

The Influence of Ethnicity on the Reporting of Intellectual Capital

(Kesan Etnik ke atas Pelaporan Modal Intelek)

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ABSTRACT

In the 21st century, Intellectual Capital (IC), which comprised of human, structural and relational capitals, has become a source of predictors for future performance. The role of IC for future performance prediction surpasses traditional measures, such as physical and financial capital. This study investigates whether the ethnicity of directors, which include chief financial officers, chairman and audit committees, influences the amount of IC disclosure at the firm level. This study adopts a quantitative research approach, whereby level of IC disclosure is measured based upon the content analysis of corporate annual reports from 77 technology based companies in Malaysia. Malaysia is used as the setting for this study due to its ethnic diversity and the fact that the ethnic groups, to some extent, maintain their original cultural values. A ranked regression of normal scores is utilized to examine the relationship between the levels of IC disclosure and ethnicity. The study finds that a significant relationship exists between ethnicity of some directors and levels of IC disclosure.

Keywords: Ethnicity; intellectual capital; financial reporting; directors

ABSTRAK

Pada abad ke-21, Modal Intelek (IC), yang terdiri daripada modal insan, struktur dan hubungan, telah menjadi sumber utama untuk meramal prestasi masa hadapan. Peranan IC untuk ramalan prestasi masa hadapan telah mengatasi peranan tradisional yang dimainkan oleh modal fizikal dan modal kewangan. Oleh itu, maklumat IC adalah penting untuk didedahkan dalam laporan tahunan. Berbeza daripada kajian lepas, kajian ini melihat aras pendedahan maklumat modal intelek akan dipengaruhi oleh latarbelakang etnik para pengarah. Kajian ini menyiasat sama ada etnik pengarah, termasuk ketua pegawai kewangan, pengerusi dan jawatankuasa audit, mempengaruhi jumlah pendedahan IC di peringkat firma. Kajian ini menggunakan pendekatan penyelidikan kuantitatif, di mana tahap pendedahan IC diukur berdasarkan analisis kandungan laporan tahunan korporat daripada 77 buah syarikat berasaskan teknologi di Malaysia. Malaysia digunakan sebagai konteks untuk kajian ini di mana setiap etnik masih lagi mengekalkan nilai budaya asal mereka. Regresi kedudukan skor normal digunakan untuk mengkaji hubungan antara tahap pendedahan IC dan etnik. Kajian ini mendapati bahawa terdapat hubungan yang signifikan antara etnik dan tahap pendedahan IC.

Kata kunci: Etnik; modal intelek; laporan kewangan; pengarah

INTRODUCTION

The notion that accounting is the language of business that enables communication between financial information users and providers is widely accepted. Just as each nation has its own language, different countries have different accounting standards. Lainez and Gasca (2006), argues that the social, political, economic and cultural environments of each country influence national accounting systems. Previous research shows that some clusters exist in disclosure practices i.e. countries under the influence of Anglo-American or Continental European (Doupnik & Salter 1993).

Prior research suggests that cultural value differences may help to explain international differences in accounting practices (Gray 1988; Heidhues & Chris 2011). Culture refers to the norms and values of social systems and the behavior of groups' interaction within and across systems

(Perera 1989). The voluntary behavior of a person is determined by the attitude of the person towards a given behavior and how the person believes other people would perceive persons engaging in such behavior (Ajzen & Fishbein 1980). Therefore, it is an empirical question whether cultural values influence firms' disclosure practices. This study is important because it is expected that differences in cultural values across the world could explain mixed findings concerning the effect of the voluntary adoption of new standards on accounting quality (Daske et al. 2013).

This study examines whether ethnicity, which is related to the spectrum of cultural dimensions, drives intellectual capital (IC) disclosure. IC includes human capital, such as the firm's knowledge workers; innovation; flexibility; tolerance for ambiguity; motivation; satisfaction; learning capacity; loyalty and formal training and education; organizational capital, including intellectual properties,

contracts, databases, information, systems, cultures, procedures, manual, best practices, administrative system and routines; and relational capital, including customers, suppliers, creditors, networks, strategic alliances and distribution channels (CIMA 2000).

This study contributes to existing literature in several manners. Firstly, by focusing on more specific aspects of disclosure (i.e., IC disclosure), this study will contribute to the understanding of the influence of ethnicity on the disclosure of the current and future potential of a company. Thus, this study will provide a more specific examination of the relationship between one type of disclosure and ethnicity in comparison with previous studies.

Secondly, this study intentionally chooses Malaysia as the setting for the research because of the country's cultural diversity. While controlling for various environmental factors (i.e., capital market regulation, economic development level and business customs in a given country), the effects of the cultural elements of different ethnicities on disclosure practices will be better demonstrated. The large migrations of people from China and India into Malaya during the colonial era (i.e., between 1800 and 1900) has provided the opportunity for ethnic Chinese and Indians to maintain their original ethnic culture of the country, to a large extent. This has become a unique feature in Malaysia. Thus, the Malaysian setting provides an opportunity to investigate the issue of culture on intellectual capital disclosure (ICD) practices. Most studies investigate the trend of ICD among Malaysian listed companies, for example Abdifatah and Nazli (2012) and Siti Mariana, Rohaida and Nurul Huda (2011). These studies found an increasing trend of ICD in Malaysia.

Finally, this study is the first to investigate the effect of different positions held by different ethnicities and the resulting effects on the levels of IC disclosure. This information is important since managers not only need to have incentives to disclose, but must be able to decide on the types and level of information to be disclosed.

LITERATURE REVIEW

The reporting of IC discloses the hidden value of individuals, corporations, institutions, communities and resources that have the potential to increase wealth (Lin & Edvinson 2008), which is usually not found in the current format of financial statements (Stewart 2001). For growing companies, managers may have an incentive to report IC to reduce information gap between companies and potential investors (Garcia-Meca & Martinez 2007). The reduction of the information gap may consequently lower the investors' required rate of return, hence lowering the costs of capital for the company. Competitive financial markets have prompted financial analysts to utilize all available, efficient and reliable information when providing financial advice to their customers (Garcia-Ayuso 2003).

Although a considerable amount of research concerning the issue of IC has been done (e.g., Hamzah

& Ismail 2009), most research concentrates on IC measurement and reporting practices. Only a few existing studies examine the influence of socio-political and environmental factors of a given country on IC reporting. Archambault and Archambault (2003) demonstrate that there are various factors that could affect annual report disclosure in a given country. Socio-political and environmental factors that are unique to specific countries and are found to influence disclosure in annual reports include cultural values (Haniffa & Cooke 2002); the legal system (Ball et al. 2000); the disclosure requirements in individual countries (Ahmed & Courtis 1999); the level of professionals influence; and the tax system (Meek & Gray 1989). Different from previous studies, this study focuses on the effect of cultural values represented by ethnicities on a specific kind of disclosure, i.e. IC disclosure. This perspective is undertaken due to the emerging importance of IC, which has been proven to be an important driver of economic growth and firm competitiveness in knowledge-based economies (Hsu & Chiang 2005).

According to Jaggi (1975), the culture has a strong influence on firms' financial disclosure. Jaggi (1975) hypothesizes that managers from different countries have different value sets that can impact the reliability of financial information. The value sets are closely related to the country's culture. Related to the value sets as mentioned in Jaggi (1975), Hofstede (1980) identifies four cultural dimensions: individualism, masculinity, power distance and uncertainty avoidance. Premised upon the four cultural dimensions identified by Hofstede (1980), Gray (1988) identified four accounting culture value dimensions which include (1) professionalism versus statutory control; (2) universality versus flexibility; (3) conservatism versus optimism; and (4) secrecy versus transparency values. Gray (1988) and Perera and Mathews (1990) argue that these accounting-culture value dimensions impact accounting systems in relation to the nature of regulation as well as disclosure practices.

A study conducted by Salter and Niswander (1995) tests the impact of cultural values on accounting practices across countries. They found that differences exist in financial reporting practices due to cross-national differences. Douppnik and Salter (1995) find that cultural values, alongside other factors (i.e., economic, legal, political and social environment), are significant in determining the clusters of countries with similar types of accounting practices.

Cultural values are related to the ethnicity of the people. The concept of ethnicity is frequently used in social psychological research. According to Zagefka (2009), the components of ethnicity include, among others, common cultural values, shared language, common history and mutual recognition of group membership.¹

RESEARCH FRAMEWORK

Since the disclosure of IC is still categorized as a voluntary practice, this study examines the level of confidentiality in relation to the IC disclosure in the annual reports of companies in relation to the ethnicity of the directors of the companies. Based upon the social identity theory framework established by Tajfel (1978), this study considers the role played by the board of directors of a company in relation to the disclosure of IC. This theory incorporates the motivational reasoning for both the personal and social characteristics of an individual. This study investigates personal and social characteristics embedded in culture impact on disclosure. According to Tajfel (1978), social identity theory states that every individual has his/her own social identity, which is determined, to a large extent, by the social norm and interactions with the community. To understand the role of social identity or ethnicity on disclosure, a survey of the history of ethnic migration to Malaysia is necessary.

Malaysian society consists of three dominant ethnicities: Malays, Chinese and Indians. According to the statistics released by the Department of National Statistics in 2007, the composition of ethnic groups in Malaysia are Malay (62%); Chinese (24%); Indian (8%); and others (6%), including Kadazan, Iban, Melanau and other indigenous people (6%) (Department of National Statistics 2007). The exodus of immigrants from China and India into Malaya during the colonial era (i.e., 1800 to 1900) have changed the ethnic composition of the population and making the Malaysian society more diversified (Levinson 1994). The cultural values are maintained by the majority of the major ethnics and have become a unique feature in Malaysia. This is because the Indian and Chinese ethnics came to Malaysia in large groups, bonded together and subsequently resisted changes in their culture.

An ethnic group is a group of people whose members share a common identity, arising from the use of a common language; common religion; and common ideology (Smith et al. 2010). Studies concerning ethnic differences in Malaysia have received considerable attention in various fields, including the field of accounting. This study examines the role played by the components of the board of directors, which include the chief financial officers, the chairman, and the audit committees, in the decisions made concerning the disclosure of IC information. The hypotheses are presented as below.

HYPOTHESES

Culture distinguishes individuals within one group from individuals within another group (Hofstede 1980). Culture reflects the learning, social traditions and way of life of a given community, including the thought process; feelings; and behavior of individuals within the culture (Harris 1987). During the development of an organization, culture can be a key in the success of a company (Flamholtz 2002). The existence of three dominant ethnic groups in Malaysia (Selvarajah & Meyer 2008), has prompted an examination

of the influence of ethnic-cultural factors on the level of IC disclosure in annual reports. The present study uses ethnicity as a proxy for cultural values.



FIGURE 1. Research framework

Figure 1 illustrates the research model applied in this study. This model demonstrates that the level of IC disclosure in annual reports is influenced by cultural values represented by ethnicity. Gray (1988) finds that a relationship exists between ethnic cultural values and the level of disclosure of information. However, Gray's study considers the disclosure of IC as the foundation of IC for the company's competitive ability in the globalization era (Stewart 2001). Therefore, this study argues that level of disclosure of IC in annual report should be examined on its own merits.

Table 1 explains the relationship between social values, transparency and disclosure of accounting information. As noted above, the main ethnic groups in Malaysia are Malays, Chinese and Indians (Hofstede 1991). The aforementioned ethnic groups are characterized as having a low level of masculinity, but having a high power gap (Hofstede 1991).

However, a high percentage of ethnic Malays seek to avoid uncertainty because they are uncomfortable with things that they do not know and attempt to avoid

TABLE 1. The relationship between social values, transparency and disclosure

Hofstede (social value)	Ethnic group	Accounting value (transparency)	Gray Practical accounting (exposure)
	<i>Malay</i>		
Power gap	High		
Masculine	Low	High	Less exposure
Avoiding uncertainty	High	secrecy	
Self-serving	Low		
	<i>Chinese</i>		
Power gap	High		
Masculine	Low	Low	More exposure
Avoiding uncertainty	Low	secrecy	
Self-serving	High		
	<i>Indian</i>		
Power gap	High		
Masculine	Mid	High	Less exposure
Avoiding uncertainty	High	secrecy	
Self-serving	High		

Source: Haniffa and Cooke (2002) & Mir et al.(2009)

ambiguity (Abdullah 1992). In contrast, a very low percentage of ethnic Chinese seek to avoid uncertainty, as the majority of the Chinese population are willing to accept new challenges and take risks (Abdullah 1992). On the other hand, a counter argument exists concerning the direction given by Haniffa and Cooke (2002) and Mir et al. (2009) based upon Hofstede's dimensions of culture. The majority of ethnic Malays are Muslims. Based upon religious traits, such persons are expected to be less selfish due to the fact that Islam encourages consensus (Abdullah 1992). Meanwhile, the majority of the Chinese population is perceived as more selfish, a result of communal ideology and ethnic polarization within the socio-economic structure (Tan 1984).

It is clear that social values are associated with transparency and disclosure in the accounting practices (Gray 1988; Hofstede 1991). Thus, while it can be implied based upon the cultural dimensions by Hofstede that ethnic Malay managers will disclose less IC compared to ethnic Chinese managers, the findings of existing studies are inconclusive, for example the study by Haniffa and Cooke (2002). Based upon the analysis of the accounting sub-culture carried out by Gray (1988), accounting profession practitioners in India are categorized as less-professional; and adhere to values associated with uniformity, high-conservatism and high secrecy. Within the framework depicted by Hofstede (1980), Gray's (1988) study finds that Indians demonstrate low levels of uncertainty avoidance. The finding has been disputed by Picard and Reis (2002) and Mir et al. (2009), who argue that Indians often avoid uncertainty due to religious factors. Their findings are inconsistent with the culture framework presented by Hofstede (1980). Thus, while the framework of Hofstede may guide the present study in the prediction of the disclosure practices by directors of different ethnicity, it is acknowledged that the effect may reduce or even reverse given other factors, such as religion and the dynamics of culture (i.e., that other ethnic's culture may assimilate dominant culture in a country).

This study utilizes the framework established by Hofstede (1980) and the analysis of the accounting sub-culture performed in Gray's study (1988), which finds that the level of uncertainty avoidance and the level of secrecy among Indian ethnic is high. Thus, a low level of disclosure is expected among Indian ethnic directors. Although the culture of Indian ethnic in India is utilized as a point of reference for Indian ethnic in Malaysia, according to Smith et al. (2010), when the homeland (mother country) is far away, ethno-symbolic ties, being the oldest and most "natural", take the leading role in the unification of the diasporic communities in situations of large migrations. This is why one can infer that the ethnic identification and ethnic nationalism is more relevant than the ties within the borders of a nation-state, where other elements play a role. This expectation is consistent with Gaurav (2013) that shows the Asian domestic culture is maintained in Asian firms listed in the U.S. i.e., the

culture affects voluntary disclosure level of intangibles information in the U.S.

There are two principal perceptions concerning the effects of cultural diversity on top management. Firstly, cultural diversity among in top management is found to affect management function such as the policies, management style and structure (O'Reilly et al. 1989). Second, cultural diversity enhances the competitiveness and innovativeness of the company, thereby contributing to the success of the organization (Hoffman & Hegarty 1993). Consistent with Meng et al. (2013), it can be expected that the top management of firms also influences disclosure level. Reporting practices are principally driven by individuals within the company, such as the chief executive officer (Farneti & Guthrie 2009). Chief executive officers are individuals who are knowledgeable about the activities of daily operations and are familiar with the advantages and disadvantages of the organization (Pollit 2007). Therefore, the following hypothesis is examined:

H₁ There is a relationship between the ethnicity of the chief executive officer and the level of intellectual capital (IC) disclosure in the annual reports of companies.

Chief financial officers are individuals who understand what types of disclosure that will reduce asymmetric information between the firm and the stock market (Clor-Proell & Maines 2014). They understand the disclosure policies adopted by a company (Armitage & Marston 2008). Therefore, the following hypothesis is examined:

H₂ There is a relationship between the ethnicity of the chief financial officer and the level of intellectual capital (IC) disclosure in the annual reports of companies.

In the context of the board of directors, the chairman of the board will explain the goals of the board of directors and ensure that all members provide input in meetings (Bird 2004). Mir et al. (2009) found that Indian companies provide more disclosure in chairman's reports than their New Zealand counterparts. Therefore, the following hypothesis is examined:

H₃ There is relationship between the ethnicity of the chairman and the level of IC disclosure in the annual reports of companies.

Audit committee members play the role of a 'watchdog' to improve the quality of information provided to the third parties (Pincus et al. 1989). Empirical evidence demonstrates that a positive relationship exists between voluntary disclosure and audit committee members (Peters & Romi 2014). Therefore, the following hypothesis is examined:

H₄ There is a relationship between the ethnicity of the Audit Committee and the disclosure of intellectual capital (IC) in the annual reports of companies.

METHODOLOGY

This study uses content analysis method on each sentence in annual report to examine the data. Information on IC is analysed based upon the IC index developed by Garcia-Meca and Martinez (2007), whose indices are based upon the analysis of financial analyst reports. The index gives the best idea of the most desired information from the perception of the analyst (Bukh 2003). Analysts' perceptions are important because analysts are the main users of annual reports and act as intermediaries between companies, investors and other users of such information (Garcia-Meca & Martinez 2007). The index has been constructed in a systematic manner and tested for its validity.

In accordance with the content analysis method, the annual reports are read in their entirety. If there is disclosure on IC items, the value '1' is assigned to the element where the item belongs, while the value of '0' is assigned if no disclosure of IC items are made (Garcia-Meca & Martinez 2007). The summed score refers to the elements of IC. This score is aggregated and treated as the level of IC reporting for each company. The number of items (i.e., indicators) relating to IC are not the same for each element of IC (refers Appendix 1). The total number of items is 60 Kappa's index is utilized to determine whether an item can be considered as representing an element of IC. The Kappa's index was verified by three experts. Any disclosure concerning elements of IC is marked '1', even if the disclosure involves only one of several items in a single element of IC. For example, the first element on managerial experience/abilities has three human capital items i.e. experience, academic level and professional level. If there is disclosure on managerial experience, (and there is no disclosure regarding academic and professional levels) the element obtains one point.

Information regarding IC is classified into three (3) categories: human capital, structural capital and relational capital. The Kappa index reliability of definitions and items are found to be at the 0.827 level, indicating that the measurements are reliable. According to Landis and Kock (1977), a value in the range of 0.41 to 0.60 is moderate; a value in the range of 0.60 to 0.80 is satisfactory; and if the value is greater than 0.80, this indicates the reliability is almost perfect. Given that the Kappa Index is found to be 0.827, the instrument used in this study to determine IC disclosure satisfies the proposed reliability tests (Gardner 1995).

The sample consists of the annual reports for technology-based companies listed on the Malaysian Exchange of Securities Dealing and Automated Quotation (MESDAQ); and the Main Board and Second Board of Bursa Malaysia. The sampling frame is determined from the list of company names in local newspapers and websites alongside the date of listing on Bursa Malaysia. The data was collected from the following specific editions and newspapers in Malaysia: the 20 November 2008 edition of the New Straits Times; and the 4 March 2009 edition

of The Star. The website of Bursa Malaysia was accessed on 21 January 2009. The period between 2005 and 2007 is examined in the present study and only companies that remain listed from 2004 to 2008 are used in the sample. During this period, some companies became affiliated with other companies, at which point such companies ceased to produce annual reports. Hence, such companies were excluded from the sample. Of these adjustments, 54 companies listed on MESDAQ were shortlisted, as well as 18 companies listed on the Main Board and five companies listed on the Second Board. The total number of companies examined is 77 companies, from which 231 company-year observations are performed over the three year period.

RESEARCH MODEL

The regression model used to determine the relationship between the level of IC disclosure and ethnicity is as follows:

$$I = \beta_0 + \sum_{n=1}^3 \beta_{1n} X_{1n} + \sum_{n=1}^3 \beta_{2n} X_{2n} + \sum_{n=1}^3 \beta_{3n} X_{3n} + \alpha \sum_{n=1}^3 \beta_{4n} X_{4n} + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \sum_{n=2005}^{2006} \beta_{9n} X_{9n} + \varepsilon$$

Where:

- I = intellectual capital disclosure score
- X_{1n} = ethnicity of the chief executive officer; n1 = Malay, n2= Chinese, n3 = Indian
- X_{2n} = ethnicity of the chief financial officer; n1 = Malay, n2=Chinese, n3 = Indian
- X_{3n} = ethnic of the chairman; n1 = Malay, n2=Chinese, n3 = Indian
- X_{4n} = ethnicity of audit committee members (percentage): n1 = Malay, n2=Chinese, n3 = Indian
(the percentage of directors of each ethnicity over the total number of directors in the audit committee)
- X_5 = education background of the board members
(the percentage of directors with an accounting or business education background over the total of the total number of directors in audit committee)
- X_6 = company size (log total assets)
- X_7 = company leverage (debt to total asset ratio)
- X_8 = company profitability (return on equity ratio)
- X_9 = year dummies
- β = parameters
- ε = random error

The dependent variable in this equation is the disclosure of IC, and the independent variables consist of the ethnicity of the director; the ethnicity of the chief financial officer; the ethnicity of the chairman;

and the ethnicity of the audit committee members. The control variables in this study consists of the educational background in accounting or business of the board of directors; company size; leverage; and the profitability of the company.

This study predicts that a background in accounting and business will have a positive effect on the decision to disclose more information concerning IC, which is more forward looking in nature. Company size is predicted to have a positive relationship with IC disclosure. Information disclosure should also, to some extent, reduce information asymmetry between the company and creditors. According to Healy and Palepu (2001), a high level of information disclosure and low information risk are likely to reduce cost of the company's debt. Thus, a positive relationship between leverage and the level of voluntary disclosures can be expected. Managers are motivated to disclose more information to strengthen their positions and improve remuneration (Singhvi & Desai 1971), particularly when the rate of return is high. Therefore, a positive association is expected between disclosure and performance.

Many of the independent variables are in the form of dichotomies. X_1 represents the ethnicity of chief executive officer, X_2 represents the ethnicity of chief financial officer, X_3 represents the ethnicity of the chairman and X_4 is the ethnicity of audit committees. There are four (4) categories of ethnicity: Malay, Chinese, Indian and other ethnicities. However, "other ethnicities" is dropped from the analysis due to a problem of singular matrix if all correlated variables are included as it will not be possible to perform the matrix inversion necessary for the regression. The dropped variable is considered as standard and interpretation of other variables is relative to this variable. For the control variables, the size of the companies are analyzed using the log of assets (Guthrie et al. 2006), while the leverage of the companies is gauged according to the debt to assets ratio of each company (Norman et al. 2009) and the profitability of the company is measured in accordance with the return on equity ratio (Haniffa & Cooke 2002). The percentages of the ethnic composition of the audit committee is based upon the number of members of an ethnic group that are members of a given audit committee over the total number of audit members of the given audit committee.

The pooled regression is run and includes dummy variables for the year effect. By doing this the intercepts could be different according to year while the slope coefficients or the relationships between other variables and the dependent variable are constant across different years. Thus, any variation within the sample (for different years) is captured by these dummies. It can be expected that not many variations exist that could alter the results significantly. Thus, panel data² can be utilized if more sample years are included.

RESULTS AND DISCUSSION

From the 231 annual reports, a total of 194 managing directors are ethnic Chinese (84%); 24 chief executive officers are Malay (10.4%); 9 chief executive officers are from other ethnic groups (3.9%); and 4 chief executive officers are Indian (1.7%). In regards to chief financial officers, 86% are Chinese; 7.4% are Malays; 4.3% is from other ethnic groups; and 1.7% are Indian. Meanwhile, in regards to chairman of the board, Malay (56.7%); followed by Chinese (41.6%); and from other ethnic groups (1.7%) (Refer to Table 2).

Panel B shows the mean (median) score of IC disclosure is 24.79%, with a maximum of 50% and a minimum of 11.67%. The level of disclosure is considerably higher than the original Garcia-Meca and Martinez (2007) study. This result is not comparable to existing Malaysian studies, such as Foong et al. (2009) who report the mean of IC disclosure as being between 16.47% to 67%, which varies according to the category of industry in which a company is grouped. However, Foong et al. (2009) use a score based on the presence of an item, as well as narrative, numerical and monetary formats. The result is expected as disclosure is expected to grow over time, and could also be due to the difference between annual report and analyst report disclosures. In regards to the ethnic composition of the audit committee, the median membership for Malays and Chinese ethnics are 33% and 67%, respectively. On average, 35% of the board members across the three ethnic groups have accounting or business background.

Table 3 demonstrates there are five variables with correlations above 0.7. Firstly, the correlation between the Malay and Chinese ethnics chief executive officer is -0.780. This is expected as these two ethnic groups constitute the majority of the overall observations. According to the correlation analysis, it is likely that if the chief executive officer is not Malay, he/she is Chinese. Thus, the Malay ethnic chief executive officer variable is dropped from the analysis. The reason one variable is excluded in instances of highly correlated variables is to deal with multicollinearity problems. Secondly, the correlation between the Malay and Chinese ethnics chief financial officer is -0.716. Similar to above, it is likely to see that if the chief financial officer is not Malay, he/she is Chinese. Thus, the Chinese ethnic chief financial officer variable is excluded. Thirdly, the correlation between the Indian ethnic managing and chief financial officer is 0.746. For Indian ethnic directors, it is observed that there is a high likelihood that if the chief executive officer is an Indian ethnic, he/she appoints a member of the same ethnic group to be the chief financial officer. Therefore, the Indian ethnic chief executive officer variable is excluded. Fourth, the correlation between the Malay and Chinese ethnics chairman is -0.965. The almost perfect negative correlation occurs since almost all chairmen are Chinese or Malay ethnics. Hence, the Chinese ethnic chairman variable is excluded. Fifth, the correlation

TABLE 2. Descriptive statistics

PANEL A. Variable dichotomy

Variable	Category	Frequency	Percentage
Chief Executive Officer (CEO)	Ethnic Malay	24	10.4
	Ethnic Chinese	194	84.0
	Ethnic Indian	4	1.7
	Other Ethnicities	9	3.9
	Total	231	100.0
Chief Financial Officer (CFO)	Ethnic Malay	17	7.4
	Ethnic Chinese	200	86.6
	Ethnic Indian	4	1.7
	Other Ethnicities	10	4.3
	Total	231	100.0
Chairman (C)	Ethnic Malay	131	56.7
	Ethnic Chinese	96	41.6
	Ethnic Indian	0	0
	Other Ethnicities	4	1.7
	Total	231	100.0
Year	2005	77	33.3
	2006	77	33.3
	2007	77	33.3
	Total	231	100.0

PANEL B. Variable ratio

Variable	N	Mean	Median	S. Standard	Distortion	Kurtosis	Minimum	Maximum
Score	231	24.79	25.00	6.22	0.66	0.85	11.67	50.00
Audit Committee (AC) Ethnic Malay	231	0.35	0.33	0.30	0.41	-0.65	0.00	1.00
Audit Committee (AC) Ethnic Chinese	231	0.60	0.67	0.31	-0.27	-0.79	0.00	1.00
Audit Committee (AC) Ethnic Indian	231	0.02	0.00	0.08	4.06	14.65	0.00	0.33
Audit Committee (AC) Other Ethnicities	231	0.03	0.00	0.09	2.86	6.52	0.00	0.33
Education Background (EB) BOD	231	0.35	0.33	0.18	0.28	-0.59	0.00	0.80
Asset (RM Mil)	231	152,311	57,816	256,771	4.20	20.25	2,954	1,716,585
Log Asset	231	7.85	7.76	0.53	0.14	-0.05	6.47	9.23
Leverage	231	0.33	0.29	0.29	3.28	17.50	0.001	2.23
Return on Equity (ROE)	231	0.04	0.06	0.19	-1.48	6.01	-1.05	0.65

between the Malay and Chinese ethnics audit committee is -0.895. Thus, the Malay ethnic audit committee variable is excluded. Note is taken of the theoretical perspective of the variables and two regressions are run each time, including one of the highly correlated variables, in order to decide

which of the two highly correlated variables should be excluded. Based upon the results of the two regressions, the variable with the lowest t-statistics is excluded.

The remaining independent variables used in the regression analysis are the Chinese ethnic chief executive

TABLE 3. Correlation analysis

Correlation	2005	2006	2007	Ethnic Malay CEO	Ethnic Chinese CEO	Ethnic Indian CEO	Ethnic Malay CFO	Ethnic Chinese CFO	Ethnic Indian CFO	Ethnic Malay Chairman
2005	1.000									
2006	-0.500**	1.000								
2007	-0.500**	-0.500**	1.000							
Ethnic Malay CEO	0.030	0.000	-0.030	1.000						
Ethnic Chinese CEO	0.008	-0.017	0.008	-0.780**	1.000					
Ethnic Indian CEO	-0.094	0.047	0.047	-0.045	-0.304**	1.000				
Ethnic Malay CFO	-0.023	-0.059	0.082	0.610**	-0.465**	-0.037	1.000			
Ethnic Chinese CFO	0.036	0.063	-0.099	-0.407**	0.624**	-0.240**	-0.716**	1.000		
Ethnic Indian CFO	-0.023	-0.023	0.047	-0.045	-0.304**	0.746**	-0.037	-0.337**	1.000	
Ethnic Malay Chairman	0.025	0.006	-0.031	0.297**	-0.310**	0.116	0.179**	-0.190**	0.116	1.000
Ethnic Chinese Chairman	-0.037	0.000	0.037	-0.287**	0.368**	-0.112	-0.170**	0.255**	-0.112	-0.965**

Correlation	Ethnic Chinese Chairman	Ethnic Malay Committee	Ethnic Chinese Audit Committee	Ethnic Indian Audit Committee	Academic Background of Board of Director	Firm Size	Leverage	Profitability
Ethnic Chinese Chairman	1.000							
Ethnic Malay Audit Committee	-0.422**	1.000						
Ethnic Chinese Audit Committee	0.419**	-0.895**	1.000					
Ethnic Indian Audit Committee	-0.049	0.015	-0.215**	1.000				
Academic Background of Board of Director	-0.278**	0.226**	-0.280**	0.083	1.000			
Firm Size	-0.073	0.286**	-0.253**	-0.045	-0.190**	1.000		
Leverage	-0.122	0.247**	-0.178**	-0.025	-0.137*	0.398**	1.000	
Profitability	-0.056	-0.070	0.034	0.158*	-0.092	0.315**	0.016	1.000

Note: ** and * denote significance at the 0.01 and 0.05 levels, respectively.

officer; the Malay ethnic chief financial officer; the Indian ethnic chief financial officer; the Malay ethnic chairman, the Chinese ethnic audit committee, the Indian ethnic audit committee; the academic background of the board of directors in accounting and business; the size of the company; leverage; and profitability. After excluding these variables, the multicollinearity problem is minimized, as the variance of inflation factor (VIF) is less than 10 (Pallant 2007).

Regression analysis using the normal score shows the model is significant with a value of $F = 2.634$ (sig. = 0.00262). Table 3 shows the level of disclosure of IC that can be explained by all variables are independent by 12.6% ($R^2 = 0.126$). The analysis of the results suggests that Malay or Indian ethnics chief financial officers; and an audit committee composition including Indians ethnic

have positive and significant relationships with the level of IC disclosure. In addition to this new perspective of the effect of director's ethnicity on IC disclosure, traditional factors have positive and significant relationships with the level of IC disclosure, such as leverage and return on equity.

The results suggest that H_1 is rejected. Thus, the conclusion reached is that no significant relationship exists between the ethnicity of the chief executive officer and the level of IC disclosure in the annual reports of companies. Although chief executive officers should have an influence on disclosure, it seems that this is not the case among Malaysian firms. Perhaps, the disclosure of IC is largely determined by the chief financial officers who are responsible for the preparation of annual reports.

TABLE 4. Regression results

Variables	Expected Sign	Coefficients	Std Errors	t value	VIF
<i>Independent Variables</i>					
Constant	NA		0.244	-1.065	
CEO(C)	+	0.026	0.217	0.327	1.678
CFO (I)	-	0.082	0.528	1.169	1.251
CFO (M)	-	0.203	0.287	2.638	** 1.480
Chairman (M)	-	0.062	0.143	0.854	1.327
Normal Scores of Audit Committee Members (C)	+	-0.016	0.089	-0.202	1.631
Normal Scores of Audit Committee Members (I)	-	0.103	0.154	1.448	* 1.287
<i>Control Variables</i>					
Normal Scores Academic Qualification in Accounting and Business Board members	+	0.052	0.071	0.733	1.271
Normal Scores of Company Size	+	-0.055	0.078	-0.706	1.538
Normal Scores of Leverage	+	0.122	0.078	1.728	** 1.254
Normal Scores of Profitability	+	0.106	0.070	1.509	* 1.234
Year 2006	NA	-0.005	0.152	-0.068	1.361
Year 2007	NA	0.087	0.153	1.179	1.374

Note: $R^2 = 0.126$; Adjusted $R^2 = 0.07855$; F Value = 2.634; and F Sig. Value = 0.00262. * and ** denote significance levels at $p < 0.05$ and $p < 0.10$, respectively. M represents ethnic Malays, C represents ethnic Chinese and I represents ethnic Indians. CEO represents chief executive officers, and CFO represents chief financial officers. Ethnic Malay chief executive officer; ethnic Chinese chief financial officer; ethnic Indian chief executive officer; ethnic Chinese chairman; and ethnic Malay audit committee variables were dropped from the analysis due to multicollinearity issues.

The second hypothesis examines the relationship between the ethnicity of the chief financial officer and IC disclosure. Table 4 demonstrates the existence of a significantly positive relationship between Malay ethnic chief financial officer and the level of IC disclosure (p -value < 0.05). This implies that firms with Malay ethnic chief financial officers tend to disclose more IC information. The result should be interpreted with caution since there are only 17 observations that include Malay ethnic chief financial officers. The finding supports the study by Haniffa and Cooke (2002), who finds that a positive and significant relationship exists between

companies with Malay ethnic chief financial officer and voluntary disclosure.

The findings can be described in light of the concept of culture and social identity theory (and not the original Hofstede's and Grey's views). One of the factors that can influence disclosure behavior is the religious belief of the individuals concerned. The majority of Malay ethnic in Malaysia are Muslim (Abdullah 1992). According to the social identity theory, individuals display their identity if they are confident that their identity will have a positive value not only for the individual, but also the group (Tajfel & Turner 1979). Thus, a Malay ethnic chief

financial officer is more likely to disclose IC information because of the belief that the disclosure may demonstrate that the company is responsible in relation to the society, environment and the economy (Siwar & Hossain 2009). The third hypothesis examines the relationship between the ethnicity of the chairman and the level of IC disclosure. Table 4 shows no significant relationship between the ethnicity of the chairman and the level of IC disclosure. No definite explanation can be provided regarding this finding as it could be attributed to the dual roles played by the chairman; the competency of the chairman; or whether the chairman has any role in the production of voluntary reporting that are not analyzed in this study. These issues are subjected to further study and require different research paradigms and methods to answer the research questions.

The fourth hypothesis examines the relationship between the ethnicity of the audit committee members and the level of IC disclosure. Table 4 demonstrates the existence of a marginally significant positive relationship between Indian ethnic membership in the audit committee and the level of IC disclosure (coefficient=0.103, significant at 0.10). The findings concerning Indian ethnic behavior is consistent with the study conducted by Mir et al. (2009), who find that companies in India provide more information in the chairman statement compared with companies in New Zealand. However, Mir et al.'s (2009) findings are in contrast to Hofstede's study of cultural dimensions, which finds Indian ethnic is more inclined towards secrecy than disclosure. While it is noted that Mir et al.'s (2009) study does not investigate the effect of ethnicity of the audit committee, the study does provide some direction to expect the relationship between ethnic culture and IC disclosure.

The influence of ethnic culture and IC disclosure can be described using the theory of social identity. Based upon the descriptive analysis, the sample contains an average of only 2% Indians ethnic in the audit committee, in comparison to audit committee memberships of 35% Malays and 60% Chinese ethnics. The fact is that Indians are a minority group in corporate boards in Malaysia, particularly in relation to audit committees. Minority group membership is often associated with low status (Hewstone et al. 2001). To improve the low-status perception, they will be required to find the identity of the organization and will be committed to the organization (Rupert et al. 2010). Minority members will invest more effort in their work in an attempt to become a respected member of the organization due to self-identification with a lower-status group. As such, they will influence the disclosure of further information in the annual report. Since the number of Indian ethnic directors is very small, the results are expected to be biased toward not finding any significant relationship. However, the findings indicate otherwise. Nevertheless, the results should be interpreted with caution due to the skewness in the data distribution.³

Table 4 also demonstrates that leverage and profitability have positive and significant relationships with the level of IC disclosure. Leverage has a positive relationship (t-statistics 1.728), which is consistent with previous studies by Gerpott et al. (2008) that suggest companies with high leverage rates will reveal more information compared to companies with low leverage rates. Profitability is marginally positively related to levels of IC disclosure (t-statistics = 1.509; $p < 0.10$). This is consistent with previous studies, including Singhvi and Desai (1971) and Patton and Zelenka (1997), who find a significant relationship between profitability and the level of disclosure of information.

CONCLUSION

The present study shows that a positive and significant relationship exists between ethnicity, which represents a set of cultural values, and levels of IC disclosure in annual reports in Malaysia. The results reveal that companies with a Malay ethnic chief financial officer and Indian ethnic serving on audit committees have a significant influence on the level of IC disclosure in annual reports. The results demonstrate that firms with Malay ethnic chief financial officers tend to report more IC than other firms. Similarly, firms with audit committees consisting of Indian ethnic are determined to be more likely to disclose IC in annual reports.

Overall, the findings of the study provide some evidence that ethnic groups have a significant influence on the disclosure of IC for companies in Malaysia due to the bonds to their original cultures since the colonial era and who are expected to retain their cultural values from their country of origin. However, the results should be interpreted with caution due to sample limitation for some ethnic groups. Thus, it is concluded that the voluntary disclosure of IC information could be influenced by the ethnicity of the chief financial officers. Additionally, the regulators of the capital market should take note of these findings as one input in designing specific training for directors.

One contribution of this study is that quality of reporting, which includes the disclosure of voluntary information, may not only be a function of the country's legal and political system; incentives from the capital market; capital structure; ownership; and the tax system, but may also be the result of specific cultural factors. The study is also expected to contribute to the study of minority cultural commitment in organizations. Minority members will invest more effort in their work in an attempt to become a respected member in the organization due to self-identification with a lower-status group. Thus, when they hold the position of chief executive officer, such individuals will demonstrate high levels of commitment, especially in sharing information that indicates whether

the firm is competitive. This new perspective could provide new insight into investigating the role of culture on information disclosure. The study also contributes to a deeper understanding of some of the findings of previous studies that find the cultural characteristics identified by Gray (1988) are evolutionary rather than static (i.e., the characteristics of ethnics are dynamic as ethnic groups adapt to the dominant culture in a given country).

This study is limited to the annual reports of 77 technology companies listed on MESDAQ; and the Main Board and Second Board of Bursa Malaysia between 2005 and 2007. Thus, these findings cannot be generalized to all companies in Malaysia.

ENDNOTES

- ¹ While ethnicity is used to describe the people of certain ethnic backgrounds, it should not be confused with race, which is frequently used to describe biological differences or the genetics of people (Zagefka 2009). These people, within their ethnic groups, retain and practice certain traits of cultural values (i.e., ethnic culture).
- ² Panel data combines time series and cross sectional observations. It does not assume that observations are independently distributed across time.
- ³ Since Indians ethnic are members of a minority group and not many of them are in the audit committees, it is likely that audit committees with Indian members would be more diverse with respect to ethnicity. Perhaps it is ethnicity diversity, rather than ethnic Indians, that make companies disclose more information regarding IC. However, further investigation needs to be performed utilizing different theory that relates to the effect of the diversity of the board of directors; and including a significant amount of data collection. The diversity could also mean diversity in the education and training, as well as experience background of the board members.

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APPENDIX

APPENDIX I. Checklist

Elements	Code	Human Capital Items
1 Management experience/abilities	MI1	Experience
	MI2	Academic level
	MI3	Professional level
2 Change in numbers of employees	MI4	Change in numbers of employees
3 Agreements with employees	MI5	Agreements with employees
4 Breakdown of employees by age or experience	MI6	Breakdown of employees by age or experience
5 Experience of employees	MI7	Training
	MI8	Profession
	MI9	Career
6 Recruitment policy	MI10	Recruitment policy
	MI11	Structural recruitment process
7 Description of competence development program	MI12	Performance appraisal system
	MI13	Training and development programs
8 Production/income per employee	MI14	Production/income per employee
9 Remuneration system	MI15	Remuneration scheme
	MI16	Directors remuneration
	MI17	Employee benefits
	MI18	Director benefits
	MI19	Employee Share Option Scheme (ESOS)
10 Education and training policy	MI20	Training programs
	MI21	Seminar
	MI22	Continuous education
10 Education and training policy	MI20	Training programs
	MI21	Seminar
	MI22	Continuous education
11 Pensions	MI23	Contribution plans
	MI24	post-employment benefit plans
	MI25	Employees Provident Fund (EPF)
12 Job rotation opportunities	MI26	Job rotation opportunities
13 Dependence on key employees	MI27	Key management personnel
14 Value added per employees	MI28	Value added per employees
15 Career opportunities	MI29	Career opportunities
16 Insurance policy	MI30	Insurance policy
17 Efficiency	MS31	Value added per expert
Element	Code	Structural Capital Items
18 Installed capacity	MS32	Installed capacity
19 Investment in technology	MS33	Important technology to enhance
20 Business model	MS34	Business strategy
21 IT systems	MS35	Software
	MS36	System
22 Utilization of energy and other input goods	MS37	Utilization of energy and other input goods
23 Organizational structure	MS38	Corporate structure
	MS39	Group structure
24 Information and communication within the firm	MS40	Supply of information
	MS41	Board and management meeting
25 Corporatize culture	MS42	Values
	MS43	Corporate vision & mission
26 Environmental policies	MS44	Environmental policies
27 Litigation	MS45	Accusation /claim
	MS46	Sanction / Penalties
28 Efforts related to the working environment	MS47	Safety & health
	MS48	Team spirit
29 External and internal failures	MS49	External and internal failures
30 Patents and licenses	MS50	Risk of failures
	MS51	Software license
31 Strategy, objects of	MS52	R&D

32	Innovation and R&D in basic research	MS53	Innovation and R&D in basic research
33	Innovation and R&D in product design/development	MS54	R&D efforts
		MS55	R&D expenditure
		MS56	Developing a platform to support many innovative
34	Future projects regarding innovation and R&D	MS57	R&D initiatives
35	Patents pending	MS58	Pending trade marks

	Element	Code	Relational Capital Items
36	Customer breakdown by product or business	MP59	Sectorial Contribution
37	Market share by segment/product	MP60	Business segment / geographical segment
38	Sales breakdown by product or business	MP61	Revenue Contribution
39	New customers	MP62	New customers
40	Customer relationships	MP63	Loyalty program
		MP64	Customer satisfaction
41	Relative market share to competitors	MP65	Market competition
42	Sales breakdown by customers	MP66	Sales breakdown by customers
43	Market share	MP67	Existing markets
44	Dependence on key customers	MP68	Specific customer
45	Value added by customer or business	MP69	Value add
46	Education and training of customers	MP70	Conference
47	Production by customer	MP71	Customer base
48	Customers by employee	MP72	Direct touch point with customers
49	Investment in new business	MP73	Joint venture
		MP74	Mergers and acquisitions
		MP75	Partnership
50	Credibility and consistency of strategy	MP76	Business sustainability
51	New products	MP77	Software
52	Strategic alliances and agreements	MP78	Agreement
		MP79	Contract
		MP80	Strategic alliances
53	Leadership and trademarks	MP81	ICT leader
		MP82	TM
		MP83	Brand
54	Price policy	MP84	Price policy
55	Information about marketing	MP85	Industry growth
56	Network of suppliers and distributors	MP87	Supply chain
		MP88	Distribution channel
		MP88	Distribution channel
57	Quality of products	MP89	ISO
58	Environmental investments	MP90	Environmental investment
59	Best practice	MP91	Best Award
60	Social responsibility	MP92	Education support
		MP93	Community project

