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THE DYNAMIC RELATIONSHIP BETWEEN CULTURE
AND ACCOUNTING: AN EMPIRICAL EXAMINATION
OF THE INDONESIAN SETTING

by

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Submitted in partial fulfillment of the requirements
for the Degree of Doctor of Philosophy

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JANUARY 1995
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*We also certify that written approval has been obtained for any proprietary material contained therein.
Abstract

by

SUDARWAN

This dissertation examines the relationships among the cultural characteristics of Indonesian society, financial reporting practices of Indonesian firms, and accounting standards promulgated by the Association of Indonesian Accountants. The examination covers the period between 1981 and 1992 and includes a sample of 108 financial reports of Indonesian firms. It is argued that an empirical relation exists between cultural values and accounting in Indonesia.

Three related models are developed to capture the association between culture and accounting in Indonesia. The first model identifies significant cultural values present in Indonesian society. The second model relates accounting values and accounting practices in Indonesia. These two models are designed to test Hofstede's theory of the five dimensions of cultural values (power distance, uncertainty avoidance, individualism, masculinity, and time horizon) and Gray's four dimensions of accounting values (professionalism, conservatism, secrecy, and uniformity) as applied in Indonesia. We use results these tests to construct the third model dealing with the relationships
between cultural values and accounting values in the
development of Indonesian accounting practices.

Linear Structural Relations (LISREL) was used to test
the validity of these models. Our findings suggest that
while all four Gray's accounting values are confirmed in
Indonesian accounting practices, four out of Hofstede's
five dimensions of culture (excepting time horizon) are
significantly apparent in Indonesian culture. We also find
that while masculinity is a significant factor of
Indonesian culture, it is not significantly related to any
one of the four values of Indonesian accounting practices.
In other words, three of Hofstede's five cultural values
(power distance, uncertainty avoidance, and individualism)
have significant relationships with one or more accounting
values.

Further examination reveals that the relations of
these three cultural values with two of the accounting
values, conservatism and uniformity, confirm our hypotheses.
Our results do not support the hypothesized relationships
between these three cultural values and two other
accounting values, professionalism and secrecy. We believe
that conflicting influences of extensive government
involvement in the economy and market competition on
business decisions of Indonesian firms are a plausible
explanation of these mixed results.
DEDICATION

This dissertation is dedicated to my Mom, whose "never give up" attitude has been the source of inspiration to my study and my work ethic, to my wife, Jamilah Sudarwan, whose support has been unfailing, and to my three sons -- Fajar, Pramana, and Ilman -- who have to share the quality time of a student dad with "never finished" school related work.
ACKNOWLEDGEMENTS

This dissertation could not be completed without the help and support of many others. I would like to thank the members of my dissertation committee, Professors Timothy J. Fogarty, Gary J. Previts, Larry M. Parker and Arthur Wilson for the time, patience, guidance, constructive comments and feedback they gave during the exploration of ideas and the completion of this project. The encouragement and helpful comments from Professor Julia Grant are also very much appreciated. I also want to express my appreciation for the support from my colleague in study, Rodney Rogers, who knew best the ups and downs of my spirit throughout the completion of this program of study.

I would also like to acknowledge the financial support from my Government (Indonesia) throughout my study in the United States. I am also thankful to Messrs. Daniel Baldini (World Bank), Dedy Hendarwan (BPKP), Agus Muhamad (Bapepam), D. Ganjarsidik (Data Consult Inc.), Pionir Harapan (Garuda) and others for providing me with the data needed for this study.

Above all, I am very grateful to Allah Most Gracious, Most Merciful. Alhamdulillah, praise be to Allah.
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Patterns of Relationships between Culture and Accounting

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CHAPTER I
INTRODUCTION

1. Research Purpose

This study advances the proposition that culture is instrumental in the development of accounting. Culture is a major societal context in which accounting operates and develops. Accounting, on the other hand, serves and shapes its societal context. In this sense, the interactions between culture and accounting shapes the process of accounting change.

This study empirically examines the relationships between culture and accounting over the period of 1981 to 1992 in Indonesia. In the process, we analyze the nature of Indonesian culture, Indonesian firms' financial reporting practices, and Indonesian accounting standards. The purpose of this analysis is to identify significant aspects of Indonesian culture and their association with the development of Indonesian accounting practice. It is expected that our results help clarify the role of culture in the development of Indonesian accounting practice. These results may also interest government agencies and the accounting profession in formulating effective policies concerning economic and accounting development in Indonesia. This study may also stand as a model for the
study of the relationships between culture and accounting in other nations.

2. Background

Early on, study of accounting change focused on normative approaches aimed at developing criteria for changes in the disclosure of financial reports. The factors driving such changes were identified as cognitive complexity of individual users (e.g., Revsine 1970; Miller 1972; Dermer 1973), information usefulness for investors' decisions (e.g., Stallman 1969; Dascher and Copeland 1971), and information quality as perceived by financial analysts (e.g., Horngren 1955; Cerf 1961; Singhvi and Desai 1971).

In the late 1970s and 1980s studies of changes in the disclosure of financial reports moved toward the framework of positive accounting research paradigm. This line of research attempted to explain and predict how self-interested individuals behave when confronted with the economic consequences of certain accounting issues. These studies examined how interactions between the interests of the state, the market, and the community prompted changes in the disclosure of financial reports. Topics discussed along these lines include the economic and political consequences of accounting choice. Accounting choice models developed within this context had a different set of independent variables including ownership structure of
firms (e.g., Smith 1976; Watts and Zimmerman 1978; Niehus 1989), management compensation plans (e.g., Healy 1985; Anderson and Louderback 1975), debt covenants (e.g., Leftwich 1981), and firms' political visibility (e.g., Wong 1988; Collins et al. 1981). Mainly, positive accounting research frames the disclosure of financial reports as a discretionary choice of management.

Both sets of studies, regardless of the approach used to examine changes in the disclosure of financial reports, are predicated on the same notion of the social role that accounting should fulfill. According to this notion, accounting is an instrument for the pursuit of institutional and social goals. Within this framework, accounting should help organizations and society achieve their goals.

These studies of accounting changes treat accounting as a dependent variable within institutional systems. Different institutional contexts require accounting to assume different roles. These studies examine such different roles of accounting as providing rationality and rhetoric to the development of capitalism (e.g., Carruthers and Espeland 1991) and facilitating resource allocation and income distribution within a capitalist economy (e.g., Tinker 1980; Taylor and Turley 1986) or within a socialist economy (e.g., Graves and Berry 1989).
Within these roles, accounting changes represent efforts to refine technical forms of accounting in the process or providing information. Accounting is thought to be capable of providing a better chance for the institutional systems to achieve their goals (Burchell et al. 1980; Hopwood 1983). In such ways, these studies emphasize the reflective role of accounting. In other words, accounting reflects other aspects of the environments in which it operates (Hopwood 1983; Harrison and McKinnon 1986).

However, another view of accounting recognizes its constitutive role in societal institutions (Burchell et al, 1985). Accounting not only reflects the institutional context in which it operates, but also plays a role in constructing that context. This view originated with DR Scott (1931). He observed that not only do organizational and societal contexts shape the technical forms of accounting, but also that accounting shapes the functions of organizations and the society which it is called upon to serve (see also Hopwood 1987; Elam 1981). Accounting both causes and responds to institutional contexts. According to this view, studies of accounting change seek to understand the process in which a particular disclosure is shaped, comes to existence, and gains its significance.
Along these lines, interactions between culture and accounting within a society or an institution represent one of the phenomena upon which studies of accounting changes could focus. The fact that the 1986 annual meeting of the American Accounting Association featured "accounting and culture" as its main theme demonstrates considerable academic interest in this topic. The increasing number of subsequent studies of the relation between culture and accounting confirms the significance of such interest.

A common topic found in studies of the interactions between culture and accounting is the association between control, culture, organizational order, and accounting systems (e.g., Dermer 1988; Birnberg and Simodrass 1989). Most of these studies deal primarily with issues related to changes in the practice of management accounting (e.g., Boland and Pondy 1983; Nahapiet 1988; Bhimani 1993; Preston 1992). The relationship between culture and the process of changes in the practice of financial accounting seem to have received relatively little attention from accounting researchers.

Additionally, although previous studies have examined the relationship between culture and accounting practices across nations, such studies focus on the accounting standard setting process, omitting the process of changes in the disclosure of financial reports (e.g., Bloom and
Naciri 1986; Harrison and McKinnon 1986). On the other hand, studies of the relationships between cultural and social changes and financial reporting practices examine only the influence of factors external to organizations, such as national culture, politics, and economy on the disclosure of financial reports among firms in different nations (e.g., Nair and Frank 1980; Burchell et al. 1985; Zeff et al. 1992). What is missing from both lines of study is research into the interactions between national culture, politics, and economy and the process of changes in accounting practice within a single nation.

A few studies have begun to address this issue. These studies attempt to uncover the relationships among national cultures, organizational cultures, and disclosures of corporate information (e.g., Gray 1988; Perera 1989; Gibbins et al. 1990). Even so, these studies chiefly develop theoretical insights into such relationships and leave empirical examinations for future research. This study attempts to test such theoretical insights by an empirical examination.

3. Why Indonesia?

Contradictory environments underlying social and institutional relationships make the study of such relationships more interesting. Given such complex
contexts, the study may provide unforeseen results that need further explanation.

To some extent, environmental features that might shape the process of accounting changes in Indonesia are conflicting. On one hand, the emergence of rapidly expanding large conglomerates and state enterprises may increase the need for such firms to provide more elaborate disclosure of corporate information to a wider interested parties. The expanded need of these firms for additional sources of capital may require them to disclose more information to potential investors. On the other hand, external factors such as the presence of protection, entry barriers to competition, monopoly, oligopoly, and lack of a well developed domestic capital market may make firms less inclined to provide more information to the public. In this sense, access to information about the firms is determined by personal relationship. Furthermore, the simple and broad nature of Indonesian accounting principles may leave firms without specific guidelines necessary for determining appropriate accounting treatments for more complicated events or transactions.

Another interesting factor of accounting development in Indonesia is the influence of Dutch and U.S. accounting practices. Historically, the Netherlands and the U.S. show different courses of accounting development. U.S.
accounting standards, for example, are much more detailed than Dutch accounting standards. While U.S. accounting standards govern the practice of firms' financial reports, Dutch accounting standards simply require that firms' financial reports be in accordance with a sound business practice. Since Dutch and U.S. accounting practices have influenced Indonesian accounting practice, the differences between Dutch and U.S. accounting may explain some of the more unique aspects of accounting development in Indonesia.

The growing economic importance of the emerging third world countries, especially those in the Pacific Rim, including Indonesia, enhances the relevance and timeliness of studying accounting development in Indonesia. Insights into the relationships between culture and accounting development in Indonesia are expected to provide a better understanding of the actual and potential roles of accounting in Indonesian development.

4. Organization of the study

The remainder of this study consists of six additional chapters. Chapter II traces the development of the Indonesian economy since the 1970s. It includes an overview of the changes in macro economic policy, structure of the economy, trade and investment policies, and the development of capital markets and the accounting profession.
Chapter III provides a review of relevant literature. A review of studies related to culture provides a synthesis of cultural values across nations and their impact on society at large. A review of accounting literature, meanwhile, provides a basis for the construction of models of the relationships between culture and accounting.

Chapter IV defines the problem and the hypotheses to tested in this study. This section formulates the research questions that frame the present study. These research questions also serve as the basis for developing models and hypotheses of the relationships between culture and accounting practice.

Chapter V discusses the research designs and the methodology used in the collection and analysis of relevant data. Chapter VI provides the results of the study. Chapter VII discusses the results, draws conclusions and notes limitations and implications of the present study.
CHAPTER II
INDONESIAN DEVELOPMENT

This chapter provides an overview of Indonesian development as the background for the development of the Indonesian accounting practice. The discussion emphasizes the recent developments since the 1970s. During this period, Indonesia underwent a significant transformation process from a traditionally agricultural society to an industrial society. This transformation brought broad consequences to the society and to organizations.

1. Historical highlights

In 1945, after 350 years of Dutch and Japanese colonial rules, Indonesia became a sovereign country after the declaration of independence was signed and announced on August 17 of that year. When the Japanese surrendered to allied forces at the end of World War II, the Dutch colonial authorities tried to reestablish their rule over Indonesia. But before the allied and Dutch forces could assume power from the Japanese authorities, the Indonesian leaders declared independence and made the international community aware of Indonesian sovereignty.

From 1945 to 1965, the Indonesian government was preoccupied with maintaining and consolidating its sovereignty over the Indonesian archipelago. The reluctance
of the Dutch colonial authority to transfer its power, as well as the internal struggles to establish ideological, political, economic, and social courses of the nation, did not provide a smooth transition period. Instead, the government faced the following turbulent events:

1) the 1948 rebellion of the communist party in Central Java;
2) parliamentary gridlock and frequent changes in parliamentary cabinets;
3) the 1958 rebellion of the outer islands;
4) the 1961 campaign to liberate West Irian from the Dutch authority; and
5) the 1964 confrontation with Malaysia.

This turbulence proved to be very costly. In the efforts to overcome this turbulence, the government faced persistently increasing expenditures. At the same time, the turbulence also caused a decline in government revenues. The main source of government revenues at the time was from export taxes. However, the takeover of the Dutch owned plantations and mine companies, the lack of managerial skills of the military and civil bureaucrats running the newly established state enterprises, and the lack of control over such state enterprises made production fall short, and hence reduced exports significantly. This situation forced the government to run a persistent and
increasing budget deficit.

Another cause of the deterioration in the Indonesian economy was the rapid growth of credit. During the 1950s and 1960s, the money supply increased several fold while the supply of goods was declining. The central bank and state banks extended unsecured loans to official agencies, state enterprises, and those individuals who had access to the ruling elite. High inflation was a logical result following these events. As of 1965, the inflation level reached as high as 650%. For specific commodities, such as rice, inflation increased more drastically, up to 900%.

The paramount event of this turbulence was the failed coup attempt of the communist party in September 1965, when president Sukarno no longer represented a large portion of the nation's elite (Bresnan 1993). The role of the president was reduced to that of balancing the interests of the two most powerful groups: the army and the communist party. Sukarno's sudden illness on August 3, 1965, intensified tensions over who would take over power had the president been incapacitated. Not to be outmaneuvered, the communist party attempted a coup that cost the lives of six top army generals.

However, in a matter of hours Major General Suharto, then the commander of the Army Strategic Reserve, brought the uprising under control. The success of Suharto in
aborting the coup attempt and the ineffectiveness of President Sukarno in handling its aftermath led to the power transfer from Sukarno to Suharto. This power transfer was documented in the Letter of Instruction of March 11, 1966, signed by Sukarno and addressed to Suharto. In this letter, Sukarno instructed Suharto to "take all measures considered necessary to guarantee security, calm, and stability of the government" (Bresnan 1993, 35). The power transfer was completed when, in July 1966, the Consultative Assembly, responsible for electing the president and vice president, confirmed Suharto's executive authority pending elections. Five consecutive elections in 1973, 1978, 1983, 1988, and 1993 resulted in unanimous votes for Suharto's presidency.

2. Recent economic development

When President Suharto took office in 1966, economic deprivation was widespread. Annual income per capita amounted to only $50, the lowest among South Asian countries. The fundamental cause of this economic hardship was the lack of effective government (Bresnan 1993; Robison 1991). Realizing this problem, the new government put "stability" as the first priority and embedded it in its economic development programs. Such programs aimed at achieving three interrelated goals: stability, growth, and equality, summed up as the "trilogy" of Indonesian
In the pursuit of stability and growth, the government let the process of capital accumulation and investments concentrate in a small group of large state and private enterprises in which the government expressed confidence. This policy resulted in restricting the dominant players of the Indonesian economy to few but large conglomerates and state enterprises. A report of the World Bank (1993), for instance, reveals that in 1980 fifty five Indonesian conglomerates accounted for 75% of capital accumulation in private sectors. In 1990, the number of conglomerates increased to 200, with total sales equal to 35% of the Indonesian Gross Domestic Product. During the same period, 180 state enterprises generated revenues as much as 15% of the Gross Domestic Product.

To promote an equal distribution of income, the government subsidized prices of certain commodities vital to people's basic needs, such as fuel, rice and sugar. The government also provided massive subsidies to small enterprises. These subsidies were given in various forms:

1) subsidized credit from state banks;

2) allocation of a certain portion of government work to small enterprises without the necessity to make the lowest bid price; and

3) subsidized pesticide for farmers.
In essence, this economic policy is a "hands on" policy where the government played a dominant role in stimulating the economy. The consequences of this policy appeared to be the following:

1) a highly regulated economy;
2) an economic dependence upon government protection and government budgets;
3) an economy oriented toward import substitution industries; and
4) a limited role of private sectors in the economy to ensure the implementation of the government economic programs.

The drop in international prices of oil and natural gas in the mid-1980s forced the government to realize that the capital accumulated at that time was insufficient to enact its economic programs. To keep the economy growing, the government turned to the private sector to increase its role in Indonesian economic development. For this purpose, the government lessened economic restrictions on economic sectors previously highly regulated, offered economic incentives for domestic and foreign private investments, began an economic policy of deregulation, and made massive cuts in economy subsidies.

Overall, the Indonesian economy during the last twenty five years has performed well. During that period, a series
of economic policies has provided the following results:

1) an average Gross Domestic Product growth of 7% annually;

2) an increase in per capita income from $50 in 1966 to $650 in 1992 with the expectation of achieving $1000 in the year 2000;

3) transformation of the structure of the economy from an inward oriented economy that stressed import substitution industries to an export oriented and more diversified economy;

4) a decrease in the number of people in absolute poverty from about 70 million, or 60% of the total population in 1970, to 27 million or 15% of the total population in 1990;

5) an increase in the equality of income distribution as shown by a decrease in the Gini coefficient from .35 in 1970 to .32 in 1990; and

6) an increase in the enrollment rate in primary and secondary schools from 72% and 12% respectively in 1965 to 99% and 47% in 1990.

3. Property, individual, and contractual rights

The basic concepts of property, individual, and contractual rights were formulated in the text of the 1945 Constitution. Pompe (1992) summarizes the three most notable concepts as the following:
1) the unity of the state with the people who are sovereign;
2) the process of decision making by consensus achieved through deliberation and with the largest majority; and
3) the organization of societies based on collectivities rather than on individual citizens.

The concept of unity between people and state leaves no clear guidelines about the proper course in cases where a conflict arises between the state and the people. However, in a combined view of the three concepts, every citizen is a member of the larger state family. The interests of each citizen are assumed to be necessarily taken into account by the family as a whole and accommodated in any decision it takes. This could be a reason why a bill of rights is not included in the Constitution. Furthermore, the concept of "collectivity" emphasizes the duties of individuals towards the state. Individual rights are assumed to be an automatic result of the full implementation of individual duties.

The concept of "collectivity" has also laid a theoretical foundation for the idea that the ownership of national territory and natural resources must be in the hand of Indonesian nationals. In the case of natural
resources deemed "strategic," only the government could control such resources. Article 33 of the 1945 Constitution decrees that sovereignty and control over water and land is vested in the state. Legislation following this decree includes the denial of ownership rights to land to foreigners and the replacement in mining industries of concession and work contracts with production sharing contracts. Ultimate control over land in the hands of the government implies that when deemed necessary for national interests, private ownership of land could be overturned, and normal use of such land diverted for strategic purposes.

Article 1338 of the Civil Code states that all contracts, legally concluded, shall apply to those who have concluded them; that is any citizen, except those declared incapable by law, is permitted to conclude a contract. According to Article 1330 of the Civil Code, minors, those who are under guardianship, and married women are incapable of concluding contracts. However, a decision of the Supreme Court in 1963 declared that a married woman is now capable of concluding contracts without the assistance of her husband.
4. Capital market

In 1977, the government reopened the Jakarta Stock Exchange previously closed in 1968. To facilitate the operation of the Exchange, the government created Bapepam and PT Danareksa. Bapepam is a government agency responsible for the supervision and operation of the Exchange. In 1992, Bapepam relinquished the operations of the Exchange to Bursa Efek Jakarta. From then on, Bapepam has functioned as a supervisory agency of the Exchange, a function similar to that of the Security Exchange Commissions in the United States. PT Danareksa is a state-owned investment company designated to buy a substantial number of stocks offered on the Exchange.

Historically, the number of companies listed in the Exchange has been low. In 1988 only twenty four companies were offering stocks and six companies offering bonds through the Exchange. During the period of 1977-1988, total value of stocks and bonds issued through the Exchange was Rp 152.62 billion and Rp 855.72 billion, respectively.¹ These figures were far below total banks' outstanding credits which amounted to Rp 44 trillion in 1988 (Data Consult, Inc. 1992).

¹ "Rp" is the abbreviation for rupiah, the unit of Indonesian currency. The exchange rate of Rp to the U.S. $ is about Rp 1,800 in 1988 and Rp 2100 in 1992.
The low activity of the Exchange was due to the government, which stressed the role of the Exchange in promoting an equitable distribution of income. The 1976 President decree No. 52 stated that the operation of Indonesian capital markets is intended to promote an equitable distribution of the public's income through extending public participation in the share ownership of companies otherwise privately held (Bapepam 1983,15).

To implement this policy, Articles 17-21 of the decree required that PT Danareksa, the state-owned investment company, be given priority to buy at least 50% of the shares offered in the Exchange. PT Danareksa divides shares it acquires on the exchange into unit certificates with a nominal value of Rp 10,000 or such amount as determined by the Minister of Finance. PT Danareksa should also prioritize the sale of its unit certificates to the public with limited financial means, such as government employees and farmers. Furthermore, no one individual or group of individuals was allowed to buy more than 100 unit certificates of PT Danareksa.

That situation changed in 1989 when the government released a deregulation policy that permits domestic and foreign investors to participate in the Exchange. PT Danareksa is no longer a dominant participant in the Exchange. After the new policy took effect in 1990, the
number of companies listed in the Exchange vaulted to 128 for firms issuing stocks and to twenty three for firms issuing bonds. Total value of stocks and bonds issued in 1990 amounted to Rp 5.58 trillion and Rp 398 billion, respectively. Likewise, total trading volume of stock transactions at the Exchange during 1990 jumped to 366.32 million shares with a total value of Rp 4.29 trillion (Data Consult, Inc. 1992).

5. Accounting development

The developments of the accounting profession, accounting education, and accounting practice in Indonesia are and were very much influenced by government policies. This influence began with the enactment of the 1954 Accountant Act, which prescribes that any service firm bearing the name of "accountant" or "accountancy" be headed by an accountant. Article 2 of the 1954 Act states that to get an accountant license, one has to complete accounting education in a state university or in other higher education institutions recognized by the government, or has to pass a series of examinations held by the Committee of Experts for Accountant Examination.

The 1954 Act was a great impetus for the establishment of the Association of Indonesian Accountants on December 23, 1957. At its inception the Association had eleven members, as many as the number of qualified Indonesian
accountants then. Seven of these were trained in the Netherlands, while the rest graduated from the University of Indonesia. One of the reasons for the formation of the Association was to comply with the 1954 Act.

The influence of the government in the Association remains significant. Historically, the position of head of the Association is always held by those who also hold a position with considerable authority in the government. In addition, accountants working in government agencies and state enterprises constitute the majority members of the Association.

Early education for accountants was initiated by the Ministry of Finance in the 1950s (Tjitrosidojo, 1982). The Ministry of Finance opened an in-house training program for adjunct accountants to be employed in either the Tax Accountant Office or Government Accountant Office, two of the agencies under the jurisdiction of the Ministry of Finance. The training required a three-year course of study. Dutch accountants working in the Ministry of Finance became the program's instructors.

Subsequently, in the late 1950s the Ministry of Finance established the Higher School for Public Finance to train its prospective and current employees. The school required a five-year course of study and offered four fields of study: taxation, accountancy, customs, and
treasury. An adjunct accountant could be promoted to the rank of full accountant upon the completion of two additional years of study in this school. The curriculum of the accountancy program was largely modeled after the Dutch system.

In 1975, the Ministry of Finance abolished the school but retained the accountancy program, subsequently carried out by the School for Government Accountants established in that year. This new school gradually taught the principles of Anglo-American accounting and abandoned the Dutch system. Graduates of the two schools currently hold positions in government agencies, accounting firms, state enterprises, and private enterprises as well.

Accounting education in universities started in 1954 when the University of Indonesia extended its School of Economics to include the newly opened Department of Accountancy. Initially, the Department of Accountancy also followed the Dutch system and appointed Dutch accounting professors. This changed in 1961 when the relationship between the Indonesian and Dutch governments worsened as a result of the controversy over West Irian. During this period, Dutch experts working in Indonesia, including the Dutch professors, returned to the Netherlands. In the meantime, the government cooperated with the Ford Foundation in bringing visiting professors from
universities in the United States to Indonesia. This move initiated the introduction of Anglo-American system of accounting education in Indonesian universities, and since the late 1970s, it has been a model for accounting education.

The influence of the government on accounting and audit practice also has been significant. The Government Accountant Office released an accounting guide for state enterprises before the Association of Indonesian Accountants promulgated the 1974 Indonesian accounting principles. Indeed, the 1974 accounting principles used the government accounting guide as a major reference. Likewise, the 1974 auditing standards promulgated by the Association was largely derived from audit standards previously set by the Government Accountant Office.2

6. Potential role of accounting profession in the development of Indonesia

The economic policy of deregulation now taken by the government opens ways for a more competitive market oriented economy. Market mechanisms push firms to compete in both product and financial markets. In the process of pushing Indonesian economy to move toward industrialization

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2 This assertion is based on a taped interview between the author and Mr. Gandhi in May 1992. Mr. Gandhi was the head of the Government Accountant Office, which was later called the Financial and Development Supervisory Board, from 1969 to 1993.
and to operate under efficient resource allocation, market mechanisms require the existence of efficient capital markets (see Lee 1987). The transformation of the production function from labor-intensive technology (low technology) to a capital-intensive technology (high technology) is a common indicator of the industrialization process. This transformation results in the emergence of new industries that employ more capital and encounter higher risks in their operations. Efficient capital markets provide firms with their capital needs and enable investors to reduce risks through a diversified portfolio investment.

Efficient capital markets require that asymmetric information among participants (i.e., managers and owners of firms) be minimized. In other words, capital markets are efficient if security prices reflect the underlying fundamental financial information. In this regard, the accounting profession could help develop a sound accounting infrastructure to support the operations of efficient capital markets. Lee (1987) identifies four basic elements of accounting infrastructure:

1) the information producer and final user;
2) the information intermediaries;
3) the laws and regulations that govern the production, transmission, and usage of
information; and
4) the legal entity that monitors and implements the laws and regulations.

The accounting profession can play a significant role in the following capacities: a) an information intermediary that, through the audit of financial reports, provides value added to the information supplied by the producer (management); and b) a professional self-regulatory agency that provides guidelines for corporate disclosure in firms' financial reports.

7. Summary

This chapter has provided the highlights of the process of change in Indonesian society. Significant changes have occurred in government policies, the economic structure, the business environment, and the accounting infrastructure. These environmental changes may have influenced the value systems of the Indonesian society at large, which in turn have consequences for organizational systems of social and business institutions. Chapter III provides an overview of the existing literature discussing the theoretical and empirical evidence of the relationships among environmental change, value systems, and organizational systems.
CHAPTER III
LITERATURE REVIEW

The first part of this chapter reviews relevant studies of cultural values underlying societal norms across nations and their consequences for organizational systems. The next section of this chapter discusses the existing literature on the relationships between cultural values and accounting practice across nations. In this way, the chapter provides a background for the present study, which extends the existing literature by examining such relationships in the Indonesian setting.

1. Culture and society

1.1 Overview

The role of culture in human activities is pervasive. Culture influences societal behavior in dealing with economic, political, and social affairs. Hussein (1993), for example, synthesizes the relationships between culture and economic activities. He asserts that unique market characteristics found across countries reflect the socio-cultural characteristics of those countries. Others stress the role of culture in the business decisions made and the negotiations undertaken by managers of different nationalities (e.g., Graham 1985; Oikawa 1992; Bedi 1993; Hoffman 1982).
The influence of culture on political affairs in organizations has been observed through organizational symbolism (e.g., Turner 1986; Riley 1983). Organizational symbols are tools for creating desired images. In this way, an organization can give an impression of having and implementing objective and rational structures and systems. Organizational systems of performance evaluation, for example, attempt to provide an image of an objective, rational, and systematic process of measuring employee and organizational performance. This image, however, does not necessarily match with reality. The difference between organizational symbols and organizational reality is attributable to political cultures in the organization (Longenecker 1989; Ferris 1991). These studies also suggest that political considerations encourage managers to manipulate organizational cultures and systems for the perceived best interests of those groups closest to managers.

Others (e.g., Hofstede 1980; Schreuder 1987) have observed that cultures function as a "glue" that binds people in organizations and nations. Cultural influence transpires in the relationships between people, between organizations, and between nations. Since cultures have such a pervasive influence on societal activities, it is imperative to gain a clear insight into the nature of
culture and into the ways culture influences these activities.

1.2 Definition and pattern of culture

Varying concepts of culture have originated in the field of anthropology. Smircich (1983, p. 342) has summarized such differing perspectives of culture, citing the following definitions:

1) culture is an instrument serving human biological and psychological needs;

2) culture functions as an adaptive regulatory mechanism that unites individuals into social structures;

3) culture is a system of shared cognition;

4) culture is a system of shared symbols and meanings; and

5) culture is a projection of the mind's universal unconscious infrastructure.

Although these definitions stress different perspectives, they share the incorporation of human mentality into the elements of culture. It is no surprise that Hofstede (1991, p. 5) defines culture as the "collective programming of the mind which distinguishes the members of one group or category of people from another."

Similarly, Trice and Beyer (1993) have asserted that the substance of a culture is the shared, emotionally charged belief systems.

Indeed, the "collective programming of the mind," or
culture, develops through shared value systems in a society (Hofstede 1980, 1991; Turner and Trompenaars 1993). Values are defined as "broad tendencies to prefer certain states of affairs over others" (Hofstede, 1991, p. 8). Once certain values are adopted by a society, these values become the societal norms to which societal behavior is expected to conform. The adherence of societal behavior to societal norms results in a pattern of consequences for individuals, organizations, and society at large. Graphically, Hofstede (1980, p. 27) illustrated the development of culture patterns as shown in Figure 1.

1.3. Cultural values

Values represent the essence of culture. Although values have a central role in the development of culture, they are not directly observable or measurable. However, observations of the origins or consequences of societal norms may provide indirect measures of the values that prevail in a society. Such observations also may provide insights into the construction and change processes of societal norms.

The use of observation regarding the origins and consequences of societal norms to explain culture is not without potential fallacy. People's behavior may not always reflect the prevailing values held by a society. Deeds may differ from values. What people actually do may
FIGURE 1
CULTURE PATTERNS
(HOFSTEDE'S MODEL)

OUTSIDE INFLUENCES:
- FORCES OF NATURE
- FORCES OF MAN

ORIGINS:
- ECOLOGICAL FACTORS

\[ \rightarrow \]

SOCIETAL NORMS:
- VALUE SYSTEMS OF MAJOR GROUPS OF POPULATION

\[ \rightarrow \]

CONSEQUENCES:
- STRUCTURE AND FUNCTIONS OF INSTITUTION

Source: Hofstede 1980, p. 27
be different from what they think members of the society should do. In other instances, changes in people's behavior do not have implications for change in societal norms. People may change their life styles, idols, and habits without necessarily changing their values. Such changes could merely reflect changes in the symbols, heroes, and rituals of a society.

To cope with this problem, Hofstede (1980, 1991) distinguishes between two categories of values: the desirable values and the desired values. The desirable values describe how people think the society ought to be; the desired values describe what people want for themselves. Based on this distinction, Hofstede asserted that societal behavior as observed in practice was closer to the desired values rather than to the desirable values. Desirable values are learned early from one's family and are hard to change. In contrast, desired values are more fluid. People learn and adjust their conceptions of symbols, heroes, and rituals through socialization processes at school and in the work place.

1.4 Dimension of cultural values

1.4.1 Hofstede's dimensional model of culture

The tendency of people to form a society based on commonly accepted norms suggests that cultural values may be a factor in attracting people to form a society or a
nation. Hofstede (1980, 1991) proposed five dimensions of cultural values that cluster nations into groups. The following description of the five dimensions of cultural values is based on Hofstede's studies of culture in fifty three countries (1980, 1991).

**Power distance**

Power distance is a measure of the interpersonal power or influence between superiors and subordinates as perceived by the least powerful of the two. It shows the extent to which the less powerful members of institutions acknowledge that power is distributed unequally. Small power distance implies that there is limited dependence of subordinates on superiors. Rather, subordinates and superiors are bound in an interdependence relationship. Communications between subordinates and superiors reflect a consultative mode in which subordinates feel free to approach and contradict their superiors. Large power distance, on the other hand, indicates a considerable dependence of subordinates on superiors. The relationship between superiors and subordinates is more autocratic or paternalistic. Subordinates are unlikely to approach and contradict their superiors.
Uncertainty avoidance

Uncertainty avoidance measures anxiety levels of the members of a society or an institution about uncertain or unknown situations in the future. To cope with anxiety, people turn to technology, rules, and rituals. Technology reduces some forms of uncertainty caused by nature. Rules, meanwhile, provide defense against uncertainties in the behavior of others. Finally, rituals help people peacefully accept uncertainties against which they cannot defend themselves. Uncertainty avoidance suggests a desire to achieve a reduction of ambiguity. People in uncertainty avoiding cultures look for a structure in their organizations, institutions, and relationships that makes events clearly interpretable and predictable.

Individualism versus collectivism

Individualism is a measure of relationships between individuals and the collectivity in a given society. Individualism pertains to societies in which the ties between individuals are loose. Individuals are expected to look after only themselves and their immediate family. Collectivism, on the contrary, pertains to societies in which people from birth onwards are integrated into strong and cohesive ingroups, which continue to protect them in exchange for unquestioning loyalty.

The degree of individualism or collectivism affects
the relationships within and between societies and organizations. More collectivist societies call for greater emotional dependence of members in their organizations. Organizations, in return, assume a broad responsibility for their members. If the organizations cease to do that, disharmony between people's values and social values will emerge. This disharmony will lead to either a shift in values toward more individualism, or pressure toward a different collective social order, or both.

Masculinity versus femininity

Masculinity is a measure of the desirability of assertive behavior as opposed to the desirability of modest behaviors. Masculinity and femininity reflect gender roles in societies in which men are more concerned with achievements outside the home while women are more concerned with taking care of homes, children and people in general. Male achievements in this domain reinforce assertiveness and competition. Female cares, on the other hand, reinforce feminine nurturance, a concern for relationships and for the living environment.

Long-term orientation versus short-term orientation

Long-term and short-term orientations reflect the extent to which societies rely on their synthesizing and analyzing capacities. Long-term oriented societies synthesize different parts into the whole in a persistent
and flexible way. They tolerate a slow construction process from parts to the whole and the different ways it may take to build the whole. Short-term oriented societies, on the other hand, tend to decompose the whole and analyze it into parts. Through this analytical ability, short-term oriented societies develop certain consistent ways of doing things. They also expect quick results because they believe that they do the right things in the right ways.

1.4.2 Turner and Trompenaars' model of capitalism cultures

Turner and Trompenaars (1993), like Hofstede, search for cultural values by which nations can be clustered. The two studies, however, differ in scope. Turner and Trompenaars' study is based on a sample of twelve countries. Specifically, their study focuses on the underlying cultural values of seven nations perceived to have shown the best practice of capitalism: the United States, United Kingdom, Sweden, Netherlands, Germany, France, and Japan. Turner and Trompenaars suggest that the ways the seven countries choose to create wealth have everything to do with the values that people in those countries bring to work. The following section discusses seven values of capitalistic cultures as described by Turner and Trompenaars.
Universalism versus particularism

Universalism measures the commitment of the societies to create and implement rules, codes, procedures, and routines such that the operations of organizations become systematic enough to create wealth. Particularism, on the other hand, is a measure of the willingness of the societies to pay attention to exceptional cases. These instances can be considered on their unique merits, regardless of the rule.

Analyzing versus integrating

Analyzing societies stress the importance of deconstructing the whole such that the parts can be examined for possible improvements. In business organizations, analytic managers view business operations in terms of facts, items, numbers, tasks, units, points, and other specifics. Synthesizing societies, meanwhile, emphasizes constructing the whole so that the entire system is better configured, designed, and organized. Likewise, synthesizing business managers focus on the efforts to integrate and configure details of business operations into patterns, relationships, and contexts.

Individualism versus communitarianism

Individualism and communitarianism drive societies in opposite directions. Individualism stresses the rights of individuals while communitarianism places the interests of
the community above the interests of individuals. Strong adherence to individualism drives business managers to focus upon the enhancement of each individual's rights, motivations, rewards, capacities, and attitudes. Embracing communitarianism, business managers will take another course. They will pay more attention to the advancement of the corporation, which all members are pledged to serve.

**Inner-directed versus outer-directed orientation**

Inner-directed and outer-directed orientations distinguish where directions, decisions, and purposes of the societies originate. Basically, this dichotomy forces a choice as to which are the more important guides to societal actions. Are they the judgments, decisions, and commitments, or are adjustments to the signals, demands, and trends in the outside world?

**Time as sequence versus time as synchronization**

The societies show their preferences regarding their use of an available time. The choice is whether it is more important to do things quickly or to synchronize efforts. The first stresses the importance of doing as many things as possible while the latter focuses on coordination in doing particular things.
Achieved status versus ascribed status

Achieved status and ascribed status indicate the preference of the societies for the design and implementation of promotional and reward systems. Achieved status societies promote those who have performed best to positions of greater influence. This is believed to motivate these individuals to continue their high performance. These societies set rewards commensurate with the contributions of the individuals. Ascribed status societies, on the other hand, determine promotions and rewards through some other characteristics, such as seniority, gender, education, birth or inherited status.

Equality versus hierarchy

Equality and hierarchy describe the ways the societies develop relationships and distribute power among their members. In societies where equality is a norm, each member has an equal opportunity to make valuable contributions. These societies always elicit and admit suggestions and ideas from their members, regardless of their status. On the other hand, where hierarchy is an accepted societal norm, societies tend to emphasize judgment and authority within the hierarchy. In this case, higher ranked members of the societies provide guidelines and make evaluations about how the lower ranked members provide their contributions and which contributions are valued.
1.4.3. Comparison between Hofstede's model and Turner and Trompenaars' model

The five and seven dimensional values of cultures described in the two different models seem to overlap. The matrix shown in Table 1 depicts this overlap.

<table>
<thead>
<tr>
<th>Turners and Trompenaars' Values</th>
<th>Hofstede's values</th>
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<tbody>
<tr>
<td></td>
<td>Power</td>
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<tr>
<td></td>
<td>Uncertainty</td>
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<tr>
<td></td>
<td>Individualism</td>
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<tr>
<td></td>
<td>Masculinity</td>
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<tr>
<td></td>
<td>Time Horizon</td>
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<td></td>
<td>Distance Avoidance</td>
</tr>
</tbody>
</table>

| Universalism versus Particularism | X |
| Analyzing versus Integrating      | X |
| Individualism versus Communitarianism | X |
| Inner-directed versus Outer-directed orientation | X |
| Time as sequence versus Time as synchronization | X |
| Achieved-status versus Ascribed-status | X |
| Equality versus Hierarchy        | X |

For the purpose of the present study, cultural values refer to the five dimensional values of Hofstede's study. The reasons for this choice are four-fold:
1) Since the seven values of Turner and Trompenaars' study are nested in Hofstede's five dimensional values, confidence in Hofstede's typology of cultural values is enhanced.

2) Hofstede's study used a more broad-based sample, that provides more generalizable results.

3) The inclusion of Indonesia in Hofstede's sample makes his work more relevant to the present study.

4) Hofstede's study opens ways for further empirical testing. It provides lists of societal norms as the manifestation of each value. It also identifies possible origins and consequences of such norms.

2. Culture and accounting

2.1 Cultural influence on management accounting

The relationship between cultures and organizations has been a common topic in sociology and organizational theory. Peters and Waterman (1982), for example, attributed firms' success to "strong" organizational cultures. Many argue that organizational cultures develop through interactions among people working in those organizations. In this case, sociologists have stressed the role of national cultures, reflected in the shared mental programming of the people in organizations, in shaping the organizational cultures. Hofstede (1991), meanwhile, asserted that interactions between national cultures and
organizational cultures do not occur in the deepest manifestation of culture, namely the desirable values. Instead, such interactions happen only in the outer components of culture (i.e., symbols, heroes, and rituals), which constitute the desired values as observed in "practices." He suggests that differences in organizational cultures emerge from different "practices" rather than from different values. However, Schreuder (1986) argued that values may drive organizational cultures through the self-selection by employees and by organizations. Organizations may be attractive to individuals who conform to certain values, or organizations may select those applicants who exhibit work related values similar to those dominant in the organizations.

Smircich (1983, p. 345) summarized studies in organizational theory focusing on the relationships between cultures and organizations. Smircich indicates five common themes in such studies:

1) comparative management;
2) corporate culture;
3) organizational cognition;
4) organizational symbolism; and
5) unconscious process in organizations.

Basically, these studies point out that systems within organizations develop and operate in a cultural context.
Several other studies focus specifically on the role of culture in shaping control and information systems in organizations. Lebas and Weigenstein (1986, p. 259) define control as "the process by which an organization ensures that the acquisition and allocation of resources are optimally coordinated to achieve the organization's goal." Three driving factors distinguish the development of control processes in an organization: market, bureaucracy, and culture (e.g., Ouchi 1980; Ouchi and Maguire 1975).

Market-oriented control uses contractual agreements as the basis for resource allocation and performance evaluation in organizations. Bureaucratic control, meanwhile, stresses the role of rules and hierarchy in organizational activities. Alternatively, cultural control emphasizes consensus building to achieve goal congruence between individuals in organizations. Of these alternatives, cultural control is desirable when the causal model is unclear or shifts frequently (Lebas and Weigenstein 1986). Indeed, the contemporary view of control acknowledges the existence of autonomous activities to which management is indifferent or is incapable of opposing (Dermer 1988). In such a view, culture offers an appropriate approach for developing control systems in organizations. Rule control and market control stress input and output control processes, respectively. Cultural
control, meanwhile, treats input and output control as a continuum process in which interactions between activities and people within an organization are more fluid.

In essence, control systems resemble the decision making process in an organization. Since information, including accounting information, has a central role in the decision making process (see Beaver 1981; Libby 1981), control systems can be manifested in information systems and accounting systems. Consequently, the design and implementation of accounting systems may be associated with the dominant values of organizational cultures. The following studies show how organizational culture influences the development of management accounting systems within organizations.

Bhimani (1993) observed the development of cost accounting systems and organizational cultures at Renault, a French firm, during the period of 1898-1938. He suggested that prior to World War I, skilled workers were the dominant force in the production process. This resulted in work related values that stressed personal relationships and the importance of particular expertise. As a consequence, cost accounting systems covered an extensive range of cost records. The introduction of Taylor's scientific management to the production process and the dramatic increase in demands for war related products
changed organizational cultures at Renault. It shifted its work related values to the productivity and efficiency of a mass production process. As a result, the cost accounting system also changed from an extensive range of cost records to one that focused on the allocation of overhead costs and on the calculation of standard costs.

Preston (1992) examined the innovation process of the health care cost accounting systems in U.S. hospitals. These cost accounting systems, he suggested, were a response to the Medicare and Medicaid programs that were introduced in 1965. To show that U.S. health care providers share the spirit of equality in health care for U.S. citizens, they agree to comply with health care cost reimbursement systems as determined by the U.S. government. However, innovations in cost accounting systems enable U.S. hospitals to define costs in ways that serve the interests of these hospitals. Thus accounting innovations facilitate organizations in conveying rhetoric and symbols that are well accepted by the society at large.

The function of accounting as a tool for creating rhetoric and symbols has been supported by similar findings in other studies (e.g., Boland and Pondy 1983; Nahapiet 1988). Other studies also focus on the effects of organizational cultures on the degree of formality in accounting systems (e.g., Birnberg and Simodrass 1988) and
on the role of accounting systems in the management decision process (e.g., Burchell et al. 1980).

2.2 Cultural influence on financial accounting

Studies of the relationships between culture and financial accounting have examined the impact of culture on accounting standards and financial reports. The examination of cultural influence on accounting standards focuses on such topics as the standard setting process (e.g., Harrison and McKinnon 1986; Belkaoui 1989; Bloom and Naciri 1989) and extent of accounting standards (e.g., Frank 1979). Studies that focus on the relationships of cultures to financial reports, meanwhile, center their examination on the measurement and disclosure practices of financial reports across nations (e.g., Nair and Frank 1980; Gray 1988; Perera 1989; Gibbins et al. 1990; Burchell et al. 1985).

2.2.1 Cultural influence on accounting standards

Frank (1979) suggested that in the countries with strong Western ties, language is a determinant factor that distinguishes the extent of accounting standards in those nations. Frank performed a factor analysis to cluster the nations based on the extent of accounting standards. A follow-up discriminant analysis of the country groupings

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3 From here on, "accounting," unless otherwise stated, refers to financial accounting.
that resulted suggested that English and French languages were among the determinant factors. Since language is part of culture, Frank argues that cultural environments influence the extent of accounting standards.

Harris and McKinnon (1986) provided insights into cultural influences on the standard setting process in Japan. They suggest that Japanese values evoke from corporate managers a strong and persistent resistance to public disclosure of corporate activities. This resistance became a problem when Japanese firms began to participate in U.S. capital markets. The securities and Exchange Commission required that Japanese firms provide consolidated financial statements, which the Japanese firms were reluctant to do. To resolve such a conflict, other dimensions of Japanese values, namely the preference for harmony over authority and consensus building over rush decisions, were emphasized in the legislation process of ordinances No. 28 and 30 pertaining to the disclosure of consolidated financial statements.

Belkaoui (1989) examined the issues of self-regulation from a cultural perspective. Using data collected from the work of Gray et al. (1984), Belkaoui drew patterns of relationships between Hofstede's cultural values and the degree of professional self-regulation in accounting. He suggested that uncertainty avoidance and individualism were
negatively related to self-regulation. Masculinity, on the other hand, was positively related to self-regulation.

Along with their contributions, these studies reveal the following limitations:

1) a narrow definition of culture such as one that is confined to language (Frank 1979);
2) static analysis of the relationships of culture to accounting at only one point of time (e.g., Frank 1979; Belkaoui 1989);
3) restriction to a single issue of accounting standard such as consolidated statements (Harrison and McKinnon 1986).

Further extensions of these studies may enhance the understanding of the relationships between culture and accounting. Such potential extensions include the examination of the impact of dynamic changes in cultural values on the changes in the accounting standard setting process and in the extent of accounting standards over time.

2.2.2 Cultural influence on financial reports

Nair and Frank (1980) examined the impact of culture on the measurement and disclosure practices of financial reports across nations. They performed a factor analysis of the international data survey collected by Price Waterhouse in 1973 and 1975. In both years, the results
showed that similar groups of nations have similar practices regarding financial reports. The results of determinant analyses performed in these studies showed that language explained more than half of the variation in the measurement practices across nations. These results gave additional support to Frank’s (1979) results which suggested a significant influence of culture on the extent of accounting standards.

Burchell et al. (1980) investigated the emergence of the disclosure of value-added income statements in financial reports of British firms. They attributed the upsurge of the value-added disclosure in the 1970s to the values held by the Labor party, which ruled Britain at the time. Ideologically, the Labor party believes in the equal status of labors and owners of capital in the wealth creation of firms. This belief renewed the discussion of how efficiency and productivity should be measured. To reflect equality, many argue that evaluation of firms’ performance should indicate how much each of the factors of production contributes to the firms’ wealth creation. Value-added disclosures fit the need for such information. However, when the Conservatives took over the government in the 1980s, value-added disclosure waned. This shift in disclosure practice reflects the shift in ideology of a government that now stressed the important role of capital
in economic activities. Productivity and efficiency are simply a matter of how much profit is generated from the use of capital. Traditional income statements are able to provide such information without the necessity for firms to provide value-added disclosures.

Gibbins et al. (1990) developed a grounded theory of management decision processes in the disclosure of corporate information for external parties. Based on interviews with managers of firms, they indicate that external norms and firms' preferences for a disclosure position are the determining factors in disclosure decisions. Given certain external norms for disclosure, those managers who perceive the disclosure as a ritual tend to follow the prescribed disclosures. Those managers who perceive the disclosure as an opportunity, however, seek firm-specific advantages in the disclosure of corporate information. The Gibbins study supports the notion that organizational culture influences not only the practice of management accounting but also financial accounting.

These studies, however, bear similar limitations to those of the previous studies. Each of these studies either applies a narrow or unclear definition of culture (Nair and Frank 1980; Gibbins et al. 1990), focuses on a specific issue (Burchell et al. 1985), or performs only a static analysis (Nair and Frank 1980).
2.2.3. Theoretical relationships between cultural values and accounting values

The shortcomings of previous studies suggest the need for a comprehensive study that attempts to explain the dynamic relationship between culture and accounting. Filling this void, Gray (1988) and Perera (1989) initiated the building of a theoretical model of the relationship between Hofstede's cultural values and accounting values, as shown in Figure 2.

This model is an extension of Hofstede's model pertaining to patterns of cultures. They add accounting values and accounting practice, as a subset of societal values and institutional consequences within a broader society. This model explains the possible reciprocal relationships among the constructs. However, in the discussion of their model, they focused on the attempts to explain and predict the cultural influence on accounting values and accounting practice. They proposed that since accounting values represent a subset of societal values, accounting values will reflect a microcosm of the broader societal values. In turn, these accounting values are translated into the practice of financial reports and accounting standards.

The model describes cultural-based accounting values in four dimensions: *professionalism, uniformity,*
FIGURE 2
RELATIONSHIP OF CULTURE TO ACCOUNTING
(GRAY'S MODEL)

EXTERNAL AND
SOCIOLOGICAL
INFLUENCES

△

SOCIETAL
VALUES

△

INSTITUTIONAL
CONSEQUENCES

▼

ACCOUNTING
VALUES

△

ACCOUNTING
PRACTICE

Source: Gray, 1988, p. 7
conservatism, and secrecy. These values are similar to those identified by Arpan and Radebaugh (1985). Arpan and Radebaugh noted that conservatism, secrecy, distrust, and fatalism, together with attitudes toward business and the accounting profession, are among the most important cultural influences on accounting practice. However, Arpan and Radebaugh did not provide systematic analyses of such relationships. The model proposed by Gray (1988) and Perera (1989), meanwhile, attempted to undertake such analysis. In so doing, Gray described four dimensions of accounting values and developed an argument for possible relationships between these values and four of the five Hofstede cultural values. The fifth dimension of Hofstede's values, time horizon, was added in Hofstede's later work (1991) and was not reflected in Gray and Perera's model.

The following descriptions of each accounting value are quoted from Gray (1988).

**Professionalism versus statutory control**

Professionalism measures a preference for the exercise of individual professional judgement and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control.

**Uniformity versus flexibility**

Uniformity is a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies.
Conservatism versus optimism

Conservatism is 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

Secrecy is 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.

Based on the matching analysis, Gray developed a basis for the four to four theoretical relationships between cultural values and accounting values. He suggested the following predicted relationships:

1) Individualism has a positive relationship to professionalism while power distance and uncertainty avoidance are negatively related to professionalism.

2) Uncertainty avoidance and power distance have a negative correlation to uniformity while there is an inverse relationship between individualism and uniformity.

3) Uncertainty avoidance is positively related to conservatism while individualism and masculinity are negatively related to conservatism.
4) The relationships of uncertainty avoidance and power distance to secrecy are positive while individualism and masculinity are negatively related to secrecy.

Concerning the relationships between accounting values and accounting practice, Gray predicted that professionalism and uniformity affect standard setting processes and the extent of accounting standards. Conservatism and secrecy, he further argued, are manifested in the measurement and disclosure practice of financial reports.

This model provides a basis for empirical research pertaining to the cultural influence on accounting which the present study attempts to do. This study also extends the theoretical model by including Hofstede's fifth dimension of cultural values in the analysis. It also develops operational measures of cultural and accounting values such that the analysis is supported by empirical evidence. Furthermore, this study covers up to a twelve-year period, which provides for a "dynamic" analysis of the patterns of cultural influence on financial accounting.

3. Summary

Hofstede's theory (1980, 1991) of the five dimensions of cultural values has been a major paradigm of culture
development across nations. These five dimensions (power
distance, uncertainty avoidance, individualism,
masculinity, and time horizon) are assumed to be capable of
explaining and predicting cultural differences across
nations.

The design and implementation of organizational
systems may reflect cultural values prevalent in a society.
Cultural differences across nations may be a factor in the
development of different organizational cultures that shape
business practices in each nation. As a part of the
business practice, accounting practices across nations are
also influenced by the development of national and
organizational cultures.

Accounting practices across nations can be
distinguished through the four underlying dimensions of
accounting values. Gray (1988) describes these values as
professionalism, conservatism, secrecy, and uniformity.
Extending the previous studies, this present study develops
a case to show that over time, change in the cultural
values of a nation could have impact on the development of
accounting practices in that nation. The predictions of the
relationships between the culture and the accounting
practice of a nation and the hypotheses derived from such
predictions are described in chapter IV.
1. Problem definition

Previous studies of cultural influences on accounting have not examined the relationships of the changes in cultural values within a nation to the changes in accounting values and accounting practice in that nation. The essence of the dynamic nature of such relationships is not well understood. Static analyses of cultural influences on accounting practices across nations do help us understand international differences in accounting standards and accounting practices. However, we also need greater insight into how cultural values affect the development of accounting practice within a nation. Such insight could help explain how the trends in accounting practice within a nation contribute to the trends in international accounting practice. Moreover, the efforts toward harmonization of international accounting may receive useful guidance from an understanding of such trends. The harmonization process could, for example, focus on those areas of accounting practice that are more receptive to cultural differences between nations.

This present study takes an initial step toward an understanding of the dynamic relationships between national
culture and accounting practice in the Indonesian setting.
The line of inquiry that needs to be addressed for such an understanding consists of the following questions:

1) How should cultural values and accounting values be measured?
2) What is the association of changes in cultural values with the trends in accounting practice?
3) How significantly do the changes in cultural values influence accounting practice over time?
4) Which cultural values have significant influence on accounting practices?
5) Which segments of accounting practices are associated with the changes in certain cultural values?

2. Model design

The analysis of previous studies indicates two sets of constructs that have reciprocal relationships to the development of accounting practice. These are country-specific cultural values and accounting values. This study focuses on the examination of cultural influence on accounting rather than on the reciprocal relationships between the two constructs. Along this line of study, country-specific cultural values serve as the independent constructs while accounting values function as the dependent constructs.
Country-specific values, as suggested by Hofstede, consist of five dimensions:

1) power distance;
2) uncertainty avoidance;
3) individualism;
4) masculinity; and
5) time horizon.

As previously mentioned in section 1.3 of this study, societal values are not directly observable or measurable. However, observations on the origins of societal norms may provide indirect measures of certain values prevalent in a society. This forms the basis for the following hypothesis:

H1 Observations of ecological factors in the Indonesian society will indicate that power distance, uncertainty avoidance, individualism, masculinity, and time horizon are the underlying values reflecting the changes in those ecological factors.

Gray (1988) and Perera (1989), meanwhile, suggest that accounting values include, but are not limited to:

a) professionalism;
b) conservatism;
c) secrecy; and
d) uniformity.

Accounting values also are not directly observable or measurable. Indirect measures of accounting values can be obtained from observations on the prevailing practice of
accounting standards and financial reporting. This assumption leads to the following hypothesis:

H2 Observations on the practice of accounting standards and financial reporting in Indonesia will indicate that professionalism, conservatism, secrecy, and uniformity are the underlying values of the Indonesian accounting practice.

3. Predicted relationships among constructs in the model

Hofstede (1980, 1991) identified societal norms that are likely to be found when a society holds certain accepted societal values. He summarized these societal norms along each of his five dimensional values. The present study uses these norms as an approximation for predicting the relationships between cultural values and accounting values. In the process, it matches the societal norms with each accounting value. The results of this matching process are synthesized to develop predicted relationships between cultural values and accounting values. The matching process and the resulting predicted relationships are shown in Tables 2-7.
### Table 2
#### The Power Distance Societal Norms and Accounting Values

<table>
<thead>
<tr>
<th>Low Power Distance</th>
<th>High Power Distance</th>
<th>Accounting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inequality in society should be minimized.</td>
<td>There should be an order of inequality; high and low are protected by this order.</td>
<td>Secrecy (+)</td>
</tr>
<tr>
<td>All should be interdependent.</td>
<td>A few should be independent; most should be dependent.</td>
<td>Professionalism (-)  Uniformity (+)</td>
</tr>
<tr>
<td>Hierarchy means an inequality of roles, established for convenience.</td>
<td>Hierarchy means existential inequality.</td>
<td>Professionalism (-)</td>
</tr>
<tr>
<td>Subordinates are people like me.</td>
<td>Superiors consider subordinates as being of a different kind.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>Superiors are people like me.</td>
<td>Subordinates consider superiors as being of a different kind.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>The use of power should be legitimate and is subject to the judgment of good and evil.</td>
<td>Power is a basic fact of society which preempts good or evil. Its legitimacy is irrelevant.</td>
<td>Professionalism (-)</td>
</tr>
<tr>
<td>All should have equal rights. Stress on reward, legitimate and expert power.</td>
<td>Powerholders are entitled to privileges. Stress on coercive and referent power.</td>
<td>Secrecy (+)</td>
</tr>
<tr>
<td>The system is to blame. People at various levels feel less threatened and more prepared to trust people.</td>
<td>The underdog is to blame. Other people are a potential threat to one's power and rarely can be trusted.</td>
<td>Secrecy (-)</td>
</tr>
<tr>
<td>Latent harmony between the powerful and the powerless.</td>
<td>Latent conflict between the powerful and the powerless.</td>
<td>Secrecy (-)</td>
</tr>
<tr>
<td>Cooperation among the powerless can be based on solidarity.</td>
<td>Cooperation among the powerless is difficult to bring about because of low faith in people.</td>
<td>Secrecy (-)</td>
</tr>
</tbody>
</table>

Key: "+" refers to a positive relationship
"-" refers to a negative relationship
<table>
<thead>
<tr>
<th>Low Uncertainty Avoidance</th>
<th>High Uncertainty Avoidance</th>
<th>Accounting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>The uncertainty inherent in life is more easily accepted and each day is taken as it comes.</td>
<td>The uncertainty inherent in life is felt as a continuous threat that must be fought.</td>
<td>Conservatism (+)</td>
</tr>
<tr>
<td>Ease, lower stress.</td>
<td>Higher anxiety and stress</td>
<td>Conservatism (+)</td>
</tr>
<tr>
<td>Time is free.</td>
<td>Time is money.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>Hard work is not a virtue per se.</td>
<td>Inner urge to work hard.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>Less showing of emotions.</td>
<td>More showing of emotions.</td>
<td>Professionalism (-)</td>
</tr>
<tr>
<td>Conflict and competition can be contained on the level of fair play and used constructively.</td>
<td>Conflict and competition can unleash aggression and should be avoided.</td>
<td>Professionalism (-)</td>
</tr>
<tr>
<td>More acceptance of dissent.</td>
<td>Strong need for consensus.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>Deviance is not threatening; greater tolerance.</td>
<td>Deviant persons and ideas are dangerous; intolerance.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>More positive toward younger people.</td>
<td>Younger people are suspect.</td>
<td>Secrecy (+)</td>
</tr>
<tr>
<td>More willingness to take risks in life.</td>
<td>Concern with security in life.</td>
<td>Conservatism (+)</td>
</tr>
<tr>
<td>Achievement is defined in terms of recognition.</td>
<td>Achievement is defined in terms of security.</td>
<td>Professionalism (-)</td>
</tr>
<tr>
<td>Relativism, empiricism.</td>
<td>Search for ultimate, absolute truths and values.</td>
<td>Uniformity (+)</td>
</tr>
<tr>
<td>There should be as few rules as possible.</td>
<td>Need for written rules, Professionalism (-) regulations.</td>
<td></td>
</tr>
<tr>
<td>If rules cannot be kept, we should change them.</td>
<td>If rules cannot be kept, we are sinners and should repent.</td>
<td>Conservatism (+)</td>
</tr>
<tr>
<td>Low Individualism</td>
<td>High Individualism</td>
<td>Accounting Values</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>People are born into extended families or clans which protect in exchange for loyalty.</td>
<td>People take care of themselves and their immediate family.</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>'We' consciousness.</td>
<td>'I' consciousness.</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>Collectivity orientation.</td>
<td>Self-orientation.</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>Identity is based in the social system.</td>
<td>Identity is based in the individual.</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>Emotional dependence of individual on organizations and institutions.</td>
<td>Emotional independence of individual from organizations and institutions.</td>
<td>Professionalism (+)</td>
</tr>
<tr>
<td>Emphasis on belonging to the organization; membership ideal.</td>
<td>Emphasis on individual initiative and achievement; leadership ideal.</td>
<td>Conservatism (-)</td>
</tr>
<tr>
<td>Private life is invaded by organizations and clans to which one belongs.</td>
<td>Everyone has a right to a private life and personal opinions.</td>
<td>Professionalism (+)</td>
</tr>
<tr>
<td>Expertise, order, duty, and security are provided by clan or organization.</td>
<td>Autonomy, variety, pleasure, and financial security.</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>Belief in group decision.</td>
<td>Belief in individual decision.</td>
<td>Conservatism (-)</td>
</tr>
<tr>
<td>Value standards differ for ingroups and outgroups; particularism.</td>
<td>Value standards should apply to all; universalism.</td>
<td>Secrecy (-)</td>
</tr>
</tbody>
</table>
Table 5
The Masculinity Societal Norm and Accounting Values

<table>
<thead>
<tr>
<th>Low Masculinity</th>
<th>High Masculinity</th>
<th>Accounting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuition.</td>
<td>Decisiveness.</td>
<td>Secrecy (-)</td>
</tr>
<tr>
<td>Levelling: don’t try to be the best.</td>
<td>Excelling: try to be the best.</td>
<td>Secrecy (-)</td>
</tr>
<tr>
<td>Small and slow are beautiful.</td>
<td>Big and fast are beautiful.</td>
<td>Secrecy (-)</td>
</tr>
<tr>
<td>Men need not be assertive; can also take caring roles.</td>
<td>Men should behave assertively.</td>
<td>Conservatism (-)</td>
</tr>
<tr>
<td>Sex roles in society should be fluid.</td>
<td>Sex roles in society should be clearly differentiated.</td>
<td>Conservatism (-)</td>
</tr>
<tr>
<td>Difference in sex roles should not mean pervasive differences.</td>
<td>Men should dominate in all setting.</td>
<td>Conservatism (-)</td>
</tr>
</tbody>
</table>

Table 6
The Time Horizon Societal Norm and Accounting Values

<table>
<thead>
<tr>
<th>Short-term Horizon</th>
<th>Long-term Horizon</th>
<th>Accounting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal steadiness and stability.</td>
<td>Persistence (perseverance).</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>Conspicuous consumption.</td>
<td>Not spending more than necessary.</td>
<td>Conservatism (+)</td>
</tr>
<tr>
<td>Respect for tradition.</td>
<td>Adaptations of traditions to a modern context.</td>
<td>Uniformity (-)</td>
</tr>
<tr>
<td>Concern with possessing the truth.</td>
<td>Concern with respecting the demands of virtue.</td>
<td>Uniformity (-)</td>
</tr>
</tbody>
</table>
Table 7
The Predicted Relationships of Cultural Values to Accounting Values

<table>
<thead>
<tr>
<th>Cultural Values</th>
<th>Accounting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professionalism</td>
</tr>
<tr>
<td>Power Distance</td>
<td>- (H3A)</td>
</tr>
<tr>
<td>Uncertainty Avoidance</td>
<td>- (H4A)</td>
</tr>
<tr>
<td>Individualism</td>
<td>+ (H5A)</td>
</tr>
<tr>
<td>Masculinity</td>
<td>0</td>
</tr>
<tr>
<td>Time Horizon</td>
<td>0</td>
</tr>
</tbody>
</table>

Key: "+" refers to a positive relationship; "-" refers to a negative relationship; "0" means there is no relationship; and "H" refers to hypotheses.

The above considerations lead to the following hypotheses:

H3A The degree of professionalism of accounting standards and financial reports will be negatively related to power distance.

H3B The degree of secrecy of accounting standards and financial reports will be positively related to power distance.

H3C The degree of uniformity of accounting standards and financial reports will be positively related to power distance.

H4A The degree of professionalism of accounting standards and financial reports will be negatively related to uncertainty avoidance.

H4B The degree of conservatism of accounting standards and financial reports will be positively related to uncertainty avoidance.

H4C The degree of secrecy of accounting standards
and financial reports will be positively related to uncertainty avoidance.

H4D The degree of uniformity of accounting standards and financial reports will be positively related to uncertainty avoidance.

H5A The degree of professionalism of accounting standards and financial reports will be positively related to individualism.

H5B The degree of conservatism of accounting standards and financial reports will be negatively related to individualism.

H5C The degree of secrecy of accounting standards and financial reports will be negatively related to individualism.

H5D The degree of uniformity of accounting standards and financial reports will be negatively related to individualism.

H6A The degree of conservatism of accounting standards and financial reports will be negatively related to masculinity.

H6B The degree of secrecy of accounting standards and financial reports will be negatively related to masculinity.

H6C The degree of uniformity of accounting standards and financial reports will be negatively related to masculinity.

H7A The degree of conservatism of accounting standards and financial reports will be positively related to time horizon.

H7B The degree of uniformity of accounting standards and financial reports will be negatively related to time horizon.
4. Summary

In this chapter the research questions and hypotheses to be tested in this study have been presented. The hypotheses developed in this study serve two purposes. Hypotheses 1 and 2 are intended to test the validity of Hofstede's theory of cultural values and Gray's theory of accounting values in the Indonesian setting, respectively. Hypotheses 3A to 7B are the basis for the tests of the relationships between the development of culture and accounting practice in Indonesia. Methods to be employed in testing these hypotheses are presented in chapter V.
CHAPTER V
METODOLOGY

In this chapter, the organization and design of the analysis performed in this study are discussed. As indicated in chapter IV, this study tries to answer five research questions regarding the relationship between culture and accounting. In the process, this study involves two interrelated steps. First, it measures culture and accounting constructs. Second, it performs an analysis of the relationship between culture and accounting. The following sections discuss the research design used in conducting these two research steps.

1. Data definition

1.1 Independent variables

This study examines the influence of cultural values on accounting values. Accordingly, the analysis treated cultural values as the independent variables. Previous discussion also mentioned the five constructs comprising culture values. These include power distance, uncertainty avoidance, individualism, masculinity, and time horizon.

These constructs are not readily observable. A research design is developed to define observed variables as proxies to the above mentioned constructs. The design
follows the indicative measures provided by Hofstede (1980). It includes the following steps. First, it identifies the origins of each cultural value as suggested by Hofstede. Second, it matches the origins with observable variables. Third, it provides justification of such a relationship.

1.1.1 Power distance

Hofstede (1980, 1991) suggests that the wealth of nations is one of the predictors of the variance in power distance between nations. Wealth correlates negatively with power distance. Members of societies in wealthy nations tend to have less dependence on powerful groups. Wealth gives a society something other than power with which to be satisfied. Under this condition, power has less leverage than it does in less wealthy societies in which power could be the only way to a better position. As a result, wealth gives people more tolerance for inequality in the distribution of power. This is the characteristic of small power distance societies.

Several factors associated with more national wealth include: 1) more modern technology; 2) less traditional

Hofstede provides explanations of the relationship between societal norms (levels of each culture value prevailed in a society) and the ecological environments that exist in that society. He suggests that these environments represent the origins of societal norms.
agriculture; and 3) better education. Technology has emerged as an important factor of wealth creation. Nations that have "cutting-edge" technology, primarily Western countries, generate more wealth than do those nations that lag behind in technology. This is true regardless of the advantages of more natural resources available in "low technology" nations.

The latest developments in technology deal with information and communication. Accordingly, the widespread use of information and communication technology in a society is an indication of a technologically modern society. The availability of telephone lines for members of a society could be part of such an indication. Along this line, this study selected two observed variables as proxy measures of the technological modernization of the Indonesian society. They are:

- numbers of telephone lines in use and
- ratio of telephone lines to population.

Transformation from agriculture to industry has been a necessity for a nation to gain more wealth. This is the path that Western and Pacific Rim countries have taken to create more national wealth. In this sense, observations on the extent to which agricultural and non-agricultural sectors contribute to the process of wealth creation in a nation could serve as an indicator of national wealth. The
structure of the Gross Domestic Product of a nation provides a basis for developing an observable variable. This study defines such a variable as the ratio of non-agriculture components to the total Gross Domestic Product.

Wealthy nations show a common characteristic of having a strong middle class society. This class consists of skilled and educated people who are capable of dealing with "high tech" industrialization. Better education also allows the middle class society to serve as an intermediary between the powerful and the powerless. A reduction in power distance may result from such an intermediary function.

Two observable variables are identified to measure education levels in Indonesian society. They are:

- total student enrollment in all education levels and
- ratio of total student enrollment to total population.

These two measures are assumed to have a positive correlation with the creation of a strong middle class in Indonesian society. Table 8 summarizes the research design for defining observable variables as a proxy to power distance.
### Table 8

**Power Distance and the Basis for Observation**

<table>
<thead>
<tr>
<th>Origins of Power Distance Norm</th>
<th>Proxy variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Power Distance</td>
<td>High Power Distance</td>
</tr>
</tbody>
</table>

| More use of technology.       | Less use of technology.                              | Numbers of telephone lines (X1) |
| Less traditional agriculture and modern industry. | More traditional agriculture and less modern industry. | Ratio of telephone lines per 100 population (X2). |
|                               |                                                      | Total student enrollment (X4). |
|                               |                                                      | Ratio of student enrollment to total population (X5). |

#### 1.1.2 Uncertainty avoidance

One of Hofstede's findings (1991) was a contrast in uncertainty avoidance levels between countries with a Roman inheritance and Chinese-speaking countries. The first countries score a stronger uncertainty avoidance index than the latter. Historically, both the Roman and Chinese empires were centralized states that left legacies of large power distance. However, they differed in one respect. The Roman empire had highly detailed codified law systems which governed most every aspect of life. Such systems fit the concept of "government by law." The Chinese empire, on the
other hand, held the ideal of "government of man." These law systems provided only broad and general principles which guide negotiations used to settle disagreements between parties. The government believes in the people's competence to interpret and carry out the "soul" of the broad and general principles of law.

This contrast suggests that the amount and coverage of codified laws correlate positively with the degrees of uncertainty avoidance. Deregulation, meanwhile, may indicate the increasing belief of the government that people are competent enough to deal with uncertainty. Thus, a deregulation policy is an indicator of movement towards low levels of uncertainty avoidance.

The process of deregulation taken by the Indonesian government during the 1980s and 1990s may define the observable variables to measure changes in uncertainty avoidance in Indonesian society. This study determined the following variables as indicators of uncertainty avoidance:

- numbers of economic deregulation packages issued by the government and
- numbers of economic sectors being deregulated.

Table 9 shows the design of variables used to measure uncertainty avoidance.
Table 9

<table>
<thead>
<tr>
<th>Origins of Uncertainty Avoidance Norm</th>
<th>Proxy variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Uncertainty Avoidance</td>
<td>Number of economic deregulation policy packages (X6).</td>
</tr>
<tr>
<td>High Uncertainty Avoidance</td>
<td>Number of economic sectors being deregulated (X7).</td>
</tr>
</tbody>
</table>

1.1.3 Individualism

Wealth provides people with resources to flexibly pursue their own interests that may be different from the interests of others (Hofstede 1991). Differences in people's interests reduces motivations toward collectivism. Instead, people tend to lead individual lives that are less dependent on others. Wealthy families, for example, can afford to own a house with a number of private rooms where each family member can keep and do their own things. Poor families, on the other hand, may have only a one- or two-room house which all family members share. The poor cannot afford to have the luxury of privacy and an individual life.

Wealth and the development of a strong middle class society transformed villages into towns, cities, and metropolises (Hofstede 1980). Centers of people's activities moved to cities. Accordingly, urban living
becomes more attractive than life in villages. However, people living in cities experience greater pressure of competition from others, which heightens the struggle for self-survival. It is apparent that urban living and individualism have a positive relationship.

The above discussion provides a basis for developing the following measures of individualism in Indonesian society. Income per capita is an indicator of the wealth of national citizens. It is expected that income per capita will capture the relationship between wealth and individualism. The urbanization rate, on the other hand, indicates the attractiveness of urban living. This study assumed that the urbanization rate will provide an indirect measure of the relationship between urban living and individualism. Thus "income per capita" and "urbanization rate" are proxy measures of change in the levels of individualism in Indonesian society. Table 10 summarizes the research design for the measurement of individualism.

<table>
<thead>
<tr>
<th>Table 10</th>
<th>Individualism and the Basis for Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origins of Individualism Norm</td>
<td>Proxy variables</td>
</tr>
<tr>
<td>Low Individualism</td>
<td>High Individualism</td>
</tr>
<tr>
<td>Less social mobility.</td>
<td>Greater social mobility</td>
</tr>
<tr>
<td>Less economic development.</td>
<td>Greater economic development.</td>
</tr>
<tr>
<td></td>
<td>Urbanization rate (X8).</td>
</tr>
<tr>
<td></td>
<td>Income per capita (X9).</td>
</tr>
</tbody>
</table>
1.1.4 Masculinity

Hofstede (1980, 1991) refers to the cultural value of masculinity as representing aggressive behavior. Femininity, on the other hand, indicates modesty. Differences in the masculinity index scores between nations, Hofstede suggests, have a significant correlation with sex role differentiation in such nations. One of his findings also indicated that masculinity scores between men and women differed significantly. However, Hofstede also suggests that more skilled female workers score higher on a masculinity index than do unskilled female workers (Hofstede 1980).

These findings provide a way to observe masculinity levels. A possible interpretation of such findings is that when more women take an active part in societal life they will have the impact on enhancing more modest societal norms. An indirect measure of to what extent women take an active role in society can be derived from the composition of employment by sex. When males dominate such a composition, masculinity is expected to be high, and vice versa.

Another interpretation that may follow from Hofstede's findings is that when women have higher levels of education that enable them to handle high skilled jobs, masculinity
is also expected to be high. Observations on the composition by sex of students at each level of education will give an indirect measure of the relationship of education levels of men and women to masculinity societal norms. More specifically, it can be expected that at lower levels of education, a greater ratio of male to female students will result in greater differences in the scores of masculinity between male and female students. At higher levels of education, however, ratio of male to female students will have only a small impact on masculinity.

Table 11 shows a research design intended to measure masculinity levels of the Indonesian society.

<table>
<thead>
<tr>
<th>Masculinity and the Basis for Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>-----------------------------------------</td>
</tr>
<tr>
<td><strong>Origins of Masculinity Norm</strong></td>
</tr>
<tr>
<td><strong>Proxy variables</strong></td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>Low Masculinity</strong></td>
</tr>
<tr>
<td>More equal partnership of men and women.</td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>High Masculinity</strong></td>
</tr>
<tr>
<td>Less equal partnership of men and women.</td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Ratio of male employment to total employment (X10).</td>
</tr>
<tr>
<td>Ratio of male students to female students in elementary school (X11).</td>
</tr>
<tr>
<td>Ratio of male students to female students in secondary school (X12).</td>
</tr>
<tr>
<td>Ratio of male students to female students in higher education (X13).</td>
</tr>
</tbody>
</table>
1.1.5 Time horizon

Hofstede (1991) used the Chinese Value Survey to develop his time horizon index. The survey indicates a relationship between high "long-term orientation" scores of the countries in the survey and the familiarity of such countries with Confucianism. Confucianism urges people to be self-disciplined and restrained. Such behavior leads to patient societies in which a conservative approach to doing things is preferred and emphasis falls on long-term results.

One implication of this attitude is the preference for a conservative use of resources. This society will be willing to trade present consumption for savings with the expectation of getting better returns in the future. Savings become the intentionally designated resource for productive investments. Thus, it is expected that societies with a long-term orientation will allocate much of their spending to productive investments. The percentage of Gross Fixed Investment in the Gross Domestic Product of a nation may indicate the proportion of productive investment from total spending.

A long-term oriented society would also consider human investment to be very productive and important. This attitude is consistent with the Confucian teaching that
acquiring skills and education are among one's main tasks in life. There will be firm commitments from such a society to spend more on educational programs. An indicator of this commitment can be observed from the patterns of government spending. High commitments would transpire in a high ratio of educational spending to total government spending.

Table 12 summarizes the framework of the research design for defining time horizon variables based on the above discussion.

<table>
<thead>
<tr>
<th>Time Horizon and the Basis for Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origins of Time Horizon Norm</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Short-term Time Horizon</td>
</tr>
<tr>
<td>Social pressure to consume.</td>
</tr>
<tr>
<td>Quick results expected.</td>
</tr>
</tbody>
</table>

1.2 Dependent variables

In the analysis of cultural influence on accounting values, the four dimensions of accounting practice as indicated by Gray (1988) function as dependent variables. These four dimensions are professionalism, conservatism, secrecy, and uniformity. Like the dimensions of cultural values, the dimensions of accounting practice also are not
directly observable. They constitute conceptual constructs underlying accounting practice.

The following steps were taken to design observable variables that can function as proxy measures of change in such conceptual constructs. First, characteristics of each construct are identified. Second, sources for observations on accounting practice are explored. Third, observable measures are matched with characteristics of each dimension of accounting practice. Finally justifications for such relationships are presented.

1.2.1 Professionalism

Two main characteristics of professionalism are a preference for the exercise of professional judgement and the maintenance of professional self-regulation (Gray 1988). The professionalism of accounting practice depends upon the presence of such characteristics in financial reports and accounting standards. To assure the reliability of accounting information, parties involved in accounting practice send signals of their commitments to professionalism in the process of financial reporting and accounting standard setting. Thus, observations on the practice of firms' financial reports and accounting regulation processes may provide indicators to the levels of professionalism in accounting practice.
In a world of asymmetrical information, managers of firms are assumed to have information on the firms that is not available to the public. Therefore, any management representation regarding the firms' financial condition, including financial reports, may not be as reliable. To refute such a perception, managers of firms need an assertion from independent professionals regarding the reliability of financial reports.

Professional auditors provide a service needed by managers of firms to enhance the reliability of financial reports. Auditors can do so in two ways. First, auditors' reputation as the professionals in the field may convince the public of the reliability of auditors' opinions. In this regard, "public trust" is an important aspect of auditors' professionalism. An auditor must not, either in fact or in appearance, have a conflict of interest with their clients. According to this measure, government auditors who conduct audits on financial reports of state-owned enterprises may not be perceived as reliable as auditors from public accounting firms. Both government auditors and managers of state enterprises are government employees. When there is a conflict between public and government interests in the firms, government auditors may not be in a position to be independent. Second, auditors' opinions give an indication to the public of the
reliability of firms' financial reports. Favorable opinions strengthen the reliability of firms' financial reports.

A conclusion may be reached that the following variables can serve as two of the observable variables of professionalism in accounting practice. They are:

- types of auditors of firms' financial reports (Y1) and
- types of auditors' opinion on firms' financial reports (Y2).

Accounting standards provide guidelines for preparing firms' financial reports in a professional way. Auditors' opinions also depend on firms' compliance with accounting standards. In this sense, any departure from accounting standards found in firms' financial reports lessens the professionalism level of such reports. Thus, the third observable variable for professionalism levels of accounting practice is defined as:

- number of accounting methods not permitted by Indonesian accounting standards but applied in financial reports (Y3).

Accounting and auditing standards may also reflect the professionalism levels of the standard setting process. Any standard that results from a process operating under a heavy influence of the government indicates a weak self-regulatory process. Thus, government involvement has a
potential to reduce the professionalism of the standard setting process. In contrast, standards developed by professionals in those fields without government involvement inherit a high level of professionalism. Thus, the more the independent professionals set the standards for their own fields, the higher the professionalism level is in those fields.

The above discussion lays out a basis for including the following variables as proxy measures of professionalism of accounting practice in Indonesia:

- number of accounting standards issued by the Association of Indonesian Accountants (Y4);
- number of auditing standards issued by the Association of Indonesian accountants (Y5); and
- contents of accounting standards (Y6).

1.2.2 Conservatism

The essence of conservatism is a preference for a cautious approach. Conservatism in accounting practice generally means that financial reports should disclose the lowest of several possible values for assets and revenues and the highest of several possible values for liabilities and expenses (Hendriksen and Breda 1992, p. 148). Based on an order from the highest to the lowest levels of conservatism, alternative possible values for assets consist of .
- the lower of cost or market values;
- historical cost;
- current cost (higher than historical cost); and
- market value exceeding both historical and current cost.

Conservatism levels of income measurement depend upon the timing of when costs are charged to current expenses and when receipts are included in current revenues. A prompt charge of cost to current expenses and a longer delay of revenue recognition reflect a more conservative approach to income measurement. The following orders of alternative timing for charging expenses and recognizing revenues show varying conservatism levels from the most to the least.

A. Expense charge (other than depreciation expense):

- expended once as paid in advance;
- expended as anticipated;
- expended as legally obliged/incurred; and
- expended as paid later.

B. Depreciation expense:

- sum of the years digit;
- double declining balance;
- declining balance; and
- straight line.
C. Revenue recognition:

- recognized as payments for the delivered goods/services are received;
- recognized when goods or services are delivered;
- recognized when contracts are signed; and
- recognized when goods or services are produced.

Firms' accounting policies disclosed in financial reports provide information regarding firms' choices of alternative asset and income measurements. These accounting policies reveal the nature of accounting treatments for asset and income measurements. This observation forms the basis for setting the following two variables as proxy measures of conservatism:

- nature of accounting policy related to asset measurement (Y7) and
- nature of accounting policy related to the measurement of income (Y8).

Firms are not totally free to set their own accounting policy. They are only permitted to set an accounting policy from a set of alternative accounting methods available in accounting standards. Accordingly, the nature of accounting methods for asset and income measurements that are allowed in the generally accepted accounting standards have an influence on the conservatism levels of accounting
practice. Thus, the following variables define the measurement of conservatism of accounting practice:

- nature of alternative accounting methods for asset measurement available in the generally accepted accounting standards (Y9) and

- nature of alternative accounting methods for income measurement available in the generally accepted accounting standards (Y10).

1.2.3 Secrecy

Confidentiality and restriction of disclosure of information about the firms may limit the information available in financial reports. This limitation is indicative of secrecy in accounting practice. The scope and degree of detail of information included in financial reports provide a basis for observations on the secrecy levels of accounting practice. It is expected that a less secretive accounting practice will lead to a broadened scope and deepened detail of information in financial reports. This expectation leads to the prediction of a negative relationship between content levels of financial reports and secrecy levels of accounting practice.

Public interest in information about the firms will pressure managers to disclose more information about the firms to the public. Such pressure increases as the parties interested in information about the firms become more
organized and more sophisticated. Institutional investors and financial analysts represent such organized and sophisticated interest groups. This reporting environment exists in countries such as the U.S. where many firms are subject to the scrutiny of institutional investors and financial analysts.

Responding to this situation, the Financial Accounting Standard Boards, a self-regulatory body of accounting standard setting in the U.S., promulgates accounting standards that increase the disclosure levels of firms' financial reports. When applied to the Indonesian setting, the U.S. accounting standards can be a benchmark of the disclosure levels of accounting practice. The more U.S. accounting standards are applied in the financial reports of Indonesian firms, the less secretive the accounting practice in Indonesia becomes. This assumption results in a prediction of the negative relationship between adherence to U.S. accounting standards and the secrecy levels of accounting practice in Indonesia.

The Indonesian accounting standards are another indicator of the disclosure levels of accounting practice. The standards require that certain information be disclosed in financial reports. A more elaborate disclosure requirement will prompt a higher level disclosure, indicating less secrecy. Predictably, there is a negative
relationship between the extent of disclosure requirement and the secrecy levels of accounting practice.

This section concludes with the description of variables intended as a proxy measure of the secrecy levels of the Indonesian accounting practice. These are:

- number of contents in financial reports (Y11);
- the compatibility level of the contents of financial reports with the disclosure requirements of U.S. accounting standards (Y12);
- number of balance sheet items prescribed in the Indonesian accounting standards (Y13); and
- number of income statement items prescribed in the Indonesian accounting standards (Y14).

1.2.4 Uniformity

Uniformity in accounting practice means two things. First, it implies a consistent implementation of accounting methods by a firm over time. Second, it refers to a comparable accounting policy across firms over a reporting period.

A review of a firm's accounting policy over time, as indicated in financial reports, is a proxy for consistency. Firms that do not report any accounting change over time have more consistent financial reports. A comparison of accounting policy across firms for a reporting period measures the comparability of financial reports in that
period. If the same accounting policies are widely applied across firms, financial reports are more comparable. The number of alternative accounting methods for each item of a financial report also has an impact on the consistency and comparability of financial reports. Accounting standards that prescribe additional accounting methods gives firms more choice in setting their accounting policy. This may lessen the consistency and comparability levels of financial reports.

Along the lines of the above argument, the following variables were used to approximately measure uniformity in accounting practice:

- number of accounting changes (Y15);
- comparison of accounting policy across firms at any one reporting period (Y16);
- number of alternative accounting methods prescribed in the Indonesian accounting standards for balance sheet items (Y17); and
- number of alternative accounting methods prescribed in the Indonesian accounting standards for the items of income statement (Y18).

2. Index scores of the observed variables

A scale was designed to develop indices of cultural values and accounting values. The index scores indicate the levels of cultural and accounting values at certain points
of time. High index scores for each variable, except for power distance and uncertainty avoidance variables, indicate greater values of the underlying constructs, such as high masculinity, high individualism, high professionalism and so forth. For power distance and uncertainty avoidance, high index scores mean lower values of the underlying constructs.

2.1 Index scores of culture variables

Observations on culture variables result in two sets of data. The first consists of data with absolute values, such as numbers of telephone lines and income per capita. The latter provides data in relative values, such as the ratio of telephone lines to population and the ratio of male to female employment. The absolute values of the first data range from a single digit to six digit numbers. In contrast to the absolute data, relative values of the second data set range from 0 to 1.

A uniform measurement scale is preferable in the data analysis. This scale provides uniform guidelines to determine what are to be considered high and low values. For this purpose, all the collected data of culture variables were converted to a range from 0 to 1.

Data that were collected from ten out of the fifteen culture variables are already in the range from 0 to 1. The following are these ten variables:
- ratio of telephone lines to population (X2);
- ratio of non-agriculture sectors to Gross Domestic Product (X3);
- ratio of student enrollment to total population (X5);
- urbanization rate (X8);
- ratio of male to total employment (X10);
- ratio of male students to female students in elementary school (X11);
- ratio of male students to female students in secondary school (X12);
- ratio of male students to female students in higher education (X13);
- ratio of Gross Fixed Investment of Gross Domestic Product (X14) and
- ratio of spending on education program to total government spending (X15).

Data from the remaining five variables were converted from positive integers to decimals that range between 0 and 1. These five remaining variables are identified as the following:

- number of telephone line in use (X1);
- total student enrollment (X4);
- number of economic deregulation policy packages (X6);
- number of economic sectors being deregulated (X7)

and

- income per capita (X9).

2.2 Index scores of accounting variables

Upon a review of financial reports and accounting standards, a scale was assigned to each accounting variable. The scale consists of discrete and continuous values. The discrete and continuous values assigned to each variable do not necessarily constitute final index scores. If these values were not in the range between 0 and 1, they were converted to be so.

Discrete values are assigned to variables that have constrained possible values. These values vary according to the number of possible conditions applied to each variable. Included in this category are the following variables:

- types of auditors (Y1),
- types of auditors' opinion (Y2)
- nature of accounting policy related to asset measurement (Y7),
- nature of accounting policy related to income measurement (Y8),
- nature of alternative accounting methods allowed for asset measurement (Y9),
- nature of alternative accounting methods allowed for income measurement (Y10),
compatibility of financial reports with the
disclosure requirement of U.S. accounting
standards (Y12), and
- comparability of accounting policies across firms
(Y16).

Two types of auditor may be assigned to audit firms' financial reports: government auditors and public accountants. There is also a possibility that firms' financial reports are not audited. In sum, the following three conditions exist for Y₁:

a) no auditors,
b) government auditors, and
c) public accountants.

As discussed earlier, public accountants are assumed to be more professional than government auditors. Presumably, assigning either government auditors or public accountants is more professional than assigning none. The following scores are assigned to each condition:

- no auditor = 1,
- government auditor = 2, and
- public accountants = 3.

A similar approach was used to develop index scores for types of auditor opinion (Y2). A scale of 1 to 4 that is assigned to each type of auditor opinion. The scale ranks the favorable levels of auditor opinion from the
least to the most favorable. The following scores illustrate such a scale:

- no opinion or disclaimer of opinion = 1,
- adverse opinion = 2,
- qualified opinion = 3, and
- unqualified opinion = 4.

Variables Y7 to Y10 are proxy measures of the conservatism levels of financial reports and accounting standards. A scale of 1 to 4 is assigned to each variable. This scale represents an order of conservatism levels from the least to the most conservative accounting practice. Considerations for determining the levels of conservatism in asset and income measurements were discussed in section 1.2.2 of this chapter.\(^5\) Similarly, appendices 5 and 6 describe and illustrate scale instruments for variables Y12 and Y16.

Continuous values were applied to the remaining accounting variables. These variables were directly measured since they are not compared to any benchmark. Based on review and analysis of financial reports and accounting standards, a value was determined and assigned to each of the following variables:

\(^5\) See also appendices 1 to 4 for a detailed design of the conservatism index.
- number of accounting methods not allowed by the Indonesian accounting standards but used in firms' financial reports (Y3);
- number of accounting standards issued by the Association of Indonesian Accountants (Y4);
- number of auditing standards issued by the Association of Indonesian Accountants (Y5),
- number of categories of accounting standards (Y6);
- number of disclosure items in financial reports (Y11);
- number of balance sheet items prescribed in the Indonesian accounting standards (Y13);
- number of income statement items prescribed in the Indonesian accounting standards (Y14);
- number of accounting changes (Y15);
- number of alternative accounting methods for balance sheet items (Y17) and
- number of alternative accounting methods for income statement items (Y18).

3. Data collection

This study used data sets that cover a twelve year period (1981-1992). During this period, a significant transformation occurred in Indonesian development. Robison (1991) observed the following occurrences:
1) a reduction in restrictions on economic sectors
that had previously been highly regulated;
2) attempts to attract greater participation of
private investments in the national economic
programs;
3) implementation of an economic policy of
deregulation and
4) massive reductions in economy subsidies.

This transformation process changed the structure of
the Indonesian economy from being highly dependent upon
government protection, oil revenues, agriculture, and
import substitution industry into being more open to market
forces, more diversified, and more export oriented. It is
likely that this significant change also results in notable
change in Indonesian culture and accounting values.

Data related to cultural values were obtained from
various statistics. The main sources of such statistics
were the United Nation's Statistics Reports, International
Statistics, International Marketing Data, and the
Indonesian Economic Trends. The reasons for using these
various sources are two fold. First, it increases the
accuracy and reliability of the data. Data from one source
were cross-checked with data from other sources. Second,
sufficient data for this study were not available from any
single source. The above sources complemented each other in completing the data.

Financial reports were obtained from firms that publish financial reports in English. These firms include both state enterprises and private corporations. Financial reports of state enterprises were provided by the Development and Finance Supervisory Boards, a government agency whose tasks include the audit of state enterprises. Financial reports of private enterprises were provided by the International Finance Corporation, an institution under the auspices of the World Bank that provides long-term loans and venture capital to private enterprises in developing countries. Both these state and private enterprises obtain funds from international sources of capital. Accordingly, firms' financial reports have to provide information that is needed by international investors.

Another group of financial reports was obtained from firms listed in the Jakarta Stock Exchange. These financial reports were provided by the Capital Market Supervisory Board to which firms listed in the Jakarta Stock Exchange submit their financial reports. These financial reports are required to be written in the Indonesian language and stated in the Indonesian currency. The inclusion of this sample group avoids potential sample bias from the
prevalence of firms reporting in the English language and oriented toward international sources of capital.

A total of 108 financial reports covering the period of 1981-1992 comprise the sample. Fifty-seven reports were published in English while the remaining forty-one reports used the Indonesian language. Fifty reports were from state enterprises, and fifty-eight reports were from private enterprises. These 108 firms cover different lines of business that include manufacturing, farming, financial services, hotel, and airline industries (see table 13).

The sources of data related to Indonesian accounting and auditing standards are Prinsip Akuntansi Indonesia 1984 and Norma Pemeriksaan Akuntan. Both are the official publications of the Association of Indonesian Accountants. The first consists of a collection of the Indonesian accounting standards issued by the Association up to 1991. The latter consists of a collection of Indonesian auditing standards promulgated by the Association until 1990. Together, they represent the definitive statement of accounting self-regulation in Indonesia.

4. Data analysis

4.1 LISREL

Linear Structural Relations (LISREL) (Joreskog and Sorbom [1989]) was used to analyze the data. This section describes the technique as used in this study.
### Table 13

List of Sample of Financial Reports of Indonesian Firms

<table>
<thead>
<tr>
<th>Company</th>
<th>Period of Reports</th>
<th>Total Reports</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) State enterprises</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Bank Bumi Daya</td>
<td>1991</td>
<td>1</td>
<td>Banking</td>
</tr>
<tr>
<td>6. Bank Exim</td>
<td>1991</td>
<td>1</td>
<td>Banking</td>
</tr>
<tr>
<td><strong>Sub total reports of state enterprises</strong></td>
<td><strong>23</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Private enterprises</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PDCFC</td>
<td>1990 – 1992</td>
<td>3</td>
<td>Financial institution</td>
</tr>
<tr>
<td>9. BNI</td>
<td>1991</td>
<td>1</td>
<td>Banking</td>
</tr>
<tr>
<td>10. Gadjah Tunggal</td>
<td>1991</td>
<td>1</td>
<td>Rubber products</td>
</tr>
<tr>
<td>11. Bank Umum Nasional</td>
<td>1991</td>
<td>1</td>
<td>Banking</td>
</tr>
<tr>
<td>12. Lippo Bank</td>
<td>1991</td>
<td>1</td>
<td>Banking</td>
</tr>
<tr>
<td>13. Lipoomo</td>
<td>1991</td>
<td>1</td>
<td>Life insurance</td>
</tr>
<tr>
<td>15. Bank Syariah</td>
<td>1991</td>
<td>1</td>
<td>Banking</td>
</tr>
<tr>
<td>16. Unilever Indonesia</td>
<td>1991</td>
<td>1</td>
<td>Household</td>
</tr>
<tr>
<td>17. Argo Futures</td>
<td>1992</td>
<td>1</td>
<td>Textile</td>
</tr>
<tr>
<td>18. Bina Finance Indonesia</td>
<td>1992</td>
<td>1</td>
<td>Financial institution</td>
</tr>
<tr>
<td><strong>Sub total reports of private enterprises</strong></td>
<td><strong>27</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub total reports published in English</strong></td>
<td><strong>40</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Reports published in Indonesian language</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) State enterprises</td>
</tr>
<tr>
<td>2. Perkernasial</td>
</tr>
<tr>
<td>7. PTPI XX</td>
</tr>
<tr>
<td>8. PTPI XXV</td>
</tr>
<tr>
<td><strong>Sub total reports of state enterprises</strong></td>
</tr>
</tbody>
</table>

| b) Private enterprises                      |
| 2. Teka Indonesia                           | 1990        | 1 | Farming      |
| 4. Sepatu Bata                              | 1987 & 1990 | 2 | Shoes        |
| **Sub total reports of private enterprises** | **21** |               |                     |

**Total reports included in the sample** | **108** |
LISREL reduces the arbitrariness of selecting the elements (observable variables) that compose latent variables (constructs) such as "power distance" and "professionalism." LISREL provides an analysis to test the validity of such a selection. In the process, LISREL incorporates estimates of the discrepancy between observed variables and latent variables. This test procedure is generally called Confirmatory Factor Analysis (CFA) which is used to test the "measurement model" in LISREL. CFA evaluates measurement error through the loading estimates of a set of observed variables to latent variables. This process is similar to that of Factor Analysis. However, whereas Factor Analysis operates on an exploratory basis, CFA is used to confirm particular expectations.

LISREL also tests the relationships among constructs ("structural equation model"). The test considers all possible connections among constructs under study. This compares favorably to other tests such as regression and ANOVA techniques, which provide a test of only selective connections among constructs. LISREL also has advantages over path analysis. Path analysis is a piecemeal process which operates on sequential regressions between constructs. LISREL, meanwhile, operates on a simultaneous analysis. Unlike LISREL, path analysis does not incorporate measurement error between the observed measures and
constructs. Instead, it assumes that the observed measures are equal to the theoretical constructs.

4.2 Confirmatory Factor Analysis (CFA) model

Confirmatory Factor Analysis begins with the computation of a covariance matrix between the observed variables in the models. Covariance between the observed variables functions as input in the estimation of the measurement models. This study uses two hypothetical measurement models. The first model incorporates the relationships between observed and latent variables of culture, which is the independent construct. The second model predicts the relationships between observed and latent variables of accounting practice, which functions as the dependent construct. The following equations show the relationships of such models.

\[ x_i = \lambda_{ij} * \kappa_{ij} + \delta_i \]  \hspace{1cm} (1)

where:

- \( x_i \) is an \( i \) by 1 vector of observed cultural variables
- \( \lambda_{ij} \) is an \( i \) by \( j \) matrix of factor loadings of the observed variables to the latent variables of culture
- \( \kappa_{ij} \) is a \( j \) by 1 vector of latent cultural variables
\( \delta_i \) is an \( i \) by 1 vector of measurement errors on \( x_i \)

\[
y_i = \lambda_{ij} \ast \eta_j + \epsilon_i
\]

(2)

where:

\( y_i \) is an \( i \) by 1 vector of observed accounting variables

\( \lambda_{ij} \) is an \( i \) by 1 matrix of factor loadings of the observed variables to the latent variables of accounting practice

\( \eta_j \) is a \( j \) by 1 vector of latent accounting variables

\( \epsilon_i \) is an \( i \) by 1 vector of measurement errors on \( y_i \)

Figures 3 and 4 provide graphics of these two measurement models.

These models represent the hypothetical measures of culture and accounting as described in H1 and H2 in chapter IV. Empirical analysis of the models was intended to obtain findings as to whether the variables of culture and accounting described in the previous section have a significant relation to the respected latent variables (conceptual constructs) of culture and accounting.
FIGURE 4
CONFIRMATORY FACTOR ANALYSIS (CFA)
FOR ACCOUNTING PRACTICE VARIABLES
(HYPOTHESIZED MODEL)

\[ \eta_1 \]
PROFESSIONALISM

\[ \eta_2 \]
CONSERVATISM

\[ \eta_3 \]
SECRETION

\[ \eta_4 \]
UNIFORMITY

\[ Y_1 \] \quad \epsilon_1
\[ Y_2 \] \quad \epsilon_2
\[ Y_3 \] \quad \epsilon_3
\[ Y_4 \] \quad \epsilon_4
\[ Y_5 \] \quad \epsilon_5
\[ Y_6 \] \quad \epsilon_6
\[ Y_7 \] \quad \epsilon_7
\[ Y_8 \] \quad \epsilon_8
\[ Y_9 \] \quad \epsilon_9
\[ Y_{10} \] \quad \epsilon_{10}
\[ Y_{11} \] \quad \epsilon_{11}
\[ Y_{12} \] \quad \epsilon_{12}
\[ Y_{13} \] \quad \epsilon_{13}
\[ Y_{14} \] \quad \epsilon_{14}
\[ Y_{15} \] \quad \epsilon_{15}
\[ Y_{16} \] \quad \epsilon_{16}
\[ Y_{17} \] \quad \epsilon_{17}
\[ Y_{18} \] \quad \epsilon_{18}
4.3 Structural equation model

The structural equation model is used to test the hypothesized patterns of relations among cultural constructs and accounting constructs. Hypotheses 3A through 6C form a basis for the following structural equation model:

\[ \text{eta}_i = \gamma_{ij} \ast \text{ksi}_j + \text{zeta}_i \]  
\( (3) \)

where:

- \( \text{eta}_i \) is an i by 1 vector of latent variables of accounting practice, the dependent constructs
- \( \gamma_{ij} \) is an i by j matrix of coefficients of \( \text{ksi} \) variables in the structural relations; it indicates the change in the expected value of \( \text{eta}_i \) after a one unit increase in \( \text{ksi}_j \)
- \( \text{ksi}_j \) is an i by 1 vector of latent variables of culture, the independent constructs
- \( \text{zeta}_i \) is an i by 1 vector of equation errors (random disturbances) in the structural relationship between \( \text{eta} \) and \( \text{ksi} \).

Figure 5 provides a graphic of the hypothetical structural relationships between the latent variables of accounting practice (\( \text{eta} \)) and the cultural latent variables (\( \text{ksi} \)).
STRUCTURAL EQUATION MODEL FOR
THE RELATIONSHIP BETWEEN CULTURE
AND ACCOUNTING PRACTICE
(HYPOTHESIZED MODEL)

POWER DISTANCE

UNCERTAINTY AVOIDANCE

INDIVIDUALISM

MASCUlINITY

TIME HORIZON

PROFESSIONALISM

CONSERVATISM

SECRECY

UNIFORMITY
4.4 Model evaluation

LISREL also enables readers to compare the hypothetical (constrained) models to other possible (unconstrained) models of the relationships between observed and latent variables and the pattern of relations among the latent variables. The unconstrained models include all possible relationships among variables in the model. It perfectly explains all variations in the data. Thus, the unconstrained model functions as a benchmark to evaluate the constrained (hypothesized) model. Test statistics that include Chi-square, Goodness of Fit, Adjusted Goodness of Fit, Root Mean Square Residuals, and Coefficient of Determination provide a guideline for such a comparison (see Bentler and Bonnet 1980).

In LISREL, chi-square is an indicator of the aggregate difference between the constrained (hypothesized) model and the unconstrained (full) model. Joreskog and Sorbom (1989) suggest the use of chi-square as a measure of goodness of fit of the model. Large values of chi-square correspond to bad fit and small values suggest a good fit.

The use of the chi-square test, however, faces several limitations. The score of chi-square is calculated as \((N - 1)\) times the minimum value of the fit function for the specified model (where \(N\) in the number of observation in the sample). This makes the result of the chi-square test
sensitive to the number of parameters included in the model and to sample size. As the relationships included in the model increase, the specified model gets closer to the unconstrained model. On the other hand, large sample size may cause an increase in chi-square simply due to the departures from multivariate normality, rather than because of the specification errors in the model. Therefore, as sample size increases, the use of the chi-square test tends to suggest the rejection of a model, irrespective of the validity of the model (Bagozzi and Yi 1988; Anderson and Gerbing 1984; Bentler and Bonet 1980).

Fornell and Larcker (1981) identified another problem with the chi-square test. They pointed out that the power of the chi-square test is not known. Without such knowledge, the probability that chi-square will reject the null hypothesis when it is false cannot be asserted. Adding to the problems is the unique role of chi-square in testing for the goodness of fit of the models. Generally, in significance testing, the hypothesis is developed such that when the null hypothesis is rejected (i.e., the chi-square value is high and the significance level is low) in favor of the alternative hypothesis, the theory is supported. In testing for goodness of fit of a specified model, however, rejection of the null hypothesis means also the rejection of the hypothetical relationship specified in the model.
This opens the possibility that when the power of the chi-square test is low, the probability of accepting a falsely specified relationship in the model will be greater.

To minimize the risk of chi square tests, Joreskog and Sorbom (1989) recommend the consideration of the effects of model parameters in computing chi-square. This is done by dividing total chi-square by the degrees of freedom. The degrees of freedom is an often used benchmark statistical comparison purposes. These authors also suggest that when sample size and chi-square value are large, a drop in the value of chi-square divided by the degrees of freedom that results from relaxing the model (replacing the initial model with a new one) indicates an improvement in the fit of the new model. General "rules of thumb," meanwhile, suggests that a chi-square/degrees of freedom value of 2 or less is considered to be an acceptable value for a model.

Goodness of Fit Index (GFI) is an indicator that can be considered analogous to the $R^2$ in a regression model (Kalbers and Fogarty 1993). GFI is computed by comparing the fit function of the constrained model to the fit function of the unconstrained model. Higher similarity between the two functions will result in a higher GFI score and indicates a good fitting model. However, adding to the estimated parameters of the model may make the constrained model approach the perfect unconstrained model. In other
words, GFI is sensitive to the numbers of parameters included in the model. To mitigate this problem, an Adjusted Goodness of Fit Index (AGFI) can be used as a better indicator. AGFI, like adjusted $R^2$, adjusts a GFI score with the total number of parameters included in the model. AGFI is unbiased as to the numbers of parameters in the model. However, Joreskog and Sorbom (1989) point out that the distribution of GFI depends on sample size. Parallel to this, Anderson and Gerbing (1984) suggest that as sample size increases, a good fitting model needs to have larger values of GFI and AGFI compared to smaller sample size models. As a "rule of thumb," Bagozzi and Yi (1988) suggest that an AGFI equal to or greater than .9 indicates a good fitting model. Joreskog and Sorbom (1989), meanwhile, also point out that any negative index of GFI and AGFI indicates the worst of all possible models.

Root Mean Square Residual (RMSR) is a measure that analyzes errors reported for all associations in the model. It measures the average of the fitted residuals that the differences between the elements of the original and reproduced covariance matrices. Since the measurement is squared, a few large errors will have a more severe impact than many small errors. These residuals are aggregated and indexed so that the reported statistic is scaled from 0 to 1. Generally, root mean square residuals below .100 are
acceptable (Kalbers and Fogarty 1993). Usually, root mean square residuals are used to compare the fit of different models for the same data.

The coefficient of Determination" (CD) is a measure of the explanatory power of variables in the model. The coefficient of determination for X and Y variables measures the percentage of variation in the observed independent and dependent variables explained by latent factors. The coefficient of determination for structural equations measures the explanatory power of the latent exogenous variables for the variation in the latent endogenous variables. A high coefficient of determination score is an indicator of a high level of explanatory power of the relationships among variables in the model. A coefficient of .900 is generally required to indicate an acceptable explanatory power of the variables in the model.

5. Summary

The design of this study consists of three related models. The first model captures the predicted relationships among the proxy measures of cultural values. The second model depicts the predicted relationships among the proxy measures of the components of accounting practice and the development of accounting values. Confirmatory factor analysis is designed to test the specified parameters included in the first two models. The third
model deals with the predicted relationships between cultural values and accounting values over time. LISREL is the method to be employed in testing such relationships. Research results from the tests of the three models are presented in chapter VI.
CHAPTER VI
RESEARCH RESULTS

This chapter provides the results of data analysis using the methods described in chapter V. This chapter starts with the presentation of statistical figures obtained from the confirmatory factor analysis of culture and accounting constructs. This is followed by the results of the analysis of the relationship between culture and accounting practice.

1. Tests of measurement models (hypotheses 1 and 2)

A comparative confirmatory factor analysis was performed to test the measurement models of culture and accounting variables. It contrasted several proposed models for the original data set. The purpose of this comparative analysis was to discover whether the hypothesized measurement models for culture and accounting variables compare favorably to other models.

The confirmatory factor analysis of the measurement models is based on the assumption that the better the specified model captures the covariance among the observed variables, the higher the validity of the resulting measure of culture and accounting variables will be. Accordingly, an evaluation of the indicators of the goodness of fit of alternative measurement models was conducted to select the
best model. In this study, the five factor measurement model hypothesized for culture variables was compared with one, two, three and four factor models. Likewise, the four factor measurement model as hypothesized for accounting variables was compared to other alternative models. Subsequently, an extended analysis was performed for the best measurement models of culture and accounting variables.

1.1 Culture variables (H1)

Using the Maximum Likelihood (ML) method to estimate the parameters of the model, the analysis produced results summarized in Table 14. This table shows that the hypothesized five factor measurement model of culture variables is not the best model.

Compared to the other four alternative models, the five factor model results in the highest score of chi-square/degrees of freedom (62.87). This means that the model has the worst fit. This also means a rejection of H1 in favor of alternative measurement models. Of the other alternative models, the two factor model has the lowest chi-square/degree of freedom (53.48). However, an analysis of root mean square residuals indicates that the two factor model results in the largest differences (.419) between the elements of the original and reproduced covariance matrices. This indicates that the two factor model has the
<table>
<thead>
<tr>
<th>Fit Statistics</th>
<th>One Factor Model</th>
<th>Two Factor Model</th>
<th>Three Factor Model</th>
<th>Four Factor Model</th>
<th>Five Factor Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index</td>
<td>0.351</td>
<td>0.334</td>
<td>0.290</td>
<td>0.396</td>
<td>0.298</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index</td>
<td>0.153</td>
<td>0.132</td>
<td>0.112</td>
<td>0.246</td>
<td>0.163</td>
</tr>
<tr>
<td>Root Mean Square Residuals</td>
<td>0.001</td>
<td>0.419</td>
<td>0.002</td>
<td>0.002</td>
<td>0.004</td>
</tr>
<tr>
<td>Chi-square</td>
<td>5142.86</td>
<td>4920.18</td>
<td>5958.07</td>
<td>4897.67</td>
<td>5532.65</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>92</td>
<td>92</td>
<td>96</td>
<td>84</td>
<td>88</td>
</tr>
<tr>
<td>Chi-square/Degrees of Freedom</td>
<td>55.9</td>
<td>53.48</td>
<td>62.06</td>
<td>58.3</td>
<td>62.87</td>
</tr>
<tr>
<td>Coefficient Determination of X</td>
<td>0.999</td>
<td>1</td>
<td>1</td>
<td>0.999</td>
<td>1</td>
</tr>
</tbody>
</table>
largest measurement errors. Of the other models, the four factor model seems to have the best overall fit indicators. It has the highest scores of the goodness of fit index and adjusted goodness of fit index (.396 and .246, respectively). This suggests that the four factor model has the highest similarity between the constrained and unconstrained models. It also has the second lowest root mean square residuals score (.002), which means that the model has small measurement errors. The coefficient of determination for culture variables in the four factor model is also very high (.999), which means a very high explanatory power of variables in the model.

The four latent variables of the best measurement model for culture consist of power distance, uncertainty avoidance, individualism, and masculinity, as shown in Table 15 and Figure 6. These four dimensions of culture match with the results of Hofstede's earlier study (1980). The fifth dimension of culture, time horizon, suggested in Hofstede's later study (1991), was not found to be a significant factor within the cultural values in Indonesia.

Two observed variables were originally intended to measure the dimension of time horizon of the Indonesian culture. These variables are: 1) ratio of Gross Fixed Investment to Gross Domestic Product (X14); and 2) ratio of spending on education to total government spending (X15).
Table 15
Confirmatory Factor Analysis of Cultural Variables: Measurement Statistics of the Four Factor Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Lambda</th>
<th>T-value of Lambda</th>
<th>Theta Delta</th>
<th>Squared Multiple Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power distance:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1</td>
<td>.175</td>
<td>8.864</td>
<td>.001</td>
<td>.438</td>
</tr>
<tr>
<td>X2</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.962</td>
</tr>
<tr>
<td>X3</td>
<td>.133</td>
<td>23.938</td>
<td>.000</td>
<td>.877</td>
</tr>
<tr>
<td>X4</td>
<td>.092</td>
<td>14.934</td>
<td>.000</td>
<td>.684</td>
</tr>
<tr>
<td><strong>Uncertainty avoidance:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X6</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.726</td>
</tr>
<tr>
<td>X7</td>
<td>.601</td>
<td>7.807</td>
<td>.001</td>
<td>.489</td>
</tr>
<tr>
<td><strong>Individualism:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X8</td>
<td>.194</td>
<td>3.585</td>
<td>.001</td>
<td>.120</td>
</tr>
<tr>
<td>X9</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.784</td>
</tr>
<tr>
<td>X14</td>
<td>.328</td>
<td>9.813</td>
<td>.000</td>
<td>.584</td>
</tr>
<tr>
<td>X15</td>
<td>.056</td>
<td>6.168</td>
<td>.000</td>
<td>.306</td>
</tr>
<tr>
<td><strong>Masculinity:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X10</td>
<td>.052</td>
<td>8.371</td>
<td>.000</td>
<td>.410</td>
</tr>
<tr>
<td>X11</td>
<td>.100</td>
<td>15.747</td>
<td>.000</td>
<td>.727</td>
</tr>
<tr>
<td>X12</td>
<td>.404</td>
<td>16.414</td>
<td>.001</td>
<td>.745</td>
</tr>
<tr>
<td>X13</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.961</td>
</tr>
</tbody>
</table>

Note: All scores of lambda X have a significant level of .001
FIGURE 6
CONFIRMATORY FACTOR ANALYSIS (CFA)
MODEL FOR CULTURAL VARIABLES
(TESTED MODEL)

\[
\begin{align*}
\delta_1 & \xrightarrow{.001} X_1 \quad .175 \\
\delta_2 & \xrightarrow{.001} X_2 \quad 1.000 \\
\delta_3 & \xrightarrow{.000} X_3 \quad .133 \\
\delta_4 & \xrightarrow{.000} X_4 \quad .092 \\
\delta_5 & \xrightarrow{.001} X_6 \quad 1.000 \\
\delta_7 & \xrightarrow{.001} X_7 \quad .601 \\
\delta_8 & \xrightarrow{.001} X_8 \quad .194 \\
\delta_9 & \xrightarrow{.001} X_9 \quad 1.000 \\
\delta_{10} & \xrightarrow{.000} X_{10} \quad .328 \\
\delta_{11} & \xrightarrow{.000} X_{11} \quad .056 \\
\delta_{12} & \xrightarrow{.002} X_{12} \quad .052 \\
\delta_{13} & \xrightarrow{.001} X_{13} \quad .100 \\
\delta_{14} & \xrightarrow{.000} X_{14} \quad .040 \\
\delta_{15} & \xrightarrow{.000} X_{15} \quad 1.000
\end{align*}
\]

POWER DISTANCE

UNCERTAINTY AVOIDANCE

INDIVIDUALISM

MASCULINITY
In the four factor (best) model, these two variables loaded significantly on individualism. The t-values of lambda X14 and X15 (9.813 and 6.168, respectively) indicate that the loading factors of the two variables are significant at p < .001.

Further analysis revealed that fourteen out of the fifteen observed variables have a significant relationship to the four dimensions of Indonesian culture. All these relationships are significant at .001 (all lambda have a t-value of 3.585 or higher). Ratio of student enrollment to total population (X5) was the only observed variable that does not have any relationship to any other variables. Since LISREL analysis works on the covariance between variables in the original data, X5 was excluded from subsequent analysis.

Table 15 and Figure 6 also show that measurement errors (theta delta) of the remaining variables included in the model are very low (between .000 and .001). The explanatory power of the variables in the model (squared multiple correlation), on the other hand, is relatively high (mostly between .400 and .962). These indicators suggest the high reliability of the model.

Compared to the general "rules of thumb," however, this model cannot be considered to be a good fitting model. Both goodness of fit index and adjusted goodness of fit
index are considerably lower than the generally accepted level of .90. Likewise, the ratio of chi-square to degrees of freedom is far above the acceptance level of 2. Nevertheless, as Joreskog and Sorbom (1989) point out, a good fitting model may also mean the best model of the proposed alternative models. In this sense, the four factor model can be considered as the best fit model.

1.2 Accounting variables (H2)

The same approach as applied to culture variables was used to analyze the results of confirmatory factor analysis of accounting variables. Table 16 shows that the four factor model compares favorably to alternative models.

Indicators of the goodness of fit revealed that of the five alternative models, the four factor model ranks first in the goodness of fit index and adjusted goodness of fit index (.306 and .115, respectively). It also ranks second in root mean square residuals and chi-square/degrees of freedom (.004 and 28.55, respectively). In terms of the coefficient of determination, it ranks third (.990).

These results provide supportive evidence for H2. Four factors - professionalism, conservatism, secrecy and uniformity - underlie the covariance among accounting variables.
Further analysis of the loading factors between observed and latent variables, as shown in Table 17 and Figure 7, reveals some interesting phenomena. First, financial report variables tend to have higher loading factors (lambda) than those of accounting standard variables. Second, the loading factors of financial report variables have a lower significance level (higher t-values) than those of accounting standard variables. Third, the explanatory power (squared multiple correlation) of financial report variables is much higher than that of accounting standard variables.

These indicators suggest that change in the prevailing accounting values is driven more by change in financial reports than by change in accounting standards. These also suggest that accounting standards change more slowly than do financial reports. The more dynamic financial reports may result from a situation where the practice of financial reporting allows firms to follow guidelines other than the Indonesian accounting standards.

---

6 Financial report variables consist of Y1, Y2, Y3, Y7, Y8, Y11, Y12, Y15, and Y16. These variables are extracted from the examination of firms' financial reports (see also the discussion in chapter V). The other variables are extracted from the examination of accounting standards.
Table 16
Confirmatory Factor Analysis
of Accounting Variables
Goodness of Fit Statistics

<table>
<thead>
<tr>
<th>Fit Statistics</th>
<th>One Factor Model</th>
<th>Two Factor Model</th>
<th>Three Factor Model</th>
<th>Four Factor Model</th>
<th>Five Factor Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index</td>
<td>0.278</td>
<td>0.259</td>
<td>0.279</td>
<td>0.406</td>
<td>0.048</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index</td>
<td>0.079</td>
<td>0.078</td>
<td>0.095</td>
<td>0.115</td>
<td>-0.278</td>
</tr>
<tr>
<td>Root Mean Square Residuals</td>
<td>0.003</td>
<td>0.007</td>
<td>0.004</td>
<td>0.004</td>
<td>0.004</td>
</tr>
<tr>
<td>Chi-square</td>
<td>3262.86</td>
<td>3986.9</td>
<td>3604.67</td>
<td>3426.35</td>
<td>7686.64</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>120</td>
<td>123</td>
<td>122</td>
<td>120</td>
<td>114</td>
</tr>
<tr>
<td>Chi-square/Degrees of Freedom</td>
<td>27.19</td>
<td>32.41</td>
<td>29.55</td>
<td>28.55</td>
<td>67.43</td>
</tr>
<tr>
<td>Coefficient Determination of Y</td>
<td>0.986</td>
<td>0.991</td>
<td>0.998</td>
<td>0.99</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 17
Confirmatory Factor Analysis of Accounting
Variables: Measurement Statistics of the
Four Factor Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Lambda</th>
<th>T-value of Lambda</th>
<th>Theta Epsilon</th>
<th>Squared Multiple Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionism:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y1</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.986</td>
</tr>
<tr>
<td>Y2</td>
<td>.971*</td>
<td>19.636</td>
<td>.017</td>
<td>.794</td>
</tr>
<tr>
<td>Y3</td>
<td>.163!</td>
<td>1.951</td>
<td>.053</td>
<td>.035</td>
</tr>
<tr>
<td>Y4</td>
<td>.053*</td>
<td>2.824</td>
<td>.003</td>
<td>.070</td>
</tr>
<tr>
<td>Y5</td>
<td>.007&quot;</td>
<td>1.513</td>
<td>.000</td>
<td>.021</td>
</tr>
<tr>
<td>Y6</td>
<td>.101*</td>
<td>2.769</td>
<td>.010</td>
<td>.068</td>
</tr>
<tr>
<td>Conservatism:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y7</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.939</td>
</tr>
<tr>
<td>Y8</td>
<td>.321*</td>
<td>5.288</td>
<td>.006</td>
<td>.219</td>
</tr>
<tr>
<td>Y10</td>
<td>-.070*</td>
<td>-5.837</td>
<td>.000</td>
<td>.256</td>
</tr>
<tr>
<td>Secrecy:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y11</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.941</td>
</tr>
<tr>
<td>Y12</td>
<td>.968*</td>
<td>5.568</td>
<td>.047</td>
<td>.238</td>
</tr>
<tr>
<td>Y13</td>
<td>.047*</td>
<td>2.298</td>
<td>.001</td>
<td>.050</td>
</tr>
<tr>
<td>Y14</td>
<td>.058*</td>
<td>2.550</td>
<td>.001</td>
<td>.061</td>
</tr>
<tr>
<td>Uniformity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y15</td>
<td>1.000</td>
<td>NA</td>
<td>.001</td>
<td>.992</td>
</tr>
<tr>
<td>Y16</td>
<td>-.005*</td>
<td>-.304</td>
<td>.004</td>
<td>.001</td>
</tr>
<tr>
<td>Y17</td>
<td>-.001&quot;</td>
<td>-1.287</td>
<td>.000</td>
<td>.015</td>
</tr>
<tr>
<td>Y18</td>
<td>-.005&quot;</td>
<td>-1.359</td>
<td>.000</td>
<td>.017</td>
</tr>
</tbody>
</table>

Note: * = significant at the level of .05 or lower;
! = significant at the level of .1;
" = significant at the level of .2;
' = not significant.
2. Tests of structural equation model (hypotheses 3A through 7B)

The confirmatory factor analysis of culture variables resulted in the deletion of the time horizon latent variable from the structural equation analysis. Accordingly, the hypothesized relationships between time horizon and the four accounting values (H7A and H7B) are also deleted. The fourteen remaining hypotheses form a basis for the trimmed structural equation model as shown in Figure 8.

Table 18 shows the results of the analysis of the goodness of fit of the trimmed model. Although the goodness of fit index and adjusted goodness of fit index scores (.209 and .077) are not high, other indicators show the significance of the relationship among constructs in the model. Root mean square residuals are very low (.004). This means that patterns of relation in the model have only small measurement errors. The resulting coefficient of determination of .925 also indicates ample explanatory power of the constructs included in the model. However, the high score of chi-square/degrees of freedom (19.785) suggests that a cautious approach be taken in interpreting the results. There is a possibility that the relationships specified in the model are different from the actual relationships. The combination of low goodness of fit index
FIGURE 8
STRUCTURAL EQUATION MODEL FOR
THE RELATIONSHIP BETWEEN CULTURE
AND ACCOUNTING PRACTICE
(TRIMMED MODEL)

POWER DISTANCE

UNCERTAINTY AVOIDANCE

INDIVIDUALISM

MASCUlINITY

PROFESSIONALISM

CONSERVATISM

SECRETY

UNIFORMITY

\( \zeta_1 \)

\( \zeta_2 \)

\( \zeta_3 \)

\( \zeta_4 \)
<table>
<thead>
<tr>
<th>Statistic</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index</td>
<td>0.209</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index</td>
<td>0.077</td>
</tr>
<tr>
<td>Root Mean Square Residual</td>
<td>0.004</td>
</tr>
<tr>
<td>Chi-square</td>
<td>3408.480</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>425</td>
</tr>
<tr>
<td>Chi-square/Degrees of Freedom</td>
<td>19.785</td>
</tr>
<tr>
<td>Coefficient of determination</td>
<td>0.926</td>
</tr>
</tbody>
</table>
scores and high scores of chi-square/degrees of freedom from the tests of the three models is also a sign of the low predictive power of the models.

Figure 9 reveals the patterns of the relationships between culture and accounting practice. The following sections discuss the compatibility of these patterns with the hypothesized relationships between culture and accounting practice.

2.1 Power distance effects

Figure 8 indicates that power distance is hypothesized to have relationships to change in professionalism, secrecy, and uniformity of accounting practice. Figure 9, however, shows that power distance has a significant relationship only with the uniformity of accounting practice. It does not have significant relationships with the professionalism and secrecy of accounting practice. The following sections will discuss the detailed results of the relationships between power distance and accounting practice.

2.1.1 Power distance and professionalism (H3A)

Hypothesis 3A predicts a negative relationship between power distance and professionalism. Hofstede (1980) suggests that one of the characteristics of low power distance societies is the association of power with expertise. Therefore, low power distance societies provide
FIGURE 9

STRUCTURAL EQUATION MODEL FOR
THE RELATIONSHIP BETWEEN CULTURE
AND ACCOUNTING PRACTICE
(TESTED MODEL)

POWER DISTANCE

PROFESSIONALISM

\[ \zeta_1 \]
\[ 0.056 \]

UNCERTAINTY AVOIDANCE

CONSERVATISM

\[ \zeta_2 \]
\[ 0.003 \]

INDIVIDUALISM

SECRECY

\[ \zeta_3 \]
\[ 0.011 \]

MASCULINITY

UNIFORMITY

\[ \zeta_4 \]
\[ 0.060 \]

ALL COEFFICIENTS ARE SIGNIFICANT AT .01
conducive environments for professionalism. High power distance societies, on the other hand, are more marked by coercive and referent power. In these societies, power is associated with authority more than it is with professionalism.

Results of the hypothesis testing conducted in this study, however, indicate no significant relationship between power distance and professionalism (see Figure 9). The maximum likelihood estimate of the relationship between the two constructs shows a parameter coefficient of -.195. However, the t-value of such a relationship is only -1.298. This means the parameter coefficient is not significant at \( p < .05 \). Therefore, hypothesis 3A is not supported. This study suggests that changes in power distance in Indonesian society may not have any impact on changes in professionalism of accounting practice in Indonesia.

2.1.2 Power distance and secrecy (H3B)

Hypothesis 3B predicts a positive relationship between power distance and secrecy. One of the characteristics of high power distance societies is a tendency of people to view others as a potential threat and not deserving of trust (Hofstede 1980). Low power distance societies, on the other hand, are characterized by secure and trustful groups. Secure and trustful people are more likely to share
information with others than are suspicious people. This forms a basis for the prediction of a positive relationship between power distance and secrecy.

Results of the hypothesis testing, shown in Figure 9, indicates no significant relationship between power distance and secrecy. The scores of the maximum likelihood estimate and t-value of the gamma between secrecy and power distance are .077 and 1.085 respectively. Thus, the relationship is not significant at p < .05. Hypothesis 3B is not supported. This result suggests that change in power distance of the Indonesian society may not have any impact on the secrecy/disclosure levels of accounting practice.

2.1.3 Power distance and uniformity (H3C)

Hypothesis 3C predicts a positive relationship between power distance and uniformity. Several characteristics of societal norms related to power distance suggested by Hofstede form a foundation for hypothesis 3C. Low power distance societies tend to believe that all people are interrelated, and that superiors and subordinates have a mutual respect and fair relationship (Hofstede 1980). High power distance societies, on the other hand, treat the majority of people as being dependent (subordinates) upon a few independent people (superiors).
Applied to organizational structure, the characteristics of high and low power distance societies will be reflected in greater and less centralization, respectively, of the organization. Centralization does not have much room for an organization to be flexible or to adapt quickly to a necessary change. Therefore, it is expected that power distance and uniformity will have a positive relationship.

Testing of hypothesis 3C indicates supportive evidence of the positive relationship between power distance and uniformity (see Figure 9). The maximum likelihood estimate of the relationship between power distance and uniformity shows a value of .329. The t-value of such a relationship is 2.008. This means that the relationship has a significance level of p < .05. Thus, the tests of hypothesis 3C suggest that an increase in firms' wealth and its wealth creation process leads to a more decentralized organization. This enables firms to flexibly adapt to necessary changes, which include changes in accounting reporting.

2.1.5 Summary

One (H3C) out of the three hypotheses (H3A, H3B, and H3C) of the relationship between power distance and accounting values is supported. The supportive evidence for hypothesis 3C is consistent with the theory of the

The other two hypotheses of a negative relationship between power distance and professionalism (H3A) and a positive relationship between power distance and secrecy (H3B) were not supported. Further discussion of the rejection of these hypotheses is presented in the next chapter.

2.2 Uncertainty avoidance effects

Figure 8 indicates that uncertainty avoidance has hypothesized relationships with each of the four accounting values (professionalism, conservatism, secrecy, and uniformity). Results of the hypothesis testing, as indicated in Figure 9, show that change in uncertainty avoidance is related to change in each dimension of accounting practice. The following sections provide the detail of these results.

2.2.1 Uncertainty avoidance and professionalism (H4A)

Hypothesis 4A predicts a negative relationship between uncertainty avoidance and professionalism of accounting practice. A decrease in uncertainty avoidance is expected to have some impact on the increase in professionalism.

Low uncertainty avoidance societies have high confidence in people's competence to negotiate and to solve
conflict (Hofstede 1980). In this situation, excessive and highly detailed government regulation is not necessary. People may rely on their expertise and skills to deal with each other. This environment is a precondition to the growth of professionalism. High uncertainty avoidance, on the other hand, has a high dependency on highly detailed government regulation. People are assumed not to be competent enough to develop self-regulation processes in dealing with each other. Professionalism should not thrive in this society.

Tests of hypothesis 4A contradicts this expectation. The test result shows a positive relationship between uncertainty avoidance and professionalism of the Indonesian accounting practice. As indicated in figure 9, the structural equation coefficient between uncertainty avoidance and professionalism is 1.143. The tests also show that the regression coefficient has a t-value of 2.191, which indicates the significance level of p < .05.

The results suggest that a decreasing trend of uncertainty avoidance is not associated with a more intense accounting self-regulation or with a stronger commitment to professionalism in the preparation of financial reports. Thus, hypothesis 4A is not supported. On the contrary, the results indicate that low uncertainty avoidance leads to a less professional accounting practice.
2.2.2 Uncertainty avoidance and conservatism (H4B)

Hypothesis 4B predicts a positive relationship between uncertainty avoidance and conservatism. Low uncertainty avoidance societies measure achievement by how much recognition others give to a person (Hofstede 1980). To achieve recognition from others, people will attempt to display their success. Analogously, a firm may use financial reports to impress others with its success. Accordingly, such firms are more likely to apply less conservative accounting methods. It is expected that a decrease in uncertainty avoidance will have some impact on a decrease in conservatism of accounting practice.

Tests of hypothesis 4B provide supportive evidence for the expected relationship between uncertainty avoidance and conservatism. The maximum likelihood estimate of such a relationship resulted in a structural equation coefficient of .719. The t-value of 4.418 indicates that the coefficient has a significance level of p < .001. These indicators suggest a positive relationship between uncertainty avoidance and the conservatism of accounting practice.

2.2.3 Uncertainty avoidance and secrecy (H4C)

Hypothesis 4C predicts a positive relationship between uncertainty avoidance and the secrecy of accounting practice. Low uncertainty avoidance societies tend to have
more tolerance for deviance since such deviance is not perceived to be threatening. This trait is also marked by a societal willingness to take risks and to be less suspicious of others (Hofstede 1980). These characteristics lower people's anxiety and increase their confidence. It is likely that societies with these characteristics will be more open to others. Therefore, any decrease in uncertainty avoidance is expected to have some impact on the decrease in secrecy, and vice versa. Applied to the accounting context, it is expected that any decrease in uncertainty avoidance will be reflected in the requirement for more disclosure in financial reports.

Tests of hypothesis 4C, as shown in Figure 9, do not provide supportive evidence of the positive relationship between uncertainty avoidance and secrecy of accounting practice. On the contrary, the test indicates a negative relationship between the two. The maximum likelihood estimate resulted in a regression coefficient of -.665 and a t-value of -2.704. This suggests that the negative relationship between uncertainty avoidance and secrecy of accounting practice is significant at p < .001. A decrease in uncertainty avoidance is significantly associated with a more secretive accounting practice.
2.2.4 Uncertainty avoidance and uniformity

Hypothesis 4D predicts a positive relationship between uncertainty avoidance and uniformity. Low uncertainty avoidance societies are willing to accept dissent if consensus cannot be reached (Hofstede 1980). Such a society perceives differences to be a matter of fact that is not necessarily bad. Differences could be a source of dynamic diversity needed by the society. Accordingly, uniformity is not worth pursuing at any cost. Thus, a decrease in uncertainty avoidance is expected to have some impact on the reduction in uniformity. In accounting practice, the reduction of uniformity could mean more selection among accounting methods and the application of different accounting methods among firms.

The tests of hypothesis 4D provide supportive evidence of the positive relationship between uncertainty avoidance and uniformity (see Figure 9). The regression coefficient of 2.586 resulting from the maximum likelihood estimate of the relationship between uncertainty avoidance and uniformity has a t-value of 4.423. Thus, the relationship is significant at .001. The results suggest that as uncertainty avoidance decreases, firms and the accounting profession may use different references in the standard setting process and the preparation of financial reports.
2.2.5 Summary

Two hypotheses of a positive relationship between uncertainty avoidance and conservatism (H4B) and a positive relationship between uncertainty avoidance and uniformity (H4D) were supported. This study indicates that a decrease in uncertainty avoidance may drive firms to deal with uncertainty in a less conservative approach (H4B). This study also indicates that a reduction in uncertainty avoidance opens the possibility for firms and the accounting profession to rely on different references. This reduces the emphasis on uniformity in the standard setting process and the preparation of financial reports, as predicted in H4D.

Two other hypotheses of a negative relationship between uncertainty avoidance and professionalism (H4A) and a positive relationship between uncertainty avoidance and secrecy (H4C) were not supported. The results of the hypothesis testing indicate an opposite direction for this relationship. These unexpected results may be due to the lack of readiness of firms and the accounting profession to deal with the deregulation process initiated by the Indonesian government.
2.3 Individualism effects

As indicated in Figure 8, individualism is hypothesized to have relationships with professionalism (H5A), conservatism (H5B), secrecy (H5C), and uniformity (H5D). Results of hypothesis testing indicate that individualism has significant relationships with each of the four accounting values (see Figure 9).

2.3.1 Individualism and professionalism

Hypothesis 5A predicts a positive relationship between individualism and professionalism. Hofstede (1980, 1991) remarks that high individualism societies emphasize such characteristics as self-orientation, individual initiative and achievement, and personal leadership. These characteristics fit the definition of professionalism as described in chapter III. Professionalism reflects a preference for individual judgment and the maintenance of self-regulation. Thus, it is expected that an increase in individualism will trigger an increase in professionalism.

Tests of hypothesis 5A show the expected result. The tests resulted in a regression coefficient of 1.732 and a t-value of 4.018. The results indicate that a positive relationship between individualism and professionalism in accounting practice is significant at p < .001. This study suggests that as individualism increases, professionalism of accounting practice also increases.
2.3.2 Individualism and conservatism

Hypothesis 5B predicts a negative relationship between individualism and conservatism. In high individualism societies, individuals are emotionally independent from organizations. They tend to believe in individual rather than group decisions (Hofstede 1980). In this situation, people will feel free to take risks in their own decisions because they feel responsible primarily only to themselves. They also have enough wealth to accommodate risk taking behavior. The willingness to take risks is a reflection of a reduction in conservatism. Therefore, it is expected that an increase in individualism will tend to reduce conservatism. Likewise, firms and the accounting profession may be less inclined to use conservative accounting methods.

Tests of hypothesis 5B, however, indicate the contrary. Test results show a regression coefficient between individualism and conservatism of accounting practice of 1.652 with a t-value of 11.302. The results suggest that such a positive relationship is significant at p < .001. Thus, an increase or decrease in individualism is associated with an increase or a decrease in conservatism of accounting practice.

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7 See also the discussion of the relationship between individualism and wealth on p. 65.
2.3.3 Individualism and secrecy

Test results show a negative relationship between individualism and secrecy of accounting practice. The regression coefficient between individualism and secrecy is -.925 with a t-value of -4.552. The negative relationship between the two variables is significant at p < .001. The results suggest that a decreasing trend in the individualism of the Indonesian society is associated with the increasing trend of secrecy of accounting practice.

The results are consistent with hypothesis 5C, which predicts a negative relationship between individualism and secrecy. Hofstede (1980) also suggests that low individualism societies have different value standards for ingroups and outgroups. Differences in standards for different groups of people are not an encouraging sign for openness in societies. On the contrary, it stimulates people to hide things from other groups of people.

2.3.4 Individualism and uniformity

Hypothesis 5D predicts a negative relationship between individualism and uniformity. People in low individualism societies use the social system as the basis for their identity. In contrast, people in high individualism societies are more likely to have an identity based in the individual (Hofstede 1980). Thus, people in low individualism societies tend to have a uniform identity.
People in high individualism societies, on the other hand, will have different identities depending on their individual characteristics. This forms a basis for the negative relationship between individualism and uniformity.

Test results show a positive relationship between individualism and uniformity. A structural equation coefficient between individualism and uniformity was estimated to be 3.568 with a t-value of 7.303. This suggests that, with a significance level of p < .001, a decrease in the individualism of the Indonesian society is associated with a decrease in the uniformity of accounting practice. Thus, hypothesis 5D was not supported.

2.3.5 Summary

Two of the four hypotheses of the relationship between individualism and accounting values were supported. Test results indicate that individualism has a positive relationship with professionalism of accounting practice. This is consistent with hypothesis 5A. Test results also provide supportive evidence of the negative relationship between individualism and secrecy of accounting practice as predicted in hypothesis 5C.

Two other hypotheses of negative relationships between individualism and conservatism (H5B) and between individualism and uniformity of accounting practice (H5D) were not supported. In contrast to the hypothesized
relationships, test results indicate that individualism is positively associated with conservatism and uniformity of accounting practice.

2.4 Masculinity effects

Three hypotheses of the relationships between masculinity and accounting values are included in this study (hypotheses 6A, 6B, and 6C). Masculinity is hypothesized to have a negative relationship with conservatism (H6A), secrecy (H6B), and uniformity (H6C) of accounting practice.

Results of the hypothesis testing, however, indicates no significant relationship between masculinity and accounting values. Test results show that masculinity has parameter coefficients of -.018, .058, and .047 with conservatism, secrecy, and uniformity of accounting practice, respectively. The related t-values that resulted from the tests are only -.385, .804, and .282 respectively. This suggests that the above relationships are not significant. No hypotheses of the relationship between masculinity and accounting values were supported.

2.5 Other results

Test results indicate a positive relationship between power distance and conservatism (see Figure 9). The relationship has a regression coefficient of .222 and a t-value of 5.248. Thus, the relationship is significant at
.001. This relationship is unexpected and not hypothesized. None of the societal norms related to power distance as indicated by Hofstede can be associated with the characteristics of conservatism of accounting practice.

2.6 Conclusion

Research results presented in the previous sections provide mixed indication of the validity of the theory of culture and accounting values developed by Hofstede and Gray and of the predicted relationships among these values in the Indonesian setting (see also Table 20). The peculiar historical development of the Indonesian society at large and the current business environment may be factors that caused culture and accounting values to develop differently from what theory predicts. Chapter VII presents the interpretation and discussion of these findings in the context of the specific historical and cultural development of Indonesia.
<table>
<thead>
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<th>Uniformity</th>
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<td>+ (H5B)</td>
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CHAPTER VII
DISCUSSION, LIMITATIONS, AND IMPLICATIONS

This chapter presents a discussion of the research findings from which the conclusions are drawn. Potential limitations of the methods, design, and theoretical foundation of the study are discussed in the context of these findings. Suggestions for potential future research which could extend this study follow the discussion of the conclusions and limitations of this study. The chapter ends with the discussion of the implications of this study for public policy related to the development of accounting practice in Indonesia and to the harmonization efforts of international accounting practices.

1. Discussion of research results

1.1. Dimensions of Indonesian culture

The findings of this study suggest that only four of Hofstede's five cultural values are present in Indonesian culture. The underlying dimensions of the Indonesian culture consist of power distance, uncertainty avoidance, individualism, and masculinity. The fifth dimension of Hofstede's cultural values, time horizon, was not found to be a significant dimension of Indonesian culture.
Hofstede (1991) suggests a link between time horizon and the *Confucian dynamism*. Of the twenty-three countries included in his study, Hofstede discovered that China, Hong Kong, Taiwan, Japan and South Korea rank as the top five countries with the highest scores for a long-term orientation index. This index was designed to measure the long-term perspectives of the nations included in that study. People in these five countries are familiar with the teaching of Confucius.

Indonesia was not included in Hofstede's 1991 study. However, a parallel can be drawn from the long-term orientation index scores that the Philippines and Pakistan obtained in that study. To some extent, the combined characteristics of the Philippines and Pakistan have much in common with the characteristics of Indonesian society. Philippines and Indonesians originate from the same "Malay" race. Pakistan and Indonesia, meanwhile, share a religious majority of Moslems. The Philippines and Pakistan obtained the index scores of 19 and 0, which are respectively the third lowest and the lowest scores collected in that study. Neither the Philippines, Pakistan, nor Indonesia is familiar with Confucianism. Thus, it is not surprising that time horizon is not a significant factor of the Indonesian culture.
Another finding of this study suggests that the two variables originally intended to measure time horizon loaded significantly to the dimension of individualism within the Indonesian culture. These two variables are: the ratio of Gross Fixed investment to Gross Domestic Product; and the ratio of spending on education to total government spending.

According to Hofstede (1991), Confucianism urges people to have few desires and to be sparing with resources. A society with this attitude tends to set aside a high proportion of income for savings. Savings would be the primary source of financing for the investments that these societies make.

Western societies, meanwhile, tend to satisfy their consumption needs first before saving. Here, the primary driving factor for savings is not an attitude of being sparing with resources, but the availability of excess income over the necessary consumption spending and the availability of credit to finance consumption and investment. In this sense, investment is not a substitute for present consumption but an addition to the present spending. Investment is a vehicle to maintain financial steadiness and stability of individuals. Thus, investment serves the interests of individuals in accordance with the principle of individualism.
An analysis of the Indonesian Gross Domestic Product reveals that the steady increase in Gross Fixed Investment is not the result of a reduction in consumption spending. Gross Fixed Investment increased from 24.3% of Gross Domestic Product in 1980 to 35% in 1991. Meanwhile, during the same period, consumption also increased from 62.8% to 64% of Gross Domestic Product (Data Consult, Inc. 1992). This suggests that the investment motives of Indonesian society mirror those of Western societies rather than of Confucian-influenced societies. This may also explain why the investment variable does not relate to time horizon but rather to individualism in the Indonesian culture.

An increasing trend of investment and a transformation from agriculture to manufacturing requires more skilled and educated workers. Lack of such workers may discourage investors, who may relocate their investments elsewhere. Thus, an increasing proportion of spending on education by the government shows efforts to produce a more skilled and educated society that may also serve the interests of investors. Since investment decisions may be based on the principle of individualism, spending on education that serves the interests of investors may also be a function of individualism rather than a function of time horizon.

Another interesting finding suggests that the ratio of male to female students in higher education and secondary
school ($X_{13}$ and $X_{12}$) has the highest and second highest loading on masculinity. This is the opposite of (Hofstede's [1980]) expectation which suggests that both men and more skilled and educated women obtain identical scores on the masculinity index. Therefore, any change in $X_{13}$ and $X_{12}$ is assumed to have only a minimum impact on masculinity.

This study's contradictory result suggests that Indonesian women tend to maintain and champion a unique femininity value. More skilled and educated women are in a position to play a leading role in this effort. They do so because of their high commitment to a unique femininity value.

Historical analysis of the woman's movement in Indonesia supports this interpretation. The prominent pioneers of woman's rights, such as Kartini and Dewi Sartika, did not associate with radical ideas for women. (Soeroto 1979; Wirjatmadja 1977). Instead they came from families with traditional gender values. While they advocated improvement in education and more active roles for women in a society, they did not urge women to abandon their traditional roles.

In summary, unlike other Asian nations that are steeped in Confucianism, the Indonesian society may not consider that the future is more important than the present. The importance of the future is appreciated only
when it has tangible impact on the present condition. Second, the structure of the Indonesian culture is based on the four dimensions of power distance, uncertainty avoidance, individualism, and masculinity. Any change in each of these four dimensions may have significant impact on social life in Indonesian. Finally, the increasing role of more skilled and educated women in Indonesian society may have significant imprint on society.

1.2. Dimensions of accounting practice in Indonesia

All of the four hypothesized dimensions of accounting values are present in Indonesian accounting practice. The development of accounting practice in Indonesia can be classified into the components of professionalism, conservatism, secrecy, and uniformity. Gray (1988) indicates that these four components comprise the structure of accounting practice across nations. Our findings suggest that the development of accounting practice in Indonesia is comparable to that of other nations. This opens the possibility of far reaching implications, as discussed later, for the design and evaluation of the development of accounting practice both in Indonesia and internationally.

Other related findings also suggest that the practice of firms' financial reporting is ahead of the development of Indonesian accounting standards. The development of accounting practice in Indonesia seems to be receptive to
the influence of the international accounting practice. When deemed necessary, Indonesian firms may look to accounting practices of other nations for guidance in the preparation of their financial reports.

The relatively simple and general nature of Indonesian accounting standards encourages firms to consider such guidance. These standards often do not provide Indonesian firms with specific guidelines necessary for determining specific accounting treatments. A provision in the Indonesian accounting standards also allows Indonesian firms to apply any accounting methods for the matters not sufficiently explained in the Indonesian accounting standards. The only criteria for such accounting methods is that they should be consistent with "sound business practice."

1.3 The relationships between culture and accounting practice

This section presents a discussion of research findings as to the relationship between the development of culture and accounting practice in Indonesia. The discussion is organized by the dimensions of accounting practice described above. This organization is somewhat different from chapter VI. The organization of research results in chapter VI highlights the impact of each culture value on the different dimensions of accounting practice.
This section depicts the responsiveness of each dimension of accounting practice to different cultural values. In combination, chapters VI and VII provide a review of both sides of the relationship between culture and accounting practice.

1.3.1 Professionalism

The professionalism of accounting practice is hypothesized to be negatively related to power distance (H3A), negatively related to uncertainty avoidance (H4A), and positively related to individualism (H5A). The tests of these hypotheses resulted in the rejection of hypotheses 3A and 4A. The test results indicate that professionalism of accounting practice is not significantly related to power distance and uncertainty avoidance. Only hypothesis 5A was supported. The professionalism of accounting practice has a significantly positive relationship with individualism. The following discussion provides an interpretation and explanation of these test results.

An increase in national wealth drives societies toward low power distance societal norms (Hofstede 1980, 1991). An analysis of Indonesian economic development, however, indicates that the creation of national wealth depends heavily on government initiatives (see also chapter II of this study). In this situation, the process of national wealth creation does not reduce the importance of
government authority to the key parties involved in such a process. Thus, for such parties, the increase in national wealth may not necessarily result in a reduction in power distance or an increase in professionalism.

This peculiar situation applies to the development of business practice in Indonesia. The success of both state and private enterprises, to some degree, has been the result of a great reliance on government policies and access to government authority. Professionalism in conducting business may have become secondary to the ability to make arrangements with the government. The preparation of firms' financial reports also reflects this pattern of doing business. Professionalism may not be a key factor in the process of financial reporting.

The government factor also plays an important role in the development of the accounting profession in Indonesia. As discussed in chapter II, the government's influence is apparent in many aspects and stages of the accounting profession. In this situation, the accounting profession is very cautious in setting professional standards (accounting and auditing standards). Necessary steps are taken to avoid any conflict between professional standards and government regulation. This environment is not conducive to the emergence of self-regulation within the accounting profession.
An incident in 1986 provides an example of how government regulation dictates the standard setting process of the accounting profession. The 1984 Indonesian accounting standards did not permit disclosure of fixed assets at their current cost unless the government permitted a firm to do so. But when the government issued a decree permitting firms to revaluate fixed assets for tax purposes (decree No. 45, dated October 12, 1986), the accounting profession followed suit by issuing Statement of Interpretation No. 3 in February 1988. This statement provides guidelines on how to disclose asset revaluation in financial statements.

High reliance by the accounting community on government authority may also be a factor in the rejection of hypothesis 4A. A parallel can be drawn with the situations in 1979 and 1982. On March 27, 1979, the Ministry of Finance issued decree No. 108, which stated that its tax agency would accept firms' audited financial statements with an auditor's unqualified opinion as the basis for the computation of income tax due from the firms. As a result, demands for audit service increased
significantly.\textsuperscript{8} When the decree was repealed in 1982, demand for audit service decreased sharply.

Analogous to the situations in 1979, 1982, and 1986, government deregulation policies implemented in the 1980s left the accounting community to respond to less government regulation. Also, less government regulation reduced the need for a professional accounting establishment and diminished demand for its services.

The above discussion suggests that the attachment of business activities to government authority may negate the consequences of the increase in national wealth and the reduction in government regulation for the changes in power distance and uncertainty avoidance of the accounting community. As a result, changes in the above environments may not have any impact on the Indonesian accounting practice. This interpretation, however, does not necessarily apply to other segments of the Indonesian society. For society at large, the increase in national wealth and the reduction in government regulation may have had an impact on societal norms related to power distance and uncertainty avoidance. But for certain segments of the society, such as the accounting community (firms and

\textsuperscript{8} This assertion is based on a taped interview between the author and Mr. Kartikahadi in May 1992. Mr. Kartikahadi is the managing partner of an accounting firm in Jakarta and the chairman of the Committee on the Indonesian Accounting Principles.
accounting profession), institutional consequences of the changes in societal norms are not automatic. For this community, environmental changes are a necessary but not sufficient condition for a change in its institutional norms. This study indicates that reduction in the reliance of the accounting community on government authority may be another necessary condition for any substantive change in the organization and self-governance of the Indonesian accounting profession.

The tests of hypothesis 5A support that individualism is positively related to the professionalism of accounting practice. One possible interpretation of this finding is that as individualism increases, competition among firms becomes stronger. In a competitive environment, managers of firms are under constant pressure to exercise their professional skills to outperform their competitors. This could also mean that professionalism is needed in the preparation of firms' financial reports.

This result, however, is not consistent with the findings of the tests of hypothesis 3A which suggests that market competition in the processes of firm's wealth creation is not associated with the increase in the professionalism of accounting practice. This leads to another possible interpretation. The test results of hypothesis 5A may also suggest that when individualism of
the Indonesian society is low, the professionalism of accounting practice is also low. Examinations of data that measure individualism and of the confirmatory factor analysis show that the results do indicate that individualism of Indonesian society may have decreased over the 1980s. Income per capita ($X_1$) and Gross Fixed Investment ($X_4$) are the two variables that have the highest loading on individualism (see Figure 6). The income per capita data show that although it increased from US $591 in 1981 to US $650 in 1992, it had a decreasing trend from 1981 to 1990 (see Table 20). Likewise, the Gross Fixed Investment ratio had a decreasing trend from 1981 to 1986 before it began climbing in 1987. Therefore, for most of the 1980s, the data reveal a decline in individualism.

<table>
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<tr>
<th>Year</th>
<th>Income per Capita (US $)</th>
<th>Gross Fixed Investment (%)</th>
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<tbody>
<tr>
<td>1981</td>
<td>591</td>
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</tr>
<tr>
<td>1982</td>
<td>597</td>
<td>27.9</td>
</tr>
<tr>
<td>1983</td>
<td>523</td>
<td>28.7</td>
</tr>
<tr>
<td>1984</td>
<td>507</td>
<td>26.2</td>
</tr>
<tr>
<td>1985</td>
<td>515</td>
<td>28.0</td>
</tr>
<tr>
<td>1986</td>
<td>463</td>
<td>28.3</td>
</tr>
<tr>
<td>1987</td>
<td>428</td>
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</tr>
<tr>
<td>1988</td>
<td>473</td>
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</tr>
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</tr>
<tr>
<td>1992</td>
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</tr>
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</table>
On the other hand, the decrease in individualism within Indonesian society during this period may not necessarily apply to business situations. The increase in the number of Indonesian conglomerates from fifty-five in 1980 to 200 in 1993 (World Bank 1993), for example, indicates a general increase in competition among firms. Since competition is one of the characteristics of high individualism, the increase in the number of competitors may also indicate an increase in the individualism of firm environments.

The above reconstruction leads to the following suggestions. First, test results indicate that the individualism of the Indonesian society had a decreasing trend over the most part of the 1980s. Second, while the individualism of the Indonesian society was decreasing, the professionalism of accounting practice remained low. Third, while the individualism of the Indonesian society was decreasing, firm environments showed a general increasing trend of individualism. Fourth, while the individualism of firms was increasing, the professionalism of accounting practice remained low.

The fourth suggestion indicates a negative relationship between the individualism of firms and the professionalism of accounting practice. If this is the
case, this is consistent with the results of the tests of hypothesis 3A. An increase in competition does not associate with an increase in the professionalism of accounting practice when access to government authority can circumvent the need for professionalism in a competitive environment, especially if the self-governance structure of the professional community is relatively immature.

1.3.2 Conservatism

The conservatism of accounting is hypothesized to be positively related to uncertainty avoidance (H4B) and negatively related to individualism (H5B). The tests of hypothesis 4B provide supportive evidence of the positive relationship between uncertainty avoidance and the conservatism of accounting practice. This implies that as the government lessens control over economic activities through its deregulation policy, firms have to deal with increasing competition. Competition does not allow managers of firms to deal only with secure businesses. An overemphasis on a conservative approach to doing business may force firms to pass investment opportunities to others. This may affect the firms' performance in product and financial markets.

In financial markets, competition requires that firms seeking funds from the markets provide evidence to convince potential investors of promising returns given risks. In
this case, a firm's cost of capital becomes a function of firms' success in this process. Impressing potential investors with a firm's success potential is crucial to improve firm's competitiveness in financial markets. Since firms' financial reports are an important source of information in competitive capital markets, firms seek to provide information in their financial reports look good. In the short-run, firms are less likely to choose conservative accounting methods to measure and disclose firms' values in the financial reports.

The tests of hypothesis 5B, however, resulted in a rejection of the expected negative relationship between individualism and the conservatism of accounting practice. On the contrary, test results show a positive relationship between the two constructs. As discussed in the previous section, individualism had a decreasing trend. Thus, the findings suggest that both the individualism of the Indonesian society and the conservatism of accounting practice were low.

The previous discussion also explained that although the individualism of the Indonesian society in general was decreasing, firms' environments had an increasing trend of individualism. This leads to an interpretation that apart from the general condition of the Indonesian society, individualism as it relates to a business entity's
environment was increasing while the conservatism of accounting practice was low. If so, the increase in the individualism of such firms would correspond to a negative relationship with the conservatism of accounting practice. This interpretation is consistent with the results of the tests of hypothesis 3B. Increasing competition motivates firms to favor risk taking behavior and to select less conservative accounting methods.

The test results also show an unexpected positive relationship between power distance and the conservatism of accounting practice. This relationship was not hypothesized. The following discussion of the process of national wealth creation provides an explanation for this unexpected result.

The process of wealth creation requires capital participation from various sources. To a certain extent, especially when the process of wealth creation depends on government authority, the needs for capital can be drawn from limited sources. In this case, there is a lack of competition among firms to attract funds from capital markets. Accordingly, firms are not subject to public scrutiny. Information about firms' operating results and asset position can be limited to a few well-connected groups. Firms do not need to be concerned about providing information regarding their success to outside investors.
and other parties. The only party to which firms must report their financial condition is the tax agency. For tax purposes alone, firms may take a conservative approach to reporting their financial condition.

But as wealth accumulation increases (which also means a decrease in power distance), the accumulated capital of the limited established well-connected groups may not be sufficient to fulfill the expanded needs for firms' capital. Firms then must look to capital markets for additional sources.

In an efficient capital market, publicly available information about a firm's performance influences a firm's attractiveness. This, in turn, affects a firm's cost of capital. Since financial reports serve as one medium for firms to dispense information about their performance, firms may choose aggressive accounting policies for processing such information. This interpretation is also consistent with the explanations of hypotheses 4B and 5B, where competition is identified as the possible driving factor for less conservative approaches to the preparation of firms' financial reports.

1.3.3 Secrecy

The secrecy of accounting practice is hypothesized to have positive relationships with power distance (H3B) and uncertainty avoidance (H4C), and a negative relationship
with individualism (H5C). The tests of these hypotheses indicate no significant relationship between power distance and the secrecy of accounting practice (rejection of hypothesis 3B). The results also do not provide supportive evidence of the positive relationship between uncertainty avoidance and the secrecy of accounting practice (rejection of hypothesis 4C). The results, however, do provide supportive evidence of the negative relationship between individualism and the secrecy of accounting practice (support of hypothesis 5C).

The tests of hypotheses 3A and 3B provide parallel results. Power distance is not significantly related to either the professionalism or secrecy of accounting practice. As in the relationship between power distance and professionalism of accounting practice, reliance of the business community on government authority may also negate the effects of the increase in national wealth on the process of lessening the secrecy of accounting practice. The importance of being able to deal with government authority gives incentives to business to build personal access to the source of such authority and to prevent others from sharing such personal access. Therefore, the increase in national wealth may not be followed by a reduction in power distance and in the secrecy of accounting practice.
This result, however, is in contrast to the suggestion of a positive relationship between power distance and the conservatism of accounting practice. As discussed in the previous section, the wealth creation process required to support large scale enterprises, regardless of the reliance on government authority, necessitates that firms develop capital sources from potential investors, especially as the need for capital increases in magnitude. Once the firms succeed in gaining funds from general capital markets, they have to make more information available to investors. Consequently, firms will have to reduce the secrecy (increase the disclosure levels) of accounting practice. It is not clear that this has yet to occur in any great degree.

The rejection of the hypothesis of the positive relationship between uncertainty avoidance and the secrecy of accounting practice (H4C) may be a sign of immaturity of the Indonesian accounting community. Firms and the accounting profession have gotten used to following government guidelines for certainty. Government deregulation lessens the availability of such guidelines. The accounting community may not be ready to face this situation. Accordingly, instead of boosting confidence, deregulation may increase the anxiety among firms and the accounting profession. This may have resulted in a more
secretive accounting practice as indicated in the tests of hypothesis 4C, which show a negative relationship between uncertainty avoidance and the secrecy of accounting practice. This result implies that there is a residual effect of the previously highly regulated business environments on the impediment to the process of increasing disclosure in external financial reporting.

The results of the tests of hypothesis 5C indicate that low individualism of the Indonesian society is associated with a high secrecy of the Indonesian accounting practice. If this is the case, the results are consistent with hypothesis 5C. As discussed earlier, however, a business firm environment contrasts with the general individualism of the society at large. Firm environments indicate increasing firm individualism. Thus, confined to the view of a business entity's strategic advantage, the above results suggest that an increasing trend of firm individualism is associated with higher concern to maintain secrecy and protect proprietary information.

1.3.4 Uniformity

The uniformity of accounting practice is hypothesized to be positively related to power distance (H3C) and uncertainty avoidance (H4D), and negatively related to individualism (H5D). The tests of these hypotheses show supportive evidence of hypotheses 3C and 4D. The results of
the tests of hypothesis 5D, meanwhile, show a positive relationship between individualism and the uniformity of accounting practice. However, since individualism as it relates to a business firm environment is opposite to individualism in society at large, the results give supportive evidence for a negative relationship between the individualism of firms environments and the uniformity of accounting practice.

An analysis of the dimensions of accounting practice indicates that the number of accounting changes (Y13) has the highest loading on the uniformity dimension of accounting practice (see Figure 7). In this context, the test results of hypothesis 3C could suggest that as the wealth creation process of the firms increases, complexity occurs and firms tend to apply more new accounting methods to their financial reporting. As the wealth creation process and competition increase, they bring more complexity to firms' operation and reporting practices. The old ways of doing things may not be suitable for an increasing complexity of firms' operation and reporting processes, and changes in these processes become inevitable. In this situation, managers of firms must be able to be creative, innovative, and flexible to adapt to the necessary changes. Changes in accounting methods
applied by the firms signals the creativity and flexibility of firms' managers.

In searching for alternative accounting methods, firms encounter the fact that the accounting profession in Indonesia may not have contemporarily appropriate accounting standards. This leaves firms with different sources of accounting methods from which to choose. The sources of new accounting methods may include, but are not limited to, the international accounting standards and the U.S. accounting standards. Due to the discrepancies between such standards, the uniformity of accounting practice is likely to decrease.

The above explanation may reconcile the seemingly contradictory results of the tests of hypotheses 4C and 4D. The results of the tests of hypothesis 4C indicate that in the absence of government regulation, business firms become anxious about business situations. At the same time, the accounting profession does not seem prepared to pursue an expanded agenda of accounting standard setting. The combined situations can lead to more secretive accounting practices. Test results of hypothesis 4D, however, could

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9 The results of the tests of hypotheses 3A and 4A do indicate that in the absence of government regulation, the accounting profession does not have an aggressive agenda for a self-regulation process to keep up with the increasing complexity of the firms' wealth creation process.
lead to an interpretation that firms are mature enough and have enough confidence to accept the risk of reporting under different accounting methods. Less uniform accounting practices are the reflections of such differences.

As indicated before, a deeper analysis suggests that the two test results may not be contradictory. Less uniform accounting practices may not be due to the maturity and confidence levels of the firms. Instead, it may result from a situation where firms cannot find uniform guidelines for the preparation of their financial reports. Anxiety among the business and uncertainty as to uniform guidelines may cause companies to select different approaches to the preparation of their financial reports. Thus, pressures of uncertainty support managerial discretion in financial reporting.

In the context of the above interpretation, the suggestion that an increase in the competitive environment (which also means an increase in firms' individualism) is associated with less uniformity of accounting practice, as indicated in the test results of hypothesis 5D, may not be relevant. Managers' internal needs for new accounting methods that can cope with the increasing complexity of firms' control and financial reporting may be the principal factor affecting the lower uniformity of accounting practice. The development of such needs may not be
necessarily associated with the firms' competitive environment. As long as these needs arise and external uniform guidelines for the desired accounting methods are not available, the practice of external financial reporting will vary. It may have little to do with the firms' competitive environment or individualism.

Importantly therefore, this study provides new evidence for the universal role of managerial discretion in the process of accounting choice. Managerial discretion, we assert, exists not only in a traditionally free market environment but characteristically in situations where there is less voluntary disclosure of information about firms, and where government influence mixes with market mechanisms. The reasons for managerial discretion differ from one case to another. It could be based on primarily economic, political, or psychological motives.

The presence of managerial discretion complicates the appreciation of cultural influence on accounting. Managerial discretion emerges from a firm's specific situation, which may or may not represent the general environment that influences the culture of society at large. Specific situation may lead to certain organizational cultures that may differ from one firm to another. State enterprises, privately held companies, and publicly held corporations, for instance, may operate in
different organizational cultures through which the management decision process is shaped, including managerial discretion over accounting choice. This further demonstrates that the relationship between culture and accounting is complicated and difficult to generalize. Other factors, such as firms' specific leadership or market situation, may also influence this relationship.

1.3.5 Professionalism, conservatism, secrecy, and uniformity of accounting practice and masculinity

The discussion of the relationships between the four dimensions of accounting practice and masculinity is presented in this separate section. The findings of the hypothesis testing related to such relationships are so unique that they warrant a separate discussion. Masculinity is hypothesized to be negatively related to conservatism (H6A), secrecy (H6B), and uniformity (H6C) of accounting practice. The results, however, indicate no significant relationships between masculinity and any dimension of accounting practice. This phenomenon is unique to masculinity, since the previous sections have revealed that the three other cultural values do have some relationships with one or more dimensions of accounting practice.

These results also seem contradictory to the suggestion that the involvement of more skilled and
educated Indonesian women is likely to distinguish a society. Skills and education are prerequisites for someone to enter the accounting profession so as to prepare or audit business financial reports. Thus, as women become more involved in these activities, they are expected to have a significant impact on the outlook of these activities. The test results, however, refuted this expectation.

The findings may lead to an interpretation that accounting practice in Indonesia is still the domain of men. An overview of the composition of the committee members responsible for setting the Indonesian accounting standards lends support to this interpretation. Over the period of 1984-1990, the Association of Indonesian Accountants assigned sixty of its members to various committees designated to develop the Indonesian accounting standards. Only three committee members, or 5% of the total committee members, were women¹⁰.

The minimum involvement of women in accounting related activities is also apparent in a study done by Abdoelkadir

¹⁰ The name of the committee members are obtained from the "Prinsip Akuntansi Indonesia," an official publication of the Association of Indonesian Accountants. The Dutch style of academic degrees preceding the name of each committee member help identify the composition of the committee members by sex. A "drs" degree indicates that the degree holder is a man. A "dra" degree indicates the degree holder is a woman.
(1982). In his study, entitled "The Perceptions of Accountants and Accounting Students on the Accounting Profession in Indonesia," only sixty six responses (6.7% of the total 980 responses) were from women. This evidence suggests either that men dominate the key roles in accounting development or alternatively that women are not interested in the development of accounting. A deeper combined explanation employing both factors is more plausible. In either case, masculinity persists in Indonesian accounting practices.

1.4 Conclusions

This section provides a summary of the discussion in the previous sections. This summary highlights the important findings of this study, whose implications are addressed in the next section.

Unlike the societies of other Asian nations, which are heavily influenced by Confucianism, Indonesian society does not seem to consider time horizon to be a significant factor in societal life. The structure of the Indonesian society is similar to that of Western societies. The values of power distance, uncertainty avoidance, individualism, and masculinity constitute its structure.

The involvement of more skilled and educated women is likely to provide a distinctive mark to Indonesian society. However, the involvement of women in the accounting
community thus far is so minimal that it does not have any impact on the development of accounting practice in Indonesia.

The dimensions of accounting practice in Indonesia match Gray's four dimensions of accounting. The components of accounting practice can be classified as professionalism, conservatism, secrecy and uniformity.

The practice of external financial reporting by Indonesian firms seems more adaptive to environmental changes than does the process of Indonesian accounting standard setting. Indonesian firms may prepare their financial reports partly in accordance with U.S. accounting standards, international accounting standards, or accounting standards applied in other nation.

Market competition and the reliance of the business community on access to government authority are factors which appear to confirm and distort the hypothesized relationships between cultural values and the dimensions of accounting practice. The reliance of the business community on government authority may have caused the relationships between cultural values and professionalism and secrecy of the Indonesian accounting practice to be the reverse of the hypothesized relationships. Market competition, on the other hand, seems to stimulate the realization of the
hypothesized relationships between cultural values and conservatism of accounting practice.

Market competition and psychological motives provide competing explanations of the relationships between cultural values and the uniformity of accounting practice. Managerial discretion over financial reporting is not necessarily limited by economic reasons identified with firms operating in established competitive capital markets. Managers of firms not operating in such an environment also have motives that may be political or psychological in nature, and serve as reasons for the discretionary reporting practices that are observed.

2. Limitations of the study

The findings and conclusions of this study are subject to several limitations. These limitations include those due to the problems arising from the theoretical foundation, measurement, and data collection aspects of the study. Possible limitations of this study are discussed in the following subsections.

The theory of cultural dimensions developed by Hofstede (1980) has been widely studied in the fields of sociology, organizational theory, and more recently in accounting literature. An analysis of the Social Citation Index reveals that over the period 1981-1992, the theory has been cited in 583 studies in different fields. Eighty-
nine of these citations were made in 1992 alone. This suggests a substantial influence among researchers as to the theory of culture used in this study. Despite this widespread acceptance, the theory does not complete in its measure of the dimensions of culture. Hofstede defines culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another" (1990, p. 5). This definition emphasizes the dimensions of culture by which cultural values across nations can be distinguished. However, the theory fails to consider possible basic dimensions of culture shared by all human beings regardless of their nationality.

A preference for justice, liberty, and prosperity, for example, is universal to all human beings. This universal value provides a basis for the establishment of regional and international organizations such as the United Nations, European Community, and Asian and Pacific Economic Community. These organizations have the capacity to influence the societal values of a nation regardless of the environmental factors unique to that nation. Thus, studies of the cultural development of a nation that is confined to observations on environmental factors unique to that nation, such as conducted in this study, is not complete.
The influence of the universal values should also be incorporated in such studies.

Hofstede also classifies cultural diffusion by nationality. This classification originates from a premise that shared values are the basis for a nation to exist. This premise may not be valid for the current situation, where great flows of people migrate from one country to another. Shared values are not the necessary reason for this migration. Instead, economic motives play a significant role in attracting people or repelling them. These immigrants may change their nationality but keep their societal ethnic values intact for many generations.

The historical development of the United States provides an example of a nation in which multiple races, cultures, and religions co-exist. The early settlers were of different national origins. Similarities in basic values may have encouraged the early settlers to create somewhat of a "melting pot" of their original cultures, from which a new identity of American culture was developed. However, recent immigrants coming to the United States tend to keep their original culture and identity intact. In cities such as Los Angeles, Miami, and New York, where people of different origins cluster, Western, Hispanic, Asian, and African cultures survive and thrive together. In this regard, cultural diffusion may not follow the border of
nations. Ethnic and race criteria may be more valid lines to draw conclusions about cultural diffusion.

The examination of the relationships between national culture and the Indonesian accounting practice conducted in this study may thus be limited by the limitation of certain assumptions pertaining to country-based cultural diffusion. The Indonesian population comprises different ethnic groups with different languages, religions, and customs. The focus on national culture borrowed from the literature may overlook the impact of the different cultures of these ethnic groups on Indonesian accounting practice. This may limit the external validity of the findings of this study. In other words, the influence of a "pure" national culture on the development of the Indonesian accounting practice may be "contaminated" by the influence of diverse ethnic cultures. However, the reliance of the Indonesian business community on the authority of the government in its business decision process, as indicated in this study, could modify the impact of these ethnic cultures. In this particular case, managers of firms, regardless of their ethnic origins, tend to look to the government as a source of guidance for their business decisions. This may induce more homogeneity than would be the case in a less centralized political state.
Hofstede's theory of culture also does not address the interaction effects among each dimension of culture. For example, his theory predicts that when more people become better educated, which contributes to the development of a strong middle class society, power distance in that society will decrease. It is possible, however, that the decrease in power distance may also be followed by a decrease in uncertainty avoidance. Better education may also enable people to feel confident about themselves and less anxious about uncertainty. In this regard, uncertainty avoidance may decrease whether or not there are government deregulation policies. In Hofstede's model, government deregulation policies are one of the environmental indicators of change in uncertainty avoidance. This possibility suggests that change in uncertainty avoidance may be due to change in power distance. Without these insights, the theory may fail to explain and predict the direct and indirect effects of change in environmental factors on cultural values.

Great care was taken to produce measures that represent theoretically and empirically valid culture and accounting constructs. However, it is likely that such observed measures cannot fully achieve perfect correspondence with the represented constructs. This is a general problem of the internal validity of any study that
uses observed measures to represent latent constructs. However, since the LISREL procedure employed a shared variation of multiple measures, the reliance on any particular measure to represent the theoretical constructs is lessened.

The samples used in this study include corporations with a wide range of lines of industry and different ownership and organizational structures. However, the samples were not randomly selected. Instead, they represented the only data available from the various sources in Indonesia. The composition of the available samples did not warrant a separate examination of the relationship between culture and accounting practice by industry classification, ownership structure, or organizational structure. Accordingly, this study could not conduct an analysis of the influence of firm specific culture on accounting practice. Organizational structures and management decision processes of state enterprises may differ from those of private enterprises. These differences may cause state and private enterprises to take different courses of action in response to changes in environmental factors. Lacking a wider sample, this study cannot provide such insights. This identifies a principal limitation for the external validity of this study.
This study covers a period from 1981 to 1992. During this twelve-year period, Indonesian society underwent a significant transformation process from a traditionally agricultural to a more industrial society. However, this period is relatively short for a study of a society and its culture. The impact of environmental changes on societal life may not be immediately noticeable. A lengthen transition period may have to elapse before the effects of interactions among the changes in environmental factors, societal norms, and their institutional consequences can be observed.

3. Contribution of the study

There are three major contributions of this study. First, this study develops quantitative measures for dimensions of culture and accounting practice over several years. These measures enable this study to use "hard" data and to conduct empirical analysis of the development of culture in the Indonesian setting. Similar measures could be used to observe the development of culture in other nations.

Second, this study empirically examines the applicability of the theories of cultural dimensions (Hofstede 1980, 1991) and accounting dimensions (Gray 1988) in the Indonesian setting. Previous studies used index scores of cultural values across nations developed by
Hofstede as the basis for analyzing the relationships between culture and accounting practice across nations. In this sense, Hofstede's dimensions of cultural values and the related index scores are taken for granted. In contrast, this study conducted tests to examine whether Hofstede's dimensions of culture are present in the Indonesian setting. This study also performed tests to determine whether the four accounting values as suggested by Gray are represented by Indonesian accounting practice. Applying these tests to other settings in different countries may serve as a test of the generalizability of the theory of culture and accounting values developed by Hofstede and Gray, respectively.

The results of the above tests provide a direction for further examination of the relationships between cultural and accounting values. The parameters specified in the model to be tested do not need to include all culture and accounting values developed by Hofstede and Gray. Instead, they can be limited to the culture and accounting values that are present in the specific setting of the study. This leads to the third contribution of this study. It empirically examines the relationships between culture and accounting practice in a single country context (Indonesia) over twelve years. Using the models developed in this study, such examination could also be applied to other
countries that have similar points of development with Indonesia.

4. Implications of the study for future research issues

This study showed mixed results in that some hypotheses were supported while some were not. Combined with the limitations of this study indicated above, these mixed results raise more questions to be addressed in future research. This future research can be classified into those issues related to the study of Hofstede's model, the study of culture, the study of Indonesia, and the study of the relationships between culture and the Indonesian accounting practice.

The replication of this study in different country settings should address at least two important general questions about Hofstede's model. First, can the generalizability of Hofstede's five dimensions of cultural values across nations be determined through empirical evidence gathered from similar studies conducted in different nations? Second, will replication of this study determine the usefulness of Hofstede's cultural values in explaining and predicting the development of accounting practice across nations?

Future study of culture could be extended to include an inquiry into the basic values of all human beings regardless of their race or nationality. Insights into
these basic values may supplement the possibly missing
dimensions of culture as currently understood by Hofstede
and others. This may enable us to have an understanding not
only about cultural differences, but also about cultural
similarities among nations which in turn would be of value
in seeking to harmonize standards for external financial
reporting. These insights may also prevent the study of
culture from the possibly Western bias of Hofstede's
concept, which equates economic development with cultural
progress. As a result, we may also be better equipped to
cope with the development of a global culture.

Another research issue related to the study of culture
deals with the inquiry into the intra-relationships among
the dimensions of culture. As discussed earlier, the
findings of this study suggest several anomalies. It
remains unclear, for instance, why the influence of market
competition is limited to the relationships between the
dimensions of culture and the conservatism of accounting
practice. Neither is the influence of market competition on
the secrecy of Indonesian accounting practice apparent. An
equally unresolved issue is why the reliance on government
authority seems to influence only the effects of culture on
the professionalism and the secrecy of accounting practice.

This indicates that Hofstede's model of culture may be
too broad to explain and predict the development of one
discipline's (accounting) practice. A well-developed theory of the intra-relationships among the dimensions of culture could elaborate on the specific direct and indirect effects of each cultural value on accounting practice. This may provide additional explanation of such unresolved issues.

The findings of this study also indicate that market competition and the reliance of the accounting community on government authority can confirm or distort the hypothesized relationships between culture and Indonesian accounting practice. These two factors (market competition and government authority) may have a mixed influence on political, economic, legal, and other aspects of the Indonesian life. Any study of Indonesia cannot overlook the mixed influence of these two factors on the object of study. Interesting topics in the further study of Indonesia may include the observations on when, why, and how market competition or government authority has a dominant influence on certain aspects of Indonesian life. An improved understanding of these issues would help develop a more precise perspective on Indonesia.

Extension of this study's analysis of the relationships between culture and Indonesian accounting practice may include the comparison of cultural influence on accounting practice across industries, firms' ownership, and firms' organizational structure. Through such
comparison the total influence of culture can be classified into the components of national culture and organizational culture. This comparison may also provide insights into the influence of organizational culture on managerial discretion over accounting choice. A larger sample of Indonesian firms and a longer coverage period would enable future studies to make such comparison.

The research issues raised above express the complexity of the relationships between culture and accounting practice. Great care should be taken when interpreting results of this line of study. Circumstantial evidence and multifaceted considerations of Indonesian society need to be explored before reaching distinct conclusions.

4. Implication for public policy of the Indonesian government and the Association of Indonesian Accountants

The potential of research findings of this study for public policy implication is discussed in this section. Implications for Indonesian government policies are presented first, followed by implications for the policies of the Association of Indonesian Accountants.

The findings of this study suggest that government deregulation policies have a positive relationship with conservatism and uniformity of the Indonesian accounting practices. The discussion of these findings suggests that
the increase in market competition that results from government deregulation policies appears to reduce the conservatism and advance the flexibility for firms' management and its accounting practices. This is a positive sign as to the effectiveness of government deregulation policies in enhancing the competitive standing of Indonesian firms.

However, other evidence in this study also suggests that the professionalism of accounting and disclosure levels of accounting practice in Indonesia do not demonstrate a significant increase over the period of 1981 to 1992. The accounting profession does not have an aggressive self-regulation agenda. Firms do not show a willingness to disclose more information to the public. This situation may hinder the progress of economic development. Lacking accountability, Indonesian firms may not be able to attract funds from international capital markets or will have to pay higher premiums for such funds. This may contribute to a higher than needed cost to the economy and impede Indonesian economic development. The reliance of the accounting community on government authority is identified as the potential cause of this situation.

The above indications lead to a suggestion that the government persist in its deregulation policies. This path
seems to support the process for the Indonesian economy to continue growing and to adapt to environmental changes. The willingness of the business community to reduce its reliance on government authority may also further strengthen Indonesian economy by encouraging alternative decision models to be developed within companies.

Indonesian accounting standards are not the only guidelines for firms' financial reporting in Indonesia. Firms may rely on the international or U.S accounting standards, or on accounting standards from other nations for the preparation of their financial reports. This suggests that the leadership and members of the Association of Indonesian Accountants are at the point of making a major strategic decision. It can decide to let firms continue the current practice of selecting the necessary accounting standards from various sources. This would enable firms to prepare financial reports in accordance with their relevant needs. As such, managerial discretion would be a key factor in the development of firms' financial reporting. However, this policy could result in two major setbacks to the accounting profession. First, in pursuing the individual needs of firms, comparability of information in the financial reports would be reduced. Second, the role of the Association of Indonesian Accountants in the process of accounting self-regulation
relevant to the Indonesian economic development becomes less clear and possibly unimportant. These concerns suggest another policy course for the Indonesian accounting profession. The Association of Indonesian Accountants could develop a closer cooperation with the accounting standard setting bodies of international organizations and other nations to evaluate alternatives regarding current trends in accounting practice. The Association could use this input for setting its own agenda in contributing to the development of the Indonesian accounting standards. This approach assumes that the leadership, resources, education structure, and government cooperation necessary for such an agenda would be forthcoming.

The research findings also imply that an active involvement of educated and skilled women can influence the direction of organizations. However, the development of accounting in Indonesia has not utilized the potential contribution of women accountants. The Association of Indonesian Accountants may have to develop a strategic plan that includes efforts to increase the participation of women accountants. Women accountants are likely to bring to the profession specific cultural values attributed by Hofstede to femininity, such as people orientation and a service ideal. This can make a difference in promoting the
image of the accounting profession in Indonesian society and business.

5. Implications for the harmonization of international accounting

The efforts toward the harmonization of international accounting can also benefit from some of the findings of this research. At least four accounting values underlie accounting practice in Indonesia: professionalism, conservatism, secrecy, and uniformity. The research findings also suggest that low levels of professionalism and high levels of secrecy are possible causes related to a reduced important of external financial reporting in business decisions.

An understanding of accounting values underlying accounting practices across nations, together with their strengths and weaknesses may provide directions toward the harmonization of international accounting. International accounting bodies, such as the International Accounting Standard Committee (IASC), may use such insights to "map" the current international accounting practice. The IASC, for example, may set out as a goal identifying and strengthening common weaknesses of accounting practice across nations.

Other findings of this study suggest that Indonesian accounting practice is not so conservative but adaptive to
relevant accounting standards applied in other nations. Competition in the financial markets also may have forced firms seeking funds to disclose more information about the firms' performance. In so doing, firms tend to follow whatever common accounting practice are acceptable in the markets. The lesson from these findings is that the IASC may wish to focus efforts on convincing the major centers of the global capital markets to allow firms listed in the markets to apply international accounting standards in their financial reports.
### Appendix 1

Example Design of Conservatism Index of Asset Measurement in the Balance Sheet of Firm; at Year; (Y7)

<table>
<thead>
<tr>
<th>Measurement method</th>
<th>Applied (Yes/No)</th>
<th>Index score computed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The lower of cost or market</td>
<td>Yes</td>
<td>Yes = 4; No = 0</td>
</tr>
<tr>
<td>2. Historical cost</td>
<td>Yes</td>
<td>Yes = 3; No = 0</td>
</tr>
<tr>
<td>3. Current cost (higher than historical cost)</td>
<td>No</td>
<td>Yes = 2; No = 0</td>
</tr>
<tr>
<td>4. Market value (higher than historical and current cost)</td>
<td>No</td>
<td>Yes = 1; No = 0</td>
</tr>
</tbody>
</table>

Total score: 7

Conservatism Index: $7/2 = 3.5$

Measurement methods represent alternative accounting methods that firms may select to measure asset values disclosed in the balance sheet. The degree of conservatism of each method goes from the most conservative (method 1) to the least conservative (method 4). A scale from 1 to 4 is used to weigh the conservatism index. The most conservative method has a weight index of 4 while the least conservative method has a weight index of 1.
Firms may select a combination of more than one accounting method. This happens when firms apply different accounting methods for different kinds of assets. When a firm selects certain accounting methods, the respective weight indices are computed. Weight indices of non-selected methods are not included in the computation. It is indicated by putting a value of 0 in the index score. The weighted index score is computed by dividing the total index score by the number of accounting methods used by the firm.

In the above example, the firm selected two accounting methods with a total score index of 7. The weighted conservatism index is equal to $\frac{7}{2}$, or 3.5.

Appendices 2 to 4 were developed through the same approach as applied to appendix 1.
Appendix 2
Example Design of Conservatism Index of Income Measurement Statement of Firm, at Year, (Y8)

<table>
<thead>
<tr>
<th>Measurement method</th>
<th>Applied (Yes/No)</th>
<th>Index score</th>
<th>Index score computed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Revenue recognition:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cash received</td>
<td>No</td>
<td>Yes = 4; No = 0</td>
<td>0</td>
</tr>
<tr>
<td>- Goods/services delivered</td>
<td>Yes</td>
<td>Yes = 3; No = 0</td>
<td>3</td>
</tr>
<tr>
<td>- Contracts signed</td>
<td>No</td>
<td>Yes = 2; No = 0</td>
<td>0</td>
</tr>
<tr>
<td>- Goods/services produced</td>
<td>Yes</td>
<td>Yes = 1; No = 0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>2. Cost allocation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Expended once as paid in advance</td>
<td>No</td>
<td>Yes = 4; No = 0</td>
<td>0</td>
</tr>
<tr>
<td>- Expended as anticipated</td>
<td>No</td>
<td>Yes = 3; No = 0</td>
<td>0</td>
</tr>
<tr>
<td>- Expended as legally obliged/incur-red</td>
<td>Yes</td>
<td>Yes = 2; No = 0</td>
<td>2</td>
</tr>
<tr>
<td>- Expended as paid later</td>
<td>No</td>
<td>Yes = 1; No = 0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>3. Depreciation method:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sum of the years digit</td>
<td>No</td>
<td>Yes = 4; No = 0</td>
<td>0</td>
</tr>
<tr>
<td>- Double declining balance</td>
<td>Yes</td>
<td>Yes = 3; No = 0</td>
<td>3</td>
</tr>
<tr>
<td>- Declining balance</td>
<td>No</td>
<td>Yes = 3; No = 0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Yes = 1; No = 0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average Index score:</strong> $(4/2) + (2/1) + (4/2)$</td>
<td></td>
<td>[rac{(4/2) + (2/1) + (4/2)}{3} = 2 ]</td>
<td></td>
</tr>
</tbody>
</table>

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### Appendix 3
Example Design of Conservatism Index of Asset Measurement Permitted by the Indonesian Accounting Standards at Year \(_Y_0\)

<table>
<thead>
<tr>
<th>Measurement method</th>
<th>Permitted (Yes/No)</th>
<th>Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Account receivables:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Estimated collectible</td>
<td>Yes = 1; No = 0</td>
<td></td>
</tr>
<tr>
<td>amount</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Face value</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2. Inventory:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net after provision for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>loss</td>
<td>Yes = 1; No = 0</td>
<td></td>
</tr>
<tr>
<td>Historical cost</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Current cost</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Net realizable value</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Subtotal</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>3. Investment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The lower of cost or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>market</td>
<td>Yes = 1; No = 0</td>
<td></td>
</tr>
<tr>
<td>At cost</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Subtotal</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>4. Fixed asset:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical cost plus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest charged to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>financing</td>
<td>Yes = 1; No = 0</td>
<td></td>
</tr>
<tr>
<td>Historical cost</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Net, after depreciation</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Subtotal</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>5. Intangible asset:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At cost</td>
<td>Yes = 1; No = 0</td>
<td></td>
</tr>
<tr>
<td>Net after amortization</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Subtotal</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

Conservatism index = \( [(4/1) + (8/3) + (7/2) + (9/3) + (7/2)] \) = 3.334
### Example Design of Conservatism Index of Income Measurement Permitted by the Indonesian Accounting Standards at Year $Y_{10}$

<table>
<thead>
<tr>
<th>Measurement method</th>
<th>Permitted (Yes/No)</th>
<th>Index score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes = 1; No = 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Revenue recognition:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- When cash is received</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>later</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>- As realized</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- Goods/services produced</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- Goods/services in the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>process of production</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Subtotal</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

| 2. Depreciation:        |     |    |
| - Sum of the years digit| 1   | 4  |
| - Double declining balance| 1  | 3  |
| - Declining balance     | 1   | 2  |
| - Straight line         |     | 1  |
|                          | 4   | 10 |
| Subtotal                 | 10  |    |

| 3. Cost allocation:     |     |    |
| - Asset written off     | 1   | 4  |
| - Periodic allocation   | 1   | 3  |
| - deferred loss         | 1   | 2  |
|                          | 3   | 9  |
| Subtotal                 | 9   |    |

Conservatism index = \[ \frac{(14/4) + (10/4) + (9/3)}{} \] : 3 = 3.00
### Example Design of Disclosure Index of Financial Report of Firm at Year

#### \( Y_{12} \)

<table>
<thead>
<tr>
<th>Possible disclosure</th>
<th>Applicability</th>
<th>Actual disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Yes = 1; No = 0)</td>
<td>(Disclosure = 1; No Disclosure = 0)</td>
<td></td>
</tr>
</tbody>
</table>

---

1. **Cash:**
   - Total cash: 1 1
   - Restricted cash: 0 0

   **Subtotal:** 1 1

2. **Account receivables:**
   - Gross amount: 1 1
   - Allowance for bad debt: 0 0
   - Basis for allowance of bad debt: 1 1
   - Types of receivables: 1 1

   **Subtotal:** 4 3

3. **Marketable equity securities:**
   - Aggregate cost: 0 0
   - Market value: 0 0
   - Unrealized gain/loss: 0 0
   - Net realized gain/loss: 0 0
   - Method of determining cost: 0 0
   - Change in the valuation allowance account: 0 0

   **Subtotal:** 0 0

4. **Financial instrument:**
   - Face, contract or principal amount: 1 1
   - Credit and market risk: 1 1
   - Cash requirement: 0 0
   - Related accounting policies: 1 1

   **Subtotal:** 3 3

---

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5. Inventory:
- Basis for valuation 1 1
- Cost flow assumption 1 1
- Classes of inventory 1 1
- Provision for inventory loss 1 0
- Amount of provision for loss 1 0
- Net inventory 1 1

Subtotal 6 4

6. Fixed asset:
- Basis for valuation 1 1
- Classification by function or nature 1 1
- Depreciation method by class 1 1
- Depreciation expense 1 1
- Accumulated depreciation by class 1 1
- Net amount of fixed asset 1 1

Subtotal 6 6

7. Leasing - lessor:
- Nature of leasing agreement 0 0
- Future minimum lease payment for each of the next five years 0 0
- Future lease minimum payment in aggregate 0 0
- Contingent rental and amount paid 0 0

Subtotal 0 0

8. Long term investment:
a) Marketable equity securities:
- Aggregate cost 0 0
- Market value 0 0
- Unrealized gain/loss 0 0
- Net realized gain/loss 0 0
- Basis for determining cost 0 0
- Change in the valuation allowance 0 0

Subtotal 0 0
b) Marketable debt securities:
- Basis for valuation 0 0
- Amount of any write-down 0 0
- Cause of any write-down 0 0
- Unrealized gain/loss 0 0
- Net amount 0 0

Subtotal 0 0

---

c) Investment under equity method:
- Name of each investee 0 0
- % of ownership of common stock of each investee 0 0
- Accounting policies 0 0
- Accounting treatment for the difference between the carrying amount of each investment and its underlying equity in the investee's net assets 0 0
- Quoted aggregate market price 0 0
- Disclosure of material effects of investment in each investee 0 0

Subtotal 0 0

---

d) Other investment:
- Basis of accounting 0 0
- Effects on stockholders' equity or income statement 0 0

Subtotal 0 0

---

9. Intangibles:
- Description of the nature of the assets 1 1
- Amortization method 1 1
- Amortization period 1 1
- Amortization expense 1 1
- Accumulated amortization 1 1
- Net amount 1 1

Subtotal 6 6

---
10. Current liabilities:
   - Amount by class of liability 1 1
   - Aggregate amount of liability 1 1
       Subtotal 2 2

11. Deferred tax asset/liability
   - Description of asset/
     liability 1 1
   - Amount of asset/liability 1 1
   - Classification into current
     and non-current 1 1
       Subtotal 3 3

12. Notes payable and debt:
   - Interest rate by class 1 1
   - Maturity by class 1 0
   - Covenants and other restric-
     tions 1 1
   - Troubled debt restructuring 0 0
   - Extinguished debt by
     repayment 1 0
   - Extinguished debt by
     defeasance 0 0
   - Conversion features 0 0
   - Aggregate amount 1 1
       Subtotal 5 3

13. Contingencies and commitments:
   - Nature of contingencies 1 1
   - Likelihood of contingencies 1 0
   - Estimated amount 1 1
       Subtotal 3 2

14. Pension
   - Description of pension plan 1 0
   - Accounting and funding policy 1 0
   - Net periodic pension cost
     amount 1 0
   - Net pension asset/liability 1 0
       Subtotal 4 0
15. Other post retirement benefit:
   - Description of the benefit 1  1
   - Accounting and funding policies 1  0
   - Net periodic cost 1  0
   - Benefit liability 1  0
   - Disclosure of matter significant to company 1  0

   **Subtotal** 5  0

16. Leases - lessee:
   - Nature of leasing arrangements 0  0
   - Gross amount of lease asset by class 0  0
   - Future minimum payment for each of the next five years 0  0
   - Contingent rental and amount paid 0  0
   - Subleases 0  0

   **Subtotal** 0  0

17. Stockholders' equity:
   a) Capital stock:
      - Par or assigned value 1  1
      - # of shares 1  1
      - # of shares held in treasury 0  0
      - Terms of preferred stock 0  0
      - Changes in numbers of shares 1  1
      - Changes in equity accounts 1  1
      - Liquidation values of preferred stocks 0  0
      - Voting rights 1  0
      - Cumulative dividends in arrears 1  1
      - Price, exercise, and expiration dates of warrants 0  0
      - Additional paid in capital by source 0  0
      - Discount/premium on stock 1  1

   **Subtotal** 7  6
b) Retained earnings:
- Nature, cause, and amount of retained earnings 1 1
- Changes in retained earnings 1 1
- Restriction on retained earnings 1 0
- Nature and effects of prior period adjustments on income statements 0 0

Subtotal
3 3

18. Income taxes:
- The difference between tax and book based income tax 1 1
- Current tax expense or benefit 1 1
- Deferred tax expense or benefit 1 0
- Loss carryforward benefit, amount and expiration dates 0 0
- Tax rates 1 1

Subtotal
4 3

19. Income allocation:
- Continuing operations 1 1
- Discontinued operations 1 1
- Extraordinary items 0 0
- Cumulative effects of accounting changes 0 0
- Prior period adjustments 0 0

Subtotal
2 2

20. Continuing operations:
- Revenue by class 1 1
- Expense by class 1 1

Subtotal
2 2

21. Extraordinary item:
- Net of tax amount 0 0
- Nature of items 0 0

Subtotal
0 0
22. Discontinued operations:
   - Assets and operations segregated 1 1
   - Gains/losses from disposal 1 1
   - Expected loss of future disposal 0 0

Subtotal 2 2

23. Foreign currency:
   - Exchange gains/losses 1 1
   - Change in cumulative translation adjustment 0 0
   - Significance changes in foreign operations 1 0
   - Disclosure of foreign customers or operations 1 1

Subtotal 3 2

24. Business combination and consolidation:
   - Nature and policy of combination/consolidation 0 0
   - Intercompany elimination 0 0

Subtotal 0 0

25. Earnings per share:
   - Earnings per common stock 1 1
   - Fully diluted earning per share 0 0
   - Conversion stocks that would affect primary earning per share 0 0
   - Sale of common or common equivalent stock 0 0

Subtotal 1 1
26. General:
   a) Accounting changes:
      - Nature and justification of the changes 0
      - Cumulative effects 0
      - Proforma effects on net income and earning per share 0
      - Effect of new accounting principles on current and future income 0

      ------------------ ------------------
      Subtotal 0
      ------------------

   b) Related parties:
      - Nature of relationship 1
      - Amount due to or from related parties 1
      - Terms and matter of settlement 1

      ------------------ ------------------
      Subtotal 3
      ------------------

   c) Non monetary transaction:
      - Nature of transaction 0
      - Gain/loss 0
      - Basis of accounting for assets transferred 0

      ------------------
      Sub total 0
      ------------------

Disclosure index = \[ \frac{21}{21} = 1 \]

\[ \{(1/1) + (3/4) + (2/2) + (4/6) + (6/6) + (6/6) + (2/2) + (3/3) + (3/5) + (2/3) + (0/4) + (0/5) + (6/7) + (2/3) + (1/1) + (3/3)\} : 21 = .792 \]

Secrecy index \( (Y12) = 1 - .792 = .208 \)
An analysis of U.S. accounting standards was conducted to develop a benchmark for disclosure index for each item of balance sheet and income statement. The benchmark reveals types of information that need to be disclosed in the balance sheet and income statement.

This benchmark, however, does not blindly apply to all firms. Certain disclosures may not be applicable to some firms. Certain firms, for example, do not have transactions related to marketable securities or leasing. For these firms, disclosure requirements for marketable securities and leasing are not applicable in computing the compatibility of firms' disclosure with the benchmark.

The disclosure index for each item of the financial statements is computed by a ratio of actual disclosure to applicable disclosure requirements.
Example Design of Comparability Index of Financial
Reports of Firm, at Year, with Total Sample Firms at Year:
\[ Y = \frac{27}{27} \]
(Y16)

<table>
<thead>
<tr>
<th>Accounting method</th>
<th># firms applying</th>
<th># firms not applying in firm, score</th>
<th>the method the method (Yes/No)</th>
</tr>
</thead>
</table>

1. Asset valuation:
   - The lower of cost
     or market 16 11 Yes 16/27
   - Historical cost 27 0 Yes 27/27
   - Current cost 0 27 No 27/27
   - Market value 2 25 No 25/27

2. Depreciation method:
   - Sum of the years
digit 0 27 No 27/27
   - Double declining
balance 7 20 No 20/27
   - Declining balance 1 26 No 26/27
   - Straight line 27 0 Yes 27/27

3. Revenue recognition:
   - Cash received
later 8 19 No 19/27
   - Goods/services
delivered 25 2 Yes 25/27
   - Contracts signed 4 23 No 23/27
   - Goods/services
produced 2 25 No 25/27

Comparability index:
\[
(20/27) + (26/27) + (27/27) + (19/27) + (25/27) +
(23/27) + (25/27)] : 12 = .883
\]

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### Power Distance

The extent that the less powerful members of institutions accept that power is distributed unequally

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Environmental Indicators</th>
<th>Proxy Variables</th>
<th>Relationships of the Proxy Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of telephone lines available (R1)</td>
<td>The telephone is a major part of the information and telecommunication technology. It is the more readily available means for information distribution in modern society. Moreover, telephone, unlike broadcasting, plays a major role in shaping the forms, availability and accessibility of the information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ratio of telephone lines to population (R2)</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>The advancement and diffusion of information and telecommunication technology in a society. Information in itself is a power.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The availability and accessibility of information to the general public provide a chance for people to get a share of the power of this information. In this situation, people will care less about the inequality of the distribution of other forms of power. Information and telecommunication technology facilitate people with access to available information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>The role of traditional agriculture in the process of wealth creation in a nation. Workers in traditional agriculture usually have less bargaining power than workers in manufacturing industries. Accordingly, power distance tend to be high in agricultural societies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>Education levels of the middle class society. Education may reduce the gap between the powerful and the powerless</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Uncertainty Avoidance

The readiness of a society to cope with uncertain or unknown situations in the future

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Environmental Indicators</th>
<th>Proxy Variables</th>
<th>Relationships of the Proxy Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total student enrolment (R4)</td>
<td>The results of wealth creation process in a nation culminates in the Gross Domestic Product figures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ratio of students enrolment to population (R5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The scope and details of government regulation. Less regulation is a sign of flexible societies. The members of the society are deemed to be competent and capable of dealing with uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of economic deregulation policy packages (R6)</td>
<td>Government deregulation policies represent a trend towards a less regulated and more mature society. Since economic deregulation policies provide a good proxy to the adaptability of the society to the lessening regulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of economic sectors being deregulated (R7)</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 7 (continued)

Individualism

The degree of bondedness among individuals in a given society

a) The attractiveness of urban living in the society. Competition and pressure found in urban living may force people to take care of only themselves and their immediate family

b) The advancement of economic development. Wealth facilitates people to pursue their own interests and to be less dependent on others

Urbanization rate (X8),

Income per capita (X9)

Masculinity

The dominance of one gender role over the other in societal activities

a) Composition of work force by sex. Interactions among people in work places play a significant role in developing organizational cultures which are part of national culture. Thus, the composition of work force by sex may reflect gender roles in shaping organizational and national and organizational cultures

b) Education levels of men and women. Education is one of the important factors in shaping one's ideas and values. Education levels of men and women may indicate the possible contribution of each gender to the development of societal values

- Ratio of male employment to total employment (X10)
- Ratio of male to female students in elementary school (X11)
- Ratio of male to female students in secondary school (X12)
- Ratio of male to female students in higher education (X13)

Employment is a good measure of the active work force

The levels of formal education are a good proxy for the reasoning ability that each gender may contribute to the development of societal ideas and values

Tolerance

Long-term and short-term orientations of a society

Tolerance capital and human investments. The preference for capital and human investments indicates people's willingness to commit to a long term project. In so doing, they may have to defer it a short- term satisfaction of consumption in favor of expecting to reap long- term benefits of the investments in the future

- Ratio of Gross Fixed Investment to Gross Domestic Product (X14)
- Ratio of spending on education to total government spending (X15)

The variable measures the preference for allocating certain proportions of national income for investments

Spending on education is a part of human investment. Thus, this variable is a measure of how the government sets a priority for human investment
<table>
<thead>
<tr>
<th>Constructs</th>
<th>Indicators</th>
<th>Proxy Variables</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionalism</td>
<td>a) Expert certification of firms financial reports</td>
<td>Type of firm’s auditors (Y11)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Self-regulatory process of the accounting profession</td>
<td>Type of auditors' opinion on firm's financial reports (Y12)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deviation of the Indonesian accounting standards found in firm's financial</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>reports (Y13)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of accounting standards (Y14)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of auditing standards (Y15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contents of accounting standards (Y16)</td>
<td></td>
</tr>
<tr>
<td>Conservatism</td>
<td>Asset income measurements</td>
<td>Firms' accounting policy reflects the preference of managers of firms for the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>disclosure of firms' operating results and financial condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accounting policy on asset measurement (Y17)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accounting policy on income measurement (Y18)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accounting methods permitted for accelerating expenses and decelerating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>income (Y19)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accounting methods permitted for making assets undervalued and making</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>liabilities overstated (Y12)</td>
<td></td>
</tr>
<tr>
<td>Secrecy</td>
<td>Disclosure requirements of firms financial reports</td>
<td>Contents of financial reports (Y11)</td>
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<td>Comparison of the contents of financial reports to the U.S. accounting</td>
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<td>reports and Indonesian accounting standards and Indonesian accounting</td>
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<td>standards (Y12)</td>
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<td>Balance sheet disclosure required by Indonesian accounting standards (Y13)</td>
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<td>Income statement disclosure required by Indonesian accounting standards (Y14)</td>
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<td>Uniformity</td>
<td>Consistency and comparability of the contents of firms' financial reports</td>
<td>Number of changes in accounting methods used in the current year financial</td>
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<td>reports (Y15)</td>
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<td>Comparison of accounting policy across firms (Y16)</td>
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<td>Number of alternative accounting methods used in the current year financial</td>
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<td>reports (Y17)</td>
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<td>Number of alternative accounting methods for balance sheet (Y18)</td>
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<td>Number of alternative accounting methods for income statement (Y19)</td>
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<td>Certified auditors are the legitimate experts in the evaluation of firms'</td>
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<td>financial reports. Auditor's opinion on firm's financial reports is determined</td>
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<td>by the levels of compliance of such reports to the professional standards</td>
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<td>The extent of the standards issued by the accounting profession reflects the</td>
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<td>role of accounting self-regulation in a process of firms' financial reporting</td>
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<td>Firms' accounting policy reflects the preference of managers of firms for the</td>
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<td>disclosure of firms' operating results and financial condition</td>
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<td>Accounting standards are a product of the deliberation process that results in</td>
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<td>the acceptance of certain preference of accounting methods by the accounting</td>
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<td>The extent of financial reporting depends on the willingness of firms to be open</td>
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<td>The U.S. accounting standards are considered to be a benchmark for the extent</td>
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<td>of the disclosure of financial reports</td>
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<td>Disclosure requirements in the Indonesian accounting standards show the extent</td>
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<td>of disclosure of financial reports of Indonesian firms</td>
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<td>Accounting changes result in less consistent meaning of the information</td>
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<td>disclosed in firms' financial reports</td>
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<td>Similar accounting policies result in more comparable financial reports</td>
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<td>The availability of alternative accounting methods is a source of</td>
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<td>inconsistency and lower comparability of firms' financial reports</td>
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