This paper examines the effect of board composition and ethnicity on audit quality using a sample of 100 companies under the Industrial Product sector listed on the Bursa Malaysia Main Board in 2002. The study uses audit fees as a proxy for audit quality and seeks to examine whether the proportion of independent directors, CEO duality and ethnicity factors are associated with audit fees. We find that the proportion of independent directors is significantly related to audit fees. However, we do not find evidence that CEO duality and ethnicity factors are associated with audit fees. Overall, our results suggest that independent directors encourage the appointment of higher quality auditors to give greater assurance to investors that company financial statements are fairly presented.

**Keywords:** Board of Directors, Ethnicity, Audit Fees, Malaysia

**Introduction**

Recent corporate failures, such as Enron and WorldCom Incorporated, indicate a requirement for high quality and transparent financial reporting in capital markets. High quality financial reporting refers to the production of financial statements with no material misstatements, omissions or biases that can cause investors to make wrong investment decisions. Erosion in the quality of financial reporting is, therefore, perceived to be associated with earnings management or fraudulent financial reporting. To add credibility to financial statements, companies hire external auditors to provide assurance to outside investors that the financial information is reliable. A high quality audit should lead to high quality financial reporting. Auditing is believed to have an economic impact on
capital markets, since audited financial information is assumed to be essential in effective investment decision-making. Consequently, auditing is required by regulatory requirements in most countries including the US, the UK, Australia, New Zealand and Singapore. Malaysia mandated auditing under Section 172 of the Companies Act 1965.

The market for audit services has received considerable attention from researchers, with studies focusing on the determinants of audit fees and audit quality. Studies on audit fee determinants are related to the development of audit fee models to investigate potential factors that impact on audit pricing (Simunic, 1980; Chan et al., 1993). Studies on audit quality are normally associated with the selection of auditors. A higher quality audit is perceived to be associated with brand name auditors or industry specialist auditors (Craswell et al., 1995; Chen et al., 2005). However, since audit quality is unobservable, many studies use audit fees as a proxy for audit quality because “more investigation will require more audit hours and / or the use of more specialized audit staff – resulting in higher fees” (O’Sullivan, 2000: 398). Thus, higher audit fees should reflect a higher quality audit since more audit effort is required to ensure that financial statements are free from material misstatement (Deis and Giroux, 1996).

Many countries, including the UK and the US, have taken initiatives to promote high quality financial reporting. The emphasis on strong corporate governance is one such initiative. In Malaysia, corporate governance has recently received greater attention following the economic turmoil of 1997. This is evidenced by the introduction of the Malaysian Code on Corporate Governance (MCCG) by the Malaysian Institute of Corporate Governance (MICG, 2000). The first principle stated in the MCCG refers to the board of directors. The company is recommended to have a well-balanced and effective board of directors in order to have a good internal corporate governance system. The MCCG has defined a well-balanced and effective board of directors as having a certain proportion of independent directors on the board. A further measure of effectiveness is the separation of the roles of the Chief Executive Officer (CEO) and the Chairperson of the board. According to Abdullah (2001: 18), the board “cannot be seen as effective and independent if the board chairperson is also the CEO as conflicts of interest will inevitably arise and the risk of one person dominating the decision-making and running of the company is high.” Empirical evidence suggests that an independent and effective board will bring independent judgement to the decision-making of the company (Beasley, 1996 and Shivdasani, 1993).

In addition, the MCCG also focuses on accountability and audit, stating that the board “should establish formal and transparent arrangements for maintaining an appropriate relationship with the company’s auditors.” (MICG, 2000: 8). Thus, these statements give the impression that the board of directors and the board’s relationship with auditors are key elements in ensuring that the company is transparent and accountable to shareholders and other related parties. This relationship can be observed from the audit fees charged in the financial statements.

Given the importance of corporate governance and auditing services, it is appropriate to investigate whether the corporate governance initiatives influence the quality of auditing,
which is reflected in the statutory audit fees paid by Malaysian listed companies. It has been argued that the selection of auditors is in the hands of shareholders and the board of directors (Jensen and Leddy cited in Beasley and Petroni, 2001).

Another interesting issue that may influence audit quality is that of cultural values. Cultural values are important because they have a strong influence on the way people behave. Since Malaysia is a multicultural society, directors of Malaysian companies come from different ethnic backgrounds. They each hold and practice their own cultural values and religious beliefs. Hence, directors of Malaysian companies manage and direct their companies according to their cultural values. This view is further supported by Abdullah (1992), who suggests that an organisation’s culture is influenced by the culture of a country. Since different ethnic backgrounds hold different cultural values, directors of companies may perceive audit quality differently.

This study, therefore, has two objectives. The first is to examine whether independent directors and CEO duality are associated with audit fees as a proxy for audit quality. The second objective is to examine whether ethnicity factors influence audit quality.

Prior Literature and Hypotheses Development

Audit Fees in Relation to Audit Quality

The central interest of the audit fees literature is the identification of factors that influence the level of fees paid for the supply of audit services. The work of Simunic (1980) in the USA is the primary foundation for most of the subsequent research on audit fee determinants. He developed audit fees models using OLS regression as a function of auditee size, complexity of auditee, risk associated with the auditee and auditor specific attributes. Consistent with other studies in the USA and the UK, audit fees are influenced by auditee size, audit risk and audit complexity (e.g. Simon et al, 1992, Che Ahmad and Derashid, 1996).

Another interesting area of study in the market for audit services is the quality of the audit. Here, the audit fee has been associated with audit quality. Audit quality refers to the ability of auditors to discover and report a breach in the client’s accounting system (DeAngelo, 1981). Based on the audit quality definition by DeAngelo (1981), the close relationship between audit quality and audit effort has been addressed. Hence, more effort from auditors to conduct extensive tests in discovering accounting errors will increase the quality of the audit. The audit effort from auditors will be reflected in the audit fees since “a higher level of assurance (quality) is presumably more costly to produce” (Simunic and Stein, 1996: 121). Consistent with Simunic and Stein (1996), Carcello et al. (2002: 369) also suggest, “audit fees reflect the economic costs of efficient auditors.” Thus, auditors require a longer time to carry out thorough audit tasks resulting in higher audit fees and higher quality of service. In other words, higher audit fees provide indirect evidence that higher quality audits are provided by auditors.
In Malaysia, By-Laws (On Professional Conduct and Ethics) (2002) issued by the Malaysian Institute of Accountants (MIA) stipulate a recommended basis for determining audit fees. The guideline emphasizes the time spent by the auditors on the audit tasks carried out and recommends the audit firm charge audit fees based on time spent [By-Laws (On Professional Conduct and Ethics), 2002]. The key issue is that auditors need to manage audit work properly to ensure that they perform the audit efficiently. According to [By-Laws (On Professional Conduct and Ethics) (2002)] auditors are required to record time spent as an integral part of the evidence of work performed. Thus, total time charged is reflected as time spent by partners and staff of the firm. In addition to time charged, auditors are required to maintain an individual charge-out rate. Hence, audit fees are charged according to a charge-out rate for the auditors involved (partners and staff) and a total time spent for particular audit work. Consequently, the longer the time spent on the audit work, the higher the audit fees since additional costs incurred by the auditor will be transferred to the company.

Board Composition in Relation to Audit Quality

In addition to audit fee determinants and audit quality, the study has its roots in agency theory where the board of directors is appointed by the shareholders to monitor managers’ self-interests. The agency problem arises within a company whenever managers have incentives to pursue their own interests at the expense of shareholders. Fama and Jensen (1983) have theorized that the board of directors is the best control mechanism to monitor the actions of management. The board is responsible for the supervision of managerial actions, for determining the level and structure of top-management compensation, for replacing poorly performing managers and for appointing the auditors of the company. In addition, Jensen and Meckling (1976) highlight that auditing is one method of ensuring that managers will act in the best interest of the outside shareholders. Therefore, the board of directors should appoint auditors to protect shareholders’ interests.

Two observable board characteristics are board composition and the separation of the roles of CEO and board chair. Board composition has received considerable attention by most corporate governance systems around the world. For example, in 1992, the Cadbury Committee issued the Code of Best Practice, which recommends that boards of UK corporations include at least three outside directors. The MCCG recommends corporations in Malaysia to have a minimum of one-third independent directors on the board. The underlying presumption is that this recommendation should improve board oversight and avoid placing too much power in the hands of the CEO, management and executive directors.

O’Sullivan (2000) documents that the proportion of non-executive directors on the board has a significant positive impact on audit fees. The plausible explanation for this finding is that independent directors demand a higher quality audit to provide greater assurance that the financial statements do not contain a material misstatement.

According to the MCCG best practices, Malaysian companies are recommended to split the function of CEO and the Chairperson of the board to ensure a balance of power and
authority, such that no one individual has unfettered power in decision-making. Boards with CEO duality are perceived to be less effective because a conflict of interest may arise. Hence, an independent board chair may be expected to demand a higher quality audit, reflected in higher audit fees. However, prior UK studies have not found that CEO duality influences audit fees. O’Sullivan (1999 and 2000) documents no evidence that CEO duality has a significant impact on audit fees. Further, in a Malaysian study, Abdullah (2001:21) found that “separating the roles of board chairperson and the CEO clearly do not have any link with performance and gearing.” Hence, whether an independent board chair influences audit quality (as measured by audit fees) in Malaysia is an empirical question.

Malaysian Cultural Values in Relation to Audit Quality

While Malaysia has a multicultural society, there is considerable division based on ethnicity, religion and language. “These different ethnic groups maintain and practice their own cultural values and religious beliefs” (Iskandar and Pourjalali, 2000: 3). Sendut (1991) infers that each ethnic group prefers to maintain its ethnic identity, suggesting that the effect of race may be significant in multicultural societies like Malaysia. Hence, this study uses race as a proxy for ethnicity. Malaysia has about 22.97 million people, of which 65% are bumiputera, 26% Chinese, 8% Indians and 1% others. Out of 65% bumiputera, 82% are Malays and 18% are other indigenous people. (Department of Statistics Malaysia, 2004).

The significance of culture has been shown to influence the rate of economic growth (Hofstede and Bond, 1988; Johnson and Lenartowicz, 1998), existing patterns of economic wealth (Franke et al., 1991), audit-detected accounting errors (Chan et al., 2003) and the interpretation of International Accounting Standards (Doupnik and Richter, 2003). Of interest to the present study is the question of whether culture influences the development of accounting practice. The seminal work in this area is attributed to Gray (1988), who proposed a framework, linking Hofstede’s (1980) cultural constructs with accounting values and practices.6

The effect of culture on the development of accounting practices in Malaysia has recently drawn the attention of a number of accounting researchers (Iskandar and Pourjalali, 2000; Haniffa and Cooke, 2002; Patel et. al, 2002). Additionally, a study on culture in management practices by Shipper et al. (2003: 175) suggests that “Malaysia is more ethnically diverse suggesting more sub-cultures that may tolerate a wider variety of management practices.” Notably, Iskandar and Pourjalali (2000) suggest that cultural values influence the development of accounting practices in Malaysia. Haniffa and Cooke (2002) also find that the extent of voluntary disclosure in the annual reports of Malaysian companies is significantly influenced by cultural factors.

Iskandar and Pourjalali (2000) identified changes in cultural values in Malaysia from 1987 to 1997 by performing an analysis of Malaysian culture as a whole. They suggest that Malaysian “culture values ranked lower in collectivism, power distance, uncertainty avoidance, and masculinity.” (Iskandar and Pourjalali, 2000: 23). This study does not,
However, differentiate between the various ethnic groups within Malaysia, which is the focus of the present study.

The study carried out by Haniffa and Cooke (2002) suggests that the Chinese are relatively individualistic compared with the Malays. This proposition is in contrast to Hofstede (1991) who infers that both of these ethnic groups have low levels of individualism. Table 1 presents the interrelationship between Hofstede’s cultural dimensions and Gray’s accounting values and practice. Based on the Hofstede (1980) and Gray (1988) theoretical framework and the study by Haniffa and Cooke (2002), Malays are expected to be less professional and secretive, and more uniform and conservative compared to the Chinese. Thus, this notion is used to examine whether the ethnicity of directors influences their demand for a high quality audit.

Table 1: The Interrelationship between Societal Values and Accounting Practices

<table>
<thead>
<tr>
<th>Hofstede societal value</th>
<th>Ethnic groups</th>
<th>Accounting value</th>
<th>Accounting practice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Malay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power distance</td>
<td>High</td>
<td>Low professional*</td>
<td>Low compliance with legal requirements</td>
</tr>
<tr>
<td>Masculinity</td>
<td>Low</td>
<td>Low secrecy</td>
<td>High disclosure</td>
</tr>
<tr>
<td>Uncertainty avoidance</td>
<td>High</td>
<td>High uniformity</td>
<td>Less flexibility</td>
</tr>
<tr>
<td>Individualism</td>
<td>Low</td>
<td>High conservatism</td>
<td>Less optimism</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power distance</td>
<td>High</td>
<td>High professional*</td>
<td>High compliance with legal requirements</td>
</tr>
<tr>
<td>Masculinity</td>
<td>Low</td>
<td>High secrecy**</td>
<td>Low disclosure</td>
</tr>
<tr>
<td>Uncertainty avoidance</td>
<td>Low</td>
<td>Low uniformity</td>
<td>High flexibility</td>
</tr>
<tr>
<td>Individualism</td>
<td>High***</td>
<td>Low conservatism</td>
<td>High optimism</td>
</tr>
</tbody>
</table>

* Even though Gray hypothesizes that a higher rank of professionalism is more likely when there are higher ranks of individualism and lower ranks of uncertainty avoidance and power distance, this study argues that Chinese are relatively more professional compared to Malays. This is supported by Abdul Rashid and Ho (2003).

** Haniffa and Cooke (2002) suggest that Chinese are relatively high with respect to secrecy compared to Malays, even though their societal value of Masculinity is low.

*** According to Hofstede (1991) Chinese rank low on individualism. However, Haniffa and Cooke (2002) document that Chinese have a relatively high ranking of individualism compared to the Malay group.

**Hypotheses Development**

Based on our discussion in section 2.2, we argue that a more independent board of directors should provide better oversight of management. Part of this oversight role is to obtain assurance that the financial statements are not materially misstated. Hence, we expect that independent directors will demand a higher quality audit, with a corresponding increase in audit fees. This gives rise to our first hypothesis:
H1: There is a positive association between the proportion of non-executive directors on the board and audit fees.

Further, when the functions of CEO and board chair are separated, an independent board chair may be expected to demand a higher quality audit. While prior research has not found a relation between CEO duality and audit fees, we explore whether this is the case for Malaysian companies. We therefore test the following hypothesis:

H2: There is a negative association between CEO duality and audit fees.

As discussed in section 2.3, cultural factors may influence the demand for a high quality audit. As the results of prior research have produced conflicting results, we test whether board ethnicity is related to audit fees, without predicting a direction. This leads to our third hypothesis:

H3: There is an association between the ethnicity of the board of directors and audit fees.

Sample and Model Description

This study focuses on the financial year 2002 because the MCCG was introduced in March 2000 and the Bursa Malaysia revamped its listing requirements regarding corporate governance in January 2001. It was expected that companies would take some time to alter their internal governance characteristics but would have done so by 2002.

The sample is composed of companies listed in the Industrial Products sector of the main board of Bursa Malaysia (formerly known as Kuala Lumpur Stock Exchange). The Industrial Product sector was selected because it is the major sector on the board of Bursa Malaysia, comprising approximately 140 companies. After eliminating newly listed companies and unavailable information, the final sample comprises 100 companies.

The primary source of audit fees data is the KLSE-RIS website for the year 2002. KLSE-RIS is the acronym for Kuala Lumpur Stock Exchange – Research Institute of Investment Analysts Malaysia Information System and provides a comprehensive database for users to obtain information on securities and derivatives traded in Malaysia. Financial figures are extracted from the disclosure made in the company’s annual report. Any incomplete data from KLSE-RIS are generally available from the company’s annual report on the Bursa Malaysia website.

Table 2 provides a summary of the two models used in this study. We test Hypotheses 1 and 2 separately from Hypothesis 3 because of potential multicollinearity between the variables. This is explained in more detail in the next section.

Malaysian companies are obliged to disclose the amount of the audit fee in their annual financial statements under Schedule (9) Para (1)(q) of the Companies Act 1965. Also, companies are required to disclose the composition of the board of directors under Bursa Malaysia Listing Requirements that were revamped in January 2001.
Consistent with prior studies, we use the log of audit fees as the dependent variable (Simunic, 1980, Craswell et al., 1995, Carcello et al., 2002). The study utilizes a number of variables to represent board and culture characteristics. First, the composition of the board of directors is identified by determining the proportion of non-executive directors. Second, we use a binary variable to indicate CEO duality. Third, consistent with study of Haniffa and Cooke (2002) the proportion of Malay directors to total directors is used in this study. Finally, we use a binary variable to represent whether the board chairperson is Malay or Chinese.

In addition, we include in our models several control variables that have been found to be significantly associated with audit fees in previous studies. As inferred by Simunic (1980), the magnitude of audit fees depends on client size, complexity of operations, and audit risk. Hence, we employ variables to represent these factors.
First, we use the log of total revenue to proxy auditee size. Auditee size is the most dominant variable across prior literature\textsuperscript{10} since a larger auditee requires more audit effort (Simunic, 1980). Total assets and total revenue are widely accepted as measures of auditee size. This study uses total revenue as an indicator of auditee size since total revenue is argued to be a better explanatory variable than total assets (Chan et al., 1993).

Second, the log of the total number of subsidiaries is used to operationalize auditee complexity. Even though Chan et al. (1993) argue that the total number of subsidiaries is unlikely to be an entirely satisfactory proxy for auditee complexity, a study by Che Ahmad and Derashid (1996) found a significant relationship between the total number of subsidiaries and audit fees. Hence, in order to be consistent with that study, we also use the number of subsidiaries as a measure of auditee complexity.

Audit risk is argued to influence audit fees since the scope of audit work is based on the audit risk model. Higher audit risk leads to more audit work, which consequently results in a higher audit fee. Based on the study carried out by O’Sullivan (1999) and Carcello et al. (2002), the sum of receivables and inventory as a proportion of total assets is used as a proxy for audit risk because companies with higher amount of these assets are perceived to have higher risk because of the possibility of bad debts and obsolete stocks.

We also include a binary variable to represent firms audited by the Big 5 (now Big 4) firms and small auditors in order to examine whether differential pricing exists between the two categories of firms in Malaysia. Prior studies by Palmrose (1986a) in the USA and Craswell and Francis (1999) in Australia suggest that the pricing for audit fees is influenced by the size of the audit firm because big firms are able to extract a premium as a result of better reputation compared to non-big firms. Finally, we also include the log of non-audit fees as a control variable. Auditors are not only providing auditing services but also non-audit services to their clients. Non-audit fees have been found to have a significant positive association with audit fees\textsuperscript{11}. Even though the reason behind this phenomenon is less clear, Turpen (1995) speculates that companies use more non-audit services indicate that the companies have a greater audit complexity. Following prior studies by Ezzamel et al. (1996) and O’Sullivan (1999 and 2000) the log of non-audit fees paid to the external auditor in the financial year 2002 is included in the models.

**Empirical Results**

Table 3 provides descriptive statistics relating to audit fees and the independent variables. The results reveal that the companies in the sample paid in the range of RM5,000 to RM4,672,000 in audit fees, with an average of RM218,052. Revenues are between zero\textsuperscript{12} and RM4,806,816,000 with an average of RM413,593,665. The descriptive statistics also reveal that Malaysian parent companies in this sector have a maximum number of 48 subsidiaries in a group and a minimum of zero. The average number of subsidiaries is nine. Findings from Che Ahmad and Derashid (1996) and Simon et al. (1992) indicate that the average number of subsidiaries in their sample of companies in 1991 and 1987 was 16 and 12 respectively. The difference is mainly due to this study’s focus on only one sector of public listed companies, whereas both of the former studies look at all sectors in Malaysia.
With regard to the percentage of assets represented by receivables and inventory (Rec&Inv), the results indicate that the average percentage of assets tied up in these items is 34 percent. As for type of auditor, 82 percent of companies in our sample are audited by a Big 5 (now Big 4) audit firm. This is comparable to the findings of Abdullah (2001), who reported that 80 percent of companies in Malaysia were audited by the Big 6 (now Big 4) audit firms. Finally, the non-audit fee paid to the external auditor averages RM103,863, ranging from zero to RM1,962,000.

<table>
<thead>
<tr>
<th>Table 3: Descriptive Statistics</th>
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<tbody>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>Audit fees</td>
</tr>
<tr>
<td>Revenues</td>
</tr>
<tr>
<td>No of subsidiaries</td>
</tr>
<tr>
<td>Rec&amp;Inv (asset)</td>
</tr>
<tr>
<td>Auditor</td>
</tr>
<tr>
<td>Non audit fees</td>
</tr>
<tr>
<td>Directors</td>
</tr>
<tr>
<td>CEO</td>
</tr>
<tr>
<td>Malaydir</td>
</tr>
<tr>
<td>Malay chair</td>
</tr>
<tr>
<td>LAFEE</td>
</tr>
<tr>
<td>LSIZCO</td>
</tr>
<tr>
<td>LSUBS</td>
</tr>
<tr>
<td>LNonAFEE</td>
</tr>
</tbody>
</table>

Of particular interest to this study are the corporate governance and ethnicity characteristics. Regarding the composition of the board of directors, the average ratio of independent directors is 37 percent, with a maximum of 80 percent and a minimum of zero percent. Thus, this finding suggests that Malaysian boards generally are consistent with the recommended best practices that require one-third of board members to be independent. This is consistent with the findings of Abdullah (2001) and the survey carried out by KLSE (now Bursa Malaysia) and PriceWaterHouseCoopers (2002), which suggest that the majority of public listed companies in Malaysia have more independent directors than the minimum requirement. As far as CEO duality is concerned, our results show that only 15 percent of companies in the sample have not separated the role of CEO and board chairperson. This finding is also consistent with the Malaysian Corporate Governance Survey 2002 (KLSE and PriceWaterHouseCoopers, 2002), which found that 15 percent of respondents have CEO duality. In general, therefore, Malaysian boards do not seem to be dominated by one person.

With regard to ethnicity, Malay directors represent an average of 38 percent of all directors on the boards of the sample companies. This percentage is relatively small when compared to the population of Malay people in Malaysia which is 53.3%. However, of the 100 companies in this study, 47% have a Malay chairperson and 53% are from other ethnic groups, predominantly Chinese (87%). Thus, assuming this percentage is representative
of other sectors, it suggests that nearly half of the companies in Malaysia are chaired by Malay people, even though the average number of Malay directors on the board is low.

Table 4 presents the results of the Pearson correlations between the variables used in the OLS regression. The table gives additional insights into the audit fees phenomenon in Malaysia. Specifically, the results indicate the relationship between the explanatory variables used in the multivariate regression as well as measuring the significance and the direction of the relationship. There are only three variables significantly correlated with audit fees: non audit fee, auditee size and number of subsidiaries. The positive significant association between non-audit fee and audit fee is consistent with the findings of Ezzamel et al. (1996). Secondly, the auditee size as measured by revenues is found to be significantly correlated with audit fees. Consistent with prior studies by Pong and Whittington, (1994), Che Ahmad and Derashid, (1996) and O’Sullivan, (2000), this suggests that, not surprisingly, larger firms require greater audit effort. Another variable that is significantly associated with audit fee is the number of subsidiaries in the group being audited. Again, this is not unexpected since auditors should take more time and effort to carry out audit work when the client’s business structure comprises a complex group of companies. This finding is consistent with previous studies conducted by Chan et al. (1993), Rose (1999) and Carcello et al. (2002).

A significant positive correlation between the two ethnicity variables suggests that the chances of a Malay being the chairperson are higher when the board of directors is dominated by Malay directors. In contrast, there is a significant negative relationship between a Malay chairperson and CEO duality. Thus, the inference that can be drawn from this is that the role of the Malay chairperson is clearly separated from the role of CEO. With respect to the auditee complexity variable (as measured by number of subsidiaries - LSUBS), this is positively correlated with the size of companies (as measured by revenues). Not surprisingly, it appears that larger companies are likely to have a greater number of subsidiaries. This result is consistent with other studies in the UK (for example O’Sullivan, 2000) and in Malaysia (Che Ahmad and Derashid, 1996). The size of the company is also correlated with non-audit fees, suggesting that a larger company pays more non-audit fees to its external auditor. No other variables in the study are correlated with each other.

Table 5 reports the regression results for the two models. The board composition variables and ethnicity variables are tested separately because they are not independent of each other. In addition, an analysis of residuals, Normal P-P plot and scatter plot are conducted to test for normality, linearity, and homoscedasticity assumptions. The analysis of residuals for both models shows that the variables are normally distributed. Meanwhile, the test on linearity using Normal P-P plot for both models also shows that points are fairly symmetrically distributed around a diagonal line. Finally, there are no trends or patterns shown in the scatter plot for both of the models, satisfying the homoscedasticity assumptions (Tabachnik and Fidel, 2001). Collectively, the results show that all assumptions are satisfied as represented in Figure 1 and Figure 2 for regression models 1 and 2 respectively.
<table>
<thead>
<tr>
<th></th>
<th>LAFEE</th>
<th>Directors</th>
<th>CEO</th>
<th>Malaydir</th>
<th>Malay chair</th>
<th>LSIZCO</th>
<th>LSUBS</th>
<th>rec&amp;inv</th>
<th>auditor</th>
<th>LNonAFEE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAFEE</strong></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Directors</strong></td>
<td>.107</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CEO</strong></td>
<td>-.061</td>
<td>.015</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Malaydir</strong></td>
<td>-.031</td>
<td>.273**</td>
<td>-.117</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Malay chair</strong></td>
<td>.006</td>
<td>.087</td>
<td>-.283**</td>
<td>.429**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>LSIZCO</strong></td>
<td>.516**</td>
<td>.021</td>
<td>-.182</td>
<td>-.032</td>
<td>-.052</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LSUBS</strong></td>
<td>.504**</td>
<td>.106</td>
<td>-.128</td>
<td>.033</td>
<td>.040</td>
<td>.334**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rec&amp;inv</strong></td>
<td>.088</td>
<td>-.024</td>
<td>-.064</td>
<td>-.116</td>
<td>-.060</td>
<td>.180</td>
<td>-.010</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Auditor</strong></td>
<td>.013</td>
<td>-.093</td>
<td>-.095</td>
<td>.019</td>
<td>-.028</td>
<td>-.027</td>
<td>-.139</td>
<td>-.184</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>LNonAFEE</strong></td>
<td>.630**</td>
<td>-.030</td>
<td>-.164</td>
<td>.027</td>
<td>.113</td>
<td>.270*</td>
<td>.196</td>
<td>.080</td>
<td>.064</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
The overall results suggest a good linear fit, with the variation in audit fee being explained by the independent variables. The first regression model produced an adjusted $R^2$ of 0.62514, while the second model produced an adjusted $R^2$ of 0.565. These are lower than those reported by Che Ahmad and Derashid (1996) and Rose (1999), which are 0.75 and 0.66 respectively. However, the adjusted $R^2$ for this study is higher compared to that produced by Simon et al. (1992). The goodness of fit is further supported by the F-statistic value of 14.59 and 11.58 which are both significant at 0.000 levels. This result is consistent with the studies conducted by Simon et al. (1992) and Che Ahmad and Derashid (1996).

The results of the models are broadly consistent with previous studies with respect to the control variables. Both auditee complexity and auditee size have a significant and positive impact on audit fees (Simunic, 1980; Chan et al., 1993; Joshi and Al-Bastaki, 2000; Simon and Taylor, 2002). As expected, these results show that larger and more complex companies require more extensive auditing, resulting in a higher audit fee. Non-audit fees also have a positive significant association with the audit fee. This is consistent with the findings of Simunic (1984), Ezzamel et al. (1996), O’Sullivan (2000) and Ezzamel et al. (2002), suggesting that firms with higher audit fees also use their external auditor to provide more non-audit services. However, in contrast to findings by Simon et al. (1992), Rose (1999) and Simon and Taylor (2002), we do not find any evidence to support the proposition that the proportion of assets in receivables and inventories influences the level of audit fee. Theoretically, companies with large amounts of these assets are exposed to higher audit risk because the valuation of receivables and inventories is subject to doubtful debts and obsolescence respectively. We do not find evidence of this association among our sample companies but this could be due to sampling limitations. Another control variable tested

<table>
<thead>
<tr>
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<th>Model 1</th>
<th>Model 2</th>
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<tr>
<td><strong>Coefficients</strong></td>
<td><strong>t-ratio</strong></td>
<td><strong>p-value</strong></td>
</tr>
<tr>
<td>Directors/ Malay dir CEO/ Malay chair</td>
<td>2.332</td>
<td>3.124</td>
</tr>
<tr>
<td>LSIZCO</td>
<td>0.246</td>
<td>3.428</td>
</tr>
<tr>
<td>LSUBS</td>
<td>0.303</td>
<td>3.009</td>
</tr>
<tr>
<td>Rec&amp;inv</td>
<td>-0.633</td>
<td>-1.237</td>
</tr>
<tr>
<td>Auditor</td>
<td>0.082</td>
<td>0.344</td>
</tr>
<tr>
<td>LNonAFEE</td>
<td>0.261</td>
<td>6.105</td>
</tr>
<tr>
<td>Constant</td>
<td>3.049</td>
<td>2.221</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>14.594</td>
<td>11.583</td>
</tr>
<tr>
<td>Significant F</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.671</td>
<td>0.619</td>
</tr>
<tr>
<td>Adj $R^2$</td>
<td>0.625</td>
<td>0.565</td>
</tr>
</tbody>
</table>

Dependent Variable: LAFEE
Figure 1: Analysis of Residuals, Normal P-P Plot and Scatter Plot – Model 1
Figure 2: Analysis of Residuals, Normal P-P Plot and Scatter Plot – Model 2
in the models is the type of auditor as represented by Big 5 (now Big 4) and non-Big 5 firms. Consistent with other studies in Malaysia (for example Simon et al., 1992; Rose, 1999) Big 5 (now Big 4) firms are not significantly associated with higher audit fees. While this suggests that there is no Big 5 audit firm premium in Malaysia, it is also possible that this result is due to the lack of variation in this variable, given that 82% of companies in our sample were audited by Big 5 audit firms.

As far as the corporate governance variables are concerned, board composition has a positively significant association with audit fees, supporting Hypothesis 1. CEO duality is not significantly associated with audit fees and hence we do not find support for Hypothesis 2. These findings are consistent with the finding of O’Sullivan (2000) and suggest that independent directors have a positive impact on audit quality by requiring more extensive auditing. The result also suggests that independent board of directors seek to purchase differentially higher-quality audit services in order to protect their reputation capital and to promote shareholders interests.

With regard to the two ethnicity variables, the results for Model 2 suggest that there is no significant association between audit fees and either a Malay chairperson or the proportion of Malay directors on the board. Hence, Hypothesis 3 is not supported as it appears that these ethnicity factors do not influence audit quality in Malaysia. This finding is in contrast with the study by Haniffa and Cooke (2002) which found significant support for the proposition that the proportion of Malay directors on the board influences the extent of voluntary disclosure in Malaysia.

**Conclusion**

The first objective of this study was to explore the association between board composition, CEO duality and audit quality in Malaysia (as measured by audit fees). Using an OLS regression model to analyse the relationships, we find that board of director composition (as measured by percentage of independent directors on Malaysian boards) is a significant predictor of audit fees. As expected, a higher proportion of independent directors on boards is associated with higher audit fees being paid by Malaysian companies. This is consistent with higher audit fees reflecting the cost to auditors of providing higher quality audit services because more time is spent conducting a thorough audit. Governance theory argues that independent directors should protect shareholders’ interests by utilizing higher quality audit services since auditing is one of the monitoring activities that has been used to control management behaviour (Jensen and Meckling, 1976). Moreover, independent directors are argued to be free from managerial influence when dealing with external auditors on audit issues. This finding is consistent with studies conducted in other settings, (for example, O’Sullivan, 2000 and Carcello et al., 2002) where it was found that board independence is a significant explanatory variable of the variation in audit fees. Our study has implications for regulators and corporate governance practitioners in Malaysia as it highlights the role of independent directors in strengthening audit quality. However, separation of the roles of CEO and board chairperson was not found to be
significantly related to audit fees. This is consistent with prior UK studies by O’Sullivan (1999), O’Sullivan (2000) and Peel and Clatworthy (2001).

The second objective was to investigate the impact of a Malay chairperson and the percentage of Malay directors on audit quality. We find that the ethnicity variables are not significantly related to audit fees, suggesting that these factors do not have any significant impact on audit quality.

Following prior audit fee studies, the models used in this study included several control variables such as auditee size, auditee complexity, audit risk, the provision of non-audit services and the type of auditor. With the exception of audit risk (as measured by proportion of assets represent by stock and receivables) and type of auditor (Big 5 versus non-Big 5), the control variables are found to be significant determinants of audit fees. These findings are consistent with previous studies conducted in Malaysia, providing further support for the determination of audit fees in Malaysia.

There are several limitations to this study. First, the sample used in this study is restricted to the Industrial Product sector. Hence, this study does not take into account possible industry impacts on the results. However, previous studies conducted in Malaysia on audit fees determinants do not find an industry effect. (Che Ahmad and Derashid, 1996). Thus, the focus on only one industry sector is unlikely to impact the validity of the results. Second, while there are three major races in Malaysia (Malay, Chinese and Indian), this study concentrates only on Malay and Chinese. This is due to a limitation of data for Indian directors and chairpersons. Another limitation is that the study only examined the association between audit fees, a Malay chairperson and the proportion of Malay directors on the board. However, several other ethnicity variables could have been used, such as the percentage of Malay shareholdings, and a Malay managing director. The justification for this limitation is that the objective of this study was to look at the influence of cultural factors on audit quality in the context of board composition and CEO duality. Furthermore, none of these variables were significant in the voluntary disclosure study by Haniffa and Cooke (2002). Even though these researchers studied a different area, the underlying rationale is similar because higher transparency in financial statements is perceived to indicate higher quality reporting.

There are a number of avenues for future research. This study examined only two variables for corporate governance. Other variables such as ownership structure and audit committee could be included in an audit fee model. Another potential extension would be to include education level in order to examine whether education and qualifications are linked to ethnicity and whether this impacts on audit quality. A future study is also suggested to include the three major races namely Malay, Chinese and Indian so that the result represents the real situation in Malaysia. Finally, alternative research methods such as interviews or surveys could be undertaken to further explore the impact of corporate governance on audit quality.
Notes

1 In this study, an independent director refers to a non-executive director.
2 The term ‘CEO duality’ is used in this study when the roles of CEO and Board Chair are not separated (Abdullah, 2004).
3 Malaysia has three major ethnic groups: Malay, Chinese and Indian.
4 There are several recommended bases for audit firms to charge audit fees and one of them is based on time spent and charge-out rate of auditors involved. (see By-Laws (On Professional Conduct and Ethics), 2002).
5 The individual charge-out rate refers to audit costing for individual staff and partners based on their experience, expertise and other direct costs involved.
6 Hofstede’s cultural dimensions are individualism/collectivism, power distance, masculinity/feminity and uncertainty avoidance.
7 Haniffa and Cooke (2002) discuss the work of Hofstede (1991), Abdullah (1992) and Tan (1984). However, they use the proposition suggested by Abdullah (1992) and Tan (1984) to determine a ranking of the cultural dimensions for Malaysia instead of using the ranking of the cultural dimensions suggested by Hofstede (1991). They argue that the uses of the ranking for Indonesia and Singapore as proxies for Malay and Chinese ethnic groups by Hofstede (1991) do not reflect the real societal values of these two groups.
8 Available at http://www.klse-ris.com.my/
9 Available at http://www.bursamalaysia.com/
10 See Simunic, 1980; Simon et al., 1992; Chan et al., 1993; Che Ahmad and Derashid, 1996; Ezzamel et al., 1996; O’Sullivan, 1999; Rose, 1999; Simon and Taylor, 2002.
11 For example, Simunic, 1984; Palmrose, 1986b; Ezzamel et al. 1996; O’Sullivan, 2000
12 One of the companies in the sample had zero revenue due to the winding down of its operations. However, we obtained statistically similar results when we omitted this company from our sample.
13 The proportion of independent directors can be Malay directors, thus this study tested these variables in a different model to avoid multicollinearity.
14 Cobbin (2002) suggested that the adjusted $R^2$ for the audit fee model is in the range of 3 percent to 99 percent. Thus, the adjusted $R^2$ for this study is within the norm of audit fee determinant studies.

References


*KLSE-RIS ‘Company Database’ Online. Available at http://www.klse-ris.com.my (accessed 1 July 2004).*


