frequency distributions of the respondents' opinions in Sections B and C were analysed to obtain an understanding of their relevance versus reliability trade-off judgments. The non-parametric Spearman's rank order correlation was applied to test existence of relationships between the respondents' motivational values and their relevance and reliability judgments. The effect of the respondents' membership of the different sub-groups on their judgment process was examined using the Pearson's Chi-square test of independence. The results and findings of the analyses are presented in the following sections.

6.6.1. Component of decision-usefulness judgment

In order to examine the respondents' relevance versus reliability trade-off judgment, the frequency distributions of the respondents' ratings for Sections B and C, presented in Table 6.38 and 6.39, respectively, were analysed. Two distinct patterns can be observed from the respondents' ratings that illustrates their judgment process. The first pattern explains how the respondents' make their trade-off judgment

between the criteria of relevance versus reliability while the second relates to their differences of opinions regarding the valuation of biological assets at current market value as compared to recognising changes in the market values in the income statement.

The pattern of the ratings shown in Table 6.38 and 6.39 generally indicate that respondents are more likely to agree that the accounting treatment for biological assets provides relevant and useful information. However, they are more likely to disagree that the information is reliable. This pattern of responses is reflected by the relatively higher frequency of ratings occurring under the categories of 'disagree' and 'disagree somewhat' for statements in the survey that supports the reliability of the accounting treatment for biological assets. This is in contrast with the fewer responses found under the category of 'disagree' for the statements that support the relevance of the prescribed accounting treatment. In fact, there are more responses that strongly agree that the accounting treatment is relevant. This pattern of responses suggests that, although many respondents agree that current market valuation of biological assets would provide useful information, they are concerned with the reliability of the information.

Table 6.38 Overall descriptive statistics of relevance and reliability judgment for Section B

	Strongly disagree	Disagree	Disagree some-what	Agree some-what	Agree	Strongly agree	Missing	Median	Mode
	1	2	3	4	5	6			
Relevance:	%	%	%	%	%	%	%		
B1 The information is useful for investment decisions.	0.82	4.51	2.05	**15.98**	**55.33**	**20.90**	0.41	5	5
B3 The information provides something unique and different about the company.	1.23	6.97	9.84	**27.87**	**46.72**	6.15	1.23	5	5
B4 The information is related to investment decisions.	0.41	2.46	4.51	**19.67**	**57.79**	**14.34**	0.82	5	5
B5 The information is necessary to show a complete picture of the company.	0.82	7.79	8.61	**22.13**	**46.72**	**13.52**	0.41	5	5
B6 The information improves investors' ability to make an appropriate decision.	0.41	4.92	2.87	**16.39**	**57.79**	**17.21**	0.41	5	5
B16 The information adds to investors' knowledge about the company.	0.82	4.10	1.64	**22.13**	**57.79**	**13.11**	0.41	5	5
B17 The information is necessary to show an in-depth picture of the company.	0.41	6.97	8.61	**26.23**	**45.08**	**11.89**	0.82	5	5
B18 The information provides something new and timely about the company.	0.82	6.15	5.33	**28.69**	**47.95**	**10.25**	0.82	5	5
B21 The information has the capacity to influence investors' decision.	0.82	4.51	5.33	**23.36**	**54.10**	**11.07**	0.82	5	5
Reliability:									
B7 The information does not sway the decision to a predetermined outcome.	1.64	**16.80**	**19.67**	**29.10**	**28.28**	2.87	1.64	4	4
B8 The information is effective.	0.41	7.38	9.02	**35.66**	**40.57**	6.15	0.82	4	5
B9 The information accurately represents the facts.	2.05	9.43	**14.34**	**34.02**	**32.38**	6.97	0.82	4	4
B10 The information is easy to understand.	1.64	9.84	**19.26**	**29.10**	**33.20**	6.15	0.82	4	5
B11 The information is of quality.	1.23	**10.25**	**11.48**	**34.84**	**34.02**	6.97	1.23	4	4
B12 The information reflects economic reality.	0.82	5.33	5.74	**27.05**	**50.82**	9.43	0.82	5	5
B13 The information meets the need for a cautious approach.	1.23	8.20	**15.57**	**33.20**	**34.84**	5.33	1.64	4	5
B14 The information is not confusing.	1.64	9.43	**16.39**	**34.02**	**33.61**	3.69	1.23	4	4
B15 The information is credible.	1.64	**10.25**	**18.03**	**35.25**	**29.51**	4.51	0.82	4	4
B19 The information will help in evaluating trends and relative performance.	0.82	6.56	9.02	**23.36**	**50.00**	9.84	0.41	5	5
B20 The information is not ambiguous.	2.05	**10.66**	**20.08**	**34.43**	**27.46**	4.51	0.82	4	4
Cost vs. benefit:									
B2 The benefits derived from this information do not justify the cost to obtain it.	3.28	**18.85**	**22.95**	**26.64**	**23.36**	4.10	0.82	4	4

Table 6.39 Overall descriptive statistics of relevance and reliability judgment for Section C

	Strongly disagree	Disagree	Disagree some-what	Agree some-what	Agree	Strongly agree	Missing	Median	Mode
	1	2	3	4	5	6			
Relevance:	%	%	%	%	%	%	%		
C21 The information is useful for investment decisions.	1.23	5.33	5.33	**24.18**	**55.74**	7.79	0.41	5	5
C18 The information provides something unique and different about the company.	0.41	7.79	**12.30**	**29.92**	**44.26**	4.92	0.41	4	5
C19 The information is related to investment decisions.	0.82	3.69	4.10	**27.46**	**56.15**	7.79	0.00	5	5
C17 The information is necessary to show a complete picture of the company.	0.82	9.02	**14.75**	**27.87**	**42.21**	5.33	0.00	4	5
C16 The information improves investors' ability to make an appropriate decision.	0.82	6.97	**10.66**	**26.23**	**47.95**	6.56	0.82	5	5
C6 The information adds to investors' knowledge about the company.	0.82	4.51	7.38	**27.87**	**49.18**	9.84	0.41	5	5
C5 The information is necessary to show an in-depth picture of the company.	0.82	9.84	**12.70**	**27.46**	**42.62**	6.15	0.41	4	5
C4 The information provides something new and timely about the company.	0.41	8.20	4.51	**29.10**	**50.82**	6.15	0.82	5	5
C1 The information has the capacity to influence investors' decision.	0.82	4.92	5.74	**18.44**	**58.20**	**11.48**	0.41	5	5
Reliability:									
C15 The information does not sway the decision to a predetermined outcome.	2.05	**15.98**	**20.49**	**31.56**	**27.87**	1.64	0.41	4	4
C14 The information is effective.	0.82	**11.07**	**20.08**	**31.56**	**33.20**	2.87	0.41	4	5
C13 The information accurately represents the facts.	1.23	**13.93**	**18.03**	**28.69**	**30.74**	6.56	0.82	4	5
C12 The information is easy to understand.	2.05	**14.34**	**18.85**	**29.10**	**30.33**	4.92	0.41	4	5
C11 The information is of quality.	0.82	**12.30**	**14.34**	**31.15**	**35.25**	4.92	1.23	4	5
C10 The information reflects economic reality.	0.82	7.38	7.38	**34.43**	**41.80**	7.79	0.41	4	5
C9 The information meets the need for a cautious approach.	0.82	**12.70**	**13.93**	**29.92**	**36.89**	5.33	0.41	4	5
C8 The information is not confusing.	2.87	**12.30**	**24.18**	**31.97**	**23.36**	4.51	0.82	4	4
C7 The information is credible.	2.05	**10.66**	**21.72**	**33.20**	**27.46**	4.10	0.82	4	4
C3 The information will help in evaluating trends and relative performance.	1.23	9.43	**13.11**	**24.18**	**44.26**	6.97	0.82	5	5
C2 The information is not ambiguous.	3.69	**15.16**	**25.00**	**27.87**	**23.36**	4.10	0.82	4	4
Cost vs. benefit:									
C20 The benefits derived from this information do not justify the cost to obtain it.	1.23	**15.98**	**20.49**	**31.56**	**27.87**	1.64	0.41	4	4

The second pattern in the frequency distribution of the respondents' ratings relates to the separate issues regarding the accounting treatment of biological assets addressed in Sections B and C. Section B deals with the issue of the usefulness of measuring biological assets at current market value while Section C covers the issue of the appropriateness of recognising changes in market values as profit or loss in the income statement.

The frequency distributions presented in Table 6.38 and 6.39 clearly show that respondents are more likely to disagree that recognising changes in market value in the income statement provides relevant information. There are more responses under the category of 'disagree somewhat' for relevance in Section C than in Section B. In addition, there are less responses falling under the category of 'strongly agree' in Section C. The non-parametric Wilcoxon signed rank test of differences between the matched pairs of responses for the criteria of relevance reported in Appendix 9 indicates that there are statistically significant differences between the responses in Sections B and C. The respondents' ratings for relevance are generally higher in Section B compared with Section C.

There is also a clear pattern of differences in the respondents' ratings of reliability in Sections B and C. The Wilcoxon signed rank test of differences between the matched pairs of responses for the criteria of reliability reported in Appendix 10 indicates that there are statistically significant differences between the responses in Sections B and C. The respondents' ratings for reliability are generally lower in Section C compared with Section B. As shown in the frequency distribution in Table 6.39, there are more ratings for reliability under the category of 'disagree' in Section C.

The respondents' ratings on statements B2 and C20, concerning the cost benefit considerations of providing the prescribed information, are also found to be different. The Wilcoxon signed rank test of differences between B2 and C20 indicates that there are statistically significant differences between the responses. The responses for C20 are generally found to be higher than B2. The respondents' are more likely to think that the benefit of recognising changes in market values in the income statement does not justify the cost incurred in providing the information.

In summary, the respondents generally believe that biological assets should be measured at current market value as it would provide relevant and useful information for investment decisions. However, there is a concern about the reliability of the information given the subjectivity involved in the measurement process. The reliability concern is more acute when dealing with the issue of income recognition. Due to the subjectivity and volatility in the market value measurement, reporting changes in market values in the income statement is viewed as unreliable and risky. Many respondents do not believe that such an income recognition policy would provide relevant information. Finally, the respondents also do not believe that benefits derived from recognising changes in market values in the income statement justifies the cost incurred in producing the information.

6.6.2. Influence of accounting motivational values

The results in Section 6.4 showed that the motivational values of accountants in Malaysia generally serve collective rather than individual interests. The accountants are, on the average, motivated by the goals of safeguarding public interest and protection of organisational interest. They have a tendency to comply with rules and accounting conventions as well as subscribe to the values of conservatism, prudence, integrity and uniformity. Therefore, the accountants are likely to pursue

self-transcendent rather than self-enhancing values and they generally lean towards conservation values. But the accountants are conflicted by the need to be open to change by pursuing their own independent professional judgments. Relating the respondents' relevance versus reliability judgments with their motivational values reveals some interesting associations.

It was discovered in Section 6.6.1 that the respondents are generally concerned about the reliability of recognising changes in market values of biological assets in the income statement. The respondents' concern may be a manifestation of their high score on the values of safeguarding public interest and the protection of organisational interest. It is likely that the respondents are worried that capital markets are unduly affected by the volatility in the financial performance of companies as a result of reporting earnings that are pegged to changing market prices of biological assets. The respondents' apprehension regarding the reliability of the income recognition policy for biological assets is also a reflection of their high score on the values of conservatism, prudence, integrity and uniformity. The respondents are unwilling to accept the potential risk from the variability in earnings caused by changing prices of biological assets.

Despite the concerns of reliability, the respondents generally believe that current market valuations and the related income recognition policy do provide information that is useful for investment decisions. This appears to be a manifestation of the respondents' rather high score on the value of independent professional judgment. The willingness of the respondents to accept a different measurement basis from the traditional transaction-based-historical cost accounting and at the same time being concerned with the risk of potential volatility in earnings clearly reflects the apparent conflict between their conservation and openness to change values discovered in Section 6.4.

A non-parametric Spearman's rank order correlation was conducted between the nine accounting motivational values and the respondents' relevant and reliability ratings in Sections B and C. The results of this analysis, presented in Appendices 11 to 14, indicate that there are statistically significant correlations between the motivational values and the respondents' relevance and reliability judgment. The correlation coefficients ranged from 0.13 to 0.28. According to Cohen (1988), this represents an effect size that is larger than small but marginal less than moderate. As a result, the association between the motivational values and the respondents' relevance and reliability judgment has both statistical and practical significance.

The results, therefore, support hypothesis H_4 that the accountants' motivational values are associated with their relevance and reliability trade-off judgments in external financial reporting.

6.6.3. Differences in judgment between sub-groups

In order to test the hypothesis (H_5) that membership of different sub-groups within the accounting sub-culture would influence the respondents' relevance and reliability trade-off judgments, the non-parametric Pearson Chi-square test for independence was applied. Each of the 21 questions that were used to measure relevance and reliability judgments in Sections B and C was subjected to the Chi-square test of independence between the sub-groupings by gender, ethnicity, religion and age. These four sub-groups are found to have significant differences in the accounting motivational value structure in Section 6.4.4.

The original six-point rating scale was transformed into a five-point scale. This was done because of the low frequency found in the ratings of the category of 'strongly

disagree'. As a result the 'strongly disagree' category was combined with 'disagree'. The response scales were reduced to five so as to ensure that there is an adequate expected count in each cell for the Chi-square test. The results showing the asymptotic significance level obtained for each of the 21 statements for Sections B and C was presented in Appendices 15 and 16. The alpha level of significance was set at 0.05. The particular aspects of the respondents' relevance and reliability judgments that were found to be significantly different between the sub-groups are discussed in the following sections.

6.6.3.1. Gender influence

The tabulation of the asymptotic significance levels from the Chi-square test of independence presented in Appendices 15 and 16 indicates that there are significant differences in the respondents' ratings between the different gender groups for the following statements:

B19 The information will help in evaluating trends and relative performance.

B20 The information is not ambiguous.

These statements relate to the evaluation of the reliability of the measurement of biological assets at current market value in Section B. No significant differences between the gender groups were found in the other statements.

Statement B19 measures whether respondents believe that current market values allow appropriate comparisons for the purpose of evaluating trends and performance. An examination of Table 6.40 shows that a higher proportion of the male respondents, at 21.17% (9.41 + 11.76), disagree that measuring biological assets at

current market value will help in evaluating trends and relative performance as compared to only 5.48% (2.74 + 2.74) of the female respondents.

Table 6.40 Judgment of reliability by gender groups for Section B

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
B19 The information will help in evaluating trends and relative performance.					
Male					
Count	16	20	32	84	18
Expected Count	12.59	15.39	39.88	85.35	16.79
% within Gender Group	9.41	11.76	18.82	49.41	10.59
Female					
Count	2	2	25	38	6
Expected Count	5.41	6.61	17.12	36.65	7.21
% within Gender Group	2.74	2.74	34.25	52.05	8.22
Total					
Count	18	22	57	122	24
Expected Count	18	22	57	122	24
% within Gender Group	7.41	9.05	23.46	50.21	9.88
B20 The information is not ambiguous.					
Male					
Count	26	32	50	52	9
Expected Count	21.65	34.22	58.66	46.79	7.68
% within Gender Group	15.38	18.93	29.59	30.77	5.33
Female					
Count	5	17	34	15	2
Expected Count	9.35	14.78	25.34	20.21	3.32
% within Gender Group	6.85	23.29	46.58	20.55	2.74
Total					
Count	31	49	84	67	11
Expected Count	31	49	84	67	11
% within Gender Group	12.81	20.25	34.71	27.69	4.55

The other statement, B20, measures whether respondents believe that current market values clearly reflect the value of the business and is not ambiguous. The cross-tabulation in Table 6.40 shows that the 69.87% (46.58 + 20.55 + 2.74) female respondents agree that measuring biological assets at current market value would provided clear information. This is compared to only 65.69% (29.59 + 30.77 +5.33) of male respondents agreeing to the statement.

Table 6.41 Chi-square tests for judgment of reliability by gender groups for Section B

	Value	df	Asymp. sig. (2-sided)
B19 The information will help in evaluating trends and relative performance.			
Pearson Chi-Square	13.2038	4	0.0103
Likelihood Ratio	14.5910	4	0.0056
Linear-by-Linear Association	1.9510	1	0.1625
N of Valid Cases	243		

0 cells (.0%) have expected count less than 5. The minimum expected count is 5.41.

B20 The information is not ambiguous.			
Pearson Chi-Square	10.2892	4	0.0358
Likelihood Ratio	10.6077	4	0.0313
Linear-by-Linear Association	0.0312	1	0.8599
N of Valid Cases	242		

1 cell (10.0%) have expected count less than 5. The minimum expected count is 3.32.

The results of the Chi-square test shown in Table 6.41 indicate that there are statistically significant differences in the opinions between the gender groups for both statements B19 and B20. The asymptotic significances at 0.0103 and 0.0358, respectively, are less than the alpha level of 0.05 and, therefore, unlikely to have occurred due to sampling error. Cramer's V for both statements are at 0.233. Therefore, the gender differences could explain 5.4% of the variance in the respondents' ratings for both these statements.

In summary, statistically significant differences are found in the judgments of the respondents of different genders concerning the reliability of the information provided by the measurement of biological assets at current market value. However, only 5.4% of the variance in the reliability judgments are attributable to differences in respondents' gender group membership.

6.6.3.2. Ethnic influence

In examining the influence of respondents' ethnic group membership on their relevance and reliability judgments regarding the accounting treatment for biological assets, the following statements from Sections B and C are found to be significant as reported in Appendices 15 and 16:

B3 The information provides something unique and different about the company.

C5 The information is necessary to show an in-depth picture of the company.

C13 The information accurately represents the facts.

C20 The benefits derived from this information exceed the cost to obtain it.

Statement B3 assesses the relevance of the information provided by measuring biological assets at current market value while statement C5 evaluates the relevance of recognising changes in market values in the income statement. Statement C13 examines the reliability of the income recognition policy. The cost benefit assessment of the accounting treatment is dealt with by statement C20.

The relevance of measuring biological assets at market value is examined by statement B3 in the context of whether the information provides something unique and different about the business. The cross-tabulation in Table 6.42 shows that a larger proportion of the non-Chinese (5.13 + 23.08 = 28.21%) do not think so, while only 16.42% (8.96 + 7.46) of the Chinese respondents disagree with the statement.

Table 6.42 Judgment of relevance by ethnic groups for Section B

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
B3 The information provides something unique and different about the company.					
Chinese					
Count	18	15	59	95	14
Expected Count	16.75	20.10	56.95	94.64	12.56
% within Ethnic Group	8.96	7.46	29.35	47.26	6.97
Non Chinese					
Count	2	9	9	18	1
Expected Count	3.25	3.90	11.05	18.36	2.44
% within Ethnic Group	5.13	23.08	23.08	46.15	2.56
Total					
Count	20	24	68	113	15
Expected Count	20	24	68	113	15
% within Ethnic Group	8.33	10.00	28.33	47.08	6.25

The differences of opinion for statement B3 are found to be statistically significant. The Chi-square test result presented in Table 6.43 shows an asymptotic significance of 0.0402, which is less than the alpha level of 0.05 and therefore unlikely to have occurred due to sampling error. The Cramer's V is 0.204. This indicates that 4.2% of the variance in the respondents' ratings on statement B3 is as a result of differences in ethnic group membership.

Table 6.43 Chi-square tests for judgment of relevance by ethnic groups for Section B

	Value	df	Asymp. sig. (2-sided)
B3 The information provides something unique and different about the company.			
Pearson Chi-Square	10.0122	4	0.0402
Likelihood Ratio	8.6608	4	0.0702
Linear-by-Linear Association	0.9934	1	0.3189
N of Valid Cases	240		

3 cells (30.0%) have expected count less than 5. The minimum expected count is 2.44.

Table 6.44 Judgment of relevance by ethnic groups for Section C

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
C5 The information is necessary to show an in-depth picture of the company.					
Chinese					
Count	22	23	63	81	14
Expected Count	21.81	26.00	56.20	86.40	12.58
% within Ethnic Group	10.84	11.33	31.03	39.90	6.90
Non Chinese					
Count	4	8	4	22	1
Expected Count	4.19	5.00	10.80	16.60	2.42
% within Ethnic Group	10.26	20.51	10.26	56.41	2.56
Total					
Count	26	31	67	103	15
Expected Count	26	31	67	103	15
% within Ethnic Group	10.74	12.81	27.69	42.56	6.20

Statement C5 assesses the relevance of the income recognition policy from the perspective of the scope of the information provided. As shown in Table 6.44, 77.83% (31.03 + 39.90 + 6.90) of the Chinese respondents think that the information provides an in-depth view of the business but only 69.23% (10.26 + 42.56 + 2.56) of the non-Chinese respondents agree with them.

Table 6.45 Chi-square tests for judgment of relevance by ethnic groups for Section C

	Value	df	Asymp. sig. (2-sided)
C5 The information is necessary to show an in-depth picture of the company.			
Pearson Chi-Square	10.3508	4	0.0349
Likelihood Ratio	11.4993	4	0.0215
Linear-by-Linear Association	0.0001	1	0.9926
N of Valid Cases	242		

3 cells (30.0%) have expected count less than 5. The minimum expected count is 2.42.

The Chi-square test result for statement C5 presented in Table 6.45 shows an asymptotic significance of 0.0349 ($p < 0.05$). As a result, the differences of opinion

between the ethnic groups in assessing the relevance of the income recognition policy are found to be statistically significant. But the value of the Cramer's V indicates that 4.3% of the variance in the respondents' ratings on statement C5 is as a result of differences in ethnic group membership.

Table 6.46 Judgment of reliability by ethnic groups for Section C

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
C13 The information accurately represents the facts.					
Chinese					
Count	26	43	59	59	15
Expected Count	31.01	36.88	57.83	62.86	13.41
% within Ethnic Group	12.87	21.29	29.21	29.21	7.43
Non Chinese					
Count	11	1	10	16	1
Expected Count	5.99	7.12	11.17	12.14	2.59
% within Ethnic Group	28.21	2.56	25.64	41.03	2.56
Total					
Count	37	44	69	75	16
Expected Count	37	44	69	75	16
% within Ethnic Group	15.35	18.26	28.63	31.12	6.64

The reliability of recognising changes in market values in the income statement is evaluated by statement C13. The statement assesses whether the income recognition policy would accurately represent the facts. The cross-tabulation in Table 6.46 shows that the proportion of the Chinese respondents that do not agree that the information would be factual is 34.16% (12.87 + 21.29). In contrast, only 30.77% (28.21 + 2.56) of the non-Chinese respondents disagree with statement C13.

The difference in opinion regarding the reliability of the income recognition policy between the ethnic Chinese and non-Chinese respondents is found to be statistically significant. The Pearson Chi-square test reported in Table 6.47 shows an asymptotic significance of 0.0071, which is less than the alpha level of 0.05 and therefore

unlikely to have occurred due to sampling error. The Cramer's V is found to be 0.242. Therefore, differences in the respondents' ethnic group membership contributed 5.9% of the variance in the respondents' ratings on statement C13.

Table 6.47 Chi-square tests for reliability by ethnic groups for Section C

	Value	df	Asymp. Sig. (2-sided)
C13 The information accurately represents the facts.			
Pearson Chi-Square	14.0587	4	0.0071
Likelihood Ratio	16.4576	4	0.0025
Linear-by-Linear Association	0.2303	1	0.6313
N of Valid Cases	241		

1 cell (10.0%) has expected count less than 5. The minimum expected count is 2.59.

Statement C20 considers whether the benefit to be derived from recognising changes in the market values of the biological assets justifies the cost to be incurred in providing the information. As discussed in Section 4.4.2, cost benefit considerations are a constraint on the relevance and reliability judgment process.

Table 6.48 Judgment of cost benefit by ethnic groups for Section C

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
C20 The benefits derived from this information exceed the cost to obtain it.					
Chinese					
Count	29	44	68	50	12
Expected Count	31.04	44.46	62.07	55.36	10.07
% within Ethnic Group	14.29	21.67	33.50	24.63	5.91
Non Chinese					
Count	8	9	6	16	0
Expected Count	5.96	8.54	11.93	10.64	1.93
% within Ethnic Group	20.51	23.08	15.38	41.03	0.00
Total					
Count	37	53	74	66	12
Expected Count	37	53	74	66	12
% within Ethnic Group	15.29	21.90	30.58	27.27	4.96

Table 6.48 presents the cross-tabulation of the responses for statement C20. A higher proportion of the Chinese respondents agrees that the benefits of the accounting treatment for income recognition justify the cost of obtaining the information. A total of 64.04% (33.50 + 24.63 + 5.91) of the Chinese respondents agree with statement C20 compared to only 56.41% (15.38 + 41.03 + 0.00) for the non-Chinese group.

The Chinese respondents' opinions regarding the cost versus benefit assessment of the income recognition policy are found to be significantly different from the non-Chinese respondents. An asymptotic significance of 0.0422 ($p < 0.05$) is obtained from the Chi-square test shown in Table 6.49. The differences in the respondents' ratings on statement C20 are, therefore, unlikely to have occurred due to sampling error. The Cramer's V is found to be 0.202. Therefore, 4.1% of the variance in the respondents' ratings on statement C20 is as a result of ethnic differences.

Table 6.49 Chi-square tests for judgment of cost benefit by ethnic groups for Section C

	Value	df	Asymp. Sig. (2-sided)
C20 The benefits derived from this information exceed the cost to obtain it.			
Pearson Chi-Square	9.8989	4	0.0422
Likelihood Ratio	12.0437	4	0.0170
Linear-by-Linear Association	0.2197	1	0.6393
N of Valid Cases	242		

1 cells (10.0%) have expected count less than 5. The minimum expected count is 1.93.

In summary, the Chinese accountants are more likely to agree that measuring biological assets at current market values would provide information that is unique and different about the business enterprise. They are also more inclined to agree that recognising changes in market values in the income statement would provide

relevant and useful information. But more of the Chinese accountants are concerned about the reliability of the income recognition policy. These differences of opinions are found to be statistically significant. However, differences in ethnic group membership could only explain a small proportion of the variance in opinions.

6.6.3.3. Religion influence

As shown in Appendices 15 and 16, differences in the respondents' religion group membership have resulted in significant differences in the following statements in Sections B and C.

B8 The information is effective.

B10 The information is easy to understand.

B12 The information reflects economic reality.

C1 The information has the capacity to influence investors' decision.

C5 The information is necessary to show an in-depth picture of the company.

C10 The information reflects economic reality.

Statements B8, B10 and B12 evaluate the reliability of measuring biological assets at current market values. No significant differences are found between the different religion groups in respect of the respondents' assessment of the relevance of the market value measurement of biological assets. Statements C1 and C5 address the issue of the relevance of recognising changes in market values in the income statement while statement C10 deals with the reliability of the income recognition policy.

Table 6.50 Judgment of reliability by religion groups for Section B

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
B8 The information is effective:					
Buddhism					
Count	6	16	40	52	11
Expected Count	9.85	11.41	45.12	50.83	7.78
% within Religion Group	4.80	12.80	32.00	41.60	8.80
Others					
Count	13	6	47	46	4
Expected Count	9.15	10.59	41.88	47.17	7.22
% within Religion Group	11.21	5.17	40.52	39.66	3.45
Total					
Count	19	22	87	98	15
Expected Count	19	22	87	98	15
% within Religion Group	7.88	9.13	36.10	40.66	6.22
B10 The information is easy to understand:					
Buddhism					
Count	10	34	34	38	9
Expected Count	14.52	23.86	36.83	42.01	7.78
% within Religion Group	8.00	27.20	27.20	30.40	7.20
Others					
Count	18	12	37	43	6
Expected Count	13.48	22.14	34.17	38.99	7.22
% within Religion Group	15.52	10.34	31.90	37.07	5.17
Total					
Count	28	46	71	81	15
Expected Count	28	46	71	81	15
% within Religion Group	11.62	19.09	29.46	33.61	6.22
B12 The information reflects economic reality:					
Buddhism					
Count	3	10	39	61	12
Expected Count	7.78	7.26	34.23	63.80	11.93
% within Religion Group	2.40	8.00	31.20	48.80	9.60
Others					
Count	12	4	27	62	11
Expected Count	7.22	6.74	31.77	59.20	11.07
% within Religion Group	10.34	3.45	23.28	53.45	9.48
Total					
Count	15	14	66	123	23
Expected Count	15	14	66	123	23
% within Religion Group	6.22	5.81	27.39	51.04	9.54

Statements B8 and B10 assess the clarity of the information provided. An examination of the cross-tabulation in Table 6.50 reveals that a relatively larger

proportion of the Buddhist group do not agree that valuing biological assets at current market values would provide information that would be easily understood and effective. The proportion of the Buddhist group that disagrees with statement B8 is 17.60% (4.80 + 12.80), compared to 16.38% (11.21 + 5.27) from the non-Buddhist group. In respect of statement B10, 35.20% (8.00 + 27.20) of the Buddhist group do not agree as compared to only 25.86% (15.52 + 10.34) from the non-Buddhist group.

Statement B12 evaluates the objectivity of measuring biological assets at current market values. The cross-tabulation in Table 6.50 shows that 13.79% (10.34 + 3.45) of the non-Buddhist group disagree that measuring the assets at market values would reflect economic reality. In contrast, only 10.40% (2.40 + 8.00) of the Buddhist group disagree with statement B12.

The differences in opinions regarding the reliability of measuring biological assets at current market values between the respondents' religion group membership are found to be statistically significant. The asymptotic significances from the Chi-square tests presented in Table 6.51 are 0.0266, 0.0090 and 0.0425 for statements B8, B10 and B12 respectively. At the alpha level of 0.05, the results are considered statistically significant. The values of the Cramer's V are 0.214, 0.237 and 0.203 respectively. Therefore, differences in the respondents' religion group membership explain 4.6% of the variance in statement B8, 5.6% of the variance in statement B10 and 4.1% of the variance in statement B12.

Table 6.51 Chi-square tests for judgment of reliability by religion groups for Section B

	Value	df	Asymp. Sig. (2-sided)
B8 The information is effective.			
Pearson Chi-Square	11.0009	4	0.0266
Likelihood Ratio	11.3495	4	0.0229
Linear-by-Linear Association	1.9394	1	0.1637
N of Valid Cases	241		

0 cells (.0%) have expected count less than 5. The minimum expected count is 7.22.

B10 The information is easy to understand.			
Pearson Chi-Square	13.5256	4	0.0090
Likelihood Ratio	13.9862	4	0.0073
Linear-by-Linear Association	0.0951	1	0.7578
N of Valid Cases	241		

0 cells (.0%) have expected count less than 5. The minimum expected count is 7.22.

B12 The information reflects economic reality.			
Pearson Chi-Square	9.8825	4	0.0425
Likelihood Ratio	10.3484	4	0.0350
Linear-by-Linear Association	0.3088	1	0.5784
N of Valid Cases	241		

0 cells (.0%) have expected count less than 5. The minimum expected count is 6.74.

The relevance of recognising changes in market values of the biological assets in the income statement is addressed by statements C1 and C5. Statement C1 evaluates whether such an accounting treatment would have the ability to influence the decision of the investor while statement C5 deals with whether the accounting treatment would provide in-depth information about the business. The cross-tabulations in Table 6.52 indicate that, while the majority of the respondents agree that the income recognition treatment for biological assets provides relevant information, the Buddhist group are more likely to agree with statements C1 and C5 compared with the non-Buddhist group. A total of 95.24% (23.02 + 59.52 + 12.70) of the Buddhist respondents compared with 81.03% (13.79 + 56.90 + 10.34) of the non-Buddhist respondents concur with statement C1. A total of 84.13% (31.75 + 45.24 +

7.14) of the Buddhist group agree with statement C5 compared to only 68.11% (23.28 + 39.66 + 5.17) from the non-Buddhist group.

Table 6.52 Judgment of relevance by religion groups for Section C

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
C1 The information has the capacity to influence investors' decision.					
Buddhism					
Count	3	3	29	75	16
Expected Count	7.29	7.29	23.43	73.41	14.58
% within Religion Group	2.38	2.38	23.02	59.52	12.70
Others					
Count	11	11	16	66	12
Expected Count	6.71	6.71	21.57	67.59	13.42
% within Religion Group	9.48	9.48	13.79	56.90	10.34
Total					
Count	14	14	45	141	28
Expected Count	14	14	45	141	28
% within Religion Group	5.79	5.79	18.60	58.26	11.57
C5 The information is necessary to show an in-depth picture of the company.					
Buddhism					
Count	11	9	40	57	9
Expected Count	13.54	16.14	34.88	53.63	7.81
% within Religion Group	8.73	7.14	31.75	45.24	7.14
Others					
Count	15	22	27	46	6
Expected Count	12.46	14.86	32.12	49.37	7.19
% within Religion Group	12.93	18.97	23.28	39.66	5.17
Total					
Count	26	31	67	103	15
Expected Count	26	31	67	103	15
% within Religion Group	10.74	12.81	27.69	42.56	6.20

The Pearson Chi-square test shows that the differences of opinions by the different religion groups regarding the relevance of the income recognition treatment of the biological assets are statistically significant. The asymptotic significances presented in Table 6.53 of 0.0085 and 0.041 for statements C1 and C5 respectively are less than the alpha level of 0.05 and therefore unlikely to have occurred due to sampling

error. The values of the Cramer's V are 0.238 and 0.203 respectively. Therefore, 5.7% of the variance in the respondents' ratings in statement C1 and 4.1% in statement C5 are as a result of religion group differences.

Table 6.53 Chi-square tests for judgment of relevance by religion groups for Section C

	Value	df	Asymp. sig. (2-sided)
C1 The information has the capacity to influence investors' decision.			
Pearson Chi-Square	13.6544	4	0.0085
Likelihood Ratio	14.2643	4	0.0065
Linear-by-Linear Association	5.3366	1	0.0209
N of Valid Cases	242		

0 cells (.0%) have expected count less than 5. The minimum expected count is 6.71.

C5 The information is necessary to show an in-depth picture of the company.			
Pearson Chi-Square	9.9679	4	0.0410
Likelihood Ratio	10.1478	4	0.0380
Linear-by-Linear Association	4.4777	1	0.0343
N of Valid Cases	242		

0 cells (.0%) have expected count less than 5. The minimum expected count is 7.19.

Finally, statement C10 evaluates the reliability of recognising changes in market values of the biological assets in the income statement. It assesses whether the information would effectively represent the economic substance of the event. The tabulation in Table 6.54 indicates that more of the respondents from the non-Buddhist group (13.79 + 7.76 = 21.55%) do not think so as compared to the Buddhist group (3.17 + 7.14 = 10.31%).

Table 6.54 Judgment of reliability by religion groups for Section C

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
C10 The information reflects economic reality.					
Buddhism					
Count	4	9	49	54	10
Expected Count	10.41	9.37	43.74	52.59	9.89
% within Religion Group	3.17	7.14	38.89	42.86	7.94
Others					
Count	16	9	35	47	9
Expected Count	9.59	8.63	40.26	48.41	9.11
% within Religion Group	13.79	7.76	30.17	40.52	7.76
Total					
Count	20	18	84	101	19
Expected Count	20	18	84	101	19
% within Religion Group	8.26	7.44	34.71	41.74	7.85

The asymptotic significance of 0.0463 from the Chi-square test presented in Table 6.55 is less than the alpha level of 0.05. Therefore, the differences of opinions regarding statement C10 are considered statistically significant. The Cramer's V is 0.200 indicating that 4% of the variance in the respondents' ratings of statement C10 is due to differences in their religion group membership.

Table 6.55 Chi-square tests for reliability by religion groups for Section C

	Value	df	Asymp. Sig. (2-sided)
C10 The information reflects economic reality.			
Pearson Chi-Square	9.6744	4	0.0463
Likelihood Ratio	10.1789	4	0.0375
Linear-by-Linear Association	3.5385	1	0.0600
N of Valid Cases	242		

0 cells (.0%) have expected count less than 5. The minimum expected count is 8.63.

In summary, the respondents from different religion groups are found to have no significant difference in their assessment of the relevance of measuring biological assets at current market value. But significant differences of opinions are noted in

their evaluation of the reliability of the market valuations. While the respondents from the Buddhist group are more likely to disagree that market valuations provide clear and effective information, the non-Buddhist group is more likely to think that market valuations do not reflect economic reality. The respondents from the Buddhist group are more likely to agree that recognising changes in market values as profits or losses in the income statement would provide relevant information. The Buddhist group is also inclined to agree that the accounting treatment for income recognition would provide reliable information. However, differences in the respondents' religion group membership could only explain 4% to 5.6% of the variances in their opinions.

6.6.3.4. Age influence

In examining the influence of the respondents' age group membership on their opinions regarding the accounting treatment of biological assets, the results of the Chi-square tests presented in Appendices 15 and 16 reveal statistically significant differences in the following statements in Sections B and C:

B14 The information is not confusing.

B20 The information is not ambiguous.

C2 The information is not ambiguous.

C7 The information is credible.

C9 The information meets the need for a cautious approach.

All these statements relate to the assessment of the reliability of the accounting treatment for biological assets. No statistical significance are found in the respondents' assessment of the relevance in Sections B and C. Statements B14 and B20 relates to the evaluation of the reliability of a market valuation approach for

biological assets while statements C2, C7 and C9 examines the reliability of recognising changes in the market values in the income statement.

Table 6.56 Judgment of reliability by age groups for Section B

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
B14 The information is not confusing:					
39 and below					
Count	11	18	49	27	4
Expected Count	12.21	18.09	37.54	37.09	4.07
% within Age Group	10.09	16.51	44.95	24.77	3.67
40 and above					
Count	16	22	34	55	5
Expected Count	14.79	21.91	45.46	44.91	4.93
% within Age Group	12.12	16.67	25.76	41.67	3.79
Total					
Count	27	40	83	82	9
Expected Count	27	40	83	82	9
% within Age Group	11.20	16.60	34.44	34.02	3.73
B20 The information is not ambiguous:					
39 and below					
Count	10	25	49	19	6
Expected Count	13.96	22.07	37.83	30.18	4.95
% within Age Group	9.17	22.94	44.95	17.43	5.50
40 and above					
Count	21	24	35	48	5
Expected Count	17.04	26.93	46.17	36.82	6.05
% within Age Group	15.79	18.05	26.32	36.09	3.76
Total					
Count	31	49	84	67	11
Expected Count	31	49	84	67	11
% within Age Group	12.81	20.25	34.71	27.69	4.55

The cross-tabulation in Table 6.56 shows that most of the respondents generally agree that the market valuation approach for biological assets would provide clear and understandable information. However, respondents from the older group are more likely to disagree with this assessment than the younger age group. The proportion of the older age group disagreeing with statements B14 and B20 are 28.79% (12.12 + 16.67) and 33.84% (15.79 + 18.05) respectively. This is compared

with 26.60% (10.09 + 16.51) and 32.11% (9.17 + 22.94) of the younger age group disagreeing with statements B14 and B20 respectively.

These differences in the respondents' opinions regarding the reliability of the market valuation of biological assets are found to be statistically significant. The results of the Chi-square tests shown in Table 6.57 indicate asymptotic significances of 0.0204 ($p < 0.05$) and 0.0022 ($p < 0.05$) for statements B14 and B20 respectively. The values of the Cramer's V are 0.220 and 0.263, respectively. Therefore, 4.8% of the variance in the respondents' ratings on statement B14 and 6.9% of the variance in statement B20 is as a result of age group differences.

Table 6.57 Chi-square tests for judgment of reliability by age groups for Section B

	Value	df	Asymp. Sig. (2-sided)
B14 The information is not confusing.			
Pearson Chi-Square	11.6197	4	0.0204
Likelihood Ratio	11.7268	4	0.0195
Linear-by-Linear Association	0.8997	1	0.3429
N of Valid Cases	241		

2 cells (20.0%) have expected count less than 5. The minimum expected count is 4.07.

B20 The information is not ambiguous.			
Pearson Chi-Square	16.6840	4	0.0022
Likelihood Ratio	17.0381	4	0.0019
Linear-by-Linear Association	0.2388	1	0.6251
N of Valid Cases	242		

1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.95.

The three statements in Section C examine the reliability of the income recognition treatment for biological assets. Statement C2 examines whether the income recognition policy provides information that is understandable while the issue of whether the information is credible and dependable is covered in statement C7. Statement C9 evaluates whether the income recognition policy satisfies the principle of prudence.

The cross-tabulation in Table 6.58 appears to contradict the results in Section B. More of the respondents from the older age group agree that recognising changes in the market value of biological assets would provide more reliable information as compared to the younger age group. The proportion of the older age group concurring with statement C2 regarding the clarity of the information is 58.65% (24.81 + 30.83 + 3.01) compared to 52.29% (32.11 + 14.68 + 5.50) of the younger age group.

In the assessment of the reliability of the income recognition policy, the respondents from the older group are more likely to agree that the information is credible. This is reflected by 71.43% (36.09 + 32.33 + 3.01) of the respondents from the older group agreeing with the statement C7. In contrast, only 57.80% (30.28 + 22.02 + 5.50) of the respondents from the younger age group agree that recognising market value changes in the income statement would provide credible information.

With regards to statement C9, more of the respondents from the older age group agree that the recognition of changes in market values in the income statement meets the principle of prudence. The proportion of the older age group agreeing with statement C9 is 76.12% (28.36 + 42.54 + 5.22) as compared to only 67.89% (32.11 + 30.28 + 5.50) from the younger age group.

Table 6.58 Judgment of reliability by age groups for Section C

	Disagree	Disagree somewhat	Agree somewhat	Agree	Strongly agree
C2 The information is not ambiguous:					
39 and below					
Count	14	38	35	16	6
Expected Count	20.72	27.48	30.63	25.67	4.50
% within Age Group	12.84	34.86	32.11	14.68	5.50
40 and above					
Count	32	23	33	41	4
Expected Count	25.28	33.52	37.37	31.33	5.50
% Age Group	24.06	17.29	24.81	30.83	3.01
Total					
Count	46	61	68	57	10
Expected Count	46	61	68	57	10
% within Age Group	19.01	25.21	28.10	23.55	4.13
C7 The information is credible:					
39 and below					
Count	12	34	33	24	6
Expected Count	13.96	23.87	36.48	30.18	4.50
% within Age Group	11.01	31.19	30.28	22.02	5.50
40 and above					
Count	19	19	48	43	4
Expected Count	17.04	29.13	44.52	36.82	5.50
% within Age Group	14.29	14.29	36.09	32.33	3.01
Total					
Count	31	53	81	67	10
Expected Count	31	53	81	67	10
% within Age Group	12.81	21.90	33.47	27.69	4.13
C9 The information meets the need for a cautious approach:					
39 and below					
Count	11	24	35	33	6
Expected Count	14.80	15.25	32.74	40.37	5.83
% within Age Group	10.09	22.02	32.11	30.28	5.50
40 and above					
Count	22	10	38	57	7
Expected Count	18.20	18.75	40.26	49.63	7.17
% within Age Group	16.42	7.46	28.36	42.54	5.22
Total					
Count	33	34	73	90	13
Expected Count	33	34	73	90	13
% within Age Group	13.58	13.99	30.04	37.04	5.35

The results of the Pearson Chi-square tests shown in Table 6.59 indicate that the differences in opinions regarding the reliability of the income recognition treatment for biological assets between the two age groups are statistically significant. The asymptotic significances for all the three statements are less than the alpha value of 0.05. The Cramer's V for statements C2, C7 and C9 are 0.287, 0.224 and 0.237 respectively. Therefore, the respondents' age group differences explain 8.2%, 5.0% and 5.6% of the variance in the respondents' ratings of statements C2, C7 and C9 respectively.

Table 6.59 Chi-square tests for judgment of reliability by age groups for Section C

	Value	df	Asymp. Sig. (2-sided)
C2 The information is not ambiguous.			
Pearson Chi-Square	19.9720	4	0.0005
Likelihood Ratio	20.3860	4	0.0004
Linear-by-Linear Association	0.1796	1	0.6717
N of Valid Cases	242		

1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.50.

C7 The information is credible.			
Pearson Chi-Square	12.1309	4	0.0164
Likelihood Ratio	12.1734	4	0.0161
Linear-by-Linear Association	1.2630	1	0.2611
N of Valid Cases	242		

1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.50.

C9 The information meets the need for a cautious approach.			
Pearson Chi-Square	13.6036	4	0.0087
Likelihood Ratio	13.7794	4	0.0080
Linear-by-Linear Association	0.8770	1	0.3490
N of Valid Cases	243		

0 cells (.0%) have expected count less than 5. The minimum expected count is 5.83.

In summary, the opinions of the respondents from the older age group regarding the reliability of the information provided by the accounting treatment of biological assets

are found to be statistically different from the younger age group. The older age group is more likely to disagree that the market valuation approach provides reliable information but they are more likely to agree that the income recognition policy is reliable. However, differences in age group membership explain 4.8% to 8.2% of the variance in these opinions.

6.6.4. Influence of sub-groups on judgment

The results from Section 6.6.3 show that the respondents' membership of different sub-groups within the accounting sub-culture in Malaysia does have an influence on their judgment in financial reporting. Significant differences in the accountants' relevance and reliability judgments are found within the sub-groups of gender, ethnicity, religion and age. The male accountants are found to be more prudent in the assessment of the reliability of the market valuation approach to accounting for biological assets. Although the ethnic Chinese accountants are more likely to support the market valuation approach, they are also more concerned with the reliability of recognising changes in market values in the income statement. The Buddhist accountants are found to be more willing to accept that the market valuation approach provides relevant and reliable information. The opinions of the different in age groups are, however, mixed.

Similar to the findings in Section 6.5.3 concerning the interpretation of the concept of assets, the effect size of the influence of sub-group membership ranged from small to moderate (Cohen, 1988). Differences in sub-group membership are found to explain 4% to 8.2% of the variance in the accountants' judgment. Therefore, the accountants' sub-group membership has both statistical and practical significant influence on their judgment in financial reporting.

The results, therefore, support the hypothesis that accountants from different sub-groups within the accounting sub-culture in Malaysia have different relevance and reliability trade-off judgments in financial reporting (H_5).

6.7. Summary of findings

The survey research conducted in this study was to examine the structure of the accounting sub-culture by applying the Schwartz (1992) universal structure of human values in the domain of accounting. The findings regarding the structure of the motivational values of accountants in Malaysia are summarised as follows:

a) The accountants are inclined to serve collective rather than individual interests.
b) The accountants are motivated by self-transcendent values such as safeguarding public interest and the protection of organisational interest.
c) The accountants are inclined to pursue conservation values of compliance with rules and conventions, uniformity, conservatism, prudence and integrity.
d) The accountants are also motivated by the value of openness to change through pursuing independent professional judgment.

The statistically significant correlations among the nine accounting motivational values support Schwartz's (1992) theory of the psychological conflicts and compatibilities between these values. This provided evidence of the validity of the motivational values in explaining the goals of the accountants.

The examination of the influence of sub-group membership within the accounting sub-culture on the accountants' motivational values revealed the following findings:

a) There are statistically significant differences in the motivational values within the respective sub-groups comprising gender, ethnicity, religion and age.
b) The magnitude of the effect of sub-group differences on the accounting motivational values ranged from 7.4% to 12.6%.

The results show that differences in sub-group membership have both practical and statistical significant influence on the accounting motivational values. This shows that cultural diversity exists within an accounting sub-culture.

Investigating the influence of the accounting motivational values on the accountants' interpretations of concepts in financial reporting resulted in the following findings:

a) There are statistically significant correlations between the accountants' motivational values and their interpretations of the concept of assets.
b) The correlation coefficients between the accountants' motivational values and their interpretations of assets ranged from 0.15 to 0.22.
c) There are statistically significant differences in the accountants' interpretation of assets within the sub-groupings by gender, ethnicity and age.
d) The magnitude of the variance in the accountants' interpretation of assets explained by sub-group membership is from 3.3% to 4.8%.

The results support the hypothesis that the accounting sub-culture would influence the accountants' interpretation of the concept of assets in financial reporting. Cultural diversity within the accounting sub-culture also influences the interpretations of the

accountants, providing further support for the influence of the motivational values on the accountants' interpretation of the concept of assets in financial reporting.

The examination of the influence of the accounting motivational values on the accountants' judgment in financial reporting resulted in the following findings:

a) There are statistically significant correlations between the accountants' motivational values and their relevance versus reliability trade-off judgment.
b) The correlation coefficient between the accountants' motivational values and their judgments ranged from 0.13 to 0.28.
c) There are statistically significant differences in the accountants' relevance versus reliability trade-off judgments within the sub-groupings by gender, ethnicity, religion and age.
d) The accountants' sub-group membership explains 4% to 8.2% of the variance in their relevance versus reliability judgments.

Similarly, the results show that there are associations between the accountants' motivational values and their relevance and reliability trade-off judgment in financial reporting. Sub-groups within the accounting sub-culture in Malaysia would also influence the accountants' relevance and reliability trade-off judgment thus providing further support for the influence of the motivational values of accountants on their judgment in accounting.

The findings are argued to be generalisable to the accounting sub-culture in Malaysia given that non-response bias is unlikely to have a major effect and the demographics of the respondents are consistent with those of the target population.

CHAPTER 7: SUMMARY AND CONCLUSIONS

7.1. Introduction

The purpose of this study was to explore a different perspective of culture from the Hofstede-Gray approach in examining the cultural relativism of accounting within the context of external financial reporting. By adapting Schwartz's (1992) universal structure of human motivational values to the domain of accounting and observing relationships with the accountants' cognitive processes in financial reporting, a more comprehensive and rigorous set of accounting values was discovered. These accounting motivational values are illustrated in the radar chart presented in Figure 7.1 in this chapter.

The conception of the accounting motivational values would be able to contribute to the understanding of the influence of culture on accounting practice by providing a more comprehensive and theoretically valid representation of the complex and obscure construct that is culture. By incorporating the universal human values, the psychological processes that reflect the complex manner in which the human aspects of accounting interact with the technical aspects can be more effectively examined with the accounting motivational values.

The knowledge of the accounting motivational values would also have policy implications in the continuing global efforts to bring about international convergence in financial reporting and auditing practices. A greater understanding of how accounting and auditing practices are affected by cultural diversity would help identify areas in which convergence efforts should be intensified. In addition, the understanding of the motivational values of accountants from different cultural

environments would assist the efforts of the International Federation of Accountants (IFAC) in improving the education, training and professional development of accountants worldwide.

Three research objectives were developed in Chapter 1 in order to provide a means to study how the universal human values can be operationalised and applied within the context of financial reporting. From these research objectives, five hypotheses were formalised in Chapter 5 to enable the validity of the accounting motivational values to be empirically tested. The Malaysian multi-cultural financial reporting environment was argued to be suitable in examining the relative stability of the accounting motivational values to represent the accounting sub-culture in Malaysia. Issues relating to sample selection and questionnaire design and administration were also addressed in Chapter 5. The data were obtained through mailed survey questionnaires sent to members of a professional accounting association in Malaysia. The analysis of the data and discussions of the findings were presented in Chapter 6.

In Section 7.2 and 7.3 of this chapter, the findings from the hypotheses testing are summarised together with the conclusions from the research question and objectives. The implications of this study and the contribution to knowledge in general and to the accounting discipline are explained in Sections 7.5 and 7.4. The limitations of the present research project and further research opportunities are described in Sections 7.5 and 7.6, respectively.

7.2. Overview of research questions and hypotheses

In order to study how the universal human values can be adapted to the domain of accounting specifically in the context of external financial reporting, the main

research objective developed in Chapter 1 was to investigate whether the motivational values of accountants affect their interpretations and judgments in financial reporting.

Drawing from the main research question, several research objectives and corresponding hypotheses were identified. A summary of the research objectives and hypotheses are presented in Table 7.1

Table 7.1 Summary of research objectives and hypotheses

Research objectives	Hypotheses
1. Whether the membership of different sub-groups within the accounting sub-culture in Malaysia affect the motivational values of accountants.	H_1: Accountants from different sub-groups within the accounting sub-culture in Malaysia possess different motivational values.
2. Whether there is an association between the motivational values of accountants in Malaysia and their interpretation of concepts in external financial reporting.	H_2: The Malaysian accountants' motivational values are associated with their interpretation of concepts in external financial reporting.
	H_3: Accountants from different sub-groups within the accounting sub-culture in Malaysia have different interpretation of concepts in external financial reporting.
3. Whether there is an association between the motivational values of accountants in Malaysia and their judgment in external financial reporting.	H_4: The Malaysian accountants' motivational values are associated with their judgments in external financial reporting.
	H_5: Accountants from different sub-groups within the accounting sub-culture in Malaysia have different judgments in external financial reporting.

An outline of the findings and discussions of the conclusions from these research objectives and hypotheses are presented in the following sections.

7.3. Findings and conclusions

The findings from the five hypotheses are summarised in Table 7.2.

Table 7.2 Summary of findings from hypotheses testing

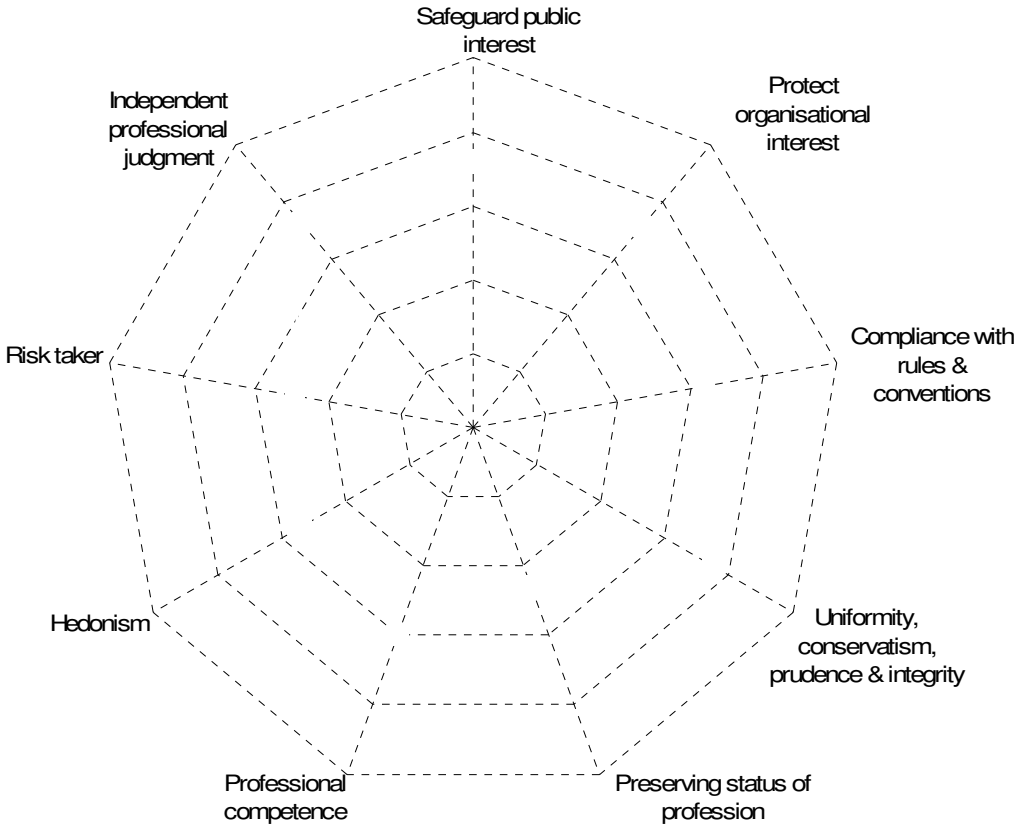
Hypotheses	Findings
H_1: Accountants from different sub-groups within the accounting sub-culture in Malaysia possess different motivational values.	There are significant differences in the motivational values of accountants from different sub-groups within the accounting sub-culture in Malaysia.
H_2: The Malaysian accountants' motivational values are associated with their interpretation of concepts in external financial reporting.	There are significant correlations between the motivational values of Malaysian accountants and their interpretation of the financial reporting concept of assets.
H_3: Accountants from different sub-groups within the accounting sub-culture in Malaysia have different interpretation of concepts in external financial reporting.	There are significant differences in the interpretation of the financial reporting concept of assets by accountants from different sub-groups within the accounting sub-culture in Malaysia.
H_4: The Malaysian accountants' motivational values are associated with their judgments in external financial reporting.	There are significant correlations between the motivational values of Malaysian accountants and their relevance and reliability trade-off judgment in financial reporting.
H_5: Accountants from different sub-groups within the accounting sub-culture in Malaysia have different judgments in external financial reporting.	There are significant differences in the relevance and reliability trade-off judgment in financial reporting by accountants from different sub-groups within the accounting sub-culture in Malaysia.

The findings from this study are argued to be generalisable to the population of the professional accountants in Malaysia based on the consistency of the demographic profile of the respondents with those of the target population. In addition, non-response bias was found in Chapter 5 as unlikely to affect the results of the study. The conclusions that are drawn from these findings are discussed in the following sections.

7.3.1. Accounting motivational values model

Adapting Schwartz's (1992) universal human values to the domain of accounting have resulted in the discovery of a set of accounting motivational values. The accounting motivational values comprise nine distinct individual-level value types that are presented in the form of a radar chart in Figure 7.1.

Figure 7.1 Structure of the accounting motivational values



The accounting motivational values represent the manifestation in the accounting environment of the desirable goals that guide the way accountants conduct their lives. The pursuit of each value has social and psychological implications to the accountants that may be compatible or may conflict with the pursuit of other values.

The array of the motivational values around the circular structure represents the dynamic relationships between these values.

The accountants' pursuit of the goals of safeguarding public interest and the protection of organisational interest are compatible as both represent the need to serve the interest of others rather than the self. The desire to demonstrate professional competence and upholding the status and prestige of the profession represent the accountants need to preserve their social esteem which serves the interest of the self. Serving the needs of others would, therefore, be in conflict with the need to enhance the accountants' own self-interest.

Representing the underlying compatible goals of self-restraint and maintaining stability and certainty are the accounting values of compliance with accounting rules and conventions and maintaining the principles of uniformity, conservatism, prudence and integrity. These conservation values are in conflict with the more open and unpredictable values of pursuing independent professional judgment and risk taking.

The findings of significant associations between the accountants' motivational values and their interpretations (H_2) and judgments (H_4) regarding the accounting treatment for assets provide empirical support for the validity of the model in representing the accountants' attitudes and beliefs in the domain of accounting. As argued by Baydoun and Willett (1995), such relationships reveal the nature of the influence of the motivational values on the technology of accounting and consequently explain the effect of culture on accounting practice.

In the case of the Malaysian accountants examined in this study, they were found to score higher on values of safeguarding public interest and protection of organisational interest, thus indicating their preference for goals that serve the

interest of others rather than preserving their own social standing. This tendency to pursue self-transcendent values was found to be significantly correlated with the preference for a simpler definition of assets. According to Schuetze (1993), a simpler and less complex definition of assets would benefit investors, perhaps by making it easier for them to comprehend the financial statements. A more complex and abstract definition of assets would only benefit the accountants themselves.

The Malaysian accountants' were also found to be concerned about the reliability of the market valuation approach to the accounting for biological assets. This judgment was found to have significant associations with the accountants' self-transcendent values. This is perhaps an indication of their belief that the subjectivity and volatility of a market valuation approach would have negative repercussions on the investing community. These relationships between the motivational values of the Malaysian accountants' and their interpretation and judgment in financial reporting show that the self-transcendent and self-enhancement values are a valid representation of their accounting behaviour.

The existence of psychological conflicts between opposing values in the accounting motivational value structure is reflected in the Malaysian accountants' high score on both conservation and openness to change values. The accountants were found to be motivated by the goals of pursuing independent professional judgment as well as complying with rules and conventions, and adhering to the principles of uniformity, conservatism, prudence and integrity. Significant associations were found between these values and the accountants' relevance and reliability judgments. The resultant conflict from pursuing these opposing values is clearly illustrated by the accountants' agreement that the market valuation approach for biological assets provides relevant information but at the same time expressing their concern with reliability problems arising from the subjectivity and volatility of market valuations.

The relationship between the conservation and openness to change values and the accountants' judgment behaviour do not only provide evidence of the validity of these values, it also reflects a particular characteristic of the motivational value structure. This characteristic is the ability of a person to hold opposing values simultaneously, although this would result in conflicting behaviours. This is, perhaps, a good illustration of the complexity of the construct of culture.

The accounting motivational values are, therefore, a comprehensive and valid representation of the accounting sub-culture hypothesised by Gray (1988). According to Gray, the accounting sub-culture exists as a component of and is influenced by the larger national culture. But it has been suggested that there is cultural diversity within a nation. This diversity can be due to differences in ethnicity (Tsui, 2001; Haniffa & Cooke, 2002), religion (Hamid *et al*., 1993), language (Belkaoui, 1980; Doupnik & Richter, 2003), gender (Hofstede, 2001) and age (Matsumoto & Juang, 2004). The multi-cultural environment of Malaysia provided an excellent opportunity to examine the effect of this cultural diversity on the accounting sub-culture.

The results from this study provided empirical support for the existence of cultural diversity within the accounting sub-culture. With the exception of language, all the other sub-groups were found to result in statistical and practical significant differences in the motivational value scores of the Malaysian accountants (H_1). Language differences were not found to have any significant association with the motivational values of the accountants because English is the 'lingua franca' of business in Malaysia. Therefore, the association between differences in sub-group membership and the observed differences in the accountants' motivational values supports Gray's (1988) hypothesis of an accounting sub-culture that is influenced by societal values. As a result, different sub-groups within the accounting sub-culture have different priorities in their pursuit of the accounting motivational values. This

would, therefore, lead to the expectation that different sub-groups within the accounting sub-culture would demonstrate different accounting behaviour based on the cognitive functioning perspective of culture (Belkaoui & Picur, 1991).

7.3.2. Influence of culture on interpretations of concepts

The results from the testing of hypothesis H_2 support the cognitive functioning perspective of culture where the accountants' motivational values are expected to influence their mental processes. The results indicate that abstract concepts like assets are subject to the connotative perceptions and interpretations of the accountants. These connotative perceptions and interpretations that are functions of the mental processes and cognitive abilities of the accountants were found to be influenced by their accounting values and beliefs.

Correlations were found between the Malaysian accountants' motivational values and their interpretation of the concept of assets in financial reporting. The perception of assets as deferred costs or expenditures was found to be associated with the accountants' need to comply with generally accepted accounting conventions such as the matching principle. The accountants' desire to safeguard the interest of the investing public was correlated with their preference for a simpler definition for assets. Finally, the accountants' general agreement that assets should be represented by something that can be legally owned was also found to be correlated with their propensity to adhere to the principles of uniformity, conservatism, prudence and integrity. Both statistical and practical significance were found in these relationships.

Studies by Bagranoff *et al*. (1994) and Belkaoui and Picur (1991) have suggested that cultural group differences would result in variations in the interpretation and perception of accounting concepts. The results from this study provide further empirical evidence of this cultural relativism theory of accounting. In testing hypothesis H_3, statistically significant differences were found between the differences in the accountants' sub-group membership by gender, ethnicity and age with their interpretation of the concept of assets. These three sub-groups were found to have contributed to the largest variance in the motivational values of the accountants. The results in this study, therefore, indicate that the accounting motivational values are an important intervening variable between the effect of sub-group differences and the accountants' interpretations and perceptions of the concept of asset in financial reporting.

7.3.3. Influence of culture on judgments

The influence of the accounting sub-culture on the accountants' judgment in financial reporting was tested in hypothesis H_4 by invoking a cognitive conception of the subjective decision-usefulness assessment of information (Borlund, 2003). The hypothesis was that the accountants' judgment decision in financial reporting would be affected by their mental processes in evaluating the trade-off between the relevance versus reliability of the information. As a corollary argument to the cognitive functioning perspective of culture, the accounting motivational values would also influence the accountants' judgment through its effect on the mental processes and cognitive abilities of the accountants.

The results from testing hypothesis H_4 have provided support for the influence of the accounting motivational values on the accountants' cognitive subjective decision-usefulness judgments in financial reporting. The accountants were found to support

the suggestion that a market valuation approach to the recognition of biological assets would provide relevant information. This judgment was argued to be consistent with the accountants' preference for the goal of pursuing independent professional judgment. Adopting a market valuation approach represents a departure from the traditional historical cost transaction-based accounting which is a manifestation of the accountants' desire for independent thoughts and actions.

At the same time, the accountants' higher score on self-transcendent and conservation values have influenced their concern for the reliability of the market valuation approach especially in relation to its effect on the volatility of reported income. The accountants' higher scores on the values of safeguarding public interest and protection of organisational interest are an expression of their concern for the effect of the subjectivity and volatility of the market valuation approach on the investing community. The preference for a more objective and stable measurement basis is a reflection of the accountants' higher score on the values of uniformity, conservatism, prudence and integrity. The accountants' relatively low score on the value of risk taking have made it difficult for them to accept the potential risk from the variability in earnings caused by changing prices of biological assets.

This apparent contradiction in the opinions of the accountants was argued to represent the psychological conflict arising from pursuing the opposing goals of conservation and openness to change. The relationships between the accountants' motivational values and their judgment in financial reporting were found to be statistically and practically significant (H_4). Therefore, the results from this study have shown that the accountants' motivational values have the capacity to explain the accountants' judgment in financial reporting.

In addition, since the motivational values of accountants were found to be influenced by sub-group differences, it is expected that accountants from different sub-groups within the accounting sub-culture would make different judgments. The results from testing hypothesis H_5 provide evidence that there are statistical and practical significant differences in the judgment of the accountants from the different sub-groups of gender, ethnicity, religion and age within the accounting sub-culture in Malaysia.

7.3.4. Conclusions

The validity of the nine accounting motivational values in explaining the behaviour of accountants has been proven in this study. The motivational values have been shown to manifest in the mental processes and cognitive abilities of the accountants in Malaysia. Significant relationships have been found linking the accounting motivational values with the accountants' interpretation and judgment in financial reporting, specifically in the context of the interpretation of the concept of assets and the relevance and reliability trade-off judgment. As a consequence, the accounting motivational values have been found to be a useful model to explain the interaction between the human factor with the physical and technical aspects of accounting.

The results from this study have also provided empirical evidence that there can still be diversity within the accounting sub-culture. The Malaysian accountants' membership of different sub-groups within the accounting sub-culture in Malaysia has exhibited variances in their motivational values. These differences in motivational values have affected their mental processes and cognitive abilities and have resulted in differences in the accountants' interpretation and judgment in financial reporting. It is, therefore, concluded that the study has provided further empirical evidence of the cultural relativism of accounting.

7.4. Contributions of the research

The main contribution of this study is the further understanding of the complex construct of culture and its effects on accounting behaviour. The accounting motivational values model identified in this study is argued to be a more theoretically comprehensive and refined representation of the accounting sub-culture compared to the Hofstede-Gray framework. The results have provided empirical evidence of the accounting motivational values' influence on accounting behaviour vis-à-vis the mental processes and cognitive abilities of the accountants. This has provided a conceptual link between the values and beliefs held by accountants and their accounting behaviour, thus reinforcing the validity of the accounting motivational values.

The approach of relying on the universal human values of Schwartz (1992) is argued to result in a more comprehensive conceptualisation of the accounting sub-culture. The universal human values are derived from the basic needs of human existence and, therefore, represent a more complete set of attitudes and beliefs. The Hofstede-Gray framework relies on Hofstede's (1980) national work-related values of a single organisation from which Gray (1988) hypothesised his four accounting value dimensions. Gray's accounting values are, therefore, too constrictive to explain adequately the depth, richness and complexity of the construct of culture. The nine accounting motivational values developed in this study are, therefore, a more useful and effective framework to explain accounting practice and behaviour in examining the cultural relativism of accounting.

Many cultural studies in accounting (Tsui, 2001; Haniffa & Cooke, 2002; Patel, 2003) have examined the influence of culture on the judgments and decisions of accountants. The focus of these studies was on the individual-level judgments and

decisions but has applied the Hofstede-Gray framework, which represents the dimensions of accounting values at the cultural or societal-level. The validity of such comparisons is, therefore, doubtful. The accounting motivational values represent individual-level constructs that would enable the valid examination of the influence of culture on judgments and decisions in accounting as argued by Doupnik and Tsakumis (2004).

The findings of this study have also contributed to the debate on whether nationality should be equated with culture. Cultural diversity within the Malaysian accounting sub-culture has been shown to result in differences in the accounting motivational values. These differences in the motivational values have been found to be associated with differences in the interpretations and judgments in financial reporting. Therefore, cross-cultural studies in accounting that compares cultures on the basis of nationality may overlook the importance of intra-country cultural variations.

The validity of the existing cultural frameworks such as the Hofstede-Gray framework in explaining cultural relativism in accounting has not been empirically proven (Doupnik & Tsakumis, 2004). It is believed that the accounting motivational values developed in this study would provide a more effective approach in understanding the influence of culture on accounting behaviour. The implications of this are presented in the following section.

7.5. Study implications

The results from this study have important implications to policymakers and regulatory bodies. The global communities' effort to bring about international convergence of accounting and auditing practices should not be only about the introduction of a single set of standards and regulations. Accounting practice

concerns the judgments and decisions of individuals. These judgments and decisions are influenced by values, attitudes and beliefs. In order to bring about true convergence, there is a need to understand how values, attitudes and beliefs affect judgments and decisions. The accounting motivational values would, therefore, represent an important contribution to the efforts of bringing about true convergence in accounting and auditing practices.

The understanding of the motivational values of accountants would also assist the efforts of improving the education, training and professional development of accountants worldwide. The knowledge of the accounting motivational value structures of particular groups of accountants would enable organisations such as the IFAC and other accounting institutions to formulate appropriate educational and professional development strategies. The implementation of ethics education, for example, may be facilitated by the understanding of the values, attitudes and beliefs of particular groups of accountants. Understanding the nature of the motivational values that may have created barriers to the acceptance of new concepts and approaches to accounting may assist in the formulation of appropriate education and training approaches.

7.6. Limitations

Adequate response rates were expected to be a problem in conducting a mail survey questionnaire research approach in this study. Appropriate questionnaire design and administration strategies were implemented, including questionnaire pre-testing procedures, to improve the mail survey response rate. Although the final response rate of 8.8% is considered low, it is contended that the results from this study would still be generalisable.

This is based on the findings that the demographic profile of the respondents matches the profile of the target population of accountants in Malaysia in terms of age, gender, ethnicity and religion. These demographic groups were used to represent the different cultural groups within the accounting sub-culture in Malaysia. In addition, the results of the non-response bias test indicate that the opinions of the non-respondents were unlikely to be substantially different.

The results from this study have provided empirical evidence of the existence of a set of unique accounting motivational values that can be used to explain accounting behaviour. However, the results were obtained within the context of accountants in Malaysia and its applicability and validity in other environments remains to be tested. In addition, the accounting behaviour examined in this study is limited to the accountants' interpretation of the concept of assets in financial reporting and their relevance and reliability trade-off judgment with regards to the measurement of biological assets. The applicability of the accounting motivational values in explaining other accounting behaviours would be the subject of further research.

7.7. Further research

The findings from this study indicate that there are opportunities for further research into the application and consistency of the accounting motivational values. The focus in this study was the examination of the accounting motivational values of one particular accounting sub-culture that is represented by the Malaysian accountants. Further research should be conducted to investigate whether the accounting motivational values structure identified in this study would differ systematically across accountants in different countries and societies, and whether such differences, if any, would result in systematic difference in financial reporting judgment. Differences have been found in the motivational values and their interpretation and judgment in

financial reporting of different sub-groups within the multi-cultural Malaysian accounting sub-culture. Consequently, it is envisaged that differences would also be found between societies. Such findings would, therefore, have considerable relevance to the continuing efforts towards the convergence of accounting and auditing practices world-wide.

The accounting motivational values model has been found to be useful in explaining accounting behaviour specifically within the context of external financial reporting. It is believed that the accounting motivational values would also be a compelling framework to examine the influence of culture on management information systems, accounting education, auditing and accounting ethics. Further studies should, therefore, examine the applicability of the motivational values to other areas of accounting behaviour.

Matsumoto and Juang (2004) argued that values are a dynamic and changing construct. Through the socialisation process of education and training, accountants are enculturated with the values, attitudes and beliefs of the accounting sub-culture. There is, therefore, an opportunity to explore the influence of accounting education, training and professional development activities on the accounting motivational values of accountants at different stages of their enculturation process. The results from such studies would have considerable applications in setting appropriate education and training strategies in accounting.

The focus in this study has been adapting Schwartz's (1992) universal individual-level human values in the domain of the accounting. The accounting motivational values are, therefore, individual-level values that are appropriately used in examining the judgments and decisions of individual accountants. Future research should examine the applicability of Schwartz's (1999) cultural-level dimensions to the

domain of accounting. Based on the universal human values, the cultural-level dimensions would be expected to be a useful framework to explore the effects of culture on the structure and functioning of institutions in accounting.

REFERENCES

Alexander, C.S. & Becker, H.J. 1978, 'The use of vignettes in survey research', *Public Opinion Quarterly*, vol. 42, no. 1, pp. 93-104.

AARF 1995, *Statement of accounting concepts SAC 4: Definition and recognition of the elements of financial statements*, Australian Accounting Research Foundation, Melbourne.

Bagranoff, N.A., Houghton, K.A. & Hronsky, J. 1994, 'The structure of meaning in accounting: A cross-cultural experiment', *Behavioral Research in Accounting*, vol. 6, Supplement, pp. 35-57.

Barry, C.L. 1994, 'User-defined relevance criteria: An exploratory study', *Journal of the American Society for Information Science*, vol. 45, no. 3, pp. 149-159.

Baydoun, N. & Willett, R. 1995, 'Cultural relevance of Western accounting systems in developing countries', *ABACUS*, vol. 31, no. 1, pp. 67-92.

Bebbington, J., Gray, R., Thomson, I. & Walters, D. 1994, 'Accountants' attitudes and environmentally-sensitive accounting', *Accounting and Business Research*, vol. 24, no. 94, pp. 109-120.

Belkaoui, A.R. 1980, "The interprofessional linguistic communication of accounting concepts: An experiment in sociolinguistics', *Journal of Accounting Research*, vol. 18, no. 2, pp. 362-374.

Belkaoui, A.R. 1995, *The cultural shaping of accounting*, Quorum Books, Westport.

Belkaoui, A.R. & Picur, R.D. 1991, 'Cultural determinism and the perception of accounting concepts', *The International Journal of Accounting*, vol. 26, pp. 118-130.

Booth, B. 2003, 'The conceptual framework as a coherent system for the development of accounting standards', *ABACUS*, vol. 39, no. 3, pp. 310-324.

Borlund, P. 2003, 'The concept of relevance in IR', *Journal of the American Society for Information Science and Technology*, vol. 54, no. 10, pp. 913-925.

Briggs, S.R. & Cheek, J.M. 1986, 'The role of factor analysis in the development and evaluation of personality scales', *Journal of Personality*, vol. 54, no. 1, pp. 106-148.

Chambers, R.J. 1966, *Accounting, evaluation and economic behaviour*, Prentice-Hall.

Chambers, R.J. 1980, *Price variation and inflation accounting*, McGraw-Hill, Sydney.

Chanchani, S. & MacGregor A. 1999, 'A synthesis of cultural studies in accounting', *Journal of Accounting Literature*, vol. 19, pp. 1-30.

Chanchani, S. & Willet, R. 2004, 'An empirical assessment of Gray's accounting value constructs', *The International Journal of Accounting*, vol. 39, pp. 125-154.

Chen, Z. & Xu, Y. 2005, 'User-oriented relevance judgment: A conceptual framework', *Conference Proceedings, 38th Hawaii International Conference on System Sciences*, Hawaii, USA, 2005. Retrieved December 24, 2005 from http://csdl2.computer.org/comp/proceedings/hicss/2005/2268/04/22680101b.pdf.

Chevalier, G. 1996, 'Should accounting practices be universal? Different needs for different creeds', in J. Blake & M. Hussain (eds), *Readings in International Accounting*, Thomson Business Press, London.

Chow, C.W., Shields, M.D. & Wu, A. 1999, 'The importance of national culture in the design of and preference for management controls for multi-national operations', *Accounting, Organisations and Society*, vol. 24, pp. 441-461.

Cohen, J. 1988, *Statistical power analysis for the behavioural sciences*, 2nd edn., Erlbaum Associates, Hillsdale.

Dancey, C.P. & Reidy, J. 2002, *Statistics without maths for psychology*, 2nd edn., Pearson Education Limited, Harlow.

DeVellis, R.F. 2003, *Scale development: Theory and applications*, Sage Publications, Thousand Oaks.

Doupnik, T.S. & Salter, S.B. 1995, 'External environment, culture, and accounting practice: A preliminary test of a general model of international accounting development', *The International Journal of Accounting*, vol. 30, pp. 189-207.

Doupnik, T.S. & Richter, M. 2003, 'Interpretation of uncertainty expressions: A cross-national study', *Accounting, Organisations and Society*, vol. 28, pp. 15-35.

Doupnik, T.S. & Tsakumis, G.T. 2004, 'A critical review of tests of Gray's theory of cultural relevance and suggestions for future research', *Journal of Accounting Literature*, vol. 23, pp. 1-48. Retrieved January 14, 2008, from http://www.cleanoffice.pl/A-CRITICAL-REVIEW-OF-TESTS-OF-GRAY-S-THEORY-OF-CULTURAL-RELEVANCE-AND-SUGGESTIONS-FOR-FUTURE-RESEARCH

Elad, C. 2004, 'Fair value accounting in the agricultural sector: Some implications for international accounting harmonisation', *European Accounting Review*, vol. 13, no. 4, pp. 621-641.

FASB 1978, *Statement of financial accounting concepts CON1: Objectives of financial reporting by business enterprises*, Financial Accounting Standards Board, Norwalk.

Forum of Firms 2007, *Perspectives of the global application of IFRS*, International Federation of Accountants, New York.

Gernon, H. & Wallace, R.S.O. 1995, 'International accounting research: A review of its ecology, contending theories and methodologies', *Journal of Accounting Literature*, vol. 14, pp. 54-106.

Gray, S.J. 1988, 'Towards a theory of cultural influence on the development of accounting systems internationally', *ABACUS*, vol. 24, no. 1, pp. 1-15

Gray, S.J. 1989, 'International accounting research: The global challenge', *The International Journal of Accounting*, vol. 24, pp. 291-307.

Grice, H.P. 1989, *Studies in the way with words*, Harvard University Press, Cambridge.

Gray, R., Owen, D. & Adams, C. 1996, *Accounting & accountability: Changes and challenges in corporate social and environmental reporting*, Prentice Hall, Harlow.

Hamid, S., Craig. R. & Clarke, F. 1993, 'Religion: A confounding cultural element in the international harmonisation of accounting', *ABACUS*, vol. 29, no. 2, pp. 131-148.

Haniffa, R.M. & Cooke, T.E. 2002, 'Culture, corporate governance and disclosure in Malaysian corporations', *ABACUS*, vol. 38, no. 3, pp. 317-349.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. 2006, *Multivariate data analysis*, 6th edn., Prentice Hall, New Jersey.

Haried, A.A. 1972, 'The semantic dimensions of financial statements', *Journal of Accounting Research*, Autumn, pp. 376-379.

Haried, A.A. 1973, 'Measurement of meaning in financial reports', *Journal of Accounting Research*, Spring, pp. 117-145.

Harrison, G.L. & McKinnon, J.L. 1986, 'Culture and accounting change: A new perspective on corporate reporting regulation and accounting policy

formulation', *Accounting, Organisations and Society*, vol. 11, no. 3, pp. 233-252.

Harrison, G.L. & McKinnon, J.L. 1999, 'Cross-cultural research in management control systems design: A review of the current state', *Accounting, Organisations and Society*, vol. 24, pp. 483-506.

Henderson, S., Peirson, G. & Brown, R. 1998, *Financial accounting theory: Its nature and development*, Longman, Melbourne.

Herbohn, K.F. & Herbohn, J.L. 1999, 'Accounting for forests in social, economic and political contexts', *Accounting Forum*, vol. 23, no. 4, pp. 408-440.

Herbohn, K.F., Peterson, R. & Herbohn, J.L. 1998, 'Accounting for forestry assets: Current practice and future directions', *Australian Accounting Review*, vol. 8, no. 1, pp. 54-66.

Hjerland, B. & Christensen, F.S. 2002, 'Work task and socio-cognitive relevance: A specific example', *Journal of the American Society for Information Science and Technology*, vol. 53, no. 11, pp. 960-965.

Hofstede, G. !980, *Culture's consequences: International differences in work related values*, Sage Publication, Beverly Hills.

Hofstede, G. 1981, 'Culture and organisations', *International Studies of Management and Organisation*, vol. 10, no. 4, pp.15-41.

Hofstede, G. 1983, 'National cultures in four dimensions: A research-based theory of cultural differences among nations', *International Studies of Management and Organisation*, vol. 13, no. 1-2, pp. 46-74.

Hofstede, G. 2001, *Culture's consequences: Comparing values, behaviours, institutions and organisations across nations*, Sage Publication, London.

Hofstede, G. & Hofstede, G.J. 2005, *Cultures and organisations: Software of the mind,* 2nd edn, McGraw-Hill, New York.

Hope, O.K. 2003, 'Firm-level disclosures and the relative roles of culture and legal origin', *Journal of International Financial Management and Accounting*, vol. 14, no. 3, pp. 218-248.

Houghton, K.A. 1987, 'True and fair view: An empirical study of connotative meaning', *Accounting, Organisations and Society*, vol. 12, no. 2, pp. 143-152.

Houghton, K.A. 1998, 'Measuring meaning in accounting: Sharing connotations of underpinning concepts', *Conference Proceedings, 2nd Asian-Pacific Interdisciplinary Research in Accounting Conference*, Osaka, Japan, 2005. Retrieved December 15, 2005 from http://www3.bus.osaka-cu.ac.jp/apira98/archives/pdfs/37.pdf.

Hronsky, J.J.F. & Houghton, K.A. 2001, 'The meaning of a defined accounting concept: Regulatory changes and the effect on auditor decision making', *Accounting, Organisations and Society*, vol. 26, pp. 123-139.

Hunt, E.B. & Hovland, C.I. 1960, 'Order of consideration of different types of concepts', *Journal of Experimental Psychology*, vol. 59, no. 4, pp. 220-225.

IASB 1989, *Framework for the preparation and presentation of financial statements*, International Accounting Standards Committee Foundation, London.

IASB 2001, *International accounting standards IAS 41: Agriculture,* International Accounting Standards Committee Foundation, London.

IASB 2003, *International accounting standards IAS 8: Accounting policies, changes in accounting estimates and errors*, International Accounting Standards Committee Foundation, London.

IASB 2005, *International accounting standards IAS 1: Presentation of financial statements*, International Accounting Standards Committee Foundation, London.

IASCF 2006, *Annual Report 2006*, International Accounting Standards Committee Foundation, London.

IFAC 2003a, *International education standards for professional accountants*, International Federation of Accountants, New York.

IFAC 2003b, *Rebuilding public confidence in financial reporting: An international perspective*, International Federation of Accountants, New York.

IFAC 2004, *IES 7 Continuing professional development: A program of lifelong learning and continuing development of professional competence*, International Federation of Accountants, New York.

IFAC 2005, *Code of ethics for professional accountants*, International Federation of Accountants, New York.

Jaggi, B. & Low, P.Y. 2000, 'Impact of culture, market forces, and legal system on financial disclosures', *The International Journal of Accounting*, vol. 35, no. 4, pp. 495-519.

Lenartowicz, T., Johnson, J.P. & White, C.T. 2003, 'The neglect of intracountry cultural variation in international management research', *Journal of Business Research*, vol. 56, pp. 999-1008.

Leung, K. 1989, 'Cross-cultural differences: Individual-level vs. culture-level analysis', *International Journal of Psychology*, vol. 24, pp. 703-719.

Loftus, J.A. 2003, 'The CF and accounting standards: The persistence of discrepancies', *ABACUS*, vol. 39, no. 3, pp. 298-309.

Matsumoto, D. & Juang, L. 2004, *Culture and Psychology*, 3rd edn, Wadsworth/Thomson Learning, Belmont.

Meyer, P.E. 1976, 'A framework for understanding "substance over form" in accounting', *The Accounting Review*, pp. 80-89.

MICPA 2005, *Annual report 2005*, Malaysian Institute of Certified Public Accountants, Kuala Lumpur.

Miranda, S.M. & Saunders, C.S. 2003, 'The social construction of meaning: An alternative perspective on information sharing', *Information Systems Research*, vol. 14, no. 1, pp. 87-106.

Morton, J.R. 1974, 'Qualitative objectives of financial accounting: A comment on relevance and understandability', *Journal of Accounting Research*, pp. 288-298.

Munter, P. & Ratcliffe, T.A. 1980, 'On the attributes of an asset', *ABACUS*, vol. 16, no. 2, pp. 116-123.

Neuman, W.L. 2000, *Social research methods: Qualitative and quantitative approaches*, 4th edn., Allyn and Bacon, Needham Heights.

Ngaire, K. 2006, 'Perceptions of the true and fair view concept: An empirical investigation', *ABACUS*, vol. 42, no. 2, pp. 205-235.

Nobes, C. 1998, 'Towards a general model of the reasons for international differences in financial reporting', *ABACUS*, vol. 34, no. 2, pp. 162-187.

Osgood, C.E., Suci, G.J. & Tannenbaum, P.H. 1957, *The measurement of meaning*, University of Illinois Press, Urbana.

Pallant, J. 2005, *SPSS survival manual*, 2nd edn., Open University Press, Berkshire.

Patel, C. 2003, 'Some cross-cultural evidence on whistle-blowing as an internal control mechanism', *Journal of International Accounting Research*, vol. 2, pp. 69-96.

Patel, C., Harrison, G.L., & McKinnon, J.L. 2002, 'Cultural influences on judgments of professional accountants in auditor-client conflict resolution', *Journal of International Financial Management and Accounting*, vol. 13, pp. 1-31.

Perera, M.H.B. 1989, 'Towards a framework to analyse the impact of culture on accounting', *The International Journal of Accounting*, vol. 24, pp. 42-56.

Peng, K., Nisbett, R.E. & Wong, N.Y.C. 1997, 'Validity problems comparing values across cultures and possible solutions', *Psychological Methods*, vol. 2, no. 4, pp. 329-344.

Rogelberg, S.G. & Luong, A. 1998, 'Nonresponse to mailed surveys: A review and guide', *Current Directions in Psychological Science*, vol. 7, no. 2, pp. 60-65.

Rokeach, M. 1973, *The nature of human values*, The Free Press, New York.

Ross, N. 2004, *Culture and cognition: implications for theory and method*, Sage Publications, Thousand Oaks.

Salter, S.B. & Niswander, F. 1995, 'Cultural influence on the development of accounting systems internationally: A test of Gray's [1988] theory', *Journal of International Business Studies*, 2nd Quarter, pp. 379-397.

Saracevic, T. 1975, 'Relevance: A review of and a framework for the thinking on the notion in information science', *Journal of the American Society for Information Science*, vol. 26, no. 6, pp. 321-343.

Schamber, L., Eisenberg, M.B. & Nilan, M.S. 1990, 'A re-examination of relevance: Towards a dynamic, situational definition', *Information Processing and Management*, vol. 26, no. 6, pp. 755-776.

Schipper, K. 2003, 'Principles-based accounting standards', *Accounting Horizons*, vol. 17, no. 1, pp. 61-72.

Schuetze, W.P. 1993, 'What is an asset?', *Accounting Horizons*, vol. 7, no. 3, pp. 66-70.

Schultz, J.J. & Lopez, T.J. 2001, 'The impact of national influence on accounting estimates: Implications for international accounting standard-setters', *The International Journal of Accounting*, vol. 36, pp. 271-290.

Schwartz, S.H. 1992, 'Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries', in M.P. Zanna (ed), *Advances in Experimental Social Psychology*, Academic Press, San Diego.

Schwartz, S.H. 1999, 'A theory of cultural values and some implications for work', *Applied Psychology: An International Review*, vol. 48, no. 1, pp. 23-47.

Schwartz, S.H. & Bilsky, W. 1987, 'Toward a universal psychological structure of human values', *Journal of Personality and Social Psychology*, vol. 53, no. 3, pp. 550-562.

Schwartz, S.H., Melech, G., Lehmann, A., Burgess, S., Harris, M. & Owens, V. 2001, 'Extending the cross-cultural validity of the theory of basic human values with a different method of measurement', *Journal of Cross-Cultural Psychology*, vol. 32, no. 5, pp. 519-542.

Sekaran, U. 1992, *Research methods for business: A skill building approach*, 3rd edn, John Wiley & Sons, New York.

Smith, P.B. & Schwartz, S.H. 1997, 'Values', In J.W. Berry, M.H. Segall & C. Kagitcibasi (Eds.), *Handbook of Cross-Cultural Psychology*, (2nd edn., vol. 3, pp. 77-118), Allyn & Bacon, London.

Soewarso, E., Tower, G., Hancock, P. & Taplin, R. 2003, 'A Comparative study of de jure and de facto disclosure between Australia and Singapore', *Asian Review of Accounting*, vol. 11, no. 1, pp. 18-47.

Sterling, R.R. 1967, 'A statement of basic accounting theory: A review article', *Journal of Accounting Research*, pp. 95-112.

Sudarwan, M. & Fogarty, T.J. 1996, 'Culture and accounting in Indonesia: An empirical examination', *The International Journal of Accounting*, vol. 31, no. 4, pp. 463-481.

Susela, S.D. 1999, '"Interests" and accounting standard setting in Malaysia', Accounting, *Auditing & Accountability Journal*, vol. 12, no. 3, pp. 358-387.

Tay, J.S.W. & Parker, R.H. 1990, 'Measuring international harmonisation and standardisation', *ABACUS*, vol. 26, no. 1, pp. 71-88.

The Economic Planning Unit 2006, *Ninth Malaysia plan 2006-2010*, The Economic Planning Unit, Putrajaya.

Tollington, T. 1998, 'What are assets anyway? Some practical realities', *Management Decision*, vol. 36, no. 7, pp. 448-455.

Tollington, T. 2000, 'The cognitive assumptions underpinning the accounting recognition of assets', *Management Decision*, vol. 38, no. 2, pp. 89-98.

Triandis, H.C. 1994, 'Theoretical and methodological approaches to the study of collectivism and individualism', in U. Kim, H.C. Triandis, C. Kagitcibasi, S.C. Choi & G. Yoon (eds), *Individualism an Collectivism: Theory, Method and Applications*, Sage Publications, Thousand Oaks.

Tsakumis, G.T. 2007, 'The influence of culture on accountants' application of financial reporting rules', *ABACUS*, vol. 43, no. 1, pp. 27-48.

Tsui, J.S.L. 2001, 'The impact of culture on the relationship between budgetary participation, management accounting systems, and managerial performance: An analysis of Chinese and western managers', *The International Journal of Accounting*, vol. 36, pp. 125-146.

Walker, R.G. & Jones, S. 2003, 'Measurement: A way forward', *ABACUS*, vol. 39, no. 3, pp. 356-374.

Wallace, R.S.O. & Gernon, H. 1991, 'Frameworks for international comparative financial accounting', *Journal of Accounting Literature*, vol. 10, pp. 209-264.

Ward, G. 2006, 'The future of the accountancy profession', *SC International Annual Conference*, Vienna, Austria, 2006.

Wason, K.D., Polonsky, M.J. & Hyman, M.R. 2002, 'Designing vignettes studies in marketing', *Australasian Marketing Journal*, vol. 10, no. 3, pp. 41-58.

Watts, R.L. 2003, 'Conservatism in accounting part I: Explanations and implications', *Accounting Horizons*, vol. 17, no. 3, pp. 207-221.

Whitley Jr., B.E. 2002, *Principles of Research in Behavioural Science*, 2nd edn., McGraw-Hill, New York.

Willett, R., Nishimura, A. & Baydoun, N. 1997, 'Reflections on the relationship between culture and accounting practices in the Asia-Pacific region', in N. Baydoun, A. Nishimura, & R. Willett (eds), *Accounting in the Asia-Pacific Region*, John Wiley & Sons, Singapore.

Williams Jr., R.M. 1968, 'Values', in E. Sills (ed), *International encyclopaedia of the social sciences*, MacMillan, New York.

Wong, P. 2004, *Challenges and successes in implementing international standards: Achieving convergence to IFRSs and ISAs*, International Federation of Accountants, New York.

APPENDICES

Appendix 1 Mann-Whitney U Test for non-response bias in Section A

Question	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	z-score	Asymp. Sig. (2-tailed)
A1	First	81	113.56	9198.50	5877.5	9198.5	-1.1337	0.2569
	Second	159	124.03	19721.50				
A2	First	83	114.17	9476.50	5990.5	9476.5	-1.3598	0.1739
	Second	161	126.79	20413.50				
A3	First	83	122.23	10145.50	6659.5	10145.5	-0.0474	0.9622
	Second	161	122.64	19744.50				
A4	First	82	117.59	9642.00	6239.0	9642.0	-0.6494	0.5161
	Second	160	123.51	19761.00				
A5	First	83	120.02	9961.50	6475.5	9961.5	-0.4037	0.6864
	Second	161	123.78	19928.50				
A6	First	83	120.63	10012.00	6526.0	10012.0	-0.1469	0.8832
	Second	159	121.96	19391.00				
A7	First	83	122.19	10141.50	6624.5	19504.5	-0.0313	0.9750
	Second	160	121.90	19504.50				
A8	First	82	107.29	8798.00	5395.0	8798.0	-2.1793	*0.0293
	Second	158	127.35	20122.00				
A9	First	83	120.83	10029.00	6543.0	10029.0	-0.2727	0.7850
	Second	161	123.36	19861.00				
A10	First	83	115.87	9617.50	6131.5	9617.5	-0.9268	0.3540
	Second	158	123.69	19543.50				
A11	First	83	118.04	9797.00	6311.0	9797.0	-0.5817	0.5608
	Second	159	123.31	19606.00				
A12	First	83	125.37	10405.50	6443.5	19484.5	-0.5060	0.6129
	Second	161	121.02	19484.50				
A13	First	83	113.92	9455.00	5969.0	9455.0	-1.4299	0.1528
	Second	161	126.93	20435.00				
A14	First	83	120.40	9993.50	6507.5	9993.5	-0.3465	0.7290
	Second	161	123.58	19896.50				
A15	First	83	113.98	9460.50	5974.5	9460.5	-1.4577	0.1449
	Second	161	126.89	20429.50				
A16	First	82	122.02	10006.00	6599.0	19640.0	-0.0045	0.9964
	Second	161	121.99	19640.00				

* Sig. $p < 0.05$

Appendix 2 Mann-Whitney U Test for non-response bias in Section B

Question	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	z-score	Asymp. Sig. (2-tailed)
B1	First	83	109.19	9062.50	5576.5	9062.5	-2.2669	*0.0234
	Second	160	128.65	20583.50				
B2	First	82	118.19	9691.50	6288.5	9691.5	-0.5409	0.5886
	Second	160	123.20	19711.50				
B3	First	83	115.72	9604.50	6118.5	9604.5	-0.9141	0.3607
	Second	158	123.78	19556.50				
B4	First	83	114.50	9503.50	6017.5	9503.5	-1.2635	0.2064
	Second	159	125.15	19899.50				
B5	First	83	118.39	9826.50	6340.5	9826.5	-0.6136	0.5394
	Second	160	123.87	19819.50				
B6	First	83	116.29	9652.00	6166.0	9652.0	-1.0231	0.3063
	Second	160	124.96	19994.00				
B7	First	82	122.47	10042.50	6316.5	18877.5	-0.3270	0.7437
	Second	158	119.48	18877.50				
B8	First	83	115.40	9578.00	6092.0	9578.0	-1.0423	0.2973
	Second	159	124.69	19825.00				
B9	First	83	122.17	10140.00	6543.0	19263.0	-0.1119	0.9109
	Second	159	121.15	19263.00				
B10	First	83	113.40	9412.50	5926.5	9412.5	-1.3489	0.1774
	Second	159	125.73	19990.50				
B11	First	82	116.10	9520.50	6117.5	9520.5	-0.8198	0.4123
	Second	159	123.53	19640.50				
B12	First	83	114.89	9536.00	6050.0	9536.0	-1.1549	0.2481
	Second	159	124.95	19867.00				
B13	First	83	126.70	10516.50	6000.5	18403.5	-1.0539	0.2919
	Second	157	117.22	18403.50				
B14	First	83	114.25	9483.00	5997.0	9483.0	-1.1388	0.2548
	Second	158	124.54	19678.00				
B15	First	83	114.45	9499.50	6013.5	9499.5	-1.1788	0.2385
	Second	159	125.18	19903.50				
B16	First	83	113.27	9401.50	5915.5	9401.5	-1.5673	0.1170
	Second	160	126.53	20244.50				
B17	First	83	112.36	9325.50	5839.5	9325.5	-1.5608	0.1186
	Second	159	126.27	20077.50				
B18	First	83	115.54	9590.00	6104.0	9590.0	-1.0307	0.3027
	Second	159	124.61	19813.00				
B19	First	83	118.37	9825.00	6339.0	9825.0	-0.6251	0.5319
	Second	160	123.88	19821.00				
B20	First	83	117.62	9762.50	6276.5	9762.5	-0.6468	0.5177
	Second	159	123.53	19640.50				
B21	First	83	122.74	10187.50	6495.5	19215.5	-0.2196	0.8262
	Second	159	120.85	19215.50				

* Sig. $p < 0.05$

Appendix 3 Mann-Whitney U Test for non-response bias in Section C

Question	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	z-score	Asymp. Sig. (2-tailed)
C1	First	83	126.39	10490.00	6276.0	19156.0	-0.7870	0.4313
	Second	160	119.73	19156.00				
C2	First	83	118.01	9795.00	6309.0	9795.0	-0.5761	0.5646
	Second	159	123.32	19608.00				
C3	First	83	118.11	9803.50	6317.5	9803.5	-0.5752	0.5652
	Second	159	123.27	19599.50				
C4	First	82	118.92	9751.50	6348.5	9751.5	-0.4479	0.6542
	Second	160	122.82	19651.50				
C5	First	83	115.92	9621.00	6135.0	9621.0	-1.0259	0.3049
	Second	160	125.16	20025.00				
C6	First	83	119.36	9907.00	6421.0	9907.0	-0.4555	0.6488
	Second	160	123.37	19739.00				
C7	First	83	113.22	9397.50	5911.5	9397.5	-1.3784	0.1681
	Second	159	125.82	20005.50				
C8	First	83	115.37	9576.00	6090.0	9576.0	-1.0162	0.3095
	Second	159	124.70	19827.00				
C9	First	83	126.82	10526.00	6240.0	19120.0	-0.8038	0.4215
	Second	160	119.50	19120.00				
C10	First	83	123.37	10240.00	6526.0	19406.0	-0.2334	0.8154
	Second	160	121.29	19406.00				
C11	First	82	116.07	9517.50	6114.5	9517.5	-0.8233	0.4103
	Second	159	123.54	19643.50				
C12	First	83	110.07	9135.50	5649.5	9135.5	-1.9692	*0.0489
	Second	160	128.19	20510.50				
C13	First	82	122.64	10056.50	6466.5	19346.5	-0.1874	0.8513
	Second	160	120.92	19346.50				
C14	First	83	116.53	9672.00	6186.0	9672.0	-0.9101	0.3628
	Second	160	124.84	19974.00				
C15	First	83	126.87	10530.00	6236.0	19116.0	-0.8047	0.4210
	Second	160	119.48	19116.00				
C16	First	83	117.39	9743.00	6257.0	9743.0	-0.7096	0.4779
	Second	159	123.65	19660.00				
C17	First	83	120.07	9965.50	6479.5	9965.5	-0.4079	0.6834
	Second	161	123.75	19924.50				
C18	First	83	117.25	9731.50	6245.5	9731.5	-0.8081	0.4190
	Second	160	124.47	19914.50				
C19	First	83	119.78	9942.00	6456.0	9942.0	-0.4822	0.6297
	Second	161	123.90	19948.00				
C20	First	82	116.79	9577.00	6174.0	9577.0	-0.8510	0.3948
	Second	161	124.65	20069.00				
C21	First	82	119.62	9809.00	6406.0	9809.0	-0.4183	0.6757
	Second	161	123.21	19837.00				

* Sig. $p < 0.05$

Appendix 4 Mann-Whitney U Test for non-response bias in Section D

Question	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	z-score	Asymp. Sig. (2-tailed)
D1	First	83	120.92	10036.00	6550.0	10036.0	-0.2619	0.7934
	Second	161	123.32	19854.00				
D2	First	83	120.51	10002.50	6516.5	10002.5	-0.3346	0.7379
	Second	161	123.52	19887.50				
D3	First	83	123.08	10216.00	6550.0	19430.0	-0.1817	0.8558
	Second	160	121.44	19430.00				
D4	First	83	123.21	10226.50	6622.5	19663.5	-0.1158	0.9078
	Second	161	122.13	19663.50				
D5	First	83	131.23	10892.00	5874.0	18754.0	-1.5649	0.1176
	Second	160	117.21	18754.00				
D6	First	83	108.52	9007.00	5521.0	9007.0	-2.2028	*0.0276
	Second	160	128.99	20639.00				
D7	First	83	135.30	11229.50	5453.5	18173.5	-2.2673	*0.0234
	Second	159	114.30	18173.50				
D8	First	83	116.77	9691.50	6205.5	9691.5	-0.8857	0.3758
	Second	160	124.72	19954.50				
D9	First	83	129.20	10723.50	5959.5	18679.5	-1.2648	0.2059
	Second	159	117.48	18679.50				
D10	First	83	116.06	9633.00	6147.0	9633.0	-0.8934	0.3716
	Second	159	124.34	19770.00				
D11	First	83	122.30	10151.00	6615.0	19495.0	-0.0512	0.9592
	Second	160	121.84	19495.00				
D12	First	83	112.92	9372.50	5886.5	9372.5	-1.5791	0.1143
	Second	160	126.71	20273.50				
D13	First	83	119.35	9906.00	6420.0	9906.0	-0.4338	0.6644
	Second	160	123.38	19740.00				
D14	First	83	117.27	9733.50	6247.5	9733.5	-0.8112	0.4173
	Second	160	124.45	19912.50				
D15	First	83	114.95	9540.50	6054.5	9540.5	-1.1628	0.2449
	Second	160	125.66	20105.50				
D16	First	83	124.81	10359.50	6489.5	19530.5	-0.3832	0.7016
	Second	161	121.31	19530.50				
D17	First	83	119.40	9910.00	6424.0	9910.0	-0.5097	0.6102
	Second	161	124.10	19980.00				
D18	First	83	116.54	9672.50	6186.5	9672.5	-1.0296	0.3032
	Second	161	125.57	20217.50				
D19	First	83	119.16	9890.50	6404.5	9890.5	-0.5649	0.5722
	Second	161	124.22	19999.50				
D20	First	83	128.84	10694.00	6155.0	19196.0	-1.0297	0.3031
	Second	161	119.23	19196.00				

* Sig. $p < 0.05$

Appendix 4a Mann-Whitney U Test for non-response bias in Section D - continued

Question	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	z-score	Asymp. Sig. (2-tailed)
D21	First	83	118.87	9866.00	6380.0	9866.0	-0.6151	0.5385
	Second	161	124.37	20024.00				
D22	First	83	122.78	10191.00	6658.0	19699.0	-0.0472	0.9624
	Second	161	122.35	19699.00				
D23	First	83	119.40	9910.50	6424.5	9910.5	-0.5274	0.5979
	Second	161	124.10	19979.50				
D24	First	83	117.01	9711.50	6225.5	9711.5	-0.9037	0.3662
	Second	161	125.33	20178.50				
D25	First	83	129.58	10755.00	6094.0	19135.0	-1.1592	0.2464
	Second	161	118.85	19135.00				
D26	First	83	112.22	9314.50	5828.5	9314.5	-1.6767	0.0936
	Second	161	127.80	20575.50				
D27	First	83	122.27	10148.00	6662.0	10148.0	-0.0401	0.9680
	Second	161	122.62	19742.00				
D28	First	83	123.91	10284.50	6564.5	19605.5	-0.2430	0.8080
	Second	161	121.77	19605.50				
D29	First	83	123.65	10263.00	6586.0	19627.0	-0.1968	0.8440
	Second	161	121.91	19627.00				
D30	First	83	121.65	10097.00	6611.0	10097.0	-0.1393	0.8892
	Second	161	122.94	19793.00				
D31	First	83	118.19	9810.00	6324.0	9810.0	-0.7240	0.4690
	Second	161	124.72	20080.00				
D32	First	83	114.20	9478.50	5992.5	9478.5	-1.3764	0.1687
	Second	161	126.78	20411.50				
D33	First	83	120.83	10029.00	6543.0	10029.0	-0.2750	0.7833
	Second	161	123.36	19861.00				
D34	First	83	113.83	9448.00	5962.0	9448.0	-1.4746	0.1403
	Second	161	126.97	20442.00				
D35	First	83	115.64	9598.00	6112.0	9598.0	-1.1600	0.2461
	Second	161	126.04	20292.00				
D36	First	83	124.31	10318.00	6531.0	19572.0	-0.3139	0.7536
	Second	161	121.57	19572.00				
D37	First	83	114.47	9501.00	6015.0	9501.0	-1.2352	0.2168
	Second	160	125.91	20145.00				
D38	First	83	116.97	9708.50	6222.5	9708.5	-0.9413	0.3465
	Second	161	125.35	20181.50				
D39	First	83	110.81	9197.50	5711.5	9197.5	-1.9107	0.0560
	Second	161	128.52	20692.50				
D40	First	83	122.67	10181.50	6667.5	19708.5	-0.0279	0.9777
	Second	161	122.41	19708.50				

* Sig. $p < 0.05$

Appendix 5 Reliability coefficients for the motivational value scales

Item (Question)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Safeguard public interest					
D3	23.1322	11.6754	0.3794	0.1822	0.7278
D8	23.2231	12.9624	0.2996	0.1131	0.7421
D19	23.0909	11.5270	0.5509	0.3703	0.6737
D23	22.9174	11.0969	0.6056	0.4240	0.6568
D29	22.9298	11.5677	0.6329	0.4104	0.6567
D40	23.5702	11.7979	0.4115	0.2157	0.7145
N of cases = 242 N of items = 6			Cronbach's Alpha = 0.7337 Mean inter-item correlation = 0.3266		
Protect organisational interest					
D12	13.4733	4.3247	0.5364	0.2965	0.4777
D18	13.6337	4.8281	0.3083	0.1317	0.6319
D27	13.7613	4.4965	0.4796	0.2486	0.5170
D33	13.8724	4.1779	0.3553	0.1616	0.6144
N of cases = 243 N of items = 4			Cronbach's Alpha = 0.6306 Mean inter-item correlation = 0.3111		
Compliance with rules & regulations					
D7	13.9835	4.7881	0.3034	0.1120	0.6318
D16	13.1074	4.5361	0.5117	0.2829	0.4318
D28	12.4752	5.9351	0.3739	0.1636	0.5521
D36	12.5372	5.7766	0.4195	0.2407	0.5248
N of cases = 242 N of items = 4			Cronbach's Alpha = 0.6071 Mean inter-item correlation = 0.2970		
Generally accepted accounting conventions					
D9	12.2686	5.8238	0.2585	0.0757	0.3605
D20	11.6901	5.8911	0.1992	0.0508	0.4325
D25	12.5165	6.3089	0.2733	0.1039	0.3471
D38	10.8430	6.9047	0.2855	0.0935	0.3507
N of cases = 242 N of items = 4			Cronbach's Alpha = 0.4406 Mean inter-item correlation = 0.1737		
Compliance with rules & conventions					
D9	29.6473	21.7543	0.2579	0.0836	0.6865
D20	29.0705	20.6825	0.3132	0.1594	0.6748
D25	29.8921	21.4216	0.3670	0.1859	0.6555
D38	28.2241	21.8829	0.4349	0.3249	0.6430
D7	29.7676	20.9041	0.3488	0.1490	0.6616
D16	28.8921	20.3383	0.5132	0.3294	0.6211
D28	28.2614	22.3189	0.4596	0.2509	0.6422
D36	28.3195	22.5683	0.4300	0.3815	0.6476
N of cases = 241 N of items = 8			Cronbach's Alpha = 0.6837 Mean inter-item correlation = 0.2332		

Appendix 5a Reliability coefficients for the motivational value scales - continued

Item (Question)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Uniformity, conservatism, prudence & integrity					
D5	19.1852	8.3416	0.2316	0.0871	0.7030
D14	18.7984	7.0542	0.5921	0.3828	0.5271
D21	18.8354	7.9811	0.3863	0.2123	0.6237
D31	18.6955	7.7746	0.4578	0.2191	0.5923
D35	18.7078	7.7366	0.4552	0.2859	0.5930
N of cases = 243 N of items = 5			Cronbach's Alpha = 0.6624 Mean inter-item correlation = 0.2905		
Preserving status of profession					
D2	6.9918	4.0740	0.2668	0.0718	0.6657
D17	6.5041	3.5020	0.4558	0.2590	0.3949
D39	6.0123	3.1891	0.4758	0.2702	0.3536
N of cases = 244 N of items = 3			Cronbach's Alpha = 0.5856 Mean inter-item correlation = 0.3204		
Professional competence					
D4	12.1975	7.9939	0.4460	0.2568	0.7046
D13	12.4444	6.9587	0.6141	0.3846	0.5974
D24	11.8107	7.7243	0.5708	0.3475	0.6291
D32	11.4239	8.9146	0.4331	0.2460	0.7063
N of cases = 243 N of items = 4			Cronbach's Alpha = 0.7240 Mean inter-item correlation = 0.3957		
Hedonism					
D10	7.4025	5.1248	0.6105	0.3858	0.7273
D26	7.7635	5.5147	0.5911	0.3595	0.7460
D37	7.0332	5.0156	0.6772	0.4588	0.6531
N of cases = 241 N of items = 3			Cronbach's Alpha = 0.7861 Mean inter-item correlation = 0.5508		
Risk taker					
D6	6.5185	4.8044	0.5494	0.3054	0.7333
D15	7.2222	4.7521	0.6387	0.4131	0.6311
D30	7.0658	4.8717	0.5956	0.3716	0.6788
N of cases = 243 N of items = 3			Cronbach's Alpha = 0.7622 Mean inter-item correlation = 0.5185		
Independent professional judgment					
D1	14.2798	5.1115	0.4358	0.1918	0.6647
D11	13.7778	5.2810	0.5356	0.3320	0.5970
D22	14.0494	5.3777	0.4396	0.1944	0.6567
D34	13.5350	5.5556	0.5255	0.3227	0.6080
N of cases = 243 N of items = 4			Cronbach's Alpha = 0.6953 Mean inter-item correlation = 0.3711		

Appendix 6 Reliability coefficients for the higher order value scales

Item (Question)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Openness to change					
D1	24.6831	21.8207	0.5387	0.3019	0.7819
D11	24.1811	23.2398	0.4912	0.3470	0.7902
D22	24.4527	22.2405	0.5506	0.3299	0.7802
D34	23.9383	24.1821	0.4249	0.3242	0.8000
D6	25.0658	19.8799	0.6144	0.4226	0.7678
D15	25.7695	20.7235	0.5855	0.4224	0.7732
D30	25.6132	20.6183	0.5867	0.4100	0.7731
N of cases = 243 N of items = 7			Cronbach's Alpha = 0.8068 Mean inter-item correlation = 0.3725		
Conservation					
D7	53.3485	44.6530	0.3210	0.1763	0.7413
D16	52.4730	42.9336	0.5290	0.4142	0.7156
D28	51.8423	45.9917	0.4496	0.2907	0.7282
D36	51.9004	45.8567	0.4648	0.3911	0.7269
D9	53.2282	45.6852	0.2472	0.1181	0.7515
D20	52.6515	43.9697	0.3150	0.1871	0.7441
D25	53.4730	45.6086	0.3148	0.1980	0.7406
D38	51.8050	44.7826	0.4788	0.3492	0.7235
D5	52.3485	46.6780	0.2603	0.2199	0.7463
D14	51.9793	44.7121	0.4729	0.4379	0.7238
D21	52.0124	45.2290	0.4249	0.2771	0.7286
D31	51.8714	46.6459	0.3337	0.2587	0.7379
D35	51.8797	45.8063	0.3940	0.3180	0.7319
N of cases = 241 N of items = 13			Cronbach's Alpha = 0.7493 Mean inter-item correlation = 0.2017		

Appendix 6a Reliability coefficients for the higher order value scales - continued

Item (Question)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Self-enhancement					
D10	33.1328	45.1656	0.4720	0.4222	0.7979
D26	33.4938	45.9510	0.4615	0.3788	0.7987
D37	32.7635	44.5397	0.5346	0.4932	0.7904
D4	33.0705	45.8575	0.4622	0.3018	0.7987
D13	33.3112	44.0069	0.5640	0.4108	0.7869
D24	32.6763	45.3365	0.5509	0.4021	0.7891
D32	32.2905	47.1486	0.4823	0.3427	0.7967
D2	34.0664	48.4539	0.3565	0.1584	0.8090
D17	33.5851	47.2604	0.4478	0.3025	0.7999
D39	33.0788	44.6646	0.5778	0.4430	0.7859
N of cases = 241 N of items = 10			Cronbach's Alpha = 0.8121 Mean inter-item correlation = 0.3019		
Self-transcendence					
D12	41.2397	29.8427	0.5586	0.3868	0.7782
D18	41.3967	30.3648	0.4397	0.2235	0.7900
D27	41.5207	30.6241	0.4685	0.3101	0.7872
D33	41.6405	29.7997	0.4031	0.2536	0.7957
D3	41.3678	30.1920	0.3405	0.2104	0.8048
D8	41.4587	31.1041	0.3489	0.1590	0.8002
D19	41.3264	28.8764	0.5895	0.4115	0.7732
D23	41.1529	28.2545	0.6358	0.4545	0.7674
D29	41.1653	28.6780	0.6963	0.5037	0.7639
D40	41.8058	29.8999	0.4057	0.2249	0.7951
N of cases = 242 N of items = 10			Cronbach's Alpha = 0.8031 Mean inter-item correlation = 0.3017		

Appendix 7 Frequency distribution of respondents' opinions on assets

Statements of attributes	Strongly disagree	Disagree	Disagree some-what	Agree some-what	Agree	Strongly agree	Missing	Median	Mode
	1	2	3	4	5	6			
Economic resource	%	%	%	%	%	%	%		
A2 Represents a deferred expenditure.	6.97	22.95	12.30	23.77	29.51	4.51	0.00	4	5
A3 Represents an entitlement to future cash or goods and services.	0.82	3.28	3.69	11.07	58.20	22.95	0.00	5	5
A4 The cost or expenditure represents the asset.	2.46	13.52	10.25	24.59	38.93	9.43	0.82	4	5
A5 Must have a physical or tangible form.	11.07	30.74	12.30	18.03	18.85	9.02	0.00	3	2
A7 Must be separable and has a separate disposal value.	1.23	11.07	12.30	16.39	43.44	15.16	0.41	5	5
A9 Represents scarce goods and services.	7.38	31.56	20.08	22.54	15.16	3.28	0.00	3	2
A11 Represents something that is real.	2.05	12.30	9.02	16.80	41.39	17.62	0.82	5	5
A13 Cost or expenditure must have been incurred.	0.82	11.07	11.89	24.59	41.39	10.25	0	5	5
A16 Represents something that can be used to be exchanged for cash or other goods and services.	1.23	2.87	2.05	12.30	61.89	19.26	0.41	5	5
Future economic benefit									
A10 Represents something that can generate other things that can be exchanged for cash in the future.	0.00	1.64	4.92	23.36	56.56	12.30	1.23	5	5
A12 Represents something that can generate cash in the future.	0.41	1.64	3.28	16.39	55.74	22.54	0.00	5	5
Control									
A1 Ability to prevent others from using the asset at present.	6.15	27.46	9.84	17.62	26.64	10.66	1.64	4	2
A8 Ability to prevent others from obtaining the cash or goods and services that will be generated from the future use of the asset.	4.51	16.80	15.16	22.54	30.33	9.02	1.64	4	5
A15 Must be legally owned and enforceable.	0.82	4.51	5.74	8.20	45.08	35.66	0.00	5	5
Past event									
A6 Must be an outcome of a past exchange transaction.	2.46	11.48	13.52	18.03	42.21	11.48	0.82	5	5
A14 Must be an outcome of a past condition that may not involve an exchange transaction.	1.64	14.34	16.80	29.51	34.84	2.87	0	4	5

Appendix 8 Chi-square tests of attributes of assets versus cultural groups

Asymp. Sig. (2-sided)	Gender	Ethnicity	Religion	Age
Deferred expenditure or cost				
A2 Represents a deferred expenditure.	0.239	0.217	0.815	*0.036
A4 The cost or expenditure represents the asset.	0.845	0.985	0.789	0.082
Something real				
A3 Represents an entitlement to future cash or goods and services.	0.597	0.750	0.503	0.232
A11 Represents something that is real.	*0.047	0.967	0.852	**0.009
A16 Represents something that can be used to be exchanged for cash or other goods and services.	0.427	0.318	0.152	*0.027
Intangibles				
A5 Must have a physical or tangible form.	0.818	0.973	0.696	0.202
A7 Must be separable and has a separate disposal value.	*0.027	0.332	0.521	0.077
Legal ownership				
A15 Must be legally owned and enforceable.	0.544	0.118	0.746	0.951
Exchange transaction				
A6 Must be an outcome of a past exchange transaction.	0.983	*0.048	0.821	0.104
A13 Cost or expenditure must have been incurred.	0.861	0.264	0.690	0.376

** Sig. $p < 0.01$; * Sig. $p < 0.05$

Appendix 9 Wilcoxon signed rank test for criteria of relevance

Questions		N	Mean rank	Sum of ranks	Z-score	Asymp. sig. (2-tailed)
B1, C21	Positive Ranks	77	51.6	3972.0	-5.2587	**0.0000
	Negative Ranks	23	46.9	1078.0		
	Ties	142				
	Total	242				
B3, C18	Positive Ranks	65	56.7	3683.0	-1.2045	0.2284
	Negative Ranks	49	58.6	2872.0		
	Ties	126				
	Total	240				
B21, C1	Positive Ranks	31	41.3	1281.5	-0.6028	0.5466
	Negative Ranks	43	34.7	1493.5		
	Ties	167				
	Total	241				
B4, C19	Positive Ranks	63	45.4	2859.0	-3.2272	**0.0013
	Negative Ranks	28	47.4	1327.0		
	Ties	151				
	Total	242				
B16, C6	Positive Ranks	66	47.8	3152.5	-3.9180	**0.0001
	Negative Ranks	27	45.1	1218.5		
	Ties	149				
	Total	242				
B6, C16	Positive Ranks	98	57.0	5585.0	-6.8779	**0.0000
	Negative Ranks	16	60.6	970.0		
	Ties	127				
	Total	241				
B18, C4	Positive Ranks	53	47.3	2506.0	-1.5502	0.1211
	Negative Ranks	39	45.4	1772.0		
	Ties	148				
	Total	240				
B5, C17	Positive Ranks	87	60.0	5220.5	-4.6009	**0.0000
	Negative Ranks	32	60.0	1919.5		
	Ties	124				
	Total	243				
B17, C5	Positive Ranks	69	49.2	3397.5	-4.6732	**0.0000
	Negative Ranks	25	42.7	1067.5		
	Ties	147				
	Total	241				

** Sig. $p < 0.01$

Appendix 10 Wilcoxon signed rank test for criteria of reliability

Questions		N	Mean rank	Sum of ranks	Z-score	Asymp. sig. (2-tailed)
B15, C7	Positive Ranks	55	42.6	2342.5	-1.7003	0.0891
	Negative Ranks	33	47.7	1573.5		
	Ties	153				
	Total	241				
B9, C13	Positive Ranks	59	55.6	3278	-2.3017	*0.0214
	Negative Ranks	43	45.9	1975		
	Ties	139				
	Total	241				
B13, C9	Positive Ranks	56	51.6	2888	-0.7350	0.4624
	Negative Ranks	47	52.5	2468		
	Ties	136				
	Total	239				
B11, C11	Positive Ranks	56	55.4	3101	-1.2869	0.1981
	Negative Ranks	48	49.1	2359		
	Ties	136				
	Total	240				
B12, C10	Positive Ranks	61	48.3	2946.5	-3.0775	**0.0021
	Negative Ranks	32	44.5	1424.5		
	Ties	148				
	Total	241				
B7, C15	Positive Ranks	54	58.0	3131.5	-0.4216	0.6733
	Negative Ranks	55	52.1	2863.5		
	Ties	131				
	Total	240				
B10, C12	Positive Ranks	65	56.2	3655.5	-2.5076	*0.0122
	Negative Ranks	42	50.5	2122.5		
	Ties	135				
	Total	242				
B14, C8	Positive Ranks	70	49.5	3465.5	-4.3937	**0.0000
	Negative Ranks	26	45.8	1190.5		
	Ties	144				
	Total	240				
B8, C14	Positive Ranks	82	56.6	4638.5	-5.7721	**0.0000
	Negative Ranks	25	45.6	1139.5		
	Ties	135				
	Total	242				
B20, C2	Positive Ranks	65	48.9	3181.5	-4.6124	**0.0000
	Negative Ranks	26	38.6	1004.5		
	Ties	150				
	Total	241				

** Sig. $p < 0.01$; * Sig. $p < 0.05$

Appendix 11 Spearman's rank order correlation between motivational values and relevance in Section B

		Universalism	Benevolence	Conformity & Tradition	Security	Power	Achievement	Hedonism	Stimulation	Self-Direction
B1	Correlation Coefficient	0.1161	*0.1578	0.0548	0.0947	0.0748	**0.1782	*0.1329	*0.1554	*0.1425
	Sig. (2-tailed)	0.0721	0.0140	0.3978	0.1417	0.2457	0.0054	0.0396	0.0155	0.0267
	N	241	242	240	242	243	242	240	242	242
B3	Correlation Coefficient	0.1259	0.0941	0.0415	0.0258	0.0746	0.0641	-0.0400	0.0950	0.0763
	Sig. (2-tailed)	0.0520	0.1460	0.5239	0.6906	0.2485	0.3226	0.5392	0.1424	0.2387
	N	239	240	238	240	241	240	238	240	240
B4	Correlation Coefficient	*0.1632	*0.1291	-0.0154	*0.1353	0.1067	*0.1353	*0.1584	**0.2764	**0.2447
	Sig. (2-tailed)	0.0113	0.0453	0.8119	0.0358	0.0977	0.0359	0.0143	0.0000	0.0001
	N	240	241	240	241	242	241	239	241	241
B5	Correlation Coefficient	0.0752	0.0958	0.0568	0.0602	-0.0221	0.0586	0.0964	*0.1401	0.1148
	Sig. (2-tailed)	0.2445	0.1373	0.3810	0.3511	0.7313	0.3644	0.1364	0.0293	0.0747
	N	241	242	240	242	243	242	240	242	242
B6	Correlation Coefficient	*0.1499	*0.1533	0.0717	*0.1493	0.0654	0.1202	*0.1640	**0.2331	**0.1900
	Sig. (2-tailed)	0.0199	0.0170	0.2686	0.0201	0.3097	0.0620	0.0110	0.0003	0.0030
	N	241	242	240	242	243	242	240	242	242
B16	Correlation Coefficient	*0.1265	0.0858	0.0235	*0.1483	*0.1427	**0.1748	*0.1611	*0.1615	**0.2049
	Sig. (2-tailed)	0.0499	0.1832	0.7174	0.0210	0.0261	0.0064	0.0125	0.0119	0.0014
	N	241	242	240	242	243	242	240	242	242
B17	Correlation Coefficient	*0.1657	**0.1827	0.1071	**0.2377	*0.1278	**0.2023	**0.2326	**0.2216	**0.2521
	Sig. (2-tailed)	0.0101	0.0044	0.0985	0.0002	0.0471	0.0016	0.0003	0.0005	0.0001
	N	240	241	239	241	242	241	239	241	241
B18	Correlation Coefficient	**0.1984	**0.1745	0.0571	**0.2218	0.0957	**0.2142	*0.1663	**0.2096	**0.2334
	Sig. (2-tailed)	0.0020	0.0066	0.3797	0.0005	0.1377	0.0008	0.0100	0.0011	0.0003
	N	240	241	239	241	242	241	239	241	241
B21	Correlation Coefficient	0.0811	0.0306	0.0832	0.1010	0.0727	0.0649	0.1092	*0.1523	**0.1742
	Sig. (2-tailed)	0.2105	0.6367	0.1999	0.1180	0.2600	0.3160	0.0922	0.0180	0.0067
	N	240	241	239	241	242	241	239	241	241

** Sig. $p < 0.01$; * Sig. $p < 0.05$ (2-tailed)

Appendix 12 Spearman's rank order correlation between motivational values and relevance in Section C

		Universalism	Benevolence	Conformity & Tradition	Security	Power	Achievement	Hedonism	Stimulation	Self-Direction
C21	Correlation Coefficient	*0.1503	*0.1619	0.0988	**0.1855	**0.1781	**0.1942	**0.1670	*0.1392	**0.1897
	Sig. (2-tailed)	0.0196	0.0116	0.1271	0.0038	0.0054	0.0024	0.0095	0.0304	0.0031
	N	241	242	240	242	243	242	240	242	242
C18	Correlation Coefficient	0.0719	0.0935	0.0239	0.1256	*0.1414	**0.1807	0.0935	0.0614	0.0765
	Sig. (2-tailed)	0.2665	0.1471	0.7124	0.0511	0.0275	0.0048	0.1486	0.3414	0.2356
	N	241	242	240	242	243	242	240	242	242
C19	Correlation Coefficient	0.0977	0.1109	0.0546	**0.1776	*0.1426	*0.1365	0.1206	0.1032	*0.1300
	Sig. (2-tailed)	0.1298	0.0844	0.3990	0.0055	0.0259	0.0334	0.0616	0.1085	0.0429
	N	242	243	241	243	244	243	241	243	243
C17	Correlation Coefficient	*0.1412	0.1230	0.1070	**0.1718	*0.1257	*0.1426	*0.1608	0.1115	*0.1425
	Sig. (2-tailed)	0.0281	0.0555	0.0973	0.0073	0.0498	0.0263	0.0124	0.0828	0.0264
	N	242	243	241	243	244	243	241	243	243
C16	Correlation Coefficient	*0.1294	0.1142	0.0464	**0.1659	*0.1575	*0.1317	*0.1276	*0.1293	**0.1660
	Sig. (2-tailed)	0.0452	0.0767	0.4751	0.0099	0.0142	0.0411	0.0487	0.0450	0.0099
	N	240	241	239	241	242	241	239	241	241
C6	Correlation Coefficient	0.0899	0.1111	0.1203	**0.1856	*0.1527	**0.2043	0.1115	0.0757	*0.1344
	Sig. (2-tailed)	0.1641	0.0847	0.0627	0.0038	0.0172	0.0014	0.0847	0.2407	0.0366
	N	241	242	240	242	243	242	240	242	242
C5	Correlation Coefficient	*0.1520	**0.1683	0.1156	**0.1707	*0.1463	**0.2060	**0.1945	**0.1900	**0.1855
	Sig. (2-tailed)	0.0182	0.0087	0.0739	0.0078	0.0225	0.0013	0.0025	0.0030	0.0038
	N	241	242	240	242	243	242	240	242	242
C4	Correlation Coefficient	0.1251	*0.1322	0.1028	*0.1382	*0.1355	*0.1419	0.0923	0.1033	0.0817
	Sig. (2-tailed)	0.0529	0.0404	0.1130	0.0320	0.0352	0.0276	0.1548	0.1096	0.2065
	N	240	241	239	241	242	241	239	241	241
C1	Correlation Coefficient	0.1012	0.0813	0.0849	*0.1294	0.1135	0.1175	*0.1397	*0.1578	*0.1550
	Sig. (2-tailed)	0.1173	0.2074	0.1901	0.0443	0.0775	0.0681	0.0305	0.0140	0.0158
	N	241	242	240	242	243	242	240	242	242

** Sig. $p < 0.01$; * Sig. $p < 0.05$

Appendix 13 Spearman's rank order correlation between higher order values and reliability in Section B

** Sig. $p < 0.01$; * Sig. $p < 0.05$		Universalism	Benevolence	Conformity & Tradition	Security	Power	Achievement	Hedonism	Stimulation	Self-Direction
B7	Correlation Coefficient	0.0542	0.0171	0.0245	0.0065	0.0008	0.1004	0.0544	0.0534	0.0682
	Sig. (2-tailed)	0.4050	0.7931	0.7066	0.9198	0.9901	0.1218	0.4047	0.4114	0.2935
	N	238	239	238	239	240	239	237	239	239
B8	Correlation Coefficient	**0.1777	**0.1765	*0.1368	*0.1513	*0.1624	**0.2010	**0.2040	**0.2158	**0.2007
	Sig. (2-tailed)	0.0058	0.0060	0.0345	0.0187	0.0114	0.0017	0.0015	0.0007	0.0017
	N	240	241	239	241	242	241	239	241	241
B9	Correlation Coefficient	**0.1702	*0.1625	0.0786	0.0932	0.1126	**0.1923	**0.1745	**0.1814	**0.2293
	Sig. (2-tailed)	0.0083	0.0115	0.2258	0.1492	0.0803	0.0027	0.0068	0.0047	0.0003
	N	240	241	239	241	242	241	239	241	241
B10	Correlation Coefficient	0.1045	*0.1507	0.0589	0.1178	0.0926	*0.1526	0.1267	**0.1813	**0.1785
	Sig. (2-tailed)	0.1063	0.0192	0.3645	0.0680	0.1508	0.0177	0.0505	0.0048	0.0055
	N	240	241	239	241	242	241	239	241	241
B11	Correlation Coefficient	0.1250	**0.1813	0.0393	0.0809	0.0703	**0.1982	*0.1284	*0.1512	*0.1633
	Sig. (2-tailed)	0.0536	0.0048	0.5458	0.2116	0.2769	0.0020	0.0479	0.0191	0.0113
	N	239	240	238	240	241	240	238	240	240
B12	Correlation Coefficient	0.1206	0.1013	0.1029	0.1241	0.0703	*0.1342	*0.1513	*0.1370	*0.1539
	Sig. (2-tailed)	0.0620	0.1166	0.1124	0.0544	0.2760	0.0374	0.0193	0.0335	0.0168
	N	240	241	239	241	242	241	239	241	241
B13	Correlation Coefficient	*0.1543	0.1038	*0.1575	**0.2094	0.0701	0.1196	0.1236	*0.1324	*0.1516
	Sig. (2-tailed)	0.0172	0.1096	0.0152	0.0011	0.2795	0.0649	0.0574	0.0409	0.0190
	N	238	239	237	239	240	239	237	239	239
B14	Correlation Coefficient	0.0939	0.1129	0.1118	*0.1645	0.1008	**0.1861	0.1093	*0.1302	0.1254
	Sig. (2-tailed)	0.1479	0.0809	0.0852	0.0107	0.1187	0.0038	0.0924	0.0439	0.0524
	N	239	240	238	240	241	240	238	240	240
B15	Correlation Coefficient	0.0867	*0.1411	0.0842	*0.1317	0.0559	0.1153	0.1115	0.0805	0.1166
	Sig. (2-tailed)	0.1805	0.0286	0.1948	0.0411	0.3868	0.0739	0.0854	0.2133	0.0708
	N	240	241	239	241	242	241	239	241	241
B19	Correlation Coefficient	0.1004	0.1243	0.0369	**0.2159	0.1196	*0.1434	*0.1611	**0.1891	**0.2289
	Sig. (2-tailed)	0.1200	0.0534	0.5695	0.0007	0.0628	0.0257	0.0125	0.0031	0.0003
	N	241	242	240	242	243	242	240	242	242
B20	Correlation Coefficient	0.0987	0.1137	0.0388	0.1081	0.0427	0.0919	**0.1863	0.0958	0.1242
	Sig. (2-tailed)	0.1274	0.0781	0.5502	0.0942	0.5084	0.1550	0.0038	0.1382	0.0542
	N	240	241	239	241	242	241	239	241	241

Appendix 14 Spearman's rank order correlation between motivational values and reliability in Section C

** Sig. $p < 0.01$; * Sig. $p < 0.05$		Universalism	Benevolence	Conformity & Tradition	Security	Power	Achievement	Hedonism	Stimulation	Self-Direction
C15	Correlation Coefficient	0.0457	0.0289	-0.0096	0.0413	-0.0287	0.0888	0.0827	-0.0126	0.0439
	Sig. (2-tailed)	0.4797	0.6544	0.8819	0.5225	0.6562	0.1684	0.2017	0.8458	0.4964
	N	241	242	240	242	243	242	240	242	242
C14	Correlation Coefficient	0.1256	*0.1626	0.0941	*0.1599	*0.1269	*0.1620	0.1211	0.1195	*0.1330
	Sig. (2-tailed)	0.0515	0.0113	0.1461	0.0128	0.0481	0.0116	0.0611	0.0635	0.0387
	N	241	242	240	242	243	242	240	242	242
C13	Correlation Coefficient	0.0903	*0.1463	0.0456	*0.1310	*0.1270	*0.1522	**0.1735	*0.1567	*0.1597
	Sig. (2-tailed)	0.1633	0.0231	0.4827	0.0422	0.0484	0.0181	0.0072	0.0149	0.0131
	N	240	241	239	241	242	241	239	241	241
C12	Correlation Coefficient	0.0853	0.1254	0.0455	0.1220	0.0881	0.0667	0.0952	0.0976	0.1142
	Sig. (2-tailed)	0.1867	0.0513	0.4825	0.0580	0.1711	0.3011	0.1413	0.1298	0.0761
	N	241	242	240	242	243	242	240	242	242
C11	Correlation Coefficient	*0.1303	**0.1940	0.0872	*0.1437	0.1061	*0.1544	*0.1298	*0.1305	**0.1662
	Sig. (2-tailed)	0.0441	0.0025	0.1799	0.0261	0.1005	0.0167	0.0455	0.0435	0.0099
	N	239	240	238	240	241	240	238	240	240
C10	Correlation Coefficient	**0.1867	*0.1377	*0.1336	**0.2101	0.0759	*0.1375	*0.1560	0.1217	**0.1691
	Sig. (2-tailed)	0.0036	0.0322	0.0387	0.0010	0.2382	0.0326	0.0156	0.0586	0.0084
	N	241	242	240	242	243	242	240	242	242
C9	Correlation Coefficient	*0.1420	*0.1486	*0.1589	**0.2288	0.1102	*0.1455	0.1005	0.1221	0.1208
	Sig. (2-tailed)	0.0275	0.0208	0.0137	0.0003	0.0866	0.0236	0.1203	0.0579	0.0606
	N	241	242	240	242	243	242	240	242	242
C8	Correlation Coefficient	0.0810	*0.1393	0.0244	0.1002	0.0796	0.0790	0.1102	0.0810	0.1193
	Sig. (2-tailed)	0.2114	0.0306	0.7069	0.1206	0.2171	0.2216	0.0891	0.2102	0.0644
	N	240	241	239	241	242	241	239	241	241
C7	Correlation Coefficient	0.1245	**0.1895	0.1112	**0.1716	0.1012	*0.1562	0.1001	0.1090	*0.1311
	Sig. (2-tailed)	0.0540	0.0031	0.0862	0.0076	0.1162	0.0152	0.1228	0.0913	0.0420
	N	240	241	239	241	242	241	239	241	241
C3	Correlation Coefficient	*0.1326	0.1100	0.0654	**0.1866	0.0989	*0.1494	*0.1540	0.0803	*0.1507
	Sig. (2-tailed)	0.0401	0.0884	0.3143	0.0036	0.1251	0.0203	0.0172	0.2145	0.0193
	N	240	241	239	241	242	241	239	241	241
C2	Correlation Coefficient	0.0950	*0.1360	0.0724	*0.1424	0.0293	0.0898	*0.1283	0.0329	0.1076
	Sig. (2-tailed)	0.1422	0.0349	0.2648	0.0270	0.6503	0.1645	0.0475	0.6112	0.0956
	N	240	241	239	241	242	241	239	241	241

Appendix 15 Chi-square tests for relevance and reliability judgment versus cultural groups – Section B

Asymp. Sig. (2-sided)	Gender	Ethnicity	Religion	Age
Relevance:				
B1 The information is useful for investment decisions.	0.311	0.179	0.177	0.549
B3 The information provides something unique and different about the company.	0.200	*0.040	0.144	0.132
B4 The information is related to investment decisions.	0.496	0.701	0.250	0.494
B5 The information is necessary to show a complete picture of the company.	0.644	0.657	0.967	0.718
B6 The information improves investors' ability to make an appropriate decision.	0.490	0.912	0.281	0.700
B16 The information adds to investors' knowledge about the company.	0.306	0.618	0.608	0.830
B17 The information is necessary to show an in-depth picture of the company.	0.130	0.852	0.245	0.295
B18 The information provides something new and timely about the company.	0.219	0.660	0.564	0.434
B21 The information has the capacity to influence investors' decision.	0.711	0.973	0.401	0.340
Reliability:				
B7 The information does not sway the decision to a predetermined outcome.	0.814	0.470	0.907	0.196
B8 The information is effective.	0.113	0.382	*0.027	0.879
B9 The information accurately represents the facts.	0.960	0.838	0.179	0.430
B10 The information is easy to understand.	0.201	0.379	**0.009	0.092
B11 The information is of quality.	0.929	0.950	0.512	0.505
B12 The information reflects economic reality.	0.529	0.450	*0.042	0.110
B13 The information meets the need for a cautious approach.	0.747	0.772	0.325	0.070
B14 The information is not confusing.	0.091	0.752	0.802	*0.020
B15 The information is credible.	0.223	0.706	0.720	0.237
B19 The information will help in evaluating trends and relative performance.	**0.010	0.284	0.134	0.250
B20 The information is not ambiguous.	*0.036	0.595	0.844	**0.002
Constraint:				
B2 The benefits derived from this information exceed the cost to obtain it.	0.986	0.445	0.828	0.405

** Sig. $p < 0.01$; * Sig. $p < 0.05$

Appendix 16 Chi-square tests for relevance and reliability judgment versus cultural groups – Section C

Asymp. Sig. (2-sided)	Gender	Ethnicity	Religion	Age
Relevance:				
C21 The information is useful for investment decisions.	0.309	0.097	0.188	0.288
C18 The information provides something unique and different about the company.	0.211	0.590	0.196	0.759
C19 The information is related to investment decisions.	0.234	0.112	0.325	0.819
C17 The information is necessary to show a complete picture of the company.	0.724	0.309	0.486	0.669
C16 The information improves investors' ability to make an appropriate decision.	0.449	0.184	0.180	0.931
C6 The information adds to investors' knowledge about the company.	0.818	0.438	0.053	0.343
C5 The information is necessary to show an in-depth picture of the company.	0.490	*0.035	*0.041	0.205
C4 The information provides something new and timely about the company.	0.489	0.571	0.310	0.340
C1 The information has the capacity to influence investors' decision.	0.965	0.196	**0.008	0.605
Reliability:				
C15 The information does not sway the decision to a predetermined outcome.	0.225	0.790	0.758	0.134
C14 The information is effective.	0.066	0.252	0.416	0.576
C13 The information accurately represents the facts.	0.209	**0.007	0.146	0.824
C12 The information is easy to understand.	0.098	0.056	0.212	0.187
C11 The information is of quality.	0.214	0,081	0.466	0.571
C10 The information reflects economic reality.	0.114	0.203	*0.046	0.118
C9 The information meets the need for a cautious approach.	0.339	0,698	0.280	**0.009
C8 The information is not confusing.	0.197	0.455	0.577	0.519
C7 The information is credible.	0.452	0.469	0,170	*0.016
C3 The information will help in evaluating trends and relative performance.	0.635	0.266	0.285	0.122
C2 The information is not ambiguous.	0.246	0.547	0.097	**0.001
Constraint:				
C20 The benefits derived from this information exceed the cost to obtain it.	0.789	*0.042	0.264	0.986

** Sig. $p < 0.01$; * Sig. $p < 0.05$

Appendix 17 Letter of introduction

Dear Sir/Madam,

I am working towards a Doctor of Philosophy degree in the School of Accounting and Finance at Victoria University of Australia. The research project being undertaken seeks to examine whether cultural values of accountants in Malaysia affect their interpretation and application of accounting concepts applied in International Financial Reporting Standards (IFRS).

There has been a global thrust for the convergence of national accounting standards with IFRS. A major barrier to convergence is the impact of culture on accounting practice. Differences in cultural values can create different interpretation and application of accounting concepts and principles. The aim of this research is to investigate how differences in cultural values of accountants affect their understanding of the term asset and their application of the relevance and reliability criteria in the recognition of a certain type of asset. The Cultural Relativism Theory and the International Accounting Standards Board's Framework for the Preparation and Presentation of Financial Statements are used to inform the conduct of this research.

You are invited to participate in this project. While your cooperation in completing the questionnaire is highly valued, your participation is voluntary. The results will be used only in an aggregated form and, therefore, your anonymity and the confidentiality of your responses are assured. The completed questionnaire will be securely stored and made available only to my project supervisors and me. Access to any coding of information in the questionnaire will also be restricted to my project supervisors and me.

The results will be contained in the thesis that will be available at the Victoria University library in Melbourne. It is also hoped that aspects of the results will be published in aggregate in various professional and academic journals.

Your participation will be appreciated and I look forward to receiving your completed questionnaire by 31 July 2006. Should you have any queries regarding the project or questionnaire, please feel free to contact me on 012-3790565 or e-mail foo-yf@academic.sunway.edu.my or my senior supervisor, Dr. Jeffrey Faux, on e-mail jeffrey.faux@vu.edu.au.

Thank you.

Yours faithfully,

Foo Yin Fah

If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University, PO Box 14428 MCMC, Melbourne, VIC 8001, Australia (Telephone no: 613-9919 4710).

Appendix 18 Letter of reminder

Dear Sir/Madam,

Recently I sent you a questionnaire seeking responses to a research project I am undertaking for a Doctor of Philosophy degree through the School of Accounting and Finance at Victoria University of Australia.

If you have already completed and returned it to me, please accept my sincere thanks. If not, I would be grateful if you could do so as the validity of the results depends on getting a significant number of completed questionnaires.

If by some chance you did not receive the questionnaire, or it has been misplaced, please contact me on 012-3790565 or e-mail foo-yf@academic.sunway.edu.my and I will send another one immediately.

Thank you in anticipation of your co-operation.

Yours faithfully,

Foo Yin Fah

Appendix 19 Final e-mail reminder

Dear Sir/Madam,

I have recently corresponded with you via postal mail, seeking responses to a research project I am undertaking for a Doctor of Philosophy degree through the School of Accounting and Finance at Victoria University, Australia. Social science projects such as this depend on the cooperation of people like yourself. I appreciate you are busy and requests from strangers are time consuming but this project could make a difference to the understanding of how accountants view the introduction of fair value accounting. If you have already responded to my earlier postal mail requests, please ignore this reminder and accept my sincere gratitude for your kind assistance.

If not, I would appreciate very much if you could complete and return the attached electronic copy of the survey questionnaire. The validity of the results of this project depends on getting a significant number of completed questionnaires. The results will be used only in an aggregated form and therefore your anonymity and confidentiality is assured.

Thank you in anticipation of your cooperation.

Best regards,

Foo Yin Fah

Appendix 20 Survey questionnaire

Foo Yin Fah
Victoria University
Australia

Title of Research Study:

A Cross-Cultural Study of Accounting Concepts Applied in International Financial Reporting Standards

SURVEY QUESTIONNAIRE

The following pages contain a series of questions about you, your values and your perception of a certain accounting problem. Please answer each question in the order it is presented, as completely and honestly as you can.

Your answers will remain strictly confidential. The questionnaire should take about 30 minutes to complete. Your co-operation is invaluable to the success of this research study.

Section A

Here are some statements describing the characteristics of assets that are reported in the financial statements. Please read each statement and consider, in your own opinion, the extent that you agree or disagree with each of them by ticking (✓) the appropriate box. *Please ignore what is stated in accounting texts and literature on assets and evaluate the statements based on your own perception of what assets should be*.

	In your opinion, what characteristics should assets reported in financial statements possess?	**Strongly agree**	**Agree**	**Agree some-what**	**Disagree some-what**	**Disagree**	**Strongly disagree**
A1.	Ability to prevent others from using the asset at present.	☐	☐	☐	☐	☐	☐
A2.	Represents a deferred expenditure.	☐	☐	☐	☐	☐	☐
A3.	Represents an entitlement to future cash or goods and services.	☐	☐	☐	☐	☐	☐
A4.	The cost or expenditure represents the asset.	☐	☐	☐	☐	☐	☐
A5.	Must have a physical or tangible form.	☐	☐	☐	☐	☐	☐
A6.	Must be an outcome of a past exchange transaction.	☐	☐	☐	☐	☐	☐
A7.	Must be separable and has a separate disposal value.	☐	☐	☐	☐	☐	☐
A8.	Ability to prevent others from obtaining the cash or goods and services that will be generated from the future use of the asset.	☐	☐	☐	☐	☐	☐
A9.	Represents scarce goods and services.	☐	☐	☐	☐	☐	☐
A10.	Represents something that can generate other things that can be exchanged for cash in the future.	☐	☐	☐	☐	☐	☐
A11.	Represents something that is real.	☐	☐	☐	☐	☐	☐
A12.	Represents something that can generate cash in the future.	☐	☐	☐	☐	☐	☐
A13.	Cost or expenditure must have been incurred.	☐	☐	☐	☐	☐	☐
A14.	Must be an outcome of a past condition that may not involve an exchange transaction.	☐	☐	☐	☐	☐	☐
A15.	Must be legally owned and enforceable.	☐	☐	☐	☐	☐	☐
A16.	Represents something that can be used to be exchanged for cash or other goods and services.	☐	☐	☐	☐	☐	☐

A17. Describe any other characteristics or features that you think assets reported in the financial statements should possess.

Please write within the space below

Please read the following scenario carefully and then answer the questions in Sections B & C.

'*X*' is an experienced accountant at *ABC Berhad*, a public listed company involved in the cultivation of oil palm for the production of crude palm oil and palm kernel. The company has substantial plantation area located throughout Malaysia. *ABC Berhad* is a profitable company and has been reporting healthy growth in profits over the past five years.

Currently, the plantations are reported in the financial statements as plantation land under property, plant and equipment, and are measured at cost. The costs incurred in land clearing for new planting activities until the point of harvest are capitalised as plantation development expenditure and classified as part of property, plant and equipment. These plantation expenditures are not amortised. Costs incurred in replanting old planted areas are charged to the income statement in the period it is incurred.

'*X*' is of the opinion that historical cost is not an appropriate valuation method for the oil palm plantation. Historical cost does not reflect the natural growth of the oil palm trees. As a result, it is unable to provide useful information about the value of the oil palm plantations. '*X*' suggests that the oil palm plantations should reflect the current market value of the oil palm trees. In addition, '*X*' feels that since the growth of the oil palm trees reveals management's ability to manage the plantation, any increase or decrease in the current market value of these oil palm trees should be included in the net profit or loss in the period the increase or decrease occurs.

Please turn to the next page

Section B

Here are some statements that may be used to support the decision to value oil palm trees at current market value, based on the scenario described earlier on page 2. As preparers of financial statements, please rate how much you agree or disagree with each of these statements by ticking (✓) the appropriate box. *There are no right or wrong answers. Your initial impressions and feelings are important.*

What is your opinion about valuing oil palm trees at current market value in the scenario described earlier on page 2?	**Strongly agree**	**Agree**	**Agree some-what**	**Disagree some-what**	**Disagree**	**Strongly disagree**
B1. The information is useful for investment decisions.	☐	☐	☐	☐	☐	☐
B2. The benefits derived from this information do not justify the cost to obtain it.	☐	☐	☐	☐	☐	☐
B3. The information provides something unique and different about the company.	☐	☐	☐	☐	☐	☐
B4. The information is related to investment decisions.	☐	☐	☐	☐	☐	☐
B5. The information is necessary to show a complete picture of the company.	☐	☐	☐	☐	☐	☐
B6. The information improves investors' ability to make an appropriate decision.	☐	☐	☐	☐	☐	☐
B7. The information does not sway the decision to a predetermined outcome.	☐	☐	☐	☐	☐	☐
B8. The information is effective.	☐	☐	☐	☐	☐	☐
B9. The information accurately represents the facts.	☐	☐	☐	☐	☐	☐
B10. The information is easy to understand.	☐	☐	☐	☐	☐	☐
B11. The information is of quality.	☐	☐	☐	☐	☐	☐
B12. The information reflects economic reality.	☐	☐	☐	☐	☐	☐
B13. The information meets the need for a cautious approach.	☐	☐	☐	☐	☐	☐
B14. The information is not confusing.	☐	☐	☐	☐	☐	☐
B15. The information is credible.	☐	☐	☐	☐	☐	☐
B16. The information adds to investors' knowledge about the company.	☐	☐	☐	☐	☐	☐
B17. The information is necessary to show an in-depth picture about the company.	☐	☐	☐	☐	☐	☐
B18. The information provides something new and timely about the company.	☐	☐	☐	☐	☐	☐
B19. The information will help in evaluating trends and relative performance.	☐	☐	☐	☐	☐	☐
B20. The information is not ambiguous.	☐	☐	☐	☐	☐	☐
B21. The information has the capacity to influence investors' decision.	☐	☐	☐	☐	☐	☐

B22. Describe any other opinion that you may have concerning the measurement of oil palm trees at current market values.

Please write within the space below

Section C

Here are some statements that may be used to support the decision to report increases or decreases in the current market value of oil palm trees in the net profit or loss for the period, based on the scenario described earlier on page 2. As preparers of financial statements, please rate how much you agree or disagree with each of these statements by ticking (✓) the appropriate box. *There are no right or wrong answers. Your initial impressions and feelings are important.*

What is your opinion about reporting increases or decreases in the current market value of oil palm trees in the net profit or loss for the period in the scenario described earlier on page 2?	**Strongly agree**	**Agree**	**Agree some-what**	**Disagree some-what**	**Disagree**	**Strongly disagree**
C1. The information has the capacity to influence investors' decision.	☐	☐	☐	☐	☐	☐
C2. The information is not ambiguous.	☐	☐	☐	☐	☐	☐
C3. The information will help in evaluating trends and relative performance.	☐	☐	☐	☐	☐	☐
C4. The information provides something new and timely about the company.	☐	☐	☐	☐	☐	☐
C5. The information is necessary to show an in-depth picture about the company.	☐	☐	☐	☐	☐	☐
C6. The information adds to investors' knowledge about the company.	☐	☐	☐	☐	☐	☐
C7. The information is credible.	☐	☐	☐	☐	☐	☐
C8. The information is not confusing.	☐	☐	☐	☐	☐	☐
C9. The information meets the need for a cautious approach.	☐	☐	☐	☐	☐	☐
C10. The information reflects economic reality.	☐	☐	☐	☐	☐	☐

What is your opinion about reporting increases or decreases in the current market value of oil palm trees in the net profit or loss for the period in the scenario described earlier on page 2?	**Strongly agree**	**Agree**	**Agree some-what**	**Disagree some-what**	**Disagree**	**Strongly disagree**
C11. The information is of quality.	☐	☐	☐	☐	☐	☐
C12. The information is easy to understand.	☐	☐	☐	☐	☐	☐
C13. The information accurately represents the facts.	☐	☐	☐	☐	☐	☐
C14. The information is effective.	☐	☐	☐	☐	☐	☐
C15. The information does not sway the decision to a predetermined outcome.	☐	☐	☐	☐	☐	☐
C16. The information improves investors' ability to make an appropriate decision.	☐	☐	☐	☐	☐	☐
C17. The information is necessary to show a complete picture of the company.	☐	☐	☐	☐	☐	☐
C18. The information provides something unique and different about the company.	☐	☐	☐	☐	☐	☐
C19. The information is related to investment decisions.	☐	☐	☐	☐	☐	☐
C20. The benefits derived from this information do not justify the cost to obtain it.	☐	☐	☐	☐	☐	☐
C21. The information is useful for investment decisions.	☐	☐	☐	☐	☐	☐

C22. Describe any other opinion that you may have concerning the reporting of increases or decreases in the current market values of oil palm trees in the net profit or loss for the period.

Please write within the space below

Section D

The goals, aspirations and wishes of some people are briefly described below. Please read each description and think how much each person is or is not like you. Tick (✓) the box that shows how much the person in the description is like you. *There are no right or wrong answers. Your initial impressions and feelings are important.*

	How much like you is this person?	**Very much like me**	**Like me**	**Some-what like me**	**A little like me**	**Not like me**	**Not like me at all**
D1.	Thinking up new ideas and being creative is important to this person. This person likes to do things in his/her own original way.	☐	☐	☐	☐	☐	☐
D2.	It is important to this person to be rich. This person wants to have a lot of money and expensive things.	☐	☐	☐	☐	☐	☐
D3.	This person thinks it is important that everyone in the world be treated equally. This person believes everyone should have equal opportunities in life.	☐	☐	☐	☐	☐	☐
D4.	It is very important to this person to show his/her abilities. This person wants people to admire what he/she does.	☐	☐	☐	☐	☐	☐
D5.	It is important to this person to live in secure surroundings. This person avoids anything that might endanger his/her safety.	☐	☐	☐	☐	☐	☐
D6.	This person thinks it is important to do lots of different things in life. This person always looks for new things to try.	☐	☐	☐	☐	☐	☐
D7.	This person believes that people should do what they are told. This person thinks people should follow rules at all times, even when no one is watching.	☐	☐	☐	☐	☐	☐
D8.	It is important to this person to listen to people who are different from him/her. Even when this person disagrees with them, he/she still wants to understand them.	☐	☐	☐	☐	☐	☐
D9.	This person thinks it is important not to ask for more than what you have. This person believes that people should be satisfied with what they have.	☐	☐	☐	☐	☐	☐
D10.	This person seeks every chance he/she can to have fun. It is important to this person to do things that give him/her pleasure.	☐	☐	☐	☐	☐	☐
D11.	It is important to this person to make his/her own decisions about what he/she does. This person likes to be free to plan and to choose his/her activities for himself/herself.	☐	☐	☐	☐	☐	☐

How much like you is this person?		Very much like me	Like me	Some-what like me	A little like me	Not like me	Not like me at all
D12.	It is very important to this person to help the people around him/her. This person wants to care for their well-being.	☐	☐	☐	☐	☐	☐
D13.	Being very successful is important to this person. This person likes to impress other people.	☐	☐	☐	☐	☐	☐
D14.	It is very important to this person that his/her country be safe. This person thinks the state must be on watch against threats from within and without.	☐	☐	☐	☐	☐	☐
D15.	This person likes to take risks. This person is always looking for adventures.	☐	☐	☐	☐	☐	☐
D16.	It is important to this person always to behave properly. This person wants to avoid doing anything people would say is wrong.	☐	☐	☐	☐	☐	☐
D17.	It is important to this person to be in charge and tell others what to do. This person wants people to do what he/she says.	☐	☐	☐	☐	☐	☐
D18.	It is important to this person to be loyal to his/her friends. This person wants to devote himself/herself to people close to him/her.	☐	☐	☐	☐	☐	☐
D19.	This person strongly believes that people should care for nature. Looking after the environment is important to this person.	☐	☐	☐	☐	☐	☐
D20.	Religious belief is important to this person. This person tries hard to do what his/her religion requires.	☐	☐	☐	☐	☐	☐
D21.	It is important to this person that things are organized and clean. This person really does not like things to be a mess.	☐	☐	☐	☐	☐	☐
D22.	This person thinks it is important to be interested in things. This person likes to be curious and to try to understand all sorts of things.	☐	☐	☐	☐	☐	☐
D23.	This person believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to this person.	☐	☐	☐	☐	☐	☐
D24.	This person thinks it is important to be ambitious. This person wants to show how capable he/she is.	☐	☐	☐	☐	☐	☐

How much like you is this person?		Very much like me	Like me	Some-what like me	A little like me	Not like me	Not like me at all
D25.	This person thinks it is best to do things in traditional ways. It is important to this person to keep up the customs he/she has learned.	☐	☐	☐	☐	☐	☐
D26.	Enjoying life's pleasures is important to this person. This person likes to 'spoil' himself/herself.	☐	☐	☐	☐	☐	☐
D27.	It is important to this person to respond to the needs of others. This person tries to support those he/she knows.	☐	☐	☐	☐	☐	☐
D28.	This person believes he/she should always show respect to his/her parents and to older people. It is important to this person to be obedient.	☐	☐	☐	☐	☐	☐
D29.	This person wants everyone to be treated justly, even people he/she doesn't know. It is important to this person to protect the weak in society.	☐	☐	☐	☐	☐	☐
D30.	This person likes surprises. It is important to this person to have an exciting life.	☐	☐	☐	☐	☐	☐
D31.	This person tries hard to avoid getting sick. Staying healthy is very important to this person.	☐	☐	☐	☐	☐	☐
D32.	Getting ahead in life is important to this person. This person strives to do better than others.	☐	☐	☐	☐	☐	☐
D33.	Forgiving people who have hurt him/her is important to this person. This person tries to see what is good in them and not to hold a grudge.	☐	☐	☐	☐	☐	☐
D34.	It is important to this person to be independent. This person likes to rely on himself/herself.	☐	☐	☐	☐	☐	☐
D35.	Having a stable government is important to this person. This person is concerned that the social order be protected.	☐	☐	☐	☐	☐	☐
D36.	It is important to this person to be polite to other people all the time. This person tries never to disturb or irritate others.	☐	☐	☐	☐	☐	☐
D37.	This person really wants to enjoy life. Having a good time is very important to this person.	☐	☐	☐	☐	☐	☐

How much like you is this person?		Very much like me	Like me	Some-what like me	A little like me	Not like me	Not like me at all
D38.	It is important to this person to be humble and modest. This person tries not to draw attention to himself/herself.	☐	☐	☐	☐	☐	☐
D39.	This person always wants to be the one who makes the decisions. This person likes to be the leader.	☐	☐	☐	☐	☐	☐
D40.	It is important to this person to adapt to nature and to fit into it. This person believes that people should not change nature.	☐	☐	☐	☐	☐	☐

Section E

Please provide some background information about yourself. Answer the questions by ticking (✓) the appropriate box. Please mark only one box unless otherwise stated.

E1. What is your age range?

- 29 and below ☐
- 30 – 39 ☐
- 40 – 49 ☐
- 50 – 59 ☐
- 60 and above ☐

E2. What is your gender?

- Male ☐
- Female ☐

E3. Which race or ethnic group do you belong to?

- Malay ☐
- Chinese ☐
- Indian ☐
- Others ☐ Please state: ……

E4. What is your religion?

- Islam ☐
- Christianity ☐
- Buddhism ☐
- Hinduism ☐
- Others ☐ Please state: ……

E5. Please state the languages and dialects that you speak fluently?

……

……

E6. Where did you complete your primary school education (or its equivalent)?

Malaysia	☐	
Overseas	☐	Please state country and years spent overseas:

……

E7. Where did you complete your secondary school education (or its equivalent)?

Malaysia	☐	
Overseas	☐	Please state country and years spent overseas:

……

E8. Where did you obtain your undergraduate university education (or its equivalent e.g. ACCA)?

Malaysia	☐	
Overseas	☐	Please state country and years spent overseas:

……

E9. How many years have you worked in public accounting firms?
* You may select more than one

None	☐	
Audit	☐	No. of years ……
Tax	☐	No. of years ……
Consultancy	☐	No. of years ……
Others	☐	No. of years ……

E10. How many years have you worked in organisations other than public accounting firms?
* You may select more than one

None	☐	
Industry	☐	No. of years ……
Academia	☐	No. of years ……
Government	☐	No. of years ……
Others	☐	Please state: ……. No. of years ……..

E11. Which professional accounting association are you a member of?
* You may select more than one

MIA	☐	
MICPA	☐	
ACCA	☐	
ICAEW	☐	
CPAA	☐	
ICAA	☐	
Others	☐	Please state: …….

E12. What is your current job title in your organisation?

……

Thank you for taking the time to complete this questionnaire.