THE MEDIATING EFFECT OF AUDIT QUALITY ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND FIRM PERFORMANCE

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DEDICATION

By the grace of almighty God

To my mother (God bless her)

To my beloved father

To my family, Shiva, Hojjat and Laya
ACKNOWLEDGEMENT

I wish to express my deepest appreciation to all those who helped me, in one way or another, to complete this thesis. First and foremost I thank God almighty who provided me with strength, direction and purpose throughout the thesis. Special thanks to my thesis supervisors Dr. Rohaida Basiruddin and Associate Professor Dr. Siti Zaleha Abdul Rasid for supporting during the execution of this thesis. Through them expert guidance, I was able to overcome all the obstacles that I encountered in these enduring three years of my thesis. In fact, they always gave me immense hope every time I consulted with them over problems relating to my thesis.
ABSTRACT

Although several studies have explored the nexus between corporate governance, audit quality and firm performance, there are still some areas that need further attention. These areas include (1) the mediating role of audit quality in the relationship between corporate governance and firm performance; (2) the impact of corporate governance characteristics such as board training, board nationality, board education, nomination committees and audit firm rotation on firm performance. Thus, the aims of the study are to examine (1) the impact of corporate governance on firm performance; (2) the relationship between corporate governance and audit quality; (3) the effect of audit quality on firm performance; and (4) the mediating role of audit quality in the relationship between corporate governance and firm performance. To achieve these objectives, data were collected from 542 listed companies in Bursa Malaysia for the period of 2003 to 2012. This study used multiple regression for data analysis. The corporate governance characteristics examined includes board of directors (size, independence, training, nationality, education), audit committee (size, independence, meeting), and nomination committee (size, independence, experience). There are three proxies of audit quality employed which are audit fees, industry specialist auditor and audit firm rotation. Firms performance is measured using return on assets, return on equity and Tobin’s-Q. In general, the results show that firms with effective corporate governance are more likely to have better performance and demand for higher audit quality. In addition, firms with higher audit quality are more likely to have better firm performance. The finding also shows that audit quality mediates the relationship between corporate governance and firm performance. This means that there is direct relationship between firms with strong corporate governance and firm performance as well as indirect relationship between them through audit quality as a mediator. These findings are robust on other estimators and sensitivity analysis. The results provide several implications to investors, policy makers, researchers and regulators, especially with regard to enhancing firm performance, adopting mandatory audit firm rotation and board diversity under the current corporate governance principles.
ABSTRAK

Walaupun banyak kajian telah menerokai hubungan antara tadbir urus korporat, kualiti audit dan prestasi firma, masih terdapat beberapa bidang kajian yang perlu diberi perhatian lanjut. Bidang-bidang ini termasuk (1) peranan pengantara kualiti audit dalam hubungan diantara tadbir urus korporat dan prestasi firma; (2) kesan ciri-ciri tadbir urus korporat seperti latihan lembaga pengarah, kewarganegaraan lembaga pengarah, pendidikan lembaga pengarah, jawatankuasa pencalonan dan tempoh hubungan firma audit ke atas prestasi syarikat. Oleh itu, matlamat kajian ini adalah untuk mengkaji (1) kesan tadbir urus korporat ke atas prestasi firma; (2) hubungan antara tadbir urus korporat dan kualiti audit; (3) kesan kualiti audit ke atas prestasi firma; dan (4) peranan pengantara kualiti audit dalam hubungan antara tadbir urus korporat dan prestasi firma. Untuk mencapai objektif ini, data telah dikumpul daripada 542 syarikat yang tersenarai di Bursa Malaysia bagi tempoh 2003 hingga 2012. Kajian ini menggunakan regresi berganda bagi menganalisis data. Ciri-ciri tadbir urus korporat yang dikaji termasuklah lembaga pengarah (saiz, kebebasan, latihan, kewarganegaraan, pendidikan), jawatankuasa audit (saiz, kebebasan, mesyuarat), dan Jawatankuasa pencalonan (saiz, kebebasan, pengalaman). Terdapat tiga proksi kualiti audit yang digunakan iaitu yuran audit, juruaudit pakar industri, dan tempoh hubungan firma audit. Prestasi firma diukur menggunakan pulangan atas aset, pulangan ke atas ekuiti dan Tobin’s-Q. Secara umum, keputusan kajian menunjukkan bahawa firma yang bertadbir urus korporat yang berkesan lebih cenderung mempunyai prestasi firma yang lebih baik dan menghendaki kualiti audit yang lebih tinggi. Di samping itu, firma yang mempunyai kualiti audit yang lebih tinggi adalah lebih cenderung untuk mempunyai prestasi yang lebih baik. Dapatan kajian juga menunjukkan bahawa kualiti audit menjadi pengantara hubungan antara tadbir urus korporat dan prestasi firma. Ini bermakna bahawa terdapat hubungan langsung antara firma dengan tadbir urus korporat yang kukuh dan prestasi firma serta hubungan tidak langsung antara keduanya melalui kualiti audit sebagai pengantara. Hasil kajian ini adalah konsisten dengan penganggar lain dan analisis sensitiviti. Hasil kajian memberi beberapa implikasi kepada pelabur, pembuat dasar, penyelidik dan penguatkuasa terutamanya yang berkait dengan peningkatan prestasi firma, menggunakan pakai tempoh hubungan firma audit mandatori dan kepelbagaian lembaga pengarah di bawah prinsip tadbir urus korporat semasa.
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<tr>
<td>CG</td>
<td>Corporate Governance</td>
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<tr>
<td>DA</td>
<td>Discretionary Accrual</td>
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<tr>
<td>FP</td>
<td>Firm Performance</td>
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<td>GLS</td>
<td>Generalized Least Square</td>
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<tr>
<td>IPO</td>
<td>Initial Public Offering</td>
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<td>MAICSA</td>
<td>Malaysian Institute of Chartered Secretaries and Administrators</td>
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<tr>
<td>MCCG</td>
<td>Malaysian Code on Corporate Governance</td>
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<td>OLS</td>
<td>Ordinary Least Square</td>
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<tr>
<td>PACAOB</td>
<td>Public Company Accounting Oversight Board</td>
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<tr>
<td>PWC</td>
<td>PricewaterhouseCoopers</td>
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<td>ROA</td>
<td>Return on Assets</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<td>SC</td>
<td>Securities Commission</td>
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<td>SEM</td>
<td>Structural Equation Modeling</td>
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<td>SOA</td>
<td>Sarbanes-Oxley Act</td>
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<td>TQ</td>
<td>Tobin’s</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>US</td>
<td>United States</td>
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<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
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</table>
CHAPTER 1

INTRODUCTION

1.1 Overview

This study investigates the impact of corporate governance characteristics on audit quality and firm performance as well as audit quality as mediator in the relationship between corporate governance and firm performance. The first section provides the background of the study and problem statement. The second section discusses the research objectives and research questions. The scope of study, significance of study, operational definition of study and structure of study are presented in the last section.

1.2 Background of the Study

Firm performance is one of the most important issues for investors, stakeholders and policy makers. According to Harrison and Wicks (2013) both current and future investors by evaluating the firm performance decide to continue their investments in the company and they want to know if the company is profitable for investing or not. For improving firm performance, there are some indicators such as corporate governance and audit quality.

Corporate governance refers to a set of systems, principles and processes by which a company is governed to achieve a company’s goals and thus enhance firm performance (Clarke, 2007). Audit quality is defined as auditors who use some
techniques to recognize and report misstatements in clients’ accounting systems. Most previous evidence suggests that lack of corporate governance and lack of audit quality are among the most important reasons for financial and corporate scandals (Al-Malkawi et al., 2014; Haspeslagh, 2010; Soltani, 2014). This led to more attention by scholars in accounting and auditing to the necessity of identifying which characteristics of corporate governance are more effective in improving firm performance. Accordingly, countries began to establish corporate governance codes in order to protect the public from fraud and to guard against the eventual collapse of the economy.

Corporate governance is an emerging and exciting issue in the Malaysian context. It became the focus of attention especially after Asian crisis 1997 and recent crisis and scandals such as Sime Bank and Malaysian Airlines (Mat Norwani et al., 2011). The Malaysian government after 1998 decided to enhance good corporate governance by adopting corporate reforms that comprise the introduction of the new code of corporate governance. In March 2000 the first code was issued with aims to encourage the principle that companies use this code in their operations for reaching ideal governance framework. In October 2007, the second code of corporate governance was revised, and all listed firms in Bursa Malaysia have to follow the new code. In 2012, the Malaysian code on corporate governance (MCCG) was revised again and this new code emphasizes strengthening the structure of board and composition recognizing the director’s role. Revising the code of corporate governance shows the importance of corporate governance for government, regulators as well as companies to use this code for achieving their goals.

Recently, researchers have examined the direct effects of corporate characteristics on audit quality and firm performance. In line with agency theory, previous studies found that strong corporate governance reduces agency cost and enhances firm performance (Black et al., 2012; Ghofar and Islam, 2015; Munisi and Randøy, 2013; Peni, 2014; Tuan, 2014) and are also in line with signaling theory, as strong and good CG demands high audit quality (Wahab et al., 2011a; Wu, 2012).
Therefore, four objectives are conducted in this study: 1) to examine the relationship between corporate governance and firm performance, 2) to examine relationship between corporate governance and audit quality, 3) to examine the relationship between audit quality and firm performance, and 4) to examine how corporate governance affects firm performance through audit quality as mediator. Furthermore, this study uses 1) characteristics of corporate governance (board size, board independence, board training, board nationality, board education, audit committee size, audit committee independence, audit committee meeting, nomination committee size, nomination committee independence, nomination committee experience) as these characteristics of corporate governance such as board and its committees influence companies decision-making as well as reduce agency cost, 2) audit quality proxies are comprised of the following: audit fees, audit firm rotation, industry specialist auditors and 3) firm performance measures include the following: return on asset, return on equity and Tobin’s q.

1.3 Problem Statement

Firm performance is one of the main criteria for investors, government and regulators. By evaluating firm performance investors decide to invest in the company or keep their investment in the firm. Therefore, companies use some characteristics such as corporate governance and audit quality for reducing their agency problems and thus enhancing their performance. Corporate governance is of paramount importance in the current economic context (Fülöp, 2014). Therefore, it is important to determine the origin of the term and to note its essential features. During the credit crisis, the lack of corporate governance (Al-Malkawi et al., 2014; Haspeslagh, 2010; Soltani, 2014) as well as audit quality (Mansouri et al., 2009; Salehi et al., 2009) are the main causes of many corporate scandals across the world. All these negative effects have generated a lot of questions about the consequences of the lack of corporate governance’s effectiveness and lower audit quality on firm performance.

Agency theory describes why the monitoring role of internal corporate governance and external corporate governance are important. Agency theory
suggests that effective and good corporate governance have better monitoring roles which reduce agency costs and thus enhance firm performance. Additionally, high audit quality as an external monitoring role can monitor the company to reduce agency costs and this leads to better firm performance. Fülöp (2014) stated that in order to enhance firm performance, an effective corporate governance should be based on a combination of internal and external mechanisms. Both internal mechanism such as board of directors and board committees, and external mechanism such as audit quality play significant role in terms of monitoring which reduce agency costs and enhance firm performance. The Malaysian government decided to enhance corporate governance regulations after some scandals and downfalls such as Bumiputera Malaysian Finance, Sime Bank, the Perwaja fiasco and Malaysian Airlines (Mat Norwani et al., 2011). A careful review of the literature showed that the empirical study in the field of corporate governance, audit quality and firm performance has focused on the direct effect of corporate governance characteristics and audit quality (Bliss et al., 2011; Boo and Sharma, 2008; Carcello et al., 2002; Desender et al., 2009; Wu, 2012) on firm performance (Ammann et al., 2011; Bhagat and Bolton, 2008; Chen et al., 2011; Lo et al., 2010; Munisi and Randøy, 2013; Peni, 2014; Reddy et al., 2010). To the best of the study’s knowledge, there is a dearth of research that examines the audit quality (external corporate governance) as a mediation effect on the relationship between corporate governance characteristics on firm performance. Therefore, this study is attempting to determine how corporate governance directly as well as indirectly affects firm performance through audit quality as an external monitoring mechanism.

Until recently, there has been no reliable evidence of the characteristics of effective corporate governance on firm performance and audit quality because of mixed or inconclusive results (Bhagat and Bolton, 2008; Krafft et al., 2014; Tam and Tan, 2007). Some characteristics of corporate governance which previous studies did not focus on are presented below:

1) Resource dependence theory explains the importance of skills, knowledge and experience of the board of directors which leads to better monitoring and enhanced firm performance. These characteristics will be effective when the board
members update and improve their knowledge and skills by training (Liu et al., 2014). Training is essential for some reasons such as: technology is developing continuously and at a fast rate (Venderbosch and Prins, 2010), training can save the organization money and time if the training helps the employee to become more efficient (Allen, 1995) and training can be cost effective, as it is cheaper to train existing employees than recruiting new employees with the skills you need (Hinkin and Tracey, 2000). In addition, Malaysian Code of Corporate Governance (2012, pp.33) points out that “all directors should receive regular training, particularly on relevant new laws, regulations, and changing commercial risks from time to time.” According to above discussion, it seems that training plays an important role in business success. However, previous studies focused only on the effects of employee training on firm performance (Aragón et al., 2014; Mohr et al., 2014; Saleem and Khurshid, 2014), and did not highlight the importance of board training on firm performance. Therefore, how board training can affect firm performance and audit quality is still questionable.

2) Board education is recognized as board diversity which can affect firm performance in terms of organizational outputs. As a group, the board of directors is comprised of a combination of capabilities and competencies that collectively demonstrate a pool of social capital and adds value in executing the function of board’s governance. Individual education of board members is important in decision-making. For instance, board members are experienced and qualified as a result of their education and they can fulfill their monitoring roles effectively (Carpenter and Westphal, 2001). Previous studies examined the education of board of directors by level of graduation on firm performance (Adams et al., 2015; Darmadi, 2013; Noor and Fadzil, 2013; Vo and Phan, 2013b). However, according to Gantenbein and Volonté (2011), place of education in terms of domestic or abroad may be more relevant than demographic attributes in explaining firm performance. Therefore, findings of this research can add new knowledge in the literature to show how board education in terms of place of education can affect firm performance.

3) Board composition is one of the most important determinants of board effectiveness (De Jong et al., 2014). Both agency and resource dependence theories
highlight the importance of a high quality and selective board of directors, which leads to better firm performance and demands for audit quality. The selection of the board members is the main task of the nomination committee. Andrews (1987) and Riabichenko (2014) argue that the presence of nominating committees enhances board independence. Therefore, by having a nomination committee, the members of the nomination committee can select the best candidate to the board of directors to reduce agency costs and improve firm performance. Shivdasani and Yermack (1999) and Hsu (2007) stated that the existence of a nominating committee is likely to improve the separation of management and control in the firm and provide the resources and the legitimacy necessary for committee members to independently exercise their duties. Nominating committee members will be judged, more than other board members, with regard to the recruitment decisions taken and they have a strong interest in maintaining their own reputations by recruiting directors who will prove to be effective monitors of management. Most previous studies have only examined the relationship between the presence of the nomination committee with firm performance (El-Faitouri, 2014; Fauzi and Locke, 2012; Heenetigala, 2011; Ntim, 2013; Singhchawla et al., 2011) and did not focus on the characteristics of the nomination committee on firm performance. However, until now there is lack of study to examine the relationship between characteristics of the nomination committee on firm performance to show how nomination committees can reduce agency problems which lead to enhance firm performance.

4) To date there have been many arguments on audit quality such as audit firm rotation. What is still not clear are the advantages and disadvantages of audit firm rotation. Followers of audit firm rotation documented that in the long term, auditors may have a close relationship with their clients which may impair and threaten auditors’ independence (DeFond and Zhang, 2014a; Kilcommmins, 2014) which auditors report are influenced by the companies. Opponents of audit firm rotation believed that auditors with long tenure have better understanding of the client’s system. However, new auditors are not familiar with their client’s system (Brooks, 2011; Dao and Pham, 2014). Among these issues, signaling theory suggests that companies signal investors that their financial information is reliable when they change auditors and use independent auditors. According to the above issues, this study aims to show how corporate governance characteristics can affect audit firm
rotation as well as how audit firm rotation as a proxy for audit quality can affect firm performance.

1.4 Objectives of the Study

The main objectives of this study is to examine the mediation effect of audit quality on the relationship between corporate governance and firm performance. This study also seeks to examine the relationship between corporate governance characteristics, audit quality and firm performance. The research objectives of this study addressed in line with the above problem statements are below:

1. To examine the effect of corporate governance on firm performance.
2. To examine the effect of corporate governance on audit quality.
3. To examine the effect of audit quality on firm performance.
4. To examine the mediating effect of audit quality on the relationship between corporate governance and firm performance.

1.5 Research Questions

The research questions this study addresses in line with the above research objectives are below:

1- Does corporate governance affect firm performance?
2- Does corporate governance influence audit quality?
3- Does audit quality affect firm performance?
4- Does audit quality mediate the relationship between corporate governance and firm performance?
According to the above questions, the corporate governance characteristics are comprised of a board of directors (size, independence, training, nationality, education), audit committee (size, independence, meeting), and nomination committee (size, independence, experience). In this study, audit fees, audit firm rotation and industry specialist auditors are the proxies for audit quality. Return on asset, return on equity, and firm value are the measures of firm performance.

1.6 Scope of the Study

This study presents a comprehensive study on corporate governance, audit quality and firm performance in the Malaysian market. This study used the 542 non-financial (5420 firms-observation) listed companies in Bursa Malaysia for the fiscal years of 2003 to 2012.

1.7 Significance of the Study

This study has significant contributions to the body of knowledge by considering gaps in the literature:

1) Demand for audit quality after corporate scandals are a main and crucial topic in the economic market. Previous studies (Coffee, 2001; Wallman, 1996) believed that without audit quality the capital market is ineffective, and the cost of capital will be higher. Hence, quality of audit is important in providing the assurance the capital market participants required, as well playing an essential role in the effective economic resource allocation (DeFond and Zhang, 2014b). Auditing is important because it limits the opportunistic behavior of management, which may accordingly reduce agency costs and therefore enhance firm performance (Reed et al., 2000). Additionally, companies with weak situations are more likely to demand audit quality to reduce their agency problems. Most of the prior studies examined the direct relationship between corporate governance characteristics on audit quality and firm performance (Adams and Mehran, 2012; Cheng, 2008; MoutinhoCerqueira, and
Brandão, 2012; O’Connell and Cramer, 2010; Sanda et al., 2011). However, this study will also add to the literature by examining the mediation effect of audit quality in the relationship between corporate governance and firm performance to show that companies having strong and effective corporate governance are more likely to have higher audit quality and audit quality would enhance firm performance. Thus, this study is significant and beneficial for both scholars and specialists in terms of adding new knowledge.

2) One of the ways that board members can develop and update their skills and knowledge is through training. Training of board of directors can promote a board to fulfill its role and make a real difference to firm performance. Additionally, training of the board leads to board competency so that they will be able to monitor executive management performance better, which may lead to higher firm performance. Previous studies have examined the effect of employer training on performance (Aragón et al., 2014; Mohr et al., 2014; Saleem and Khurshid, 2014), however, the findings of this study can contribute new knowledge to how the training of board of directors can affect firm performance.

3) The nature and responsibility of the nomination committee is identifying and recommending qualified candidates to the board of directors. According to Marrakchi Chtourou et al. (2001), the presence of the nomination committee is important for board effectiveness and monitoring ability which can reduce agency cost and enhance firm performance. However, most prior studies only examined the relationship between the establishment of the nomination committee with firm performance; therefore, the findings of this study add new knowledge to the literature by showing how the characteristics of the nomination committee can reduce agency costs which leads to enhanced firm performance. Furthermore, the findings of this research may be beneficial for regulations to emphasize nomination committee characteristics in the code of corporate governance because this committee appoints the qualified directors which lead to enhance the firm performance.

4) After financial scandals such as Enron (2001), WorldCom (2002), Schlecker (2012), Dynegy (2012), Banco Espírito Santo (2014) and the financial debt
crisis in 2007-2008, the concept of independence of external auditors has been under
question. In response to this issue, many governments adopted regulations to
improve the rotation of audit firms and partners. By adopting the mandatory audit
rotation, the quality of audits will be enhanced (Ewelt-Knauer et al., 2013; Lennox et
al., 2014). The concept of audit firm rotation has not been adopted yet in Malaysia;
however, there is audit partner rotation every five years. Prior studies (Abbott et al.,
2003; Carcello et al., 2002; Moutinho, Cerqueira and Brandão, 2012; Stanley, 2011)
examined the relationship between corporate governance characteristics, audit
quality as proxy by audit fees, non-audit fees, and firm performance. To the best of
the author's knowledge, there is a lack of studies that used audit firm rotation as a
proxy for audit quality and also effectiveness of corporate governance characteristics
on audit firm rotation in Malaysia. However, according to the concept of audit firm
rotation in Malaysia, the current study uses audit firm rotation as a proxy for audit
quality and shows how corporate governance characteristics can affect audit firm
rotation and firm performance.

This study in terms of valuable insights for scholars will provide managerial
implications for the government, audit firms, auditors and investors in order to
improve the regulations, rules and bylaws. Table 1.1 shows the summary of research
questions, findings, conclusion and implications.
Table 1.1: Summary of research questions, findings, conclusion and implications

<table>
<thead>
<tr>
<th>Research Gaps</th>
<th>RQs</th>
<th>Findings</th>
<th>Conclusion</th>
<th>Contributions</th>
<th>Implications</th>
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<tbody>
<tr>
<td>Lack of evidence on the effect of CG on FP.</td>
<td>Q1: Does corporate governance affect firm performance?</td>
<td>There is significant and positive relationship between board size, audit committee meeting, board nationality and ROA, ROE.</td>
<td>*There is significant and positive relationship between board size, audit committee meeting, board nationality and ROA, ROE.</td>
<td>Theoretical Contribution: From perspective of agency and resource dependence theories, the result is consistent.</td>
<td>The corporate governance practices still need to be improved on firm performance. Board nationality and board education seems to be adding in the corporate governance to reduce agency cost and enhance firm performance.</td>
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<td>*There is significant and negative relationship between board education and ROA, ROE.</td>
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<td>Methodological Contributions: The effect of corporate governance characteristics as latent variable on firm performance.</td>
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<td>There is significant and positive relationship between board independence, audit committee size, board nationality, board education and TQ.</td>
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<td>Empirical Contribution: negative relationship between board training, nomination committee independence, nomination committee experience and TQ. Positive relationship between board nationality and FP.</td>
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<tr>
<td>Research Gaps</td>
<td>RQs</td>
<td>Findings</td>
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<td>Lack of sufficient evidence on the effect of characteristics of board and its committee on AQ.</td>
<td>Q2: Do corporate governance influence audit quality?</td>
<td>The CG has significant relationship to AQ.</td>
<td>* There is significant and positive relationship between board independence, board training, audit committee independence and meeting, nomination committee size, board nationality, board education and audit fees as a proxy for AQ. There is significant and negative relationship between nomination committee independence, nomination committee experience and audit fees.</td>
<td>Theoretical Contribution: From perspective of agency, resource dependence and signaling theories, the result is consistent. Methodological Contributions: CG characteristics as well as AQ proxies are used as latent variable</td>
<td>Demand for higher audit quality enhance when effective CG is conducted.</td>
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<tr>
<td>Research Gaps</td>
<td>RQs</td>
<td>Findings</td>
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<td>Lack of sufficient study on the effect of AQ on FP.</td>
<td>Q3: Does audit quality affect firm performance?</td>
<td>There is significant relationship between AQ and FP.</td>
<td>* There is insignificant relationship between audit fees ROA and ROE. There is significant and positive relationship between audit fees and TQ. * There is significant and negative relationship between audit firm rotation and ROA. * There is significant and positive relationship between ISA and ROE.</td>
<td>Theoretical Contribution: From perspective of signaling theory, the result is consistent. Methodological Contributions: AQ proxies as well firm performance are used as latent variable. Empirical Contribution: Negative relationship between audit fees and ROA, as well as positive relationship between audit fees and TQ. Negative relationship between audit firm rotation and ROA. Positive relationship between ISA and ROE.</td>
<td>Higher audit quality can be improved firm performance. Regulators consider the rule of mandatory audit firm rotation in Malaysian listed companies to enhance auditor independence.</td>
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<td>Lack of study examines the audit quality as mediator in the relationship between CG and FP.</td>
<td>4: Does audit quality mediate the relationship between corporate governance and firm performance?</td>
<td>AQ mediates the relationship between CG and FP.</td>
<td>*There is significant and positive relationship between CG and FP through AQ as a mediator as well as direct relationship between CG and FP.</td>
<td>Theoretical Contribution: Signaling theory as a complementary theory to agency theory. Methodological Contributions: use structural modeling approach in STATA to test mediating effect. Empirical Contribution: CG is significantly related to AQ and FP. AQ is significantly related to FP.</td>
<td>Effective CG demand high AQ and FP as well as high AQ improve FP</td>
</tr>
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</table>
1.8 Operational Definition of the Study

This study uses three main variables for examining the relationship between them. They include corporate governance characteristics, audit quality proxies and firm performance measures. The corporate governance variables comprise board of directors (size, independence, training, nationality and education), audit committee (size, independence and meeting), nomination committee (size, independence and experience). Audit quality in this study uses three proxies such as audit fees, audit firm rotation and industry specialist auditors. The firm performance in this study is measures by ROA, ROE and firm value (TQ). The operation definitions of variables are defined below:

1.8.1 Corporate Governance Operation Definition

Board of directors: This study defines larger size of board members with more independent non-executive directors, training programs, high proportion of foreign board members and higher proportion of directors who studied at overseas university as an affective board.

Audit committee: companies having more members, high proportion of independent non-executive members and meeting frequency of at least four times in a year are defined as companies having an effective audit committee.

Nomination committee: companies having more nomination committee members, high proportion of independent non-executive members with expertise are defined as companies with an effective nomination committee.
1.8.2 Audit Quality Operation Definition

According to agency theory as well as signaling theory, high audit fees, high audit firm rotation and appointment of industry specialist auditors are defined as higher audit quality.

1.8.3 Firm Performance Operation Definition

This study uses three measures of firm performance which called accounting-based measure such as ROA, ROE and firm value such as TQ.

1.9 Structure of the Study

The remainder of this study is organized as follows: In Chapter 2, the study first focuses on related theories, firm performance, corporate governance characteristics and proxies of audit quality. The second part reviews the related literature about corporate governance characteristics, audit quality and firm performance. The last part follows the hypotheses developments and conceptual framework.

Chapter 3 describes the methodology employed in this research. It first describes the research paradigms, research design, sample selection and the period of study. Second, the study explains data sources and the data analysis procedure, and the third section explains the definition and measurements of the main variables. Model specifications, related control variables and a summary of chapter have been presented in the last section.

Chapter 4 explains the results and findings of this study which first explain the results of the relationship between corporate governance characteristics and firm performance. Second, the study explains the results of the association between
corporate governance characteristics and audit quality proxies. Third, the study explains the results of the relationship between audit quality proxies and firm performance. Finally, an explanation of the result of mediating effects of audit quality in the relationship between corporate governance and firm performance is given. The summary of the chapter has been presented in the last section.

Chapter 5 finally explains the discussion and conclusion of the study. Implications, limitations, recommendations for future studies and conclusion are presented in the last section.
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