2011

Auditor Stress: Antecedents and Relationships to Audit Quality

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AUDITOR STRESS: ANTECEDENTS AND RELATIONSHIPS TO AUDIT QUALITY

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A thesis submitted in partial fulfilment of the requirement for the degree of

Doctor of Philosophy

School of Accounting, Finance and Economics

Faculty of Business and Law

Edith Cowan University, Perth

Western Australia

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2011

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ABSTRACT

Research on Reduced Audit Quality Practices (RAQP) has consistently shown serious negative consequences in the auditing profession. It has found that under certain pressure levels, auditors tend to engage in RAQP. However, most of the previous studies that had investigated RAQP failed to examine RAQP from a stress model perspective which incorporates stressors, stress measures and stress consequences into the model and to measure the interactions among these constructs. Previous research has mainly focused on the direct effect of stressors (e.g., time budget pressure, leadership styles, individual personality etc.) on RAQP; there is no single investigation that has simultaneously examined RAQP from a stress model perspective. In addition, research in RAQP is relatively scarce in emerging and newly industrialised countries, and most of the relevant literature is derived from developed countries.

This study, therefore, addresses this void by investigating how job stress and stressors in the auditors' workplace affect RAQP, thus enhancing the explanatory power of stressors on outcome variables. The premise for this investigation is that the auditing workplace has been acknowledged as a high stress environment and studies in job stress provide support for negative consequences on auditors' job outcomes. This study examined the impact of eight stressors (workload, budget attainability, budget emphasis, role ambiguity, role conflict, type A behaviour pattern, considerate and structure leadership) along with job stress, on outcome variables (job performance and RAQP). The stressors were chosen based on the previous studies in RAQP and stress in the accounting environment. The RAQP examined in this study were premature sign-off, reduction of standards of work below levels considered reasonable, failure to research an accounting principle, superficial review of documents and acceptance of weak client explanations. This study assesses the extent to which job stress and job performance are associated with key stressors and RAQP among auditors in Malaysia.

A quantitative research design was adopted involving the use of a mail survey to collect data from auditors that are currently working either in Big-Four or non-Big Four firms in Malaysia. In total, 274 usable responses were obtained and analysed by using structural equation modeling.

The findings of the study showed that all stressors, except for considerate leadership and budget emphasis, significantly affect auditors' job outcomes. Specifically, three of the stressors, namely, role conflict, behavioural pattern and budget attainability have a direct association with RAQP, while role ambiguity affects RAQP indirectly through job stress and job performance. Results also revealed that workload, role ambiguity, role conflict and structure leadership were significantly associated with job stress, as expected. However, job performance was only affected by role ambiguity. The results generally support the proposition that job stress and job performance serve as important mediators in the relationship between stressors and RAQP.

DECLARATION

I certify that this thesis does not, to the best of my knowledge belief:

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ACKNOWLEDGEMENTS

First of all, I would like to acknowledge the foremost contribution provided by my Principal Supervisor, Professor Malcolm Smith for his wisdom in guiding me patiently throughout the completion process of this thesis. With his invaluable guidance, motivation and supervision, I found encouragement and learned much more than I even then realised. I would also like to thank Dr. Zubaidah Ismail for her association in supervising this project. Her suggestions, insight and constructive criticisms have provided the necessary inspiration to enable me to continue on this thesis.

I would like to convey my highest appreciation to my beloved mother, father for their love, support and faith in me. Special thanks to my mother for spending her precious time to look after my wife and kids here while I was studying. I am truly indebted to my mother in law and all of our family members for their prayers and kindness support for me.

In addition, my utmost and heartfelt appreciation to my beloved wife, Hamizah Salim; who has conveyed her endless love and her impressive patience in accompanying me in the happiness and otherwise for the almost three years of my study here. To my kids, Danish, Danial and Dalia, thank you very much for your smiles, cries and moment of joys from which I attain my motivation to accomplish this small contribution to the academia. They inspired me to give it all I had, and to make the best of the opportunities that came my way.

I wish to thank the Malaysian Institute of Accountants for their assistance, to University Malaysia Terengganu (UMT) and Ministry of Higher Education Malaysia, for their financial support. Finally, many good friends have contributed to this study, in one way

or another, and to each of them, I express my deepest appreciation for their ideas, assistance and their willingness to just listen. Thank you all for the wonderful support.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This thesis studies Reduced Audit Quality Practices (RAQP) and its antecedents in the Malaysian context from a stress theoretical perspective. This chapter aims at providing an overview of the thesis. The first section provides background to the research, followed by the research question and conceptual model. The significance of this study is provided in Section 1.5. The chapter concludes with an outline of the organisation of the thesis and summary of the chapter.

1.2 Background of the Study

The issue of audit quality has long been acknowledged since the Cohen Commission report issued by the American Institute of Certified Public Accountant (AICPA) in 1978 and motivates a substantive body of audit quality related research. Indeed, the major accounting scandals such as Enron, WorldCom and Parmalat in the early 2000s have put the auditing profession under increasing public scrutiny. These scandals have certainly shed light on the quality of audit work, which is only recognised and emphasised after irregularities are discovered. Consequently, accounting and auditing regulatory bodies have examined the issues arising from these scandals to ensure that financial reporting and audit regulation are appropriate. For example, the Sarbanes Oxley act was introduced in the United States to strengthen the accounting profession. In Malaysia, the Malaysian Institute of Accountants (MIA) conducted a compliance audit on audit firms for the period 2003 to 2006 and issued their first ever Practice Review report in 2007. Unsurprisingly, the report highlighted some audit quality issues and the existence of reduced audit quality practices among the auditors in Malaysia.

The aftermath of these scandals has motivated a growing interest in research on audit quality by academics to find the reasons for the scandals and to strengthen the auditing profession (Fearnley, Brandt, & Beattie, 2002). Indeed, one consequence of this scandal is the trend to blame the auditors and question the quality produced by audit firms. This can be understood from the greater implication of audit failure faced not only by capital market participants but also the general public. Therefore, new studies on audit quality are crucial to find out the factors that contribute to substandard audit quality.

Studies of audit quality from the behavioural perspective are assigned to one of two distinct categories: audit service quality (ASQ) and reduced audit quality practices (RAQP). The former is based on preparers and users of financial reports perception, whereas, the latter relate to auditors' actual activities in executing auditing tasks to ensure required standards and regulations are complied with. Because the ASQ is based more on the users' perception, it is not necessarily examined in the actual audit quality (Pandit, 1999). On the other hand, RAQP is defined as actions taken during an engagement that will reduce evidence-gathering effectiveness (Kelley & Margheim, 1990). Auditors are said to engage in RAQP or dysfunctional behaviour if their actions depart from the required standards. Potential RAQP include a variety of inappropriate outcomes such as premature signing off on audit program steps, failing to research an accounting principle, making superficial review of client documents and accepting weak client explanation (Kelley & Margheim, 1990). Various factors that are associated with the occurrence of RAQP have been investigated in previous studies. For more than a decade all studies consistently provided evidence that auditors sometimes do not properly execute the audit procedures when exposed to pressure (E. Cook & Kelley, 1988; Coram, Ng, & Woodliff, 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Kelley & Seller, 1982; Otley & Pierce, 1996b) and this continues to be a major problem for the auditing profession.

The previous studies in RAQP have focused heavily on the direct association between stress antecedents or stressors (e.g., time budget pressure, leadership style, review

procedures) and RAQP. Although the public accounting workplace has long been acknowledged as a high stress environment (Gaertner & Ruhe, 1981; Weick, 1983), none of these studies have examined thoroughly the potential effect of pressure from the job stress theoretical perspective. The relationship between stress and job related outcomes have been well established in psychological and behavioural studies. Job stress is found to have a significant impact on individual and organisational's performance (Chen, Silverthorne, & Hung, 2006; Spector, Dwyer, & Jex, 1988; Virtanen et al., 2009; Williams et al., 2001; Yousef, 2000), organisational commitment (Montgomery, Blodgett, & Barnes, 1996; Sager, 1990), productivity (Letvak & Buck, 2008; Montgomery, et al., 1996) and absenteeism (Spector, et al., 1988). In the accounting literature, a number of studies have investigated the consequences of job stress on the profession such as poor performance, job dissatisfaction, job burnout and turnover (Choo, 1986; Fisher, 2001; Fogarty, Singh, Rhoads, & Moore, 2000; Larson, 1991; Libby, 1983; Rebele & Michaels, 1990; Senatra, 1980; K. J. Smith, Davy, & Everly, 1995, 2007; Sweeney & Summers, 2002) and the potential risks inherently associated with the auditing profession, namely RAQP which could damage the image and public trust in the audit firm and profession in general (DeZoort & Lord, 1997).

The most damaging consequence of job stress on auditors' performance is substandard quality of work produced by auditors. In the auditing setting, poor performance could be translated to inability of the auditors to detect and report any material misstatement in clients' financial reports, or in other words, potential dysfunctional behaviours or RAQP engaged in by auditors. Libby (1983, pp. 373-374) argued that "...the stress concept may provide a useful structure for analysing a wide variety of accounting issues." Furthermore, as the nature of stress cannot be totally eliminated or controlled in a working environment especially in the auditing setting (DeZoort & Lord, 1997), it should be of greater concern to the profession especially when the auditing profession is under intense scrutiny. A better understanding of stress effects should be helpful in developing and implementing more useful stress management programs (Lepine, Podsakoff, & Lepine, 2005).

Therefore, this study investigates the issue of RAQP based on the job stress theoretical model developed by Parker and Decotiis (1983). Based on this model, there are two levels of outcomes; the first level is referred to as short-term psychological states such as anxiety or tension. In this study, job stress is used for this level. Second level outcomes are the consequences of job stress, which in this study is RAQP. K. J. Smith et al. (2007, pp. 128-129) suggest that "the introduction of key mediating variables that are related to both job stressors and job outcomes may reduce misspecification bias and enhance the explanatory power of stressors on outcome variables". Moreover, most of the previous studies in RAQP are limited to time budget pressure and have not investigated the combined implication of other stress factors (e.g., role ambiguity, role conflict and workload) that have long been recognised in stress studies to affect job related outcomes in a more comprehensive model of RAQP.

1.3 Research Questions

Behavioural factors such as job stress are significantly affecting job performance of auditors (Choo, 1986). Auditors with poor job performance could produce substandard audit work, consequently leading to low audit quality and thus, expose audit firms to legal liability, loss of client and diminish firms reputation (Fisher, 2001). Therefore, this research endeavours to study the behavioural factors that may directly affect the quality of auditors. Specifically, the study sets out to address the following primary research question:

"What are the effects of job stress on Reduced Audit Quality Practices?"

In addressing this primary question, the study will focus on the influences of stress antecedents that exist in the auditing work environment that will influence the behaviour of the auditors. More specifically, this study attempts to answer the following research questions:

1. What are the stress antecedents that influence auditors' job stress?
2. What are the stress antecedents that influence auditors' job performance?
3. What are the stress antecedents that influence reduced audit quality practices?
4. What are the relationships between job stress, job performance and reduced audit quality practices?

1.4 Research Model

The study uses the job stress model developed by Parker and Decotiis (1983), which has two level of outcomes. The basic research model is depicted in Figure 1.1.

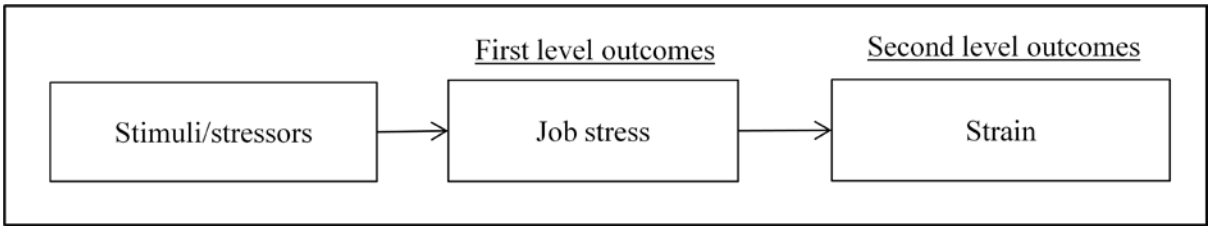

Figure 1.1: Basic Research Model

Based on this basic research model and the literature review in Chapter 2, the conceptual model underpinning the research questions is shown in Figure 1.2. The conceptual model is developed by focusing on the specific stressors that exist in the auditing environment which could exert job stress and affect the job-related outcomes, such as job performance and RAQP. Details of the model are discussed in Chapter 4, Conceptual Framework and Hypotheses Development.

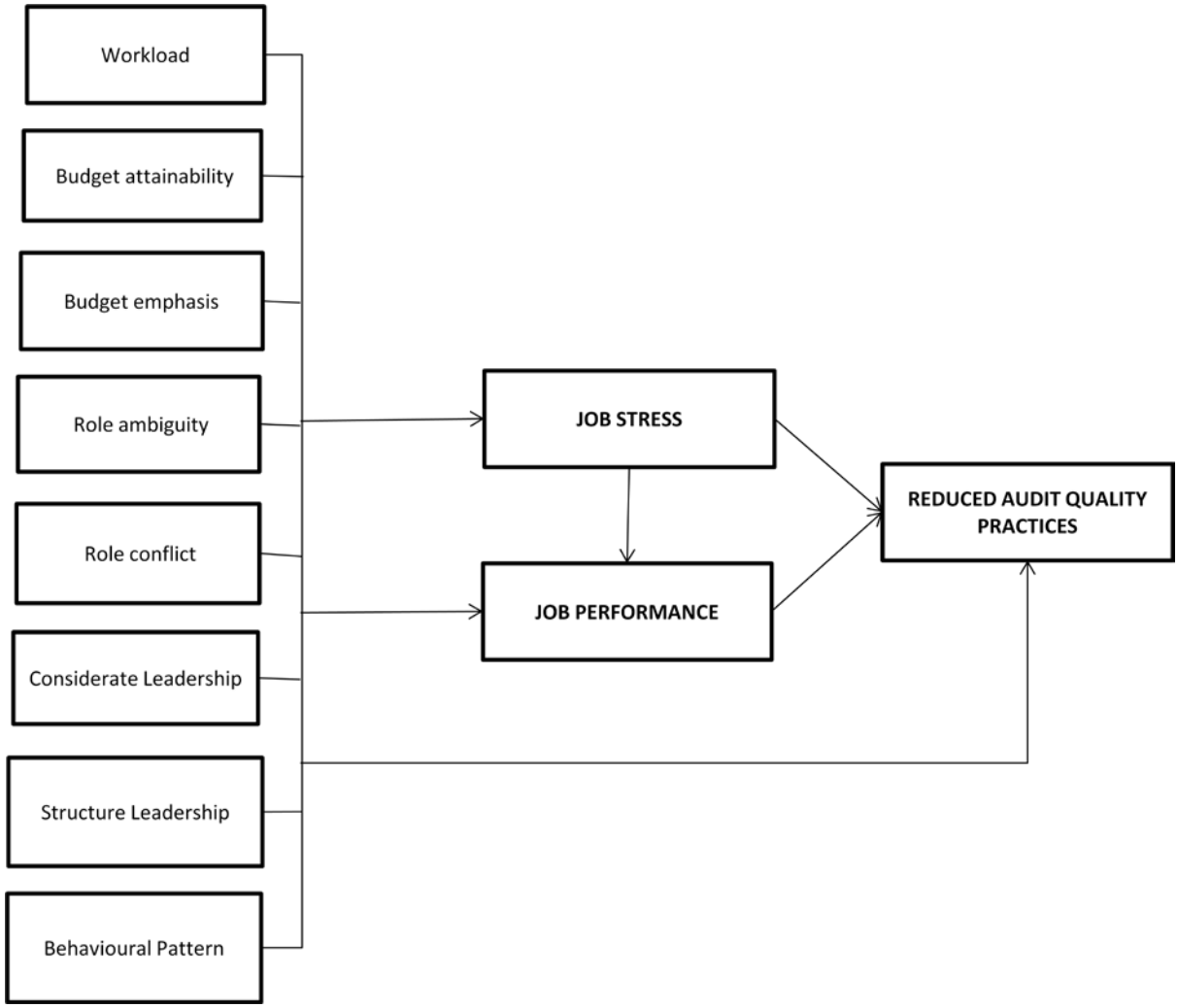

Figure 1.2: **Conceptual Model**

1.5 Significance of the Study

This study will have both practical and theoretical significance. Firstly, through providing a greater understanding of auditors' job stress and its influence on auditors' behaviour, it can contribute to improvement in the quality of audit work. The understanding of the auditors' job stress antecedents and their association with audit quality could provide insightful information on the factors motivating the auditors to engage in RAQP, thus will provide focus for improvement in audit firm's personnel management, and change in working environment in order to reduce stress among the auditors.

Second, the theoretical framework to be developed and tested will advance audit quality theory. Much of the literature in the audit quality field has used agency theory as a basis for the research framework. This theory is used to explain the rationale of audit firms' involvement in reducing the information gap. Many of the previous studies that used agency theory were conducted under the assumption that larger audit firms provided greater audit quality (Watkins, Hillison, & Morecroft, 2004). However, the occurrences of recent scandals involving big audit firms (Enron, WorldCom and Parmalat) provide evidence that make this assumption somewhat tenuous. "A fruitful area of research would attempt to isolate intra-firm differences in audit quality...Studies might also include investigating hiring and training practices, assignment of staff, levels of supervision, and partner designation and rotation across offices. In addition, behavioural studies may prove promising at isolating certain within-firm audit quality differences" (Watkins, et al., 2004, p. 184). Therefore, this study examines the issue of audit quality from the behavioural perspective. Studies in organisational behaviour show that individual behaviour may affect their work performance. One of the factors that could affect individual behaviour is stress and this factor has been shown to affect individual job-related outcomes. It is also believed to affect the way auditors behave and consequently affect audit quality. The implication of job stress on audit quality has received little attention from researchers, particularly in Malaysia. Therefore, the study is undertaken as a first step in understanding audit quality from a job stress theoretical perspective. Job stress literature has gained strong theoretical development on issues relevant to understanding as well as managing the impact of job-related stress (see, Beehr & Franz, 1987; Cooper & Marshall, 1976; Greenhaus & Parasuraman, 1986; Jex, Beehr, & Roberts, 1992; Parker & Decotiis, 1983). This will be a significant contribution of the research.

Third, the proposed study also will extend the previous RAQP model by integrating it with a broader set of antecedent variables which involve individual, firm and job characteristics. By examining these antecedents, the study is more comprehensive compared to previous studies. Previous studies in RAQP were highly focused on time budget pressures (e.g., E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007), whereas studies on auditors' stress did not directly examine the

implication of stress factors for audit quality (e.g., Choo, 1986; Fisher, 2001; Senatra, 1980; K. J. Smith, et al., 2007).

Fourth, this study identifies time budget pressure either in the form of budget attainability or budget emphasis as an issue in RAQP and hence situated it within the theoretical model of job related stress conceptualised by Parker and Decotiis (1983). As time budget pressure issue has received high attention in the auditing field, placing it within the job stress literature is useful in gaining a deeper understanding of the way auditors cope with it. Moreover, this will help audit firms to understand better the adverse impact of this pressure on auditors and audit quality, and to identify possible ways of better managing stress related issues. Placing time budget pressure in a job stress theoretical model is another contribution of the study.

Fifth, this study extends previous research in this area by focusing on responses of almost all levels of audit staff, namely, staff (junior), senior, manager and partner. There is evidence that managers and partners also engage in RAQP (E. Cook & Kelly, 1991), and lower rank (staff and senior) and higher rank (manager and partner) auditors respond differently to pressure (Moreno & Bhattacharjee, 2003). Yet, many studies in RAQP particularly time budget pressure have focused mainly on the behaviour of staff and senior auditors (e.g., Kelley & Margheim, 1990; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004). Furthermore, no RAQP studies, except Paino, Ismail and Smith (2010) which only examined audit manager, have been conducted in Malaysia. Therefore, by providing results from almost all levels of audit personnel, this study provides a better understanding of the relation between auditors' response and job related stress. In addition, most studies on RAQP have focused on the big audit firms (e.g., Kelley & Margheim, 1990; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004; Rebele & Michaels, 1990). This limitation in research scope has been recognised by Pierce and Sweeney (2004, p. 437) who suggest that "The research also needs to be

extended to smaller audit firms outside the Big Five[1], given that their environment may be significantly different, particularly in terms of reporting structures, client mix, audit approach, mix of budget/deadline targets and the intensity of time pressure." Accordingly, this study is a response to this call and contributes to the auditing literature by including Big Four and non-Big four audit firms.

Sixth, research on audit quality from the behavioural perspective is relatively scarce in number in emerging or newly industrialised countries as much of the relevant literature is derived from developed countries. Therefore, the study investigates the issue of audit quality by incorporating behavioural variables from Malaysia. In addition, as Malaysia is considered a country with a weak legal environment (Johl, Jubb, & Houghton, 2007; Kallunki, Sahlström, & Zerni, 2007), the study will also contribute to the literature by examining auditors in such an environment.

Finally, the findings from this study could provide information to audit firms and policy makers, particularly the Malaysia Institute of Accountants (MIA), a regulatory body that governs the practice of public accountants in Malaysia in assisting audit firms to better understand the negative implications of job stress on audit personnel and audit quality, to identify possible ways to manage job stress and therefore creates a better working environment and in promulgating new standards or guidelines.

1.6 Study Design

This study used a mailed survey of external financial statement auditors that are registered with MIA. The selection of the MIA members for this study was due to their vast experience of auditing field work. A survey questionnaire is used as the main method of data collection to examine how stress antecedents in the auditing

[1] Prior to 2002, Big four international audit firms were known as Big five (Ernst & Young, KPMG, PriceWaterhouse, Deloitte Touche Tohmatsu, and Coopers & Lybrand)

environment impact on the auditors' job stress, job performance and consequently RAQP. The design of the questionnaire for the study was based on previous studies in order to ensure the validity and reliability of the measures.

The remainder of the thesis is organised as follows. Chapter 2 draws an outline of the background of the auditing environment in a Malaysian setting. It will describe the function of MIA and applicable standards and guidelines that govern auditing practice in Malaysia. Chapter 3 discusses the literature review on job stress and audit quality. The conceptual framework and hypotheses development are explained in Chapter 4, whereas the adoption of the survey research method and research instruments are elaborated in Chapter 5. Data analysis and hypotheses testing for this study are presented in Chapter 6. Finally, the detailed discussion of the findings is presented in Chapter 7, together with the contribution to the body of knowledge in this area, limitations and recommendations for future research.

1.7 Summary

This chapter provides an overview of the research, including the background of the study, research questions, research model, significance of the study and an overview of the study design. Chapter 2 provides the background auditing setting from a Malaysian perspective.

CHAPTER 2: BACKGROUND OF MALAYSIAN AUDITING ENVIRONMENT

1.1 Introduction

This chapter briefly reviews the background of the Malaysian Institute of Accountants (MIA), applicable standards on auditing in Malaysia, and regulation imposed by profession and regulator to maintain high audit quality in Malaysia.

1.2 Malaysian Institute of Accountants

The Malaysian Institute of Accountants (MIA) is a statutory body established under the Accountant Act 1967. Its responsibilities include regulating the practice, ethics, standards, promoting the interests of the profession and assessing the qualifications of persons for admission as members. In carrying out its responsibilities, MIA conducts a programme of education and training for their members, develops and issues standards or guidelines on financial reporting, auditing, ethics and other technical areas and provides technical support or updates to members. In order to maintain their members' skills and knowledge, the MIA requires their members to attain a minimum number of Continuous Professional Education (CPE) credit hours each year. The MIA members are also required to comply with MIA By-Laws (On Professional Ethics, Conduct and Practice) to maintain the integrity of the profession. In accordance with the provision of the Accountant Act, registration with MIA as a chartered accountant is mandatory in order to engage in public accounting practice.

1.3 Auditing Standards in Malaysia

The Malaysian Approved Standards on Auditing (MASA) issued by MIA is developed based on the International Standards on Quality Control, International Standards on Auditing, International Auditing Practice Statements, International Standards on Review Engagements, International Standards on Assurance Engagements and

International Standards on Related Services of the International Auditing and Assurance Standards Board issued by the International Federation of Accountants (IFAC). These International Standards are adopted in Malaysia with minimal changes in order to reflect the local legal environment.

The MIA as a member of IFAC is committed to the Federation's mission for the development and strengthening of the accounting profession in providing high quality services to the public. Therefore, as a member, MIA is obliged to support the work of IFAC by informing its members of every pronouncement issued by IFAC and incorporating ISA on national auditing standards.

Previously, auditing standards in Malaysia were issued jointly by the MIA and Malaysian Institute of Certified Public Accountants (MICPA). However, the establishment of the Audit Oversight Board (AOB) by the Securities Commission (SC) effective on April, 1 2010 has empowered the MIA as the only body responsible for the issuance of auditing standards in Malaysia.

1.4 Quality Control in Malaysia Auditing Profession

Quality control is important in the auditing profession to ensure that auditors maintain a high standard of service provided to clients, users and regulators. International Standard on Auditing 220 (ISA 220) and International Standard on Quality Control 1 (ISQC 1) provide guidance on specific responsibilities of auditors regarding quality control procedures for audit of historical financial information, including financial report audits.

ISA 220.2 stated that quality control systems, policies and procedures are the responsibility of the audit firm and that under ISQC 1, the audit firm has an obligation to establish and maintain a system of quality control to provide it with reasonable

assurance that the firm and its personnel have complied with professional standards and applicable legal and regulatory requirements and that the reports it issues are appropriate. ISA 220.3 requires the audit engagement team to implement quality control procedures that are applicable to the audit engagement and ISA 220.4 acknowledges that they may rely on the firm's system of quality control.

While ISA 220 deals with quality control procedures for audit of financial statements, ISQC 1 deals with a firm's responsibilities for its system of quality control for audits and review of financial statements, and other assurance related services engagements. ISQC 1 has similar objectives as ISA 220 and requires that a firm's system of quality control must include policies and procedures addressing each of the following elements:

a. Leadership responsibilities for quality within the firm;
b. Relevant ethical requirements;
c. Acceptance and continuance of client relationships and specific engagements;
d. Human resources;
e. Engagement performance; and
f. Monitoring.

The ISQC 1 paragraph 20 requires that a firm shall establish policies and procedures designed to provide it with reasonable assurance that the firm and its personnel comply with relevant ethical requirements, which include:

a. Integrity;
b. Objectivity;
c. Professional competence and due care;
d. Confidentiality; and
e. Professional behaviour.

The ISQC 1 paragraph 21 also addresses quality control aspects regarding the requirement for the auditors to maintain their independence, so that the firm must clearly communicate its independence requirements to its personnel and identify and evaluate any circumstances and relationships that could threaten the independence.

Apart from that, MIA sets rules on professional conduct and ethics known as the MIA By-Laws (On Professional Ethics, Conduct and Practice). The By-Laws are issued in pursuant to section 10(a) of the Accountants Act 1967 and for MIA members to comply with. The By-Laws are developed substantially based on the Code of Ethics for Professional Accountants issued by the International Federation of Accountants (IFAC). The By-Laws consist of two main parts; part I relates to By-Laws on professional ethics and part II relates to By-Laws on professional conduct and practice. The first part establishes ethical requirements for all members of MIA, whereas, the latter prescribes the obligations of the members professional conduct or the practice of their firms.

The objectives of MIA to prescribe the code of professional conduct and ethics of their members is to maintain the members' high standards of ethics, professionalism and professional conduct that are expected of the profession, as well as to act in the public interest. Therefore, in order to achieve these objectives, the MIA members should observe and comply with the ethical requirements in the By-Laws. MIA has made additional specific By-laws on quality assurance by issuing the By Laws, Part II 550: Quality assurance and practice review.

Practice review is created as part of the quality assurance programs to provide assurance to the public that all auditors maintain a high level of competence in public practice. Auditors who are engaged in public practice services are subject to this programme as stated in the By-Laws. The purpose of the practice review is to assist members in public practice to improve the audit quality of their firms, to ensure all members in public practice have complied with the applicable auditing and accounting standards, as well as

statutory and regulatory requirements, and to identify areas of weaknesses in the audit practice which may require assistance in maintaining and observing professional standards.

The practice review report is classified into three categories, namely a. Type 1 – satisfactory, b. Type 2 – assurance to be provided, and c. Type 3 – Follow up review. During 2009, the MIA reviewed 370 audit firms which represented 27.37% of the audit firms registered with MIA and found that 8.7% is Type 1, 42.14% is Type 2 and 49.16% is Type 3[2].

In addition to the above, auditors in Malaysia are also governed by SC under the Securities Commission Act. Under the SC, the AOB has been established as a regulatory oversight body. The mission of the AOB is to assist the SC in overseeing the auditors of public interest entities by:

a. Registering auditors of public interest entities; and
b. Conducting inspections and monitoring programmes on registered auditors to assess the extent of their compliance with recognized auditing and ethical standards.

The AOB is also empowered to sanction any registered auditors for failure to comply with any provisions in the act, notices or guidelines issues by the SC.

[2] Malaysian Institute of Accountants Annual Report 2009

1.5 Summary

This chapter provides an overview of the Malaysian auditing environment, including the approved standards and regulatory quality control of auditing. Literature pertaining to the issue of audit quality, especially RAQP, will be discussed in Chapter 3.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This chapter reviews the literature related to the issue of RAQP and audit quality. This chapter is structured as follows: firstly it explores the issue of job performance among auditors and the impact of auditors' job stress on it. Then follows a discussion of the concept of audit quality and type of audit quality studies. The concept of RAQP is discussed in section 3.3. The discussion of theory of stress is presented in section 3.4 followed by the issue of stress among auditors. Finally, there follows a discussion of variables involved in the job stress model that could influence auditors' behaviours.

3.2 Auditor Job Performance

Job performance is defined as the ability of an employee to achieve the organisation's criteria (Chi, Yeh, & Chiou, 2008). Baumeister and Showers (1986) defined performance as an individual performing a task in a situation that allows optimal outcome. The employees are considered to have achieved better performance if they are able to meet the goals or objectives set by the organisation. In general, job performance is measured from two perspectives either from quantitative or qualitative factors. For example, sales persons are said to have high performance if they are able to meet their sales target, whereas accountants' performance are evaluated on their ability to work efficiently and meet the deadlines set by their employer. In general, individual job quality or productivity could influence organisations' or companies' overall performance. Hence, individual job performance is very important for organisational survival and can be considered the most important job outcome, especially for organisations or companies that have a high investment in human capital, such as auditing firms (Kalbers & Cenker, 2008). Furthermore, as any one individual is different from other individuals in terms of ability and personality, most companies tend to evaluate employees based on their individual job performance (Kalbers & Cenker, 2008).

In auditing, individual job performance is very important as it affects the quality of audits (Kalbers & Cenker, 2008). Compromises with job performance may produce substandard audit quality and consequently lead to potential legal liabilities and loss of credibility for the audit firms (Fisher, 2001). Individual job performance has become more crucial at the individual and firm level especially after the recent spate of major accounting and auditing scandals that shocked the profession and public at large. Perhaps, at the firm level, individual job performance is important to secure present and future clients, to prevent legal liability and for firm survival. For audit personnel, job performance is important for pay raises, promotion and job tenure (Kalbers & Cenker, 2008).

Auditors' job performance has been measured from various perspectives such as from the effectiveness and efficiency of auditors in executing audit engagements (McDaniel, 1990), audit firm's control system (Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004), RAQP (Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990), decision making performance (Ashton, 1990), judgment performance (Choo, 1995) and promotion (Emby & Etherington, 1996). However, most studies share similar findings, that is, pressure or specifically time pressure is a factor that significantly affects auditors' job performance. Although time pressure is used to improve efficiency and effectiveness (McDaniel, 1990) and is a common means of a firm's control system to improve quality (Otley & Pierce, 1996b), previous studies show inverse results. For example, McDaniel (1990) used efficiency and effectiveness as a measure of auditors' performance. She found that time budget pressure had a different impact on auditors' efficiency and effectiveness. Auditors were found to have high efficiency when time budget pressure increased but on the other hand, decreased effectiveness on the audit task. Otley and Pierce (1996b) reported that too much emphasis on quantitative control such as time budget pressure can lead to auditors' dysfunctional behaviour. The results of Coram et al. (2003), and Kelley and Margheim (1990) support Otley and Pierce's (1996b) contentions that the ability of auditors to maintain high audit quality is questionable under time budget pressure.

Performance and stress (e.g., time budget pressure) have been theorised to follow an inverted U-shaped function that is commonly referred to as the Yerkes-Dodson effect (DeZoort & Lord, 1997). The inverted U-shaped theory assumes that moderately stressful working conditions could enhance job performance, but extreme stressful conditions would affect job performance detrimentally. In auditing, this theory has been supported by a number of studies and shows that stress in the auditing profession often has a curvilinear relationship with auditors' job performance (Choo, 1986, 1995; Kelley & Margheim, 1990). Such evidence indicates that job stress plays an important role in influencing auditors' behaviour and their inability to manage the level of stress could lead to negative performance effects.

Drawing from the inverted U-shaped theory, the level of an individual's performance will increase in line with low to moderate levels of job stress. However, as the level of job stress continues to increase from moderate to a higher level, an individual suffers from anxiety which can reduce his/her job performance (DeZoort & Lord, 1997). Ashton (1990, p. 150) argued that " better performance can result from the increased intention and effort induced by pressure, but increasingly intense pressure can lead to an increased level of psychological arousal which results in worse performance". Therefore, the level of job performance is dependent on the amount of job pressure involved and whether the task is easy or difficult. Choo (1986), for example, found that auditors performed at optimal levels when a moderate level of stress or pressure exists in their working environment, however, auditors' performance reduced significantly if auditors received an extreme level of stress. Similarly, in another study, Choo (1995) found that auditors' judgment performance declined when stress levels increased beyond a moderate level. With particular reference to audit quality, Kelley and Margheim (1990) found a similar pattern between budget pressure and RAQP. They further argued that a greater amount of pressure will lead to an increase in auditors' dysfunctional behaviour.

In relation to job stress, studies have examined many stress antecedents associated with job performance. Prior studies found consistent negative results between stress antecedents and job performance (e.g., Montgomery, et al., 1996; Park, 2007; Williams, et al., 2001; Yousef, 2000). Auditors, by the nature of their work, are susceptible to a stressful environment (Campbell, Sheridan, & Campbell, 1988; Gaertner & Ruhe, 1981) and this environment has a negative association with auditors' job performance (Choo, 1986, 1995; Choo & Tan, 1997; Fisher, 2001; Kalbers & Cenker, 2008; Rebele & Michaels, 1990). Therefore, time budget pressure, combined with other stress antecedents would be expected to impair an individual auditor's performance and consequently affect audit quality.

The existence of the negative effect of job stress among auditors warrants further examination. This is particularly critical in the auditing profession as audit quality is highly dependent on judgment and integrity of audit personnel (Otley & Pierce, 1996b). It is believed that auditors who are exposed to stress would behave unprofessionally and tend to engage in Reduced Audit Quality Practices (RAQP). As stress is seen as an on-going process in an auditor's professional life, an understanding of the relationship between job stress and job performance is important in order to ensure audit quality is not diminished (Choo, 1986). Choo (1986, p. 28) further concluded that "in a profession in which members are subjected to high stress levels from various sources, the management of stress becomes a critical issue, especially with regard to performance".

3.3 Audit Quality

3.3.1 Definition and Concept of Audit Quality

Previous studies have devoted a great deal of attention to audit quality. The quality of audit work is very important as it has a significant effect not only on the audit firm but also on the public. In auditing, audit quality is the fundamental factor and explains the demand for auditing practice. The auditing profession serves as a "middle-man" to reduce information asymmetry between the preparer (company's management) and users (for example company's shareholders and creditors) of financial statements.

Therefore, in order to retain this role, auditors must maintain the trust and confidence of the public (Pasewark, Shockley, & Wilkerson, 1995) which can only be achieved by providing high standards of audit quality. It could be argued that this stewardship function has been violated in the event of substandard audit quality.

Audit quality is defined from various perspectives. The most prevalent definition of audit quality in the accounting literature is the market-assessed probability that the financial statements contain material errors and that the auditor will both detect and report errors and irregularities in financial statements (DeAngelo, 1981). Other definitions used in the accounting literature are the probability that an auditor will not issue an unqualified report for financial statements containing significant misstatements (C.-W. J. Lee, Liu, & Wang, 1999), the accuracy of the information provided by auditors (R. A. Davidson & Neu, 1993; Krinsky & Rotenberg, 1989; Titman & Trueman, 1986), and the degree to which the auditors comply with applicable auditing standards (J. M. Cook, 1987; Krishnan & Schauer, 2001; McConnell & Banks, 1998; Tie, 1999).

Although there are various definitions given to audit quality, they share similar dimensions: competence and independence. According to Fearnley and Beattie (2004), these audit quality dimensions are necessary to avoid audit failure, thus, they are mutually inclusive (Barnes & Huan, 1993) and not completely separated as suggested by DeAngelo's definition (Duff, 2004). If the auditor is incompetent, there is the possibility of his/her independence being jeopardised (T. Lee & Stone, 1995). There is a high possibility of the auditor relying on the information given by clients when he/she has insufficient experience and low expertise. Another example exists, in that the auditor may not properly investigate and discover frauds or material misstatements on the items for which they have no intention to report errors (Duff, 2004). T. Lee and Stone (1995) further argue that if the auditor is incompetent, independence is not an audit characteristic to be anticipated. On the other hand, auditors may be highly

competent in performing their tasks, however, such an ability is useless if the auditors do not report the errors or fraud discovered due to lack of independence.

Auditors' competency is defined as the ability of the auditor to identify and discover any omission, misstatement or fraud in the client's financial statements (Fearnley & Beattie, 2004). Accordingly, ISA 200 relates competency to the ability of the auditor to identify any material misstatements in financial statements through proper planning and an attitude of professional scepticism (IFAC, 2006). Indeed, ISA 240 states that auditors should be able to detect any fraud if they conduct proper audit procedures to obtain reasonable assurance that the financial statements are free of material misstatements (IFAC, 2006). As part of the stewardship function, auditors have a responsibility to respond to error or fraud risk by planning and performing the audit to obtain reasonable assurance that any material misstatement, due to error or fraud, is detected. Therefore, auditors are expected by third parties to have adequate knowledge and the necessary technical skills to perform their duties. Thus, auditors must maintain a level of competency when they consider a broad set of information, including fraud risk factors. In order to ensure auditors have the necessary knowledge, and to maintain a high level of competency among auditors, most of the professional and regulatory bodies set a minimum entry level for the profession (see IES 1, IFAC, 2003). It is believed that by having a minimum entry level, auditors have adequate training in accounting and other areas related to their profession and should be able to recognise any irregularities in the financial system. In addition, in light of the constant changes affecting the accountancy profession, the professional and regulatory bodies have made it mandatory for auditors to attend continuous education training throughout their career, to ensure they stay abreast with current developments in accounting and related matters. For example, the Malaysian Institute of Accountants (MIA) introduced and made mandatory a Continuing Professional Education (CPE) requirement on 1 March 1992. Members of the MIA are required to attain a minimum number of CPE credit hours for each CPE cycle (60 CPE hours within 3 years). Auditors' competency is based on auditor technical skills and knowledge, and is relatively easy to conceptualise (Duff, 2004). Competency can be easily demonstrated by referring to audit work and incompetence is easily detected through any omission on necessary procedures, standards or guidelines.

This attribute is very important to increase the credibility of the financial statements. As credible financial statements closely reflect a company's actual economic condition, which would help users of financial statements to make the right decisions, and avoid possible losses in the future.

On the other hand, independence is an important audit attribute since the main demand for auditing is to reduce the conflict between the preparers and users of financial statements. Indeed, Mansouri, Pirayesh and Salehi (2009) argue that audit quality is highly dependent on the independence of the auditor. The term independence embodies two concepts which are "independence in mind" and "independence in appearance". DeAngelo's (1981) definition of independence (an auditor's willingness to report on misstatements as a result of error or fraud in audited financial statements) could be considered as independence in mind. Auditors however, as required by most professional codes must be both, independent in mind and independent in appearance (Houghton & Jubb, 2003). IFAC (2006, section 290.8) defines independence in mind as "the state of mind that permits the expression of a conclusion without being affected by influences that compromise professional judgement, allowing an individual to act with integrity, exercise objectivity and professional scepticism". Independence in appearance is defined as the avoidance of facts and circumstances that are so significant that a reasonable and informed third party would reasonably conclude that a firm's, or a member of the audit team's, integrity, objectivity or professional scepticism had been compromised (IFAC, 2006). Therefore, independence in mind exists when auditors are able to maintain an unbiased attitude throughout the audit, and independence in appearance relates to the public or market perception about independence (Arens, Elder, & Beasley, 2006). Independence in mind is necessary to enhance the credibility of the financial statements (Church & Zhang, 2002). On the other hand, auditors should also be seen to be independent in executing their audit tasks (Stevenson, 2002), and to increase public confidence in the financial statements (Lowe & Pany, 1995; Manzon & Guo, 2009). Indeed, because the nature of independence in mind is unobservable, the public tends to evaluate auditor's independence based on their perception. Bad perception of independence of appearance is sufficient to undermine confidence in

financial reports (Fearnley & Beattie, 2004). Explicitly, both independence concepts are necessary to increase public trust in the auditing process and financial reporting.

3.3.2 Types of Studies

Studies on audit quality have been investigated from two approaches; audit firm differentiation and the behavioural perspective. For the former, as audit quality is not directly observable and measurable, various proxies for audit quality have been developed in the literature. This approach indirectly examines audit quality and investigates the differences between audit firms using different proxies of quality measurement such as pricing differentials (Asthana, Balsam, & Kim, 2009; Craswell, Francis, & Taylor, 1995; Francis & Simon, 1987; Palmrose, 1986, 1989; Simon, 1985; Simon & Francis, 1988; Simunic, 1980; Turpen, 1990; K. Wang, O, & Iqbal, 2009), firm size or reputation (Francis & Simon, 1987; Kanagaretnam, Krishnan, & Lobo, 2009; Krishnan & Schauer, 2000; Simon & Francis, 1988; Weber, Willenborg, & Zhang, 2008), litigation risk (Beatty, 1993; Bell, Landsman, & Shackelford, 2001; Bockus & Gigler, 1998; Seetharaman, Gul, & Lynn, 2002; Venkataraman, Weber, & Willenborg, 2008), industry specialisation (A. M. Ali, Sahdan, Rasit, & Lee, 2008; Almutairi, Dunn, & Skantz, 2009; Carson, 2009; Craswell, et al., 1995; DeFond, Francis, & Wong, 2000) and users' perceptions of audit quality (Almutairi, et al., 2009). This approach focuses on the audit firm characteristics as one entity. Previous studies provide evidence that these factors affect the quality of work produced by audit firms.

Audit quality studies from the behavioural perspective could be categorised into two distinct groups: audit service quality (ASQ) and reduced audit quality practices (RAQP). ASQ investigates the perception of preparers, auditors, users and other interested parties of financial statements towards a number of attributes that are related to audit quality. This group of studies not only examined the main attributes of audit quality (competence and independence) as defined by DeAngelo (1981), but also included the quality aspects of services provided by audit firms. ASQ is based on the assumption that auditing is a service profession, thus, "quality occurs during service

delivery, usually in an interaction between the client and the contact person from the service firm" (Parasuraman, Zeithaml, & Berry, 1985, p. 42). In that sense, ASQ deals with the perceptions of what the clients expect from audit firms and how the audit firms meet those expectations. Carcello, Hermanson and McGrath (1992) identified twelve ASQ attributes and these attributes are audit team and firm experience with the client, industry expertise, audit firm responsiveness to client needs, audit firm compliance with general audit standards, audit firm commitment to quality, audit firm executive involvement, conduct of audit field work, involvement of audit committee, individual team member characteristics, audit firm maintains a sceptical attitude, audit firm freshness of perspective, and degree of individual responsibility. These attributes have been used widely by subsequent studies including Behn, Carcello, Hermanson and Hermanson (1997), Pandit (1999) and Boon, McKinnon and Ross (2008). Other studies (Duff, 2004, 2009; Turk & Avcilar, 2009) have used the five-dimension service quality (SERVQUAL) inventory, which has been widely applied in service settings to examine ASQ. Although some studies have considered ASQ as part of audit quality (Boon, et al., 2008; Duff, 2004, 2009), however, because audit quality is more concerned with final output of the audit process and the ASQ relates more to the way the audit firms deliver the audit services, Pandit (1999) argues that ASQ is not about audit quality, but rather the "quality of the input provided by the audit firm while performing the audit services" (p. 173). Indeed, he further argues that "the quality of audit services was assumed to be a function of the client's perceptions about the audit firm and not necessarily the actual quality delivered by the audit firm" (p. 173).

On the other hand, RAQP typically examines the actual quality of work performed by the auditor and uses more direct proxy measurement. Coram et al. (2003) referred to this approach as a "look behind the audit veil". This approach involves investigating auditors' behaviour during the audit engagement to determine whether they are acting appropriately when carrying out audit procedures. The RAQP approach is based on the assumption that auditors' behaviour would be reflected in the auditing engagement such as in the audit work, the errors made by auditors and non compliance with applicable auditing standard and guidelines. This approach is also known as dysfunctional behaviour of auditors. A number of auditor behaviours have been identified as those

that directly reduce the quality of an audit such as premature sign-off on an audit program step, making superficial review of client documents, failing to properly research an accounting principle, rejecting an awkward item from a sample, accepting weak client explanations and failing to pursue a questionable item in the audit (E. Cook & Kelley, 1988; Coram, et al., 2003; Malone & Roberts, 1996; Otley & Pierce, 1996b; Paino, et al., 2010).

The work of audit firms is under scrutiny due to high profile scandals involving big audit firms and it is important to understand auditor behaviour in these high quality audit firms (based on the following criteria, high fees, brand name, industrial specialist are found to be associated with high quality audit in previous studies[3]), as the incidence of RAQP is still problematic in big firms. Furthermore, as RAQP is closely associated with fundamental audit quality attributes; competence and independence, no matter how well the firms serve their clients (ASQ), the incidence of RAQP may affect the final product of audit firms, which is the auditor's opinion. Previous studies have also found the individual and team member variables to be more important than firm attributes in explaining audit quality (Boon, et al., 2008; Carcello, et al., 1992). Thus, it is important to further investigate the implication of auditor's behaviour on audit quality. Therefore, this study adopts the RAQP behavioural perspective approach in investigating the audit quality issue.

3.4 Reduced Audit Quality Practices

The incidence of reduced audit quality practices (RAPQ) in audit firms has been the focus of studies over a long period of time and in many countries such as Australia (Coram, et al., 2003), France (Herrbach, 2001), Ireland (Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004), Malaysia (Paino, et al., 2010), Mauritus (Soobaroyen & Chengabroyan, 2006), New Zealand (E. Cook & Kelly, 1991; Gundry & Liyanarachchi, 2007), United States (Alderman & Deitrick, 1982; Donnelly, Quirin, & O'Bryan, 2003;

[3] (see, Balsam, Krishnan, & Yang, 2003; Carcello & Nagy, 2004; Craswell, et al., 1995; Francis & Simon, 1987; Palmrose, 1986; Simon & Francis, 1988).

Kelley & Margheim, 1990; Malone & Roberts, 1996) and United Kingdom (Willett & Page, 1996). All studies showed relatively high number of auditors had been involved in RAQP and provide evidence that the auditors tended to compromise audit effectiveness by not properly executing the audit program. For instance, Coram et al. (2003), Kelley and Margheim (1990), and Otley and Pierce (1996b) found that more than 50% of auditors committed at least one RAQP throughout their career.

RAQP are defined by Herrbach (2001, p. 790) as "poor execution of an audit procedure that reduces the level of evidence gathered for the audit, so that the collected evidence is unreliable, false or inadequate quantitatively or qualitatively". RAQP occurs when auditors have not properly executed audit procedures required to complete their tasks. This behaviour will not only give a negative effect to individual auditors (e.g., performance evaluation), it also threatens the outcome of the engagement and the validity of the audit opinion, thus affecting the overall firm's performance and users' economic decisions. Although RAQP does not necessarily lead audit firms to issue an inappropriate audit opinion, if audit work is not properly performed and executed, the audit risk is increased (Coram, et al., 2003), in the sense that the probability of firms issuing the wrong opinion is higher. Auditors may reach invalid conclusions due to insufficient evidence gathered during the audit engagement.

This research stream originally emerges from the report issued by the American Institute of Certified Public Accountants' (AICPA) Cohen Commission in 1978[4]. The Cohen Commission report provides some important insight on auditors' behaviours and provides evidence that it is normal for auditors to sign-off an audit program without performing necessary audit procedures, not recording the omission of those audit procedures or not substituting it with other alternative audit procedures or steps (Alderman & Deitrick, 1982). The report also disclosed that approximately 60% of the auditors engaged in premature sign-off acts (Margheim & Pany, 1986) and provides a platform for subsequent research to further investigate the RAQP among the auditors.

[4] This report is not publicly available. References for this report has been obtained from other studies, e.g. Alderman and Deitrick (1982) and Margheim and Pany (1986).

In general, RAQP have both, direct and indirect implications for audit quality. Underreporting of time is a behaviour engaged by auditors that indirectly affects audit quality (Kelley & Margheim, 1990; Otley & Pierce, 1996b). Lack of human resource management, budget revision and unrecognised time pressure on future audits are the consequence of underreporting of time (Donnelly, et al., 2003). On the other hand, a considerable amount of research effort has examined the behaviours that directly affect audit quality, which are incomplete execution of audit programs and audit procedures that are necessary in completing the audit task, including premature sign-off (Alderman & Deitrick, 1982; Donnelly, et al., 2003; Kelley & Margheim, 1990; Margheim & Pany, 1986; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004; Raghunathan, 1991), accepting weak client explanations or doubtful evidence (Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Malone & Roberts, 1996; Otley & Pierce, 1996b), failing to research an accounting principle (Kelley & Margheim, 1990; Otley & Pierce, 1996b), making superficial reviews of client documents (Kelley & Margheim, 1990; Malone & Roberts, 1996; Otley & Pierce, 1996b), reducing the amount of work performed on audit step (Kelley & Margheim, 1990; Otley & Pierce, 1996b), rejecting awkward looking items from a sample and not testing all of the items in a selected sample (Coram, et al., 2003).

Studies in RAQP have extensively focused on premature sign-off. Premature sign-off is defined as the "audit personnel signing-off on audit program steps before completing one or more of the required audit procedures" (Raghunathan, 1991, p. 71). Alderman and Deitrick (1982) replicated and extended the Cohen Commission study to investigate the existence of premature sign-off practice among the auditors of big firms in the United States and the reasons for such behaviour. They found that 31% of the auditors believed that premature sign-off occurred in their office and more importantly, this undesirable behaviour occurred when the auditors believed the step to be unnecessary to the audit. Margheim and Pany (1986) found that auditors in non-Big firms believed that premature sign-off was more likely to occur in smaller firms than in big firms. While Alderman and Deitrick (1982) and Margheim and Pany (1986) studied auditors' perceptions, Raghunathan (1991) examined auditors actual behaviour. He found that 55% of the auditors had prematurely signed-off on the audit program.

The studies on RAQP aside from premature sign-off have also been well documented. Kelley and Margheim (1990) examined, in addition to premature sign-off, four others types of RAQP such as reducing the amount of work performed on the audit step, accepting weak client explanations, failing to research an accounting principle and making superficial reviews of client documents. Interestingly, unlike the previous studies, their study of staff and senior auditors in one of the big audit firms in United States found auditors to be less likely to engage in premature sign-off (8%). Instead, they found that auditors mostly engaged in accepting weak client explanations (33%) and reduced the amount of work performed on an audit step (31%). Kelley and Margheim (1990) also found that more than 25% of auditors admitted to failing to research an accounting principle and made superficial reviews of client documents. Further, Kelley and Margheim (1990) found that more than half of staff auditors participating in their study engaged in at least one of the types of RAQP during the audit engagement. Consistent with Kelley and Margheim's (1990) results, Malone and Roberts (1996) found premature sign-offs are the least likely RAQP used by auditors.

Subsequent studies on RAQP showed an increasing trend. Coram et al. (2003) who investigated 38 auditors from various sizes of firms in Australia found that 63% of the auditors admitted "sometime" using RAQP especially in the area of compliance testing, creditors' cycle and completion of the audit. They also found that more than 40% of the auditors noticed their colleague "sometimes" had used RAQP in speeding up audit testing, specifically in rejecting awkward-looking items from a sample (54%), accepting doubtful audit evidence (50%) and not testing all of the items in a selected sample (43%). The result of Otley and Pierce (1996b) are more disturbing as they found that 88% of the senior auditors in three of the Big 6 firms in Ireland admitted to engaged in at least one of these RAQP.

Various factors that are associated with the occurrence of RAQP have been investigated in previous studies generally focusing on audit firm control systems (Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Malone & Roberts,

1996; Margheim & Pany, 1986; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004), individual differences (Donnelly, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Malone & Roberts, 1996) and perceived consequences of the behaviour (Bernard Pierce & Sweeney, 2005, 2006). The audit firm control factors that are commonly researched by previous studies include time budget pressure, leadership style, firms' quality control and review procedures, and firm structure. Among others factors in the audit firm control systems, time budget pressure has consistently been a significant factor explaining RAQP (Alderman & Deitrick, 1982; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004). Otley and Pierce (1996b) found a significant relationship between budget pressures and RAQP, whereas Coram et al. (2003) found that 78% of auditors engaged in RAQP mainly because of time budget pressure. Gundry and Liyanarachchi (2007) examined 168 auditors from various sizes of firms in New Zealand and found that time budget pressure was significantly associated with premature sign-off but not with accepting weak client explanations, though not all research supports these findings (e.g., Margheim & Pany, 1986). They argued that prematurely signing off an audit step was a more serious RAQP than accepting a weak client explanation. Pierce and Sweeney (2004) identified premature sign-off as the most serious act compared to other RAQP. These results suggest that once auditors perceive the time budget as difficult to achieve, they tend to act in an unprofessional manner by engaging in RAQP. Otley and Pierce (1996b) further suggested that time budget pressure is linked with auditors' reducing evidence-gathering inappropriately, thereby reducing audit quality.

While most of the studies in RAQP have given significant focus to time budget pressure, Otley and Pierce (1996b) examined the effect of several firm's control systems on auditors' dysfunctional behaviour in three big audit firms. They constructed a model to explain three types of dysfunctional behaviour; under-reporting of time, pre-mature sign off, and audit quality reduction behaviour. They examined time budget pressure and other firm's control systems (leadership style, commitment, approval and audit review) that may have influenced the incidence of RAQP among auditors. Their results showed significant influence of the variables (leadership styles, supervisor approval,

effectiveness of audit review and organisational commitment) with all three types of dysfunctional behaviour.

There has also been increasing interest in the effect of personality characteristics in accounting literature (Choo, 1992). Studies in the auditing field have investigated the direct and moderating influence of auditors' personal characteristics on RAQP and previous research found this factor has been inconsistent and contradictory (Donnelly, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Malone & Roberts, 1996). For instance, Gundry and Liyanarachchi (2007) found a significant direct and moderating relationship between auditors' personality characteristic of Type A and the incidence of RAQP. Kelley and Margheim (1990) however, did not find any significant direct or moderating relationship of personality type A on RAQP. One plausible reason for these inconsistent results may be that Kelley and Margheim (1990) used a simple form of Type A instrument (six questions) compared to Gundry and Liyanarachchi (2007) who used an instrument which comprised 38 questions.

In addition, studies have found that RAQP were most likely to occur at lower-level positions within the firm. Gundry and Liyanarachchi (2007) and Alderman and Deitrick (1982) found that staff and seniors auditors were more likely to engage in RAQP than managers and partners. Similarly, most of the other studies that examined staff and senior auditors found a high incidence of RAQP at these levels (Kelley & Margheim, 1990; Otley & Pierce, 1996b; Raghunathan, 1991). One possible explanation for this may be that auditors at lower level positions perceive meeting the budget as important for their performance evaluation and their evaluation is done by managers and partners. In addition to that, they may think that budgets are more difficult to attain thus influencing them to engage in RAQP. On the other hand, Coram et al. (2003) found that there was no significant difference in terms of experience level in the incidence of RAQP. Malone and Roberts (1996), however, did find experience level or "tenure effect" associated with RAQP. Malone and Roberts (1996) found that senior auditors were more likely to have committed RAQP than staff auditors. According to them,

higher level auditors have been in public accounting for quite some time and they had more chances to experience and respond to circumstances where RAQP were possible. With regard to gender, there was no significant difference between male and female auditors in the incidence of RAQP (Coram, et al., 2003).

There was also evidence that the incidence of these behaviours not only occurred in small and medium firms (Gundry & Liyanarachchi, 2007; Margheim & Pany, 1986), but surprisingly, in Big four firms (Donnelly, et al., 2003; Kelley & Margheim, 1990; Otley & Pierce, 1996b; Raghunathan, 1991) associated with high quality and good reputation (Francis & Simon, 1987; Geiger & Rama, 2006; Simon & Francis, 1988). Perhaps, the most comprehensive study on the factors that could possibly explain the incidence of RAQP was conducted by Malone and Roberts (1996). They investigated RAQP from five perspectives, namely personality characteristics, professional characteristics, quality control and review procedures, audit firm structure and time budget pressure. They found quality control and review procedures, auditors' need for approval and need for achievement to be significantly associated with RAQP behaviours. As most of the other factors were not significantly associated with RAQP, they further concluded that it is difficult to model the factors that are associated with the incidence of RAQP.

Most of the prior studies show that auditor behaviours are reflective of his or her personality when performing audit work. The behaviour of individuals who perform audit work certainly could affect audit quality (Herrbach, 2001). In addition to that, prior studies in RAQP also provide evidence that an auditor's intention to engage in RAQP could be related to the level of stress faced by the auditors, such as time budget pressure (Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). Among auditors, job stress tends to have an adverse impact on auditors' job performance (Choo, 1986, 1995; Choo & Tan, 1997; Fisher, 2001; Kalbers & Cenker, 2008; Rebele & Michaels, 1990). These findings support the view that auditors may be more likely to engage in RAQP as a response to stress (Kelley & Margheim, 1990).

However, having said that, most of the previous studies are limited as they did not fully investigate a more comprehensive model of stress factors associated with RAQP. Furthermore, given the trend towards behaviours that could directly reduce audit quality, it is reasonable to conclude that RAQP does exist and needs to be carefully dealt with because of the effect it can have on audit quality.

3.5 Theory of Stress

Much attention has been devoted to studies on stress since the first study by Cannon in 1914 (Beehr & Franz, 1987). Stress is generally defined as "the psychological state experienced by an individual when faced with demands, constraints, and/or opportunities that have important but uncertain outcomes" (Greenhaus & Parasuraman, 1986, p.38). Based on this definition, stress consists of two major elements; the source of stress and the implication of stress to an individual. Previous stress studies typically have used the definition of stress in three different ways; as a stimulus, a response (strain) or a relationship between stimulus and response (Beehr & Franz, 1987; Jex, et al., 1992). Stimuli are external forces or environmental situations which require a physical or psychological response from individuals (Greenhaus & Parasuraman, 1986; Jex, et al., 1992). Stimulus is also referred to as a stressor factor. According to Jex et al. (1992), this definition originated from the field of physics and was then borrowed by other areas. A response or strain is referred to as the effect of such forces on the individual (Jex, et al., 1992) or a symptom of stress (Greenhaus & Parasuraman, 1986). In other words, strain is the implication of the external or environmental events on the individual. Stress may also be defined as a relationship between stimulus and strain. Researchers who use this stress definition refer to the interaction between environmental conditions or events and individual responses to that condition or event. Some researchers use outcomes resulting from strain as a definition of stress (see, Greenhaus & Parasuraman, 1986). According to them, outcomes refer to the results of that strain which have implications for individual daily life (e.g., family problems, health and job performance).

Job stress differs from stress in general because it is organisational in nature (Montgomery, et al., 1996). It may occur when there is a mismatch between individual ability and organisational demands. Cooper and Marshall (1976) state that individual differences, psychological and/or physiological, may depart from the norm due to working environment and situation. Hence, job stress is defined as "the feeling of a person who is required to deviate from normal or self-desired functioning in the work place as the result of opportunities, constraints, or demands relating to potentially important work-related outcomes" (Parker & Decotiis, 1983, p.165). Parker and Decotiis (1983) further stated that this feeling may have physical or mental adverse consequences for the individual. Therefore, based on the above definition, stimulus or stressor's definition of job stress is any environmental situations or conditions in the organisation or workplace that require a necessary response from the individual, physically or psychologically. The examples of environmental situations in the organisation that have been referred to in previous studies are role conflict, role ambiguity, role overload and organisational characteristics such as leadership style (Fisher, 2001; Montgomery, et al., 1996; Parker & Decotiis, 1983; Senatra, 1980). On the other hand, strain is referred to as the reaction which could affect both employee and organisation. Examples of these are low job performance, low job satisfaction and organisational commitment (Choo, 1986; Fisher, 2001; Parker & Decotiis, 1983).

Cooper and Marshall (1976) in their review of the literature on job stress and its association to coronary heart disease and mental ill health reported that job stress had been studied from two perspectives: intra organisational and extra organisational antecedent stressors, that form the basis of stressful situations. They further identified five dimensions of intra organisational antecedent stressors including factors intrinsic to a job, role in organisation, career development, relationship at work, and organisational structure and climate. On the other hand, extra-organisational antecedent stressors include family or personal problems such as financial problems and life crises. In their model, individual characteristics or personality differentiation serve as moderating variables. These individual differences moderate the stress experienced by the individual as well as the symptoms of an individual's occupational health.

Later, Parker and Decotiis (1983) conducted a survey using the model developed by Cooper and Marshall (1976) to investigate the relationship between job stressors and two dimensions of job stress namely time pressure and anxiety. However, their model departed from Cooper and Marshall's (1976) model by first, excluding personality characteristics and second, excluding psychological states (e.g, anxiety, time pressure) from personality characteristics group, thus developed two level outcomes of job stress model. The first level outcome, known as "job stress", is viewed as a short-term psychological state such as anxiety or tension. On the other hand, second level outcomes are the "consequences of job stress rather than as stress per se" (Parker & Decotiis, 1983, p. 164). Therefore, if the individual experiences a high level of stress or it continues over a prolonged period, the possibility of second-level outcomes is increased. They further argued that the concept of job stress is manifested as a response of an individual to organisation environment (stimuli), thus preventing it being treated as a characteristic of the environment (stimuli) or as an attribute of the individual. Ivancevich and Matteson (1980), in another study, developed a model similar to Cooper and Marshall (1976) with one exception, they appeared to agree with Parker and Decotiis (1983) that job stress is a result of an interaction of both, individual and environmental characteristic and not part of these characteristics. Based on Parker and Decotiis's (1983) model, the job stress model is shown in Figure 3.1.

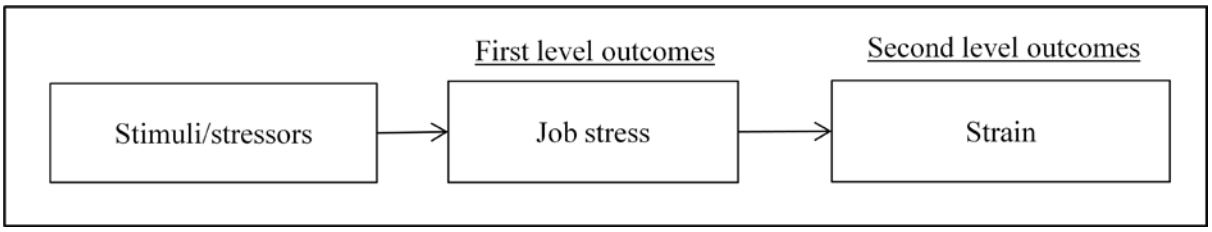

Figure 3.1: Job Stress Model

Parker and Decotiis (1983) using a mail survey questionnaire, involving 367 major restaurant managers that hold positions from trainees to regional managers, assessed their perceptions toward several aspects of the organisation. Forward and backward multiple regressions were used to analyse organisational climate; the results showed that all of the stressor antecedents (aspects of job; structure, climate, information flow;

aspects of role; career development) were significantly associated with both job stress dimensions; time pressure and anxiety. However, the extra-organisational stressors were relatively weak. Further investigation on individual variables in each stressor category revealed that some stressors were significantly associated with both of the dimensions of job stress (stability, compensation basis, hours worked per week; concern for individual, corporate management out of touch; closeness of supervision, supply support problems; training quality, promotion basis; years of education), whereas, the others were significantly associated with one of the dimensions either time pressure (autonomy, pay-performance limit; communication openness; emphasis on individual development; support from boss, cohesiveness; age) or anxiety (formalization; role conflict).

Notwithstanding the general understanding of the definition of stress, there is still a lack of consensus of what exactly constitutes stress and indeed, the term is ambiguously defined (Beehr & Franz, 1987; Parker & Decotiis, 1983). Further, the terms stress, stressor and strain are often used interchangeably in previous literature to define stress (Jex, et al., 1992). Jex et al. (1992) examined 51 articles which had ‘stress’ or ‘stressful’ terms from 1985 to 1989. They found that, 41% of the articles meant stressor or stimulus for stress; 25% referred to strain and 14% were unclear. They also found that respondents in their surveys tended to interpret the word stress as both stressors and strain, even though the association with strain was slightly stronger than stressor. Jex et al. (1992) argued that this misunderstanding could result in confounding problems, thus the validity of the research results were questionable.

In this study, the term stressor, will be used as suggested by Jex et al. (1992) and Parker and Decotiis (1983), whereas, job stress and strain will be defined as proposed by Parker and Decotiis (1983) in order to avoid any operational confusion. Stressor or stimulus is defined as organisational conditions or environment. Job stress is defined as individual short term psychological condition as a response to organisational conditions or the environment, whereas, strain is referred to as the consequences of job stress,

rather than organisational conditions or environment. Therefore, in this study, Parker and Decotiis's (1983) two level outcomes will be employed. In addition to that, Jex et al. (1992) suggested not using the word 'stress' in survey items to avoid misinterpretation by respondents. However, due to inconsistent usage of the term in previous studies and its different meaning, the literature review of the present study will also include the studies which have used different terms for 'stress'. The purpose is to determine whether that there is a relationship among stress factors and job related outcomes.

3.6 Auditor and Stress

Accounting, particularly auditing is traditionally considered a high-stress profession (Campbell, et al., 1988; Gaertner & Ruhe, 1981). Many accountants have been reported to have heavy smoking and drinking habits, ulcers, chronic back pain and headaches as consequences of stress (Gaertner & Ruhe, 1981). Stress in the accounting context can be defined as "...how professionals perceive individual pressures at a specific point in time as well as the cumulative effects of pressure over time" (DeZoort & Lord, 1997, p. 33). Choo (1995, p. 617) defined auditor's overall job related stress as "the stress caused by his or her self-perceived inability to perform well in an ongoing auditing work environment". Auditors play a boundary-spanning role (Rebele & Michaels, 1990). A boundary-spanner requires extensive "interactions with many people, both inside and outside the organisation, with diverse needs and expectation" (Goolsby, 1992, p. 156). The need to satisfy the expectation and demand of the many people within their relevant environment could create potentially stressful situations (Goolsby, 1992; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). As a boundary-spanner, the auditor interacts with internal staff (team members, supervisor, manager) and external parties (clients, regulators), who are subject to unforeseen problems in their work environment, which could all contribute to higher level of work related stress (Gill, Flaschner, & Shachar, 2006). For example, auditors are particularly vulnerable to stress because conflicts of interest may exist in performing their duties, where auditors stand between management, who are responsible for preparing statements of a company's financial position and results of operation, and the investors or other interested parties who use

these statements, along with other information, in making decisions to achieve their own specific objectives. The auditors' relationship with the client may deteriorate if there is disagreement between client and auditor, for example in terms of the audit opinion issued by the auditors. Indeed, clients tend to threaten the auditor by switching to other firms if they do not agree with the auditors' opinion (Chow & Rice, 1982).

This boundary-spanning role creates stress that arises from both intra organisational and extra organisational stressors. Auditors are exposed to a number of intra organisational stressors or pressure in the workplace that exist mainly because of the unique characteristic of the profession itself such as independence, nature of job and ambiguous professional standards or guidelines (DeZoort & Lord, 1997). These unique characteristics may lead to the stress that is caused by the inability of the auditors to perform well in a specific audit engagement or as termed by Choo (1995), an auditor's task-related mental stress. For example, auditors experience stress due to high work demands of the profession, both in terms of quantity of the work (Campbell, et al., 1988; Sweeney & Summers, 2002) and the need to meet tight deadlines or budgets (Alderman & Deitrick, 1982; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; McDaniel, 1990; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004). Public accounting is known for its busy season when auditors' workload increases but time budget remains the same as for an off-peak period (Jones, Norman, & Wier, 2010). Similarly, the presence of fee pressure on the firm can also put pressure on the auditors (Houston, 1999). Increasing audit workload while fees remain the same due to high competition among the audit firms and the changing business focus by audit firms and their clients towards process re-engineering will force partners to try to minimise the time spent on audit engagements (Coppage & French, 1987; DeZoort & Lord, 1997; B. Pierce & Sweeney, 2004) contributing to auditors attempting to complete engagement work in less time and within the budget, thereby, increasing the pressure related to many engagements (Gaertner & Ruhe, 1981). Under pressure to keep work with the fee constraint, senior auditors are most likely to reduce audit procedures even though they know that client risk is high (Houston, 1999).

In the “post-Enron era” auditors are additionally exposed to a more rigid environment with increased regulation, thus auditors are required to do more work without increasing their audit fees due to a competitive audit market, and a need to achieve a balance between providing quality audit work and profitability of an engagement. This cost-quality conflict increases the pressure on auditors, and could influence the way auditors react, and the final output of the audit. In order to compensate for marginal profit from audit fees, audit firms are highly dependent on providing other non-audit services (Cohen & Trompeter, 1998). These non-audit services may put pressure on the auditors’ judgement to support client reporting methods (DeZoort & Lord, 1997; Moreno & Bhattacharjee, 2003; "Sarbanes-Oxley Act of 2002," 2002) and to remain objective (Quick & Rasmussen, 2009). According to Pasewark et al. (1995), auditors are likely to compromise their professional objectivity when confronted with a “powerful” client.

In addition, audit firms have a very clear hierarchical structure and have been described as being surrounded by a ‘supervision atmosphere’ (Otley & Pierce, 1996b). The firm’s structure requires the auditor to interact with others in the audit firm, thus could expose the auditors to stress. For example, Otley and Pierce (1996b) suggested that because of the unique hierarchical structure in audit firms, audit seniors may face more pressure than other positions because their position is in the middle of the hierarchy. Audit seniors have more responsibilities than other staff mainly because they are the ones who are directly involved and supervise the fieldwork’s audit team as well as being answerable to a manager and partner. Since the work of senior and staff auditors provides the foundation for the audit opinion (Willett & Page, 1996), the manager and partner may place high pressure on senior and staff auditors to provide high quality audit work within the specified time and budget. For the staff auditors, stress increases when they accept high workload and more responsibilities than they can handle to impress their seniors or superiors with their performance with a view to promotion.

Stress in auditing, to some extent could produce positive outcomes such as increased work efficiency, increased focus on task and problem solving, and decreased attention

to irrelevant information (E. Cook & Kelley, 1988; DeZoort & Lord, 1997; Kelley & Seller, 1982; McDaniel, 1990), however, the risks associated with pressure-induced dysfunctional behaviour could negatively affect the auditors and firms (DeZoort & Lord, 1997). As a consequence of these pressures, auditors' job performance could decline (Choo, 1986, 1995; Fogarty, 1996; Fogarty, et al., 2000; K. J. Smith, et al., 2007), in that their ability to work effectively is decreased (McDaniel, 1990), may reduce the ability of the auditors to detect material misstatements or frauds; or the auditors may engage in unprofessional behaviours that potentially impair audit quality (Alderman & Deitrick, 1982; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b; B. Pierce & Sweeney, 2004). A number of financial scandals in the past few years (e.g., Enron, Parmalat, Satyam) involving auditors appear to support this contention. Stress has also been associated with auditor's low job satisfaction (Fisher, 2001; Rebele & Michaels, 1990; Senatra, 1980) and turnover intentions (Collins, 1993).

Although the effects of stress on auditors' behaviour have been evaluated extensively (e.g., Choo, 1986, 1995; Choo & Tan, 1997; Fisher, 2001; Fogarty, 1996; Fogarty, et al., 2000; Rebele & Michaels, 1990; Senatra, 1980; K. J. Smith, et al., 2007; Sweeney & Summers, 2002), there is little research that connects stress and RAQP. The studies on job stress in auditing do not directly examine the implications of stress on audit quality. Thus, this study will extend prior research by examining the job stress factors and their influence on audit quality. In addition to that, studies on RAQP do not directly examine the implication of job stress. Previous studies (e.g., E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007) generally focus on time budget pressure but ignore job stress itself as a critical dimension. As discussed in the previous section, job stress, as the outcome of the interaction between individual and stress antecedents, may influence the way an individual behaves in performing their task. Thus, it is important to examine the implication of job stress on RAQP. Therefore, this study will extend the previous studies, not only by integrating a broader set of stress antecedents involving individual, nature of work and audit firm characteristics but will also include job stress itself as a variable. By examining these variables, the study is more comprehensive compared to previous studies, thus providing additional knowledge in this field.

3.7 Stressor Factors

3.7.1 Workload

Workload is defined as the number of hours reported by employees and number of people served or worked for (Shirom, Nirel, & Vinokur, 2006). Beehr, Walsh and Taber (1976) defined work overload as employees having more work to do than could be completed within a given period. Previous studies have provided support for the negative effect of work overload on aspects of health, productivity and job performance. Laaksonen, Rahkonen, Martikainen and Lahelma (2006) found that physical workload and job control were associated with general health, whereas job demands were strongly related to mental health. Letvak and Buck (2008) reported that long working hours per day were significantly associated with job stress and low work productivity. Similarly, Schaubroeck, Cotton and Jennings (1989) found that workload was positively associated with job tension among workers in United States universities. With regard to job performance, Virtanen et al. (2009) reported that long working hours were linked to a negative effect on cognitive performance among middle aged British civil servants. Similarly, Spector et al. (1988) found that workload was negatively associated with job performance. Hence, Kahn et al. (1964) note that workload may influence job-related tension directly.

Similarly, the relationship between workload and job stress has been extensively examined in the accounting research literature. This could be due to the auditing profession being well known as a high stress profession, partly due to work overload existing during the peak (busy) period because of high work demand. This peak (or busy) period in the auditing profession has been well acknowledged by the industry and occurs during the first quarter of the calendar year, mainly because most companies (other than in Australia) close their accounts with December year ends (Campbell, et al., 1988). Hence, work overload is inherent to the nature of the auditing environment. According to DeZoort and Lord (1997), this pressure relates to professionals' actual workload during the audit engagement process. Work overload results when auditors are facing higher workloads due to long working hours and extensive work demands during the peak period compared to the off-peak period. During the peak period, many

auditors work around 60 to 80 hours per week (Dalton, Hill, & Ramsay, 1997). Indeed, these workloads do not always decrease during the off-peak period and auditors typically work more than 40 hours per week (Sweeney & Summers, 2002; Ward & Albright, 2009). In addition to that, accounting work is based on clear and tight deadlines, in which the flow of tasks is often uncontrollable. Therefore, in many situations, job demands will exceed the abilities or resources of the individual, consequently workload can result in emotional exhaustion and burnout (Fogarty, et al., 2000).

Sweeney and Summers (2002) claimed that the peak period could be used as a mechanism to identify those auditors who can work effectively under a challenging environment. However, previous studies have shown that such an intensive workload is likely to exert considerable pressure on auditors. For example, Campbell et al. (1988) in their study of 221 tax practitioners in the United States, reported that 23% of tax practitioners considered stress as a very serious problem during the peak tax period compared to 8% during the off-peak period.

Sweeney and Summers (2002) found that at the end of a busy period, auditors experienced significantly greater emotional exhaustion from their work and were depersonalised in their approach to their work, colleagues and clients. They examined 142 respondents from various levels of the hierarchy (staff to partner) and profession (auditors, tax officers, consultants and administrator) in one national public accounting firm in the United States. They found that, for the pre-busy season, hours worked by public accountants were positively correlated to role stressors but not to public accountants' job burnout, whereas, role stressors positively influenced job burnout. However, their investigation during the busy season showed that public accountants' working hours were positively correlated to both role stressors and job burnout. Similarly role stressors were positively correlated with burnout. They further concluded that high workload could lead to psychologically stressful conditions.

Similarly, Fogarty et al. (2000) in their study of American Institute of Certified Public Accountants (AICPA) members found that workload was associated with burnout. Almer and Kaplan (2002) extending the Fogarty et al. (2000) study, examined the effect of flexible work arrangements on public accountant's (AICPA) burnout by comparing a sample of public accountants under a standard work arrangement to a demographically similar sample under a flexible arrangement. They found that public accountants under a standard work arrangement reported higher burnout and lower job satisfaction than their counterparts under a flexible work schedule. More recently, K. J. Smith et al. (2007), in their study of samples similar to those of Fogarty et al. (2000) and Almer and Kaplan (2002), found that workload was positively related with stress arousal.

Conversely, Ehlen, Cluskey and Rivers (2000) found there was no difference in terms of stress levels between the busy and slack periods for auditors and tax professionals even though the average hours worked increased more than 25% in the former period. Their investigation showed that audit firms used several strategies to mitigate stress levels during the busy period, such as using experienced staff to mentor junior staff, well defined overtime/bonus plans, offering interactive career tracks, the use of flexible time and using temporary staff to meet seasonal demands. However, a study by Friedman, Rosenman and Carroll (1958) found that during the peak tax season, tax accountants experienced high levels of cholesterol which declined significantly to a lower level during the off-peak season. Their finding indicates that working long hours could contribute to high levels of cholesterol probably due to maximum stress experienced by accountants as suggested by Campbell et al. (1988) and Sweeney and Summers (2002). Furthermore, high workload also contributes to high turnover rate in the accounting profession (Almer & Kaplan, 2002; Larson, 1991; K. J. Smith, et al., 2007). In other words, people who perceived or experienced high stress may desire to change their jobs.

From a job performance perspective, studies in accounting environment found that workload is positively related to job performance (Fogarty, et al., 2000; K. J. Smith, et al., 2007), contrary to previous studies in other work settings (e.g., Laaksonen, et al.,

2006; Schaubroeck, et al., 1989; Spector, et al., 1988; Virtanen, et al., 2009). Fogarty et al. (2000), in explaining this counterintuitive result, propose that overload includes an "eustress[5]" component that is unmediated. K.J. Smith et al. (2007) suggest that the positive relations between workload and job performance may result from overload being perceived as a challenge rather than a threat. Challenge stressors are viewed as having the potential to promote personal gain and growth (Lepine, et al., 2005).

3.7.2 Time Budget Pressure

Time budget pressure is considered as a major problem faced by auditors (DeZoort & Lord, 1997). Hence, the ability to cope with time budget pressure is the prerequisite to survive in the auditing profession (Kelley & Seller, 1982). Time budget pressure occurs when an audit firm allocates an inadequate number of hours for auditors to complete specified audit procedures (Margheim, Kelley, & Pattison, 2005). These time constraints occur due to limitations on the resources allocated to perform audit engagement (DeZoort & Lord, 1997). Limited resources, among other factors, could be due to personnel or fee constraints. Auditors face conflicting goals when they need to maintain high quality standards while attaining very difficult time budgets (E. Cook & Kelley, 1988). Therefore, budget attainability is an important factor in determining the degree of pressure experienced by auditors (McNair, 1991). The more difficult the budget is to achieve, the more pressure faced by auditors. Thus, it is difficult to balance these responsibilities, which will result in compromise of one of the elements (Robertson, 2007).

A considerable amount of literature has been published on time budget pressure. Otley and Pierce (1996b) in their study of senior auditors in Ireland found that 16.5% and 28.5% of the auditors in their sample indicated that the time budget for the jobs they had worked on in the previous year was impossible and practically unattainable, respectively. Whereas, Kelley and Margheim (1990) showed that 44.7% of auditors in

[5] Eustress or good stress is a positive form of stress that is healthful, gives one a feeling of fulfilment, and enhances one's performance (K. J. Smith, Derrick, & Koval, 2010)

the United States perceived time budgets to be attainable with considerable effort. In their study, less than 18% of the auditors felt the time budget to be either impossible or practically unattainable. Willett and Page (1996) found that 88% of auditors perceived time pressures had increased over their period of training. According to them, this may be due to auditors' career advancement within the firm, where the higher the position held by auditors, the more pressure is experienced by them.

Time budget is used as a control mechanism by audit firms and is a necessary tool for planning and controlling audit engagements. McNair (1991) argued that as audit firms are labour intensive, time budgets are influenced almost directly through audit fees. Since audit fees are closely related to auditors' time spent, firms control auditors' time spent through time budgets. E. Cook and Kelly (1991) found that auditors perceived fee pressure from clients to be the most common cause of time budget pressure; time budgets force auditors to complete audit tasks within the time allocated to them. As a consequence, time budget pressure leads auditors to work harder (E. Cook & Kelly, 1991; Kelley & Seller, 1982; Otley & Pierce, 1996b), strive for efficiency (McDaniel, 1990), to use more efficient audit techniques (Coram, et al., 2003) and to remove any slack that may exist in the budget (Kelley & Seller, 1982). Time budgets also could improve audit judgments by encouraging auditors to focus more on relevant information and to avoid the danger of allowing judgments to be influenced by irrelevant information (Glover, 1997). Alternatively, as prior year's actual figures appear to have more influence on the current time budget (Otley & Pierce, 1996a), auditors may use previous time budgets to plan the current year audit in order to increase the efficiency of their work (Ettredge, Bedard, & Johnstone, 2008; Kermis & Mahapatra, 1985).

However, time budget pressure can present a serious problem and at some point, auditors may negatively respond to time budget pressure. Time budget achievement has been viewed as a measure of efficiency of auditors (McNair, 1991). Thus, promotion is one of the major control mechanisms employed by audit firms to ensure employees behave in the best interests of the firm (Ponemon, 1990). Accordingly, as achievement

of time budget is perceived as a critical performance evaluation criterion for career advancement by auditors (Ettredge, et al., 2008; Kelley & Seller, 1982; Otley & Pierce, 1996b), auditors have incentives to exhibit undesirable behaviours (E. Cook & Kelley, 1988; Coram, et al., 2003; Houston, 1999), which can be associated with quality threatening behaviours. Otley and Pierce (1996b) found that almost 70% of senior auditors from three big firms perceived budget achievement or emphasis as important in the overall evaluation of performance. However, their further analysis using multiple regressions revealed that budget achievement did not lead to RAQP.

A more recent study, however, provides conflicting results: Ettredge et al. (2008) found that audit firms used prior time budget achievement to keep time budgets tight when the prior budget was excessive. This action exposes auditors to continuing pressure to maintain or increase efficiencies in the current year. Similarly, Lau and Buckland (2001) in their study of 132 functional heads in Norwegian manufacturing companies indicated that budget achievement was significantly associated with job-related tension. As job-related tension has negative association with job performance, it is believed that budget emphasis will increase auditors' dysfunctional behaviour. As suggested by Kermis and Mahapatra (1985, p. 263), "excessive time pressure can force individuals to give the appearance of compliance with time budgets (playing the "budget game") while leaving the work undone, particularly if time-budget attainment is a significant factor in performance evaluations of auditors". Previous studies support this suggestion (Alderman & Deitrick, 1982; Raghunathan, 1991).

The intensity of time budget pressure could have adverse effects on audit quality (E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). Otley and Pierce (1996b) argued that auditors will behave unprofessionally under time budget pressure and are more likely to be involved in dysfunctional behaviours. It is easy to understand that when auditors are struggling to meet the budget which could have a detrimental effect on their performance evaluation, many auditors see RAQP as a way out. Empirical results seem

to add weight to these arguments. For example, Kelley and Margheim (1990) surveyed 85 staff and senior auditors from two big audit firms to identify whether time budget pressure, personality and leadership had an impact on RAQP. They found that budget attainability negatively influenced RAQP and under-reporting of time. This study supported the earlier finding of E. Cook and Kelley (1988) who found that 22% of the auditors will engage in RAQP in order to achieve the budgets set by their firms. A similar finding has been found in a more recent study conducted by Coram et al. (2003). Of the 60% of auditors surveyed by Coram et al. (2003) who admitted to engaging in RAQP, almost 80% of the respondents cited time budget pressure as a factor in committing these acts. In a study of auditors in New Zealand, Gundry and Liyanarachchi (2007) found that time budget pressure was significantly associated with premature sign-off and not with accepting weak client explanations. They suggested that premature sign-off practice was considered a more serious RAQP compared to the latter.

At the other extreme, excessive time budget pressure can result in poor auditors' job performance. McDaniel (1990) found an interaction between time budget pressure and auditors' job performance. As the time budget pressure increased, auditors' performance decreased significantly. Specifically, increased time budget pressure would reduce audit effectiveness to gather sufficient audit evidence, reduce auditors' processing and sampling accuracy. Similarly, Choo and Firth (1998) found that auditors' judgement expertise (in the form of configural information processing) will reduce significantly under time pressure.

Kelley and Margheim (1990, p. 38) stated that " audit managers and partners should be particularly concerned with the possibility of underreported time and incorrect or poorly documented audit work papers when the time budget on the audit is very tight but the audit team is able to complete the audit within budget". This implies time budget pressure placed on auditors could be associated with high job stress resulting in poor

audit quality. Therefore, it is suggested that audit firms need to seriously consider the threat time budget pressure poses to audit quality.

3.7.3 Role Ambiguity and Role Conflict

The typical source of stress or stressor faced by employees in the workplace or organisation is referred to as role stress or role stressor (Fisher, 2001). These role stressors consist of role ambiguity and role conflict (Montgomery, et al., 1996). These elements have been found to affect job outcomes and job-related attitudes (Rebele & Michaels, 1990). Rizzo, House and Lirtzman (1970, p. 155) defined role ambiguity as " (1) the predictability of the outcome or responses to one's behaviour..., and (2) the existence, or clarity of behavioural requirements, often in terms of inputs from the environment, which would serve to guide behaviour and provide knowledge that the behaviour is appropriate". Role ambiguity occurs when an employee receives insufficient information, unclear policies and directives, is uncertain about authority, duties and relations with others to carry out their duties effectively (Bamber, Snowball, & Tubbs, 1989; Jackson & Schuler, 1985; Senatra, 1980). Therefore, role ambiguity refers to pressure due to lack of clarity or not understanding one's exact role within the organisation (DeZoort & Lord, 1997).

In contrast, Wolfe and Snoek (1962, p. 103) defined role conflict as "...the simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make difficult or impossible compliance with the other". Therefore, role conflict exists when an employee faces incompatible orders or expectations from more than one superior, incompatible policies or standards of evaluation and the employees' own individual belief conflict with those held by his or her superior or organisation (Rizzo, et al., 1970). The influence of role conflict and role ambiguity as stress antecedents are well documented in previous research.

Over several decades, various studies have reported that the accounting profession is exposed to role conflict and role ambiguity in a public accounting environment (e.g., Bamber, et al., 1989; Fisher, 2001; Gaertner & Ruhe, 1981; Kemery, Bedeian, Mossholder, & Touliatos, 1985; Rebele & Michaels, 1990; Senatra, 1980; Strawser, Kelly, & Hise, 1982; Sweeney & Summers, 2002). Rebele and Michaels (1990, p. 127) argued that "the independent auditor's role is particularly susceptible to both components of role stress (role ambiguity and role conflict) because of (1) its boundary-spanning nature, (2) the potential for conflicting expectations from clients and the firm, and (3) the complexity of modern-day audits and the derivative consequences of poor role performance". For example, an auditor may be in a dilemma when he or she is not allowed by clients to perform certain tests, yet the test is very important and could affect the whole audit work for that transaction cycle, or at the worst scenario, auditors face conflicting objectives: either to operate at minimum cost while affecting the quality of audit work by reducing some of the necessary audit procedures, or perform all audit procedures to maintain high audit quality, which may jeopardise profitability by increasing the engagement costs.

Several studies confirmed the argument of a negative implication between role ambiguity and conflict and job outcomes in the auditing profession such as increased job-related tension and lower job performance. Indeed, Senatra (1980) suggested that the implication of role conflict and role ambiguity in audit firms could create other serious problems such as poor quality of auditors' performance and increased turnover. Senatra (1980) investigated the influence of role conflict and role ambiguity on job outcomes among the senior auditors from eight offices of a big audit firm in the United States. In particular, they explored the types of organisational climates that could lead to role conflict and ambiguity. It was found that the degree of role ambiguity had a negative influence on job satisfaction, whereas, increased role conflict led to high job related tension. According to Senatra (1980), role conflict does not affect job satisfaction possibly because the audit senior perceived role conflict to be an inherent part of the audit job and thus the conflict is expected.

Rebele and Michaels (1990) in their study of big four firms in the United States extended the study done by Senatra (1980) and also examined the relationship between role stress (role conflict and role ambiguity) and job performance. They found that job satisfaction was not only influenced by role ambiguity, as observed by Senatra (1980), but also was significantly affected by role conflict. However, consistent with the result obtained by Senatra (1980), further analysis revealed that only role conflict was positively related to the job related tension experienced by auditors. With regard to job performance, it was found that it had a negative relationship with role ambiguity. Similarly, a more recent study by Jones, Norman and Wier (2010) confirmed that both role conflict and ambiguity were negatively associated with job satisfaction. Like Rebele and Michaels (1990), the researchers also found that job performance was negatively associated with role ambiguity but not with role conflict.

Fisher (2001) investigated the influence of role conflict and role ambiguity on auditors' job satisfaction and performance in New Zealand. Based on 119 respondents from various auditor positions (from staff to partner) in two big firms, his findings for the relationship between role conflict/role ambiguity and job satisfaction/job performance supported Rebele and Michaels (1990) and Jones et al. (2010) studies with one exception. Rebele and Michaels (1990) and Jones et al. (2010) did not find a significant relationship between role conflict and job performance, whereas Fisher (2001) showed a significant negative relationship between these variables. Similarly, Fogarty (1996) found that role conflict had negative relations to job performance.

Law, Sweeney and Summers (2008) examined the effect of role conflict and role ambiguity public accountants' exhaustion from two public accounting firms in the United States. They found that role ambiguity was positively related to exhaustion, but not to role conflict. On the other hand, Fogarty et al. (2000) found that both of the role stressors were positively related to public accountants' burnout. Consistent with Senatra (1980), they found only role ambiguity had a negative association with job satisfaction and none of the roles were associated with turnover intentions and job performance.

With regards to job tension, Fogarty (1996) found that role conflict and role ambiguity had a significant positive relation to job tension. K. J. Smith, Everly and Johns (1993) and K. J. Smith, Davy and Stewart (1998) showed that stress arousal was positively associated with role ambiguity. In a more recent study, K. J. Smith et al. (2007) found that stress arousal was not associated with role ambiguity, but significantly related with role conflict.

Senatra (1980, p. 594) further claimed that, "the potential effects of conflict and ambiguity are costly, not only to the individual in terms of emotional consequences such as high job related tension and low job satisfaction, but also to the organisation in terms of lower quality performance and higher turnover". Role conflict and ambiguity can therefore be seen as important sources of stressful conditions which are perceived by auditors to exist in the auditing environment and consequently affect auditors' job outcomes.

3.7.4 Type A Behavioural Pattern (TABP)

It is well known that individuals have different characteristics and will respond differently to environmental conditions. As auditors' job performance is affected by environment or workplace conditions, the auditors' individual characteristics are of interest in gaining a better understanding of the incidence of job stress toward RAQP. Typical individual or personality characteristics in the business literature exhibit a Type A Behaviour Pattern (Choo, 1986; Fisher, 2001; Gundry & Liyanarachchi, 2007; Kushnir & Melamed, 1991; C. Lee, Ashford, & Bobko, 1990). Type A behaviour pattern (TABP) is characterised by a number of attributes such as competitiveness, persistence, impatience, aggressiveness, having a greater sense of time urgency, commitment to work, ambition and experiencing high levels of stress compared to Type B behaviour pattern (Blumenthal et al., 1985; Caplan & Jones, 1975; Jenkins, Zyzanski, Ryan, Flessas, & Tannenbaum, 1977; Rayburn & Rayburn, 1996). It is said that most individuals are likely to lie on the continuum between the two characteristics (Caplan & Jones, 1975). Thus, TABP could contribute to successful auditors' performance as well

as to problematic behavioural and physical expressions of stress. The auditing setting is particularly appropriate for investigating the implication of TABP for individual performance and stress mainly because work intensity, work hours and performance are directly linked to an individual auditor's efforts.

Numerous studies that focused on TABP have found TABP linked with an increased risk of coronary heart disease (Blumenthal et al., 1987; Booth-Kewley & Friedman, 1987; Kawachi et al., 1998; Schaubroeck, Ganster, & Kemmerer, 1994). For example, Schaubroeck et al. (1994) focused on the implication of TABP for cardiovascular disorder and found that, in the long term, Type A individuals exhibited symptoms of cardiovascular illness because of psychological and job complexity. Traditionally, TABP is viewed as a construct that should be relatively free from emotional concomitants (Friedman & Rosenman, 1974; Jenkins, et al., 1977). However, a number of studies support the idea that TABP is associated with emotional distress (Bluen, Barling, & Burns, 1990; Choo, 1986; Dimsdale, Hackett, Block, & Hutter, 1978; Søgaard, Dalgard, Holme, Røysamb, & Håheim, 2008). Bluen et al. (1990) demonstrated that Type A sales persons experienced high stress compared to Type B sales persons. This finding supports the earlier study by Choo (1986) and Haskins, Bagliorni and Cooper (1990), who found that auditors with Type A personality experienced more job-related stress than other auditors. In a more recent study, Søgaard et al. (2008) found that TABP was associated with psychological distress. In contrast, however, K. J. Smith et al. (1998) did not find any significant relationship between TABP and stress arousal among the members of American Institute of Certified Public Accountants (AICPA) and American Women's Society of Certified Public Accountants (AWSCPA). They argued that their measure, which captured the goal-oriented, achievement and task-oriented construct, did not measured the hostility/aggression component of Type A behavioural pattern associated with increased stress and deleterious health consequences. Similarly, Law et al. (2008) found that public accountants who exhibited greater Type A were not experiencing greater exhaustion. They suggested that the insignificant relationship between Type A and exhaustion could be because the Type A trait may have been redundant or was overlapping with other traits, as they used multiple personality traits in their study.

As TABP was found to be associated with stress, it may have significant implications in regard to audit quality. For instance, if Type A individuals are experiencing high levels of stress, would they be more likely to engage in RAQP or have poor job performance, thus resulting in low audit quality? Existing studies on RAQP and job performance, however, do not seem to support this argument. For example, Kelley and Margheim (1990) investigated the direct and moderating effect of TABP on the incidence of RAQP and did not find a significant direct or moderating effect of personality type on audit quality behaviour.

Fisher (2001) examined the moderator effect of TABP on role stress, job satisfaction and job performance in auditing. The study did not find a moderator effect of personality type. Nevertheless, the result showed a direct effect of personality type, where TABP was found to be better in both job satisfaction and job performance than their Type B counterparts. Fisher (2001) further argued that the external auditors' working environment probably was not extreme enough to reveal TABP behaviour. Consistent with the finding in Fisher (2001) and Kelley and Margheim (1990), Gundry & Liyanarachchi (2007) found no significant moderating influence of personality type on the association between time budget pressure and RAQP among auditors in New Zealand. One plausible explanation for this outcome may be that individuals with TABP characteristics are also said to be more ethically oriented than Type B (Rayburn & Rayburn, 1996), thus it is expected that Type A individuals would be less likely to engage in such kinds of behaviour (e.g. RAQP) that could jeopardise their performance or promotion. Another possible reason for high performance of Type A individuals could be due to the characteristics of TABP which lead such individuals to respond positively to challenging work conditions (Herried, Peterson, & Chang, 1985). The characteristic of TABP such as need for achievement may lead to high stress for the Type A individual, but on the other hand, that may also lead to greater goal attainment and better job performance.

3.7.5 Leadership Behaviour

Leaders are perhaps the most powerful determinant of organisational culture because leaders are the ones, who set the tone of the organisation, define its values and norms, and create and maintain an image of the organisation (Sekaran, 2006). Leadership behaviour therefore may influence the work place environment conditions either in a positive or negative way. Any actions taken will be considered as a signal by others in the organisation. If a leader is commonly known to have negative behaviours, these negative behaviours will easily be accepted and recognised by others in the organisation, thus its culture will become increasingly dysfunctional. In the auditing profession, there is a high possibility that the firm's leadership will shape others' behaviour in the firm. For example, if an audit senior is known to always engage in premature sign-off activity, that would give a message to staff auditors that the action is acceptable. Once it becomes institutionalised throughout the firm, this practice will become part of the firm's culture.

Dysfunctional organisations generally fail to achieve their objectives, frequently because of poor leaders (Sekaran, 2006). Paul, Strbiak and Landrum (2002) showed that dysfunctional behaviour in top management prohibits groups from effectively accomplishing their tasks. In general, organisations focus on productivity, efficiency and profit, thus, many organisational leaders have not developed strong interpersonal skills, and indeed, may instead have begun to abuse their authority in dealing with subordinates (Sekaran, 2006). This lack of human touch may contribute to the development of dysfunctional organisational cultures. Lok and Crawford (2004) suggested that leadership style is a major influence on individuals.

For example, Madlock (2008) demonstrated that leadership styles were strongly associated with high job satisfaction. When leaders demonstrate high levels of consideration, supportive and human-oriented behaviour styles, their subordinates tend to have higher levels of job satisfaction (Lok & Crawford, 2004; Tsai, 2008; Vries, Roe, & Taillieu, 1998). In addition, K. L. Lee (2008) suggested that integrating,

compromising and obliging leadership styles will enhance subordinate satisfaction. Employees demonstrate more confidence in supervisors who practice considerate leadership (Tsai, 2008), thus increasing their job satisfaction and performance, and hence improving overall organisational performance (Madlock, 2008).

Leaders also have a strong influence on employees and organisational outcomes (Vries, et al., 1998). Somech (2006) stated that participative leadership behaviours affect outcomes, such as group performance and innovation by influencing the behaviours of subordinates. A strong argument has been put forward by social psychological theory and social cognition research regarding differences of leaders' and subordinates' perspectives pertaining to subordinates' stress (Offermann & Hellmann, 1996). It has been argued that leadership style could be one of the job stress sources (Parker & Decotiis, 1983). Indeed, Ryska (2002) proposed that the study of work-related stress or job stress should include variables that reflect the organisational environment and work setting, such as leadership style. Gill et al. (2006) showed that subordinates will have low job stress under leaders that encourage more subordinate participation in problem solving and in exploring new approaches to achieve organisational objectives.

In the auditing profession, one of the most important characteristics of the audit environment facing audit personnel which could influence their behaviour is a hierarchical structure. There is a distinct hierarchical structure where there are three typical layers of supervision: audit senior, audit manager and partner. Staff will directly report to audit senior, whereas seniors directly report to manager and the manager directly reports to the partner. In this situation, where the performances of subordinates (staff, senior and manager) are evaluated by the superior or leader, the superiors' behaviour is expected to influence the subordinates' behaviours. Many studies in auditing have measured leadership style by using two dimensions: consideration and structure behaviours (e.g., Kelley & Margheim, 1990; Otley & Pierce, 1996b; Pratt & Jiambalvo, 1981; Zikmund, 2003). Fleishman and Peters (1962) defined consideration as the extent to which an individual is likely to have job relationships characterised by

mutual trust, respect for subordinates' ideas, and consideration of their feelings. On the other hand, structure is defined as the extent to which an individual is likely to define his own role and those of his subordinates towards goal attainment.

Kelley and Margheim (1990) found that more auditors were involved in underreporting behaviour when the leadership style was characterised by structure, which suggests that auditors may be experiencing high stress under such style. However, they did not find leadership style's moderating the relationship between time budget pressure and RAQP. In examining the audit firm's control system, Otley and Pierce (1996b) found that if the manager exercised a high level of structure in their leadership style, the tendency of senior auditors to be involved in RAQP was high. Alternatively, if a considerate leadership style was practiced by the managers, the likelihood of seniors committing RAQP was low. Similarly, Pratt and Jiambalvo (1981) investigated the relationship between leadership behaviour and audit team performance and they concluded that consideration behaviour compared to structure behaviour could enhance audit team performance.

3.8 Summary

In summary, this chapter has examined the existing literature and research issues associated with RAQP and audit quality. This chapter highlights the implication of job stress factors on auditors' behaviours. The discussion provides a foundation to fulfil the purposes of this study to extend previous studies by investigating the effects of variables on RAQP among the auditors in Malaysia. The next chapter considers the implication of this literature review for developing the hypotheses.

CHAPTER 4: HYPOTHESES DEVELOPMENT

4.1 Introduction

This chapter discusses the conceptual framework and development of hypotheses used in this study. An extensive review of relevant literature presented in Chapter 3 highlighted several main variables and relationships that are expected to exist between the constructs. These main variables are tested under specific hypotheses.

4.2 Conceptual Framework

Studies in the audit quality field generally use agency theory as the theoretical framework. Under this theory, information asymmetry between principal and agent will create a problem where an agent may pursue his own interest at the expense of the principal. Accordingly, independent or external auditors are hired to reduce this information asymmetry gap. As the agency conflict increases, a higher quality of audit is demanded (Watkins, et al., 2004). Most agency-related audit quality research assumes audit firm's attributes such as size, high audit fee and industrial specialisation to correspond with greater competence and independence, producing higher information quality and credibility (Balsam, et al., 2003; Carcello & Nagy, 2004; Craswell, et al., 1995; DeFond, et al., 2000; Francis & Simon, 1987; Geiger & Rama, 2006; Palmrose, 1986; Schauer, 2002; Simon & Francis, 1988).

Although the previously discussed theory has been widely used in the mainstream of audit quality research, studies on behaviour shows that organisational behaviour could influence an individual employee's performance (Chen, et al., 2006; Montgomery, et al., 1996; Williams, et al., 2001; Yousef, 2000). One of the organisational behavioural attributes that has directly affected job performance is job stress. Organisational and psychological literatures have identified many stress antecedents and provide evidence of the adverse effect of stress on job related outcomes (e.g., Bauer et al., 2006; Lau &

Buckland, 2001; Virtanen, et al., 2009; Vries, et al., 1998). Similarly, in the auditing profession, stress is found to affect auditors' job performance (Choo, 1986; Fisher, 2001; McDaniel, 1990; Rebele & Michaels, 1990) and most importantly, stress could also affect audit quality by influencing auditors' behaviours. Under certain levels of stress, auditors tend to exhibit dysfunctional behaviours by engaging reduced audit quality practices (E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b).

This study uses a modified Parker and Decotiis' (1983) job stress model to examine the effect of stressors on job performance and reduced audit quality practices (RAQP). The study focuses on audit personnel behaviour and the antecedents of stress. This study investigates the following three areas: auditors' job characteristics, firm characteristics and individual characteristics to explain behaviour among auditors. Several intra organisational stressors identified by Cooper and Marshall (1976) are sorted into two groups either as job characteristics or firm characteristics. In respect of individual characteristics, Cooper and Marshall's (1976) model suggests they only moderate the effects of other stressors, however, other studies show that some of these variables have a direct influence on job stress related outcomes (Fisher, 2001). Therefore, this study shows individual characteristics as an antecedent stressor in order to evaluate whether they have a direct effect on RAQP and job performance. The stressor variables which are believed to be the major causes of RAQP and impact on auditors' job performance in each dimension are identified from previous studies. The study's conceptual framework is presented in Figure 4.1.

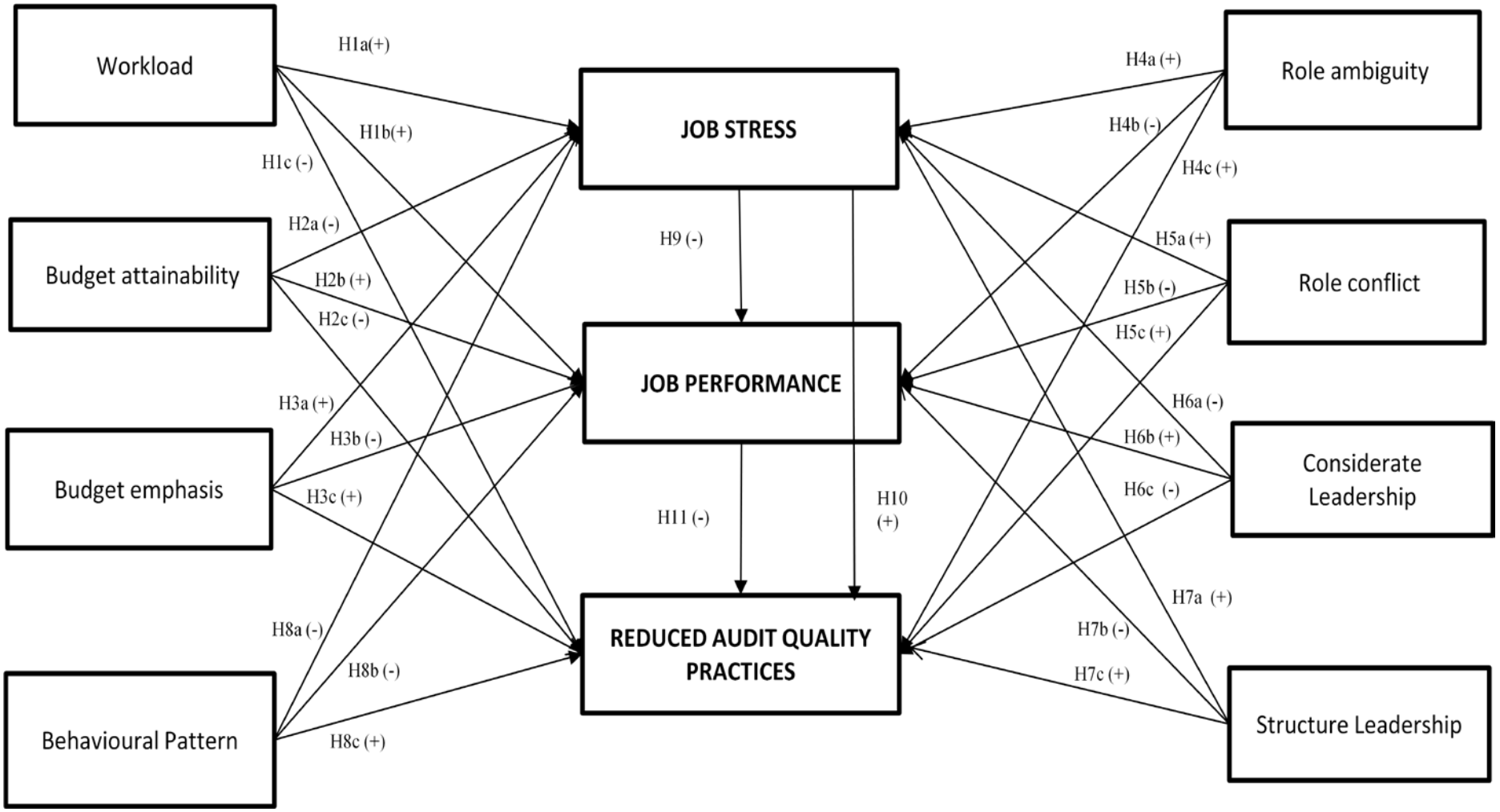

Figure 4.1: Conceptual Model Underpinning The Study

4.3 Hypotheses Development

As been discussed in the previous section, this study investigated three major factors that will influence RAQP, namely job characteristics, firm characteristics and individual characteristics. These characteristics with their specific variables were identified based on previous literature that was related to the auditing work environment. The development of each variable along with their hypotheses is discussed in the following section

4.3.1 Workload

Workload is a job condition that can precede and influence the level of job stress (Jackson & Schuler, 1985; Schaubroeck, et al., 1989). In fact, workload is often cited as a stressor in the accounting work environment (K. J. Smith, et al., 2010). This is particularly because of a peak period (busy season) that is typically associated with auditing job environment. During this period, auditors need to work longer hours than in the off peak period, thus auditors are experiencing high stress, greater emotional exhaustion and a more cynical attitude toward clients and fellow employees (Campbell, et al., 1988; Law, et al., 2008; Sweeney & Summers, 2002). Sweeney and Summers (2002) further concluded that work overload could result in a psychological stressful condition.

Having said that, unlike other studies in various job environments that found workload was negatively associated with job performance (Laaksonen, et al., 2006; Schaubroeck, et al., 1989; Spector, et al., 1988; Virtanen, et al., 2009), studies in the accounting environment have also found that workload can be positively associated with job performance (Fogarty, et al., 2000; K. J. Smith, et al., 2007). Consequently, this could also reduce the intention of the auditors to involve in RAQP. Therefore, high workload will have negative implications on auditors' job stress but not to the job performance and RAQP, thus the following hypotheses are proposed:

H1a: High workload will be associated with an increase in job stress

H1b: High workload will be associated with an increase in job performance

H1c: High workload will be associated with a decrease in RAQP

4.3.2 Budget Attainability

Budget attainability and its impact on RAQP have received substantial interest in previous studies (E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). Budget attainability is considered as a major problem faced by the public accounting profession (DeZoort & Lord, 1997). Auditors may feel pressure in the completion of audit engagements with limited resources allocated to them. Therefore, it is believed that the more that the auditors perceive the budget to be unattainable, the higher the job stress experienced by them. As the time budget pressure increases, auditors' performance decreased significantly (Choo & Firth, 1998; McDaniel, 1990). According to McDaniel (1990), the implication of time budget pressure on audit effectiveness could be more serious if auditors prematurely sign off on audit procedures yet report that they had performed it. This argument is supported by studies in RAQP, where most of the studies showed that time budget pressure was the main factor for auditors to engage in RAQP (E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). Indeed, 80% of the auditors surveyed by Coram et al. (2003) who were involved in RAQP cited unattainability of budget as a factor in committing these practices.

Therefore, based on the above argument, it can be theorised that, low budget attainability could increase auditors' job stress, have a negative impact on auditors' job performance and increase the tendency to engage in RAQP. Thus, the following hypotheses are tested:

H2a: Low levels of budget attainability will be associated with an increase in job stress

H2b: Low levels of budget attainability will be associated with a decrease in job performance

H2c: Low levels of budget attainability will be associated with an increase in RAQP.

4.3.3 Budget Emphasis

The high emphasis on meeting a time budget placed by audit firms could influence auditors' behaviour (Otley & Pierce, 1996b). Otley and Pierce (1996b) found that most of the senior auditors perceived time budget achievement was critical for performance evaluation. Furthermore, Lau and Buckland (2001) found that budget emphasis was significantly associated to job related tension. As the time budget emphasis is seen by auditors as a critical performance indicator and could lead to the high stress experienced by auditors, it is believed that meeting the time budget is associated with RAQP. There is the possibility that auditors might leave the work undone but acted as if they had complied with it in order to meet the budgets (Kelley & Margheim, 1990; Kermis & Mahapatra, 1985). Therefore, the following hypotheses are examined:

H3a: High perceived emphasis on meeting time budgets in performance evaluation will be associated with an increase in job stress.

H3b: High perceived emphasis on meeting time budgets in performance evaluation will be associated with a decrease in job performance.

H3c: High perceived emphasis on meeting time budgets in performance evaluation will be associated with an increase in RAQP.

4.3.4 Role Ambiguity and Role Conflict

Role ambiguity and role conflict have been seen as significant auditors' stress antecedents by previous studies. Indeed, these antecedents are perceived to exist in the audit firm by auditors and thus affect the auditors' job outcomes (Senatra, 1980). Previous studies provide evidence that role ambiguity and role conflict may influence auditors' job performance, job satisfaction and job related tension (Fisher, 2001; Jones, et al., 2010; Rebele & Michaels, 1990; Senatra, 1980). A high degree of role ambiguity and role conflict could adversely affect auditors' job performance and increase the level of stress experienced by auditors (Fisher, 2001; Jones, et al., 2010; Rebele & Michaels, 1990; Senatra, 1980).

Furthermore, strong arguments have been presented in the literature in support of a negative association between job performance and both, role ambiguity and role conflict. For example, Jackson and Schuler (1985, pp. 42-43) argued that "From a cognitive perspective, performance should be hindered by role ambiguity and role conflict because with them the individual faces either a lack of knowledge about the most effective behaviours to engage in or an almost impossible situation for doing everything expected. Therefore, regardless of the amount of effort expended, behaviours are most likely to be inefficient, misdirected, or insufficient". They further suggested that "a motivational perspective would predict that performance should be negatively correlated with role ambiguity and role conflict because they are negatively associated with effort-to-performance and performance-to-reward expectancies" (p. 43). Therefore, it is expected that an auditor who perceives high levels of role ambiguity and role conflict to exist will be likely to engage in RAQP as they experience higher stress and lower performance than other auditors. Thus, the following hypotheses are posited:

H4a: High perceived role ambiguity will be associated with an increase in job stress.

H4b: High perceived role ambiguity will be associated with a decrease in job performance.

H4c: High perceived role ambiguity will be associated with an increase in RAQP.

H5a: High perceived role conflict will be associated with an increase in job stress.

H5b: High perceived role conflict will be associated with a decrease in job performance.

H5c: High perceived role conflict will be associated with an increase in RAQP.

4.3.5 Leadership Behaviour

Previous studies have suggested that leadership behaviour could be one of the sources of job stress (Parker & Decotiis, 1983). It has been found that employees will exhibit higher job satisfaction, increased job performance and low job stress if leaders demonstrated high consideration, are supportive and exhibit human-oriented behaviour (Lok & Crawford, 2004; Madlock, 2008; Tsai, 2008; Vries, et al., 1998). Moreover, leadership behaviour that delegates more decision-making power to employees will enhance group performance (Somech, 2006) and consequently improve the organisation's performance (Madlock, 2008). In the auditing profession, as a hierarchical structure is part of the firm's main characteristics, leadership behaviour (senior, manager and partner) could influence the behaviour of subordinates (staff, senior and manager). This is supported by previous studies, where leadership behaviour has been found to influence RAQP among auditors. Auditors tended to engage in RAQP under structured leadership behaviour (Kelley & Margheim, 1990; Otley & Pierce, 1996b) and performed better under consideration behaviour (Pratt & Jiambalvo, 1981), thus suggesting that auditors may experience high stress under structured leadership behaviour.

Evidence from previous studies suggests that, leadership behaviour which allows subordinates or employees to have some authority and greater participation in decision making will enhance subordinates' job performance, job satisfaction and lead to low stress. Therefore, it is expected that auditors will experience low job stress under a

considerate leadership style, which in turn will enhance their job performance, thus improving the quality of their audit work. Accordingly, the following hypotheses are proposed:

H6a: High levels of consideration in the leadership style of seniors/managers/partners will be associated with a decrease in job stress.

H6b: High levels of consideration in the leadership style of seniors/managers/partners will be associated with an increase in job performance.

H6c: High levels of consideration in the leadership style of seniors/managers/partners will be associated with a decrease in reduced audit quality practices.

On the other hand, subordinates or employees tend to experience low satisfaction with superiors that exert formalised or structured behaviour, using punishments and warnings instead of coaching and feedback behaviour (K. L. Lee, 2008). This type of leadership style creates rigid application control in the working environment and is concerned about well defined work procedures. It has been argued that under rigid application control, auditors tend to have defensive behaviours and are most likely to engage in RAQP (Otley & Pierce, 1996b). Therefore, the following hypotheses are proposed:

H7a: High levels of structure in the leadership style of seniors/managers/partners will be associated with an increase in job stress.

H7b: High levels of structure in the leadership style of seniors/managers/partners will be associated with a decrease in job performance.

H7c: High levels of structure in the leadership style of seniors/managers/partners will be associated with an increase in reduced audit quality practices.

4.3.6 Type A Behavioural Pattern

Previous studies provide evidence that Type A individuals tend to experience high stress (Bluen, et al., 1990; Choo, 1986; Dimsdale, et al., 1978; Søgaard, et al., 2008) and increase in stress will lead to an increase in health problems such as coronary heart disease (Blumenthal, et al., 1987; Booth-Kewley & Friedman, 1987; Kawachi, et al., 1998; Schaubroeck, et al., 1994). Choo (1986, p. 18) argued that "the overly competitive and fast life style of Type A's tends to place them in a constant state of anxiety when dealing with their daily working environment. Consequently, they generally find it hard to cope with job stress." These characteristics may have implications for audit quality, for example, if high stress is said to be associated with a Type A individual, they may be more likely to engage in RAQP.

On the other hand, Type A individuals are also committed to their work, ambitious and competitive, which means that they may achieve the organisation's goals without engaging in RAQP. The commitment and competitiveness dimensions of Type A behaviour patterns seem significant, and the more influential dimension (Malone & Roberts, 1996). With these dimensions, Type A individuals will uphold and comply with work and organisational procedures in order to avoid any negative impact on their performance evaluation. In addition to that, Type A individuals are also said to be more ethically-oriented than Type B individuals (Rayburn & Rayburn, 1996). Therefore, the individual displaying a Type A behaviour pattern would be less likely to engage in RAQP.

Several studies examined the direct effect of the Type A behavioural pattern and the incidence of RAQP, but all failed to find any association with these variables (Kelley & Margheim, 1990; Malone & Roberts, 1996). Similarly, previous studies fail to support the Type A behaviour pattern moderating the effect of role stress on RAQP and job performance (Fisher, 2001; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990). However, Fisher (2001) found a direct effect of Type A behaviour pattern, where Type A individuals exhibited higher job satisfaction and job performance than Type B

counterparts. Even though there is limited support for the specific nature of the relationship between Type A and RAQP, the characteristics of Type A behaviour patterns (e.g., committed to their work, ambitious and competitiveness) and positive response towards challenging work condition are expected to have a direct effect on RAQP and could reduce the auditors' intention to engage in RAQP. Therefore, the following hypotheses are proposed:

H8a: Type A individuals will be associated with higher job stress compared to Type B individuals.

H8b: Type A individuals will be associated with better job performance compared to Type B individuals.

H8c: Type A individuals are less likely to use RAQP compared to Type B individuals.

4.3.7 Job Stress and Job Performance

Stress has been theorised to affect auditors' job outcomes. Specifically, high stress levels experienced by auditors could detrimentally affect job performance (Choo, 1986; Fisher, 2001; McDaniel, 1990; Rebele & Michaels, 1990). Under highly stressful conditions, auditors experienced greater emotional exhaustion which could affect their approach towards the job (Sweeney & Summers, 2002). McDaniel (1990) found that as the pressure imposed on auditors increases, auditors' performance in terms of processing accuracy and sampling adequacy declined significantly. Thus, the following hypothesis is proposed:

H9: High levels of job stress will be associated with a decrease in job performance.

4.3.8 Job stress and RAQP

Studies on RAQP provide conclusive results with regards to the implication of stress on RAQP. Auditors tended to be involved in RAQP when they experience high pressure. Most of the previous studies found that a high level of pressure was significantly associated with a high level of RAQP (Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). According to Houston (1999), auditors are more likely to omit some of the procedures even for high risk clients, if the pressure is high enough. Indeed, as a high-stress profession, the incidence of RAQP is considered normal and exists at all levels of position in audit firms (E. Cook & Kelley, 1988) and across all sizes of audit firms (Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). Therefore, the following hypothesis is posited:

H10: High levels of job stress will be associated with an increase in RAQP.

4.3.9 Job Performance and RAQP

Auditors are said to have high job performance if they can work effectively and efficiently by properly completing audit procedures and gathering sufficient appropriate evidence within the budget allocated (McDaniel, 1990). This performance is translated into audit quality. However, if the auditors underperform, the possibility of providing substandard audit quality is high. In other words, if auditors fail to properly execute the audit engagement (e.g., through early sign off or omission of some crucial procedures without strong justification), the possibility of issuing the wrong audit opinion is also high. As the auditors' performance is related to their promotion prospects (Hirst, 1983), there is the possibility that auditors may not become involved in any dysfunctional activities that could jeopardise their performance evaluation. Therefore, it could be argued that auditors with high performance will not engage in any RAQP. Thus, the following hypothesis is developed:

H11: High levels of job performance will be associated with a decrease in RAQP.

4.4 Summary

This chapter develops the conceptual model underpinning the study based on the literature review discussed in Chapter 3. This model links various stress antecedents or variables to auditors' job-related outcomes (job stress, job performance and RAQP). At the same time, this model also shows the linkage between job stress and job performance; job stress and RAQP; and between job performance and RAQP. Chapter 5 discusses the research methodology that includes the research design, sampling procedure, questionnaire development, variable development, data collection and techniques for analysing quantitative data.

CHAPTER 5: RESEARCH METHODS

5.1 Introduction

This chapter presents the research method used in this study, including the research design, the measurement of variables, data collection process and techniques for analysing quantitative data. This chapter is organised into six sections. Section 5.2 explains the research design of the study, followed by the sampling procedures in section 5.3. Questionnaire and variables developments are then discussed in sections 5.4 and 5.5. The method of data collection is discussed in section 5.6, and section 5.7 outlines the analytical techniques used.

5.2 Research Design

Research design is “a master plan specifying the methods and procedures for collecting and analysing the needed information” (Zikmund, 2003, p. 65). The research design for this study can be divided into several elements as shown in Figure 5.1. This study employs a quantitative approach where the questionnaire will be developed and pilot-tested.

5.3 Sampling Procedure

Sampling is the process of selecting a sufficient number of elements from the population so that its characteristics or properties can be generalised to the population (Sekaran, 2006). In order to select the right samples, three steps of sampling procedure are taken into consideration; 1) to define the population, 2) to identify the sampling frame, and 3) to select the sample elements.

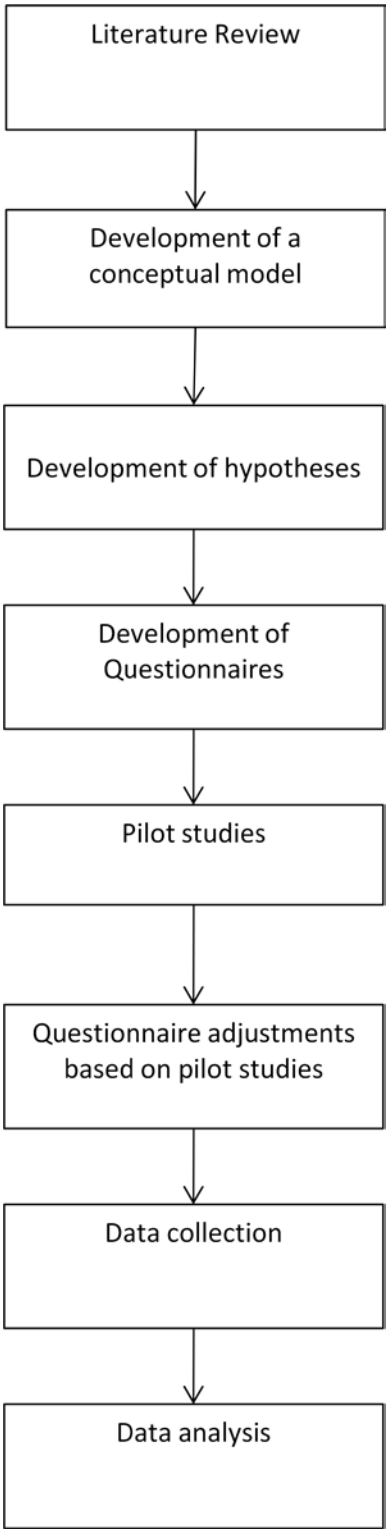

Figure 5.1: Research Design

5.3.1 Population

Population is defined by Neuman (2006, p. 224) as "a large group of many cases from which a researcher draws a sample and to which results from a sample are generalised." The population of the study consisted of all the financial statements external auditors in Malaysia that are registered as a member of the Malaysian Institute of Accountant (MIA).

5.3.2 Sampling Frame

The sample frame is "a list of all the elements in the population from which the sample is drawn" (Sekaran, 2006, p. 265). As this study uses MIA members as its subject, the types of MIA membership would provide the sampling frame for this study. Basically, MIA offers three categories of membership to its members: chartered accountant, licensed accountant or associate member. As at 30 June 2009, the total membership was at 25,631 and the distribution of members as in Table 5.1:

Table 5.1: MIA Membership as at 30 June 2009

	Chartered Accountant	Licensed Accountant	Associate Member	Total
Members[6]	25,526	11	94	25,631

For this study, the sampling frame was restricted only to MIA members that are registered as chartered accountants. This group was selected mainly due to their vast experience of auditing field work, making them appropriate recipients of the questionnaire.

[6] The figures are obtained from MIA's 2009 annual report.

5.3.3 Sample Elements

Sampling element is defined as “the name for a case or single unit to be sampled” (Neuman, 2006, p. 224). Chartered accountant are those with three years relevant experience in public accounting firm or government department or other commercial organisations and who have an accounting degree or post-graduate diploma from local higher institutions or accounting professional qualifications from local and overseas accounting bodies recognised by the MIA. However, for chartered accountants, only those that are working as a financial statement external auditor at various positions in the public accounting firm will be selected in the sample. On the other hand, associate members are mainly academics, who have at least three years teaching experience in accountancy related subjects at higher institutions. Therefore, this type of membership was excluded from this study.

5.4 Questionnaire Development

The design of questions for the questionnaire were based on the theoretical framework underlying the research question (Tharenou, Donohue, & Cooper., 2007). The questionnaire development should adequately capture all the information needed to answer the study’s research questions and form an integrated whole (Neuman, 2006). A structured questionnaire was developed from existing instruments in order to ensure the validity and reliability of the measures. The following sections describe how the questionnaire was designed, the scales used and the response format selected.

5.4.1 Questionnaire Design

The questionnaire was divided into seven sections: demographic information, job characteristics, firm characteristics, individual characteristics, job stress, job performance and reduced audit quality practices. Demographic information of the respondent’s background collected were gender, age, year of audit experience, job position and type of audit firm. The other sections contained questions focusing on the

key constructs in the theoretical framework (job characteristics: workload and budget attainability; firm characteristics: budget emphasis, role ambiguity and role conflict, leadership style; individual characteristics: type A behavioural pattern). The sequence of the questions in the questionnaire began with easier questions followed by difficult ones as suggested by Dillman (2000) (refer to Appendix 1 for the full copy of the questionnaire).

5.4.2 Scale and Response Format

The purpose of scaling is to assist in the conceptualisation and operationalisation of a construct and also to produce quantitative measures which can be used to test hypotheses (Neuman, 2006). The most commonly used scales are five- or seven-point Likert scales (Neuman, 2006) which are adequate for use with most items (Hinkin, 1995).

A five-point Likert scale was employed in all of the questions in the questionnaire except for the demographic information for the following reasons: firstly, it allows "respondents to indicate how strongly they agree or disagree with carefully constructed statements that range from very positive to very negative toward an attitudinal object" (Zikmund, 2003, p. 312). Secondly, "the simplicity and ease of use of the Likert scale is its real strength. When several items are combined, more comprehensive multiple indicator measurement is possible" (Neuman, 2006, p. 210), therefore, the Likert scale is the most appropriate for research designs that utilise self-administered surveys, personal interviews or online surveys (Hair, Babin, Money, & Samouel, 2003). Finally, coefficient alpha reliability with the five-point Likert scale has been shown to increase, at first, but then to level off when more than five-points are used (Lissitz & Green, 1975). Table 5.2 shows various categories of five-point Likert scale used for each variable in this study.

5.5 Development of Variables

This section describes the measurement tools used to measure each construct for all the variables in the theoretical framework.

Table 5.2: Five-point Likert Scale Categories

Variables	Five-point Likert scale
Type A behavioural pattern	'*1*' represents '*false*' and '*5*' represents '*true*'
Budget attainability	'*1*' represents '*impossible to achieve*' and '*5*' represents '*very easy to achieve*'
Budget emphasis	'*1*' represents '*not important*' and '*5*' represents '*very important*'
Responds to budget attainability Reduced audit quality practices Reason for reduced audit quality practices Job stress Leadership style	'*1*' represents '*never*' and '*5*' represents '*always*'
Workload Role ambiguity and role conflict	'*1*' represents '*strongly disagree*' and '*5*' represents '*strongly agree*'
Job performance	'*1*' represents '*unsatisfactory*' and '*5*' represents '*outstanding*'

5.5.1 Dependent Variables

5.5.1.1 Job Stress

Job stress was measured based on the Job-related tension scale developed by Kahn et al. (1964). The Job-related tension scale consists of fifteen questions and each question is scored on a five-point Likert scale ('1' represents 'never' and '5' represents 'always'). An overall tension score was calculated for each individual respondent. The higher the overall score, the higher the respondent's job stress level.

5.5.1.2 Job Performance

The study employed the job performance measurement adapted by Fisher (2001) that was originally developed by Choo (1986). This self rated instrument uses a five-point Likert scale with '1' representing 'unsatisfactory' and '5' representing 'outstanding'. Choo's (1986) performance instrument was chosen mainly because it had been subjected to rigorous development and testing, and was devised in consultation with five personnel partners from five national accounting firms. The instrument consists of twelve performance dimensions and individual performance is based on his/her average scores on these dimensions. Choo (1986) identified several weaknesses of his performance instrument, first, it assumes that each dimension is of equal importance, second, it fails to account for the relative importance of each dimension across different auditors level in the audit firm. To overcome these problems, Fisher (2001) developed a weighting system for the Choo (1986) instrument with the assistance of partners from big audit firms, which is employed in this study.

Self-rating performance measures have been used in previous research to avoid the problem of "halo-error" associated with superiors' ratings (Brownell, 1982; Nealey & Owen, 1970). Brownell (1982, p. 17) describes "halo error" as the tendency to evaluate "globally" or, in other words, "to evaluate on only one cognitive dimension." Previous studies provided the evidence that self-rating contained less "halo-error" than superiors' rating (Heneman, 1974). Although there has been criticism that self-rating performance may lead to leniency bias in responses (Heneman, 1974; Nealey & Owen, 1970), if it does exist, as long as such bias is not systematic with the independent variables, a study's results should not be affected (Brownell & McInnes, 1986).

5.5.1.3 Reduced Audit Quality Practices

The following five RAQP used by Kelley and Margheim (1990) and Otley and Pierce (1996b) were adopted as dependent variables in this study:

1. Prematurely signing-off on a audit program step,
2. Reducing the amount of work performed on an audit step below what the audit would consider reasonable,
3. Failing to research an accounting principle or technical issue,
4. Making superficial reviews of client documents, and/or
5. Accepting weak client explanations.

These behaviours were selected mainly because Kelley and Margheim (1990) found these behaviours to be commonly engaged in by auditors. Subjects were asked to indicate the frequency of each variable encountered in the previous year of audit work. Each question was scored on a five-point Likert scale ('1' represents 'never' and '5' represents 'always') as adopted by Otley and Pierce (1996b). For each respondent, the overall measure of RAQP is the sum of the respondent's scores on these five practices. Therefore, higher scores represent greater incidence of respondent's RAQP.

5.5.2 Independent Variables

5.5.2.1 Workload

Workload was measured based on role overload measurement that consists of a three-item scale from Beehr et al. (1976). The instrument was measured based on a five-point Likert scale anchored by 'strongly disagree' to 'strongly agree'. Higher scores were associated with greater workload experienced by respondents. This instrument has been widely used in previous studies (Beehr, Jex, Stacy, & Murray, 2000; H. Lee, Song, Cho, Lee, & Daly, 2003; Sweeney & Summers, 2002).

5.5.2.2 Budget Attainability

The instrument was adopted from Otley and Pierce (1996b) study. Respondents were asked their perceptions and responses on the attainability of their budget in the last

year. The question was scored on a five-point Likert scale (‘1’ represents ‘impossible to achieve’ and ‘5’ represents ‘very easy to achieve’).

5.5.2.3 Budget Emphasis

Respondents were asked two direct questions about their perception of the importance of budget achievement in their overall performance evaluation. The instrument was adopted from Otley and Pierce (1996b). The instrument was measured based on a five-point Likert scale (‘1’ represents ‘not important’ and ‘5’ represents ‘very important’).

5.5.2.4 Role Ambiguity and Role Conflict

In this study, role ambiguity and role conflict were measured based on the instrument developed by Rizzo et al. (1970). The instrument consisted of 14 items, with 8 of the items relating to role conflict and 6 items relating to role ambiguity. 85% of stress studies have employed this instrument to investigate the impact of role stress (Fisher, 2001). The psychometric properties of both measures have been closely scrutinised in previous studies (House, Schuler, & Levanoni, 1983; Schuler, Aldag, & Brief, 1977) and the results indicate that “the Rizzo et al. (1970) role ambiguity and role conflict scales have been and are satisfactory measures of two role constructs” (Jackson & Schuler, 1985, p. 17). A recent study by C. S. Smith, Tisak and Schmieder (1993) also concluded that the psychometric properties of the scales were acceptable.

Role ambiguity was measured based on the items that reflect certainty about duties, authority, allocation of time and relationship with others; clarity or existence of guidelines, directives, policies; and the ability to predict sanctions as outcomes of behaviour.

On the other hand, role conflict items were developed based on role conflict components, which identified the conflict between the focal person's values and the defined role behaviour; conflict between time, resources or capabilities of focal person and defined role behaviour; and conflicting expectations and organisational demands in the form of incompatible policies. This instrument used a five-point Likert scales ranging from strongly disagree to strongly agree.

5.5.2.5 Leadership Consideration and Structure

Leadership consideration and structure were measured using the instrument adapted for an auditing setting by Pratt and Jiambalvo (1981) that was based on Stogdill's (1963) Leader Behaviour Description Questionnaire (LBDQ). The instrument was measured based on a five-point Likert scale ('1' represents 'never' and '5' represents 'always'). Otley and Pierce (1996b) reported the cronbach alpha of their study was .88 which indicated a high level of reliability. They further suggested that the instrument is applicable in an auditing setting. In addition to that, the LBDQ was used mainly because it has dominated previous studies which have measured leadership behaviour (Goodstein & Lanyon, 1999; Kao, Craven, & Kao, 2006; Lok & Crawford, 2001; Lok, Westwood, & Crawford, 2005).

5.5.2.6 Type A Behaviour Pattern (TABP)

There are two dominant instruments used to assess the TABP: the Structured Interview (SI) and the Jenkin Activity Survey (JAS), a self-administered questionnaire (Blumenthal, et al., 1985). Structured Interview is the initial scale used to measure TABP (Edwards, Baglioni, & Cooper, 1990). However, it is time consuming to evaluate each respondent and takes approximately one hour to complete an interview, making it impractical for use in large scale survey research (Blumenthal, et al., 1985; Edwards, et al., 1990). It also requires rigorous training from its originator to ensure validity and reliability (Yarnold & Bryant, 1988) and has to be administered by specially-trained interviewers (Blumenthal, et al., 1985).

Because of that, various self-reported measures of TABP have been developed, such as the Jenkins Activity Survey, the Vickers scale, Blumenthal's Type A Self-Rating Inventory Scale and the Ivancevich and Matteson Individual Behaviour Activity Profile. There is, however, lack of consensus among researchers in terms of which self-reported measure of the TABP is the most appropriate for use in organisational research (Fisher, 2001). Therefore, the validity of the TABP scale is established based on the association between the chosen self-reported measure and Structured Interview (Fisher, 2001; Yarnold & Bryant, 1994).

The Jenkins Activity Survey (JAS) is the most commonly used self-reported scale in TABP studies (Edwards, et al., 1990; Fisher, 2001; Gundry & Liyanarachchi, 2007; Yarnold & Bryant, 1988) and has items similar to those used in the Structured Interview (Edwards, et al., 1990; Fisher, 2001). However, the JAS has some major problems that limit its usefulness. Perhaps, the most obvious shortcoming of the JAS is its expense. It is costly to administer since it is licensed under the Psychological Corporation and has to be supervised by a registered psychologist (Gundry & Liyanarachchi, 2007); and it takes approximately one hour to complete (Blumenthal, et al., 1985). Although the licensed right can be obtained from the Psychological Corporation, the practicality issue arises if it is going to be used in large scale survey research.

On the other hand, the Blumenthal's Type A Self-Rating Inventory (TASRI) Scale developed by Blumenthal et al. (1985) does not need to be administered by a registered psychologist. The TASRI has also been found to have a high correlation with both, the Structured Interview and JAS (Blumenthal, et al., 1985; Yarnold & Bryant, 1994). The TASRI uses Type A scores which consist of 38 personality characteristics (while the Vickers, and Ivancevich and Matteson Individual Behaviour Activity Profile consist of 9 and 21 characteristics respectively), thus increasing the chances of differentiating between Type A and Type B samples (Yarnold & Bryant, 1988). In addition, the TASRI's personality traits assess the

responses and expressions of the individual, which is important in assessing the Type A characteristic and which will enhance the construct validity of the Type A measure (Yarnold & Bryant, 1988). Finally, TASRI requires only ten minutes to complete (Blumenthal, et al., 1985), and is thus appropriate for use with a large number of subjects compared to SI and JAS. Therefore, based on these arguments, this study employed the TASRI instrument. In TASRI, respondents were asked to indicate the extent to which each of a number of characteristics was true for them. Individuals who score above the median level will be classified as Type A personality, whereas, those who score below the median level will be classified as Type B personality (Gundry & Liyanarachchi, 2007).

5.6 Data Collection

Data collection for this study comprised two stages; pilot testing of the questionnaire and final questionnaire administration to auditors in Malaysia. These stages are discussed in the following sections.

5.6.1 Stage One: Pilot Testing

Pilot testing was undertaken in order to refine the questionnaire prior to the final questionnaire administration. As defined by Zikmund (2003, p. 63), pilot testings " collect data from the ultimate subjects of the research project to serve as a guide for the larger study". It is suggested that subjects should be drawn from the target population and simulate the procedures that have been designed for final data collection in the main study. In this study, three pilots were conducted and further discussions are as follows:

First, the questionnaire was examined by statistician and language consultants from Edith Cowan University (ECU). The questionnaire was amended based on the statistician and language consultants suggestions such as to standardise Likert scale to a

five-point scale as it provides several advantages as been discussed in previous section, to consistently begin all the questions with negative scale (e.g., '1' represents '*false*' and '5' represents '*true*') and finally to arrange the sequence of the questions in the questionnaire from easy to difficult questions.

Second, the questionnaire was distributed to six ECU accounting PhD students from Malaysia in order to refine the readability and clarity of the questionnaire. All of the students that participated in this pilot test were academics with extensive experience in the auditing and accounting fields. All of the participants found that the phrasing and wording of the questionnaire were simple and easy to understand, and that the length of the questionnaire was reasonable.

The questionnaires were then distributed to auditors in Malaysia for the pilot testing. At this stage, the participants consisted of staff and senior auditors in non-big audit firms. As this was a preliminary study, a convenience sampling technique was used where the researchers solicited the aid of contact auditors to co-ordinate the research within the firms. Questionnaires were distributed and collected by the contact auditors in selected firms. 70 questionnaires were sent to contact auditors and 44 usable responses were received, a response rate of 63%. Among the respondents, 77% were staff auditors and 23% were senior auditors.

The objective of this pilot study was twofold. First, to ensure the questionnaire was easy to understand by the participants and second, to explore the existence of the RAQP phenomenon in the Malaysian auditing environment. With regards to the first objective, there were no major comments received from the participants, therefore the questionnaire was deemed to be appropriate for use in the final data collection stage.

For the second objective, Table 5.3 presents the frequencies of specific RAQP committed by participating auditors. From this table, five practices most commonly used by auditors during their audit engagements can be identified: Auditors are mostly engaged in "superficial reviews of client's documents" and "reduced audit work below what they considered reasonable" with 45.5% and 20.5% respectively of auditors citing at least they were "often" involved in these kinds of unacceptable behaviours. The RAQP "accepted weak client explanation" and "failed to research an accounting principle" accounting for 13.7% followed by "premature sign-off" (15.9%). Most of the auditors admitted "at least sometimes" to engaging in RAQP. This pilot study showed a high incidence of RAQP among the auditors compared to studies by Otley and Pierce (1996b) and Coram et al. (2003) with 88% and 63% of senior auditors admitting to engaging in RAQP. Of some concern also is the fact that none of the auditors answered "never" for all types of RAQP, which indicates that all RAQP are common practices among auditors in non-big firms. This appears to contradict to results of Otley and Pierce (1996b) who found that 12% of respondents indicated "never" for all four types of RAQP, and Coram et al. (2003) who found 37% of auditors to never engage in any RAQP.

Table 5.3: The Frequencies of Specific RAQP Engaged by Auditors

RAQP	Never		Rarely		Sometimes		Often		Always	
Prematurely signing-off on a audit program step	4.5%	(2)	11.4%	(5)	68.2%	(30)	13.6%	(6)	2.3%	(1)
Reduced work below what you considered reasonable	6.8%	(3)	13.6%	(6)	56.8%	(25)	18.2%	(8)	2.3%	(1)
Failed to research an accounting principle	6.8%	(3)	15.9%	(7)	63.6%	(28)	11.4%	(5)	2.3%	(1)
Made superficial reviews of documents	0%	(0)	6.8%	(3)	47.7%	(21)	34.1%	(15)	11.4%	(5)
Accepted weak client explanation	2.3%	(1)	22.7%	(10)	61.4%	(27)	11.4%	(5)	2.3%	(1)

These preliminary results provide evidence that the RAQP phenomena does occur in the Malaysian auditing environment with more than half of the participating auditors committing these practices at least "sometimes".

5.6.2 Stage Two: Mail Questionnaire Administration

The questionnaire was distributed in March 2010 with the assistance of the MIA. As the MIA treated the information of their members as confidential, no list of members was given by MIA to the researcher. In fact, MIA insisted that the labelling process of respondents' addresses onto the outgoing envelopes was to be done in their head office in Kuala Lumpur. This restriction resulted in a lack of opportunity for a follow up procedure. MIA had prepared the list of respondents based on the requirement given by the researcher, with the proviso that only MIA members that are currently working as financial statement external auditors should be selected as respondents.

MIA obtained the number of respondents as required in this study by searching in their database. By using the "external auditors" keyword, 1,756 members met the criteria, thus, 1,756 questionnaires were mailed to auditors ranging from various levels (staff to partner) across small to Big-four firms in Malaysia. The questionnaire consisted of six pages printed on double sided A4 paper (refer to Appendix 1).

In order to enhance the response rate in the absence of a follow-up procedure, Dillman's (2000) suggestions were employed in this study. 1) The questionnaire was prepared in a booklet form, with paper folded in the middle and stapled along the spine. This format is more familiar for the respondents as people tend to read from page one and then turning to page two and so forth. 2) The questionnaire began with the easiest question; grouping similar questions together and building cognitive ties among groups of questions. 3) The questions were easy and simple. 4) The questions applied to all the respondents. 5) Questions were numbered consecutively and simply from beginning to end. 6) The questionnaire should have a reasonable length. The questionnaire in this study had a reasonable page length (6 pages). Neuman (2006) stated that using questionnaires of up to 15 pages is acceptable for well educated respondents.

In addition to that, Dillman (2000) emphasised the importance of the following consideration to increase the response rate; 1) Including a good cover letter and having official sponsorship for the survey. In this study, each questionnaire was accompanied with a covering letter typed on ECU letter-head paper explaining the research and written instruction for completing the questionnaire (refer to Appendix 2); and a support letter from MIA endorsing the study (refer to Appendix 3). 2) Emphasising anonymity and confidentiality. For this, the covering letter also included the statement, which emphasised all the data disclosed would be treated with the strictest confidence and only aggregated finding would be reported in this study. 3) Providing a postage-paid, self addressed envelope with the questionnaire. The study complied with all three suggestions.

5.6.3 Ethical Considerations

Ethical considerations are important as it legally and morally necessary to define the scope of the research activities (Neuman, 2006). This consideration arises from the ethical dilemmas and conflicts in conducting research activities and embraces the issues of integrity, subjects' right, confidentiality and conflict of interest.

This study followed the guidelines provided by the Edith Cowan University Ethics Committee, where research involving human participants needs an ethics clearance from the Committee before data collection can commence. This guideline considers and protects the welfare of any person involved in the research in general. Therefore, based on ethical and professional principles, the researcher has to take the primary responsibility in conducting this research. The ethical considerations in terms of confidentiality and anonymity of the research participants were fully observed and addressed in the processes of sample selection and data collection, where each stage of the methodology has been approved by the Ethics Committee.

In addition to that, this study adhered to the ethical conduct suggested by M. Smith (2011): by obtaining appropriate written permissions from participating organisations, participants were informed of the motives for the research, providing feedback of the results to the participants, gaining permission from participating, assuring both confidentiality and anonymity to the participants, granting the right of withdrawal to participants at any time and guaranteeing the safe storage of research data for a period up to seven years.

5.7 Techniques for Analysing Quantitative Data

As has been discussed earlier, pilot studies were conducted first in order to test the quality of data and to strengthen the quality of the research design. In addition to that, the measurement of reliability and validity of the items in the questionnaire were also examined before conducting a formal survey.

5.7.1 Reliability, Validity and Normality

Both reliability and validity refer to related, desirable aspects of measurements as they are concerned with how concrete measures are connected to constructs (Neuman, 2006). These are major criteria for evaluating measurements (Zikmund, 2003). On the other hand, normality is important because it provides the underlying basis for many of the inferences made by business researchers (Hair, et al., 2003).

5.7.1.1 Reliability

Reliability is defined as “the degree to which measures are free from error and therefore yield consistent results” (Zikmund, 2003, p. 300). It is to ensure the consistency and stability of measurement when measuring the same thing each time. A reliable instrument could be used repeatedly in different time and different

conditions. Two dimensions underlying the concept of reliability: stability and internal consistency.

Stability measures the reliability of an instrument over time even though under uncontrollable testing conditions. Stability could be examined by test-retest reliability. Tests-retest reliability refers to the conduct of the same test, administered twice to the same subjects at intervals between several weeks to 6 months later. The higher the correlation of the two tests the more stable is the instrument.

Internal consistency measure the degree of homogeneity of the items in the instrument. In other words, the items in the instrument should be capable of measuring the construct. The most popular tests for internal consistency is Cronbach's coefficient alpha and Kuder-Richardson formulae. A better instrument should have higher coefficients. Generally, a measure with a Cronbach's alpha of above 0.7 is considered to be highly reliable (Hair, et al., 2003).

5.7.1.2 Validity

"Validity is the ability of a measure (for example, an attitude measure) to measure what it is supposed to measure" (Zikmund, 2003, p. 302). In other words, instrument or measurement should be able to measure what it is designated to measure. There are three validity tests that are used to test the goodness of measures; content validity, criterion-related validity and construct validity.

Content validity is also known as face validity referred to the adequacy and representativeness of the items in an instrument to measure what they are supposed to measure. In other words, the content of scale appears to be adequate to measure the construct. Zikmund (2003, p. 302) defined content validity as a "professional

agreement that a scale logically appears to accurately measure what it is intended to measure". The content validity is greater if more scale items are used to measure the construct. For this study, content validity should not be a threat as the instruments in this study were adopted from previous studies. The adequacy of the items in the instruments used had been rigorously examined by previous research works.

Construct validity assesses the underlying construct or scale to determine how well the results obtained from the use of the construct fit with theory. Construct validity means that the empirical evidence generated by a measure is in line with the theoretical logic about the concept. It can be evaluated by using convergent validity technique and discriminant validity. As this study uses Structural Equation Modeling (SEM), it is important to measure the construct validity. The model must not only provide acceptable fit, but also must show evidence of construct validity (Hair, Black, Babin, Anderson, & Tatham, 2006). Convergent validity occurs when indicators of a specific construct share a high proportion of variance in common (Hair, et al., 2006), whereas discriminant validity reflects the extent to which the constructs in a model are different (Holmes-Smith, 2005). Convergent validity is similar to criterion validity (Zikmund, 2003). Further discussion of validity tests are explained in the data analysis chapter in Chapter 6.

5.7.1.3 Normality

Data screening and transformation techniques are used to ensure that data have been correctly entered and that the distributions of variables are normal. The results may be biased or even invalid if the variable departs significantly from its normal distribution. The assumption of normality is a pre-requisite for many inferential statistical techniques. Thus, it is important the data is normally distributed.

However, if the data is not normally distributed, it is necessary to transform the values of a variable in order to satisfy the distribution requirements for the use of a particular statistic by using some mathematical transformation such as using the logarithm, square root or reciprocal (Greenhalgh, 1997; Zikmund, 2003). But, problems with such transformations can provide an incorrect specification (Shook, Ketchen Jr, Hult, & Kacmar, 2004) and often violate the theoretical logic underpinning the original dataset (Hult et al., 2006). Another alternative is by using the non-parametric test. Non-parametric tests are also known as assumption-free tests because they have fewer assumptions about the type of data (Field, 2009). The most common non-parametric procedures used are the Mann-Whitney test, the Wilcoxon signed-rank test, Friedman's test and the Kruskal-Wallis test. On the other hand, SEM offers estimation methods for non-normal data. The SEM estimation methods for non-normal data are discussed in detail in Subsection 5.7.3.2.

The normality assumption could be examined graphically and/or statistically. Graphically, it could be examined through histogram, stem-and-leaf plot, boxplot, normal probability plot and detrended normality plot. For the latter, a number of statistical approaches are available to test normality such as Kolmogorov-Smirnov statistics with a Lilliefors significance level and the Shapiro-Wilks statistic, Skewness and Kurtosis. This study employs both methods, the graphical plots and statistical analysis (Kolmogorov-Smirnov, Skewness and Kurtosis) to assess the normality of the data.

5.7.2 Analytical Procedure for Quantitative Data

This study used PASW Statistics version 18.0 (formerly known as SPSS). PASW is a tool that provides a wide variety of statistical methods for analysing data. In this study, it was used to calculate descriptive statistics for analysing the profile of respondents and to assess the preliminary analysis. SEM is analysed using AMOS for Windows version 17.0. AMOS is used to confirm the theoretical hypotheses based on the analysis of

empirical data. An overview of the SEM that was used in this study is discussed in the following sections.

5.7.3 Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) is becoming increasingly popular in the social science research (Hoyle, 1995; Medsker, Williams, & Holahan, 1994) and has attracted the attention of accounting researchers (e.g., Choo & Tan, 1997; Fogarty, et al., 2000; Hoyle, 1995; Jones, et al., 2010; D. Smith & Langfield-Smith, 2004). SEM is a statistical technique that allows the simultaneous analysis of a series of structural equations while incorporating potential measurement errors (D. Smith & Langfield-Smith, 2004). This is particularly useful when a dependent variable in one equation becomes an independent variable in another equation (Hair, et al., 2006). SEM is sometimes described as causal modeling (Hoyle, 1995), however, it can only provide evidence of causality but not establish causality (Hult, et al., 2006). The directional arrow used in SEM can be somewhat misleading as it implies a directional association between variables. In actual fact, SEM only tests the relations among variables and cannot be used to test directionality (Hoyle, 1995; D. Smith & Langfield-Smith, 2004).

SEM is also regarded as a family of statistical techniques known by many names such as path analysis, partial least squares models, latent variable analysis, or is just referred to by the name of the software package used such as LISREL or AMOS. Although there are many ways to test the SEM model, there is agreement that SEM involves three aspects: first, “the estimation of multiple and interrelated dependence relationships, second, an ability to represent unobserved concepts in these relationships and correct for measurement error in the estimation process and third, defining a model to explain the entire set of relationships” (Hair, et al., 2006, p. 711).

SEM offers various advantages compared to multiple regression and path analysis techniques such as accounting for random measurement error, controlling for some types of non-random error, evaluating convergent and discriminant validity, providing a global view and more holistic approach to model building and emphasizing theory testing (Blanthorne, Jones-Farmer, & Almer, 2006; Hoyle, 1995).

SEM has two stages in analysis, the analysis of the measurement models and analysis of the structural model (Hoyle, 1995; D. Smith & Langfield-Smith, 2004). The measurement model specifies relations between manifest (observed) variables and latent variables (Medsker, et al., 1994). A latent variable is "...a hypothesized and unobserved concept that can be represented by observable or measurable variables" (Hair, et al., 2006, p. 712). This variable can only be measured indirectly through scaled responses to a series of items (observed variables) such as job stress. The loading and reliability of each latent variable is obtained through confirmatory factor analysis and then incorporated into the structural model. The structural model is a model of relations between latent variables, including specified measurement error variances (D. Smith & Langfield-Smith, 2004).

Hair et al. (2006) introduced a more comprehensive SEM process. It involves six stages in a decision process as outlined in Figure 5.2. The discussion of stages one and two are described throughout Chapters one to five, whereas, stages three and four are discussed in the following subsections. Stages five and six are then discussed in the data analysis chapter (Chapter Six).

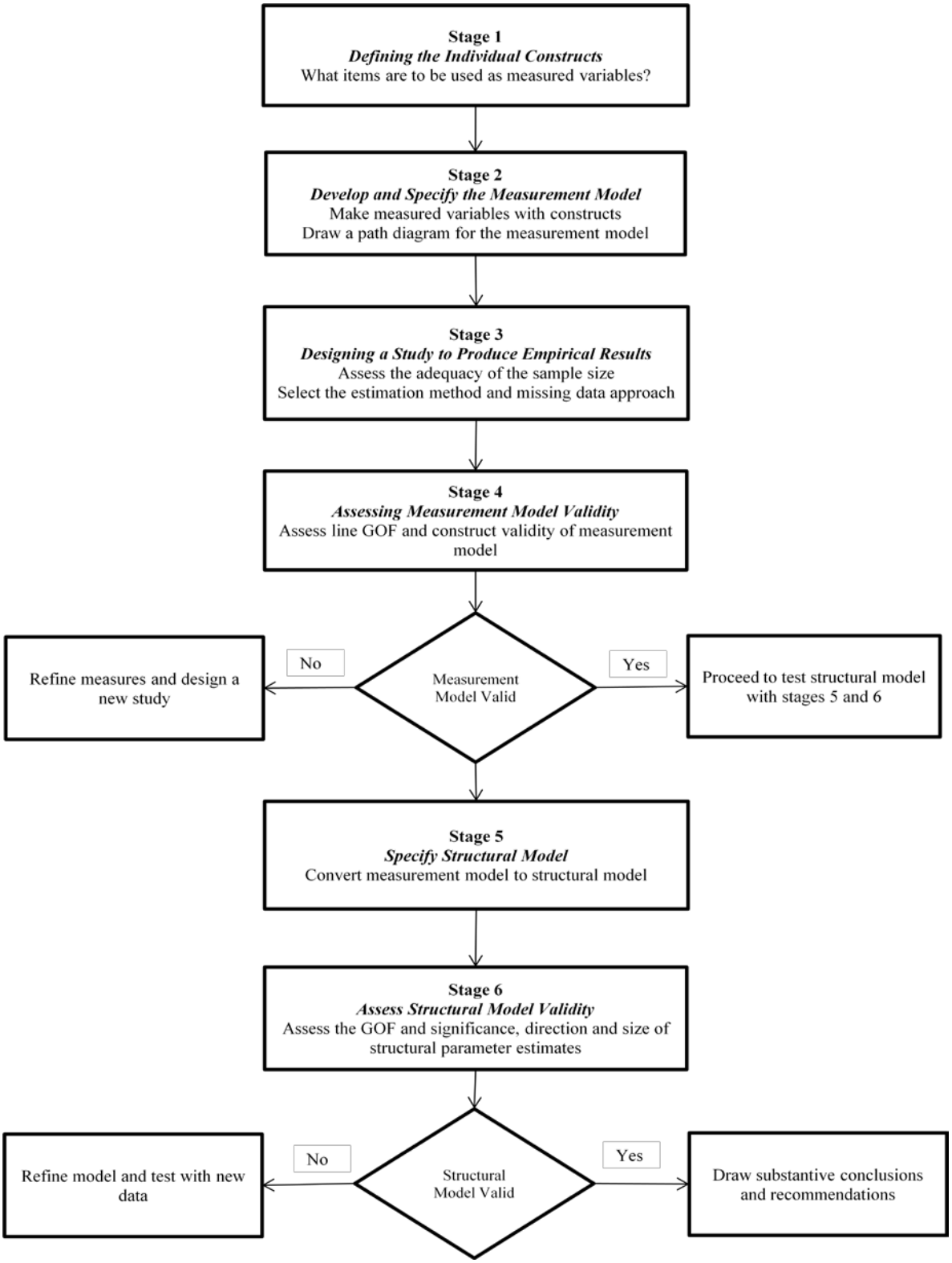

Figure 5.2: Six Stage Process for Structural Equation Modelling

(Source: Hair, et al., 2006)

5.7.3.1 Sample Size

As with other multivariate techniques, SEM generally requires a large sample size. According to Hair et al. (2006), SEM programs may produce unreliable results if small sample sizes are used. There are different opinions regarding what is regarded as sufficient for a minimum sample size (MacCallum, 2003; MacCallum, Widaman, Preacher, & Hong, 2001). A large sample size is preferred to use a complex model, whereas, when the sample size is small, simpler models are often preferred (MacCallum, 2003). According to him, a simpler model with a small sample size tends to generalise better than the use of a complex model. A suggested rule of thumb for SEM is a minimum sample size of 100 (Medsker, et al., 1994), however, it has also been suggested that a sample size of 200 may be required to generate valid fit measures and to avoid drawing inaccurate conclusions (Marsh, Balla, & McDonald, 1988; Medsker, et al., 1994).

Another issue pertaining to sample size is the minimum number of respondents/cases per variable. A number of rules exist but there is a lack of consistency among previous researchers on this issue. For example, Field (2009) suggested that at least 10 to 15 respondents per variable. Hair et al. (2006) suggested 15 respondents for each variable in the model, especially if the data depart from the assumption of multivariate normality. Bentler and Chou (1987) suggested that a minimum of five respondents per variable in the model was sufficient for normally distributed data and 10 respondents per variable for non-normal distributed data.

On the other hand, MacCallum, Widaman, Zhang and Hong (1999) and Velicer and Fava (1998) showed that the sample rules of thumb are not valid and the minimum sample size or sample to variable ratio depends on other aspects of the design of the study. Their studies indicated that as communalities (average variance extracted among items) are low, the importance of sample size increases. “Communalities represent the average amount of variation among the measured/indicator variables explained by the measurement model” (Hair, et al., 2006, p. 741). MacCallum et al.

(1999) showed that with all communalities above 0.6, small samples (less than 100) may be adequate. With communalities in the range 0.5, samples between 100 and 200 can be good enough. Under the worst scenario of low communalities (below 0.5), they recommended samples above 500. In addition to that, sample size should be increased if data exhibit non-normal distribution characteristics, if certain alternative estimation procedures are used, and if more than 10% of missing data is expected (Hair, et al., 2006).

5.7.3.2 Estimation Techniques

SEM provides a wide range of estimation techniques and these techniques strongly influence the results of SEM (i.e., fit indices and estimates of coefficients), especially in the presence of model misspecifications (Fan, Thompson, & Wang, 1999). Therefore, it is important to report the choice of estimation technique and the reasons for that choice (D. Smith & Langfield-Smith, 2004). The justification of the choice of estimation method can be based on several considerations such as the distribution of the sample and the number of observations (Hair, et al., 2006).

Initially, the model estimation technique was Ordinary Least Squares (OLS). However, the Maximum Likelihood Estimation (MLE) supercedes OLS because it is more efficient and unbiased when the data is normally distributed. However, the potential sensitivity of MLE to non-normality of data required a need for alternative estimation techniques. Alternative methods such as Weighted Least Squares (WLS), Generalised Least Squares (GLS) and Asymptotically Distribution Free (ADF) estimation became available. These techniques received particular attention due to their insensitivity to non-normality of the data, but it requires a large sample size.

Although all of the alternative estimation techniques have become more available, MLE continues to be the most widely used technique. MLE has proven fairly robust

to violations of the normality assumption (Henri, 2007). Previous studies also showed that MLE produced reliable results in most circumstances compared to other techniques (Olsson, Foss, & Breivik, 2004). Furthermore, MLE requires small sample sizes (as small as 50) to provide valid results, however, it is recommended that the minimum sample sizes are 100 to 150 to ensure stability of MLE (Hair, et al., 2006).

5.7.3.3 Distribution of sample

Most of the estimation techniques in SEM assume the data have multivariate normality in order to obtain reliable estimates (Henri, 2007; Hult, et al., 2006; Shook, et al., 2004). The use of non-normally distributed data may lead to inflated goodness-of-fit statistics and underestimated standard errors (MacCallum, Roznowski, & Necowitz, 1992). One possible result is inaccurate findings and possibly erroneous conclusions. Therefore, the researcher should assess and discuss the multivariate normality of the data and if needed, undertake corrective action to account for non-normality (Hult, et al., 2006). Despite these concerns, previous studies showed that the majority of studies that used SEM did not discuss whether or not the sample was normally distributed. For instance, Henri (2007) found that 61% of studies in management accounting field did not note the distribution characteristics of the data. Similarly, Hult et al. (2006) and Shook et al. (2004) found that 91% and 81% of the previous studies did not discuss the normality distribution of the sample.

In the case of a non-normal distribution, the researcher can take corrective action to rectify the violation of the normality assumption by using a data transformation such as square root, logarithm and inverse (Tabachnick & Fidell, 2007; Zikmund, 2003). However, such transformations come with other problems. Shook et al. (2004) argued that if the researcher has developed a strong theoretical foundation and belief in the original specification, data transformation can provide an incorrect specification. This argument is advocated by Hult et al. (2006). According to them,

data transformation often violates the theoretical logic underpinning the original dataset. Therefore, an alternative approach for non-normal data is to use an estimation method that does not assume multivariate normality or to use estimation techniques that adjust the model fit statistics and standard errors of each individual parameter estimates, such as using weighted least squares (WLS), generalised least squares (GLS) and asymptotically distribution free (ADF) (Henri, 2007; Hult, et al., 2006; D. Smith & Langfield-Smith, 2004).

On the other hand, Hair et al. (2006) suggested another alternative approach for data that violate the normality assumption, to ensure the ratio of respondents to parameters is higher. They suggested that a generally accepted ratio to minimize problems with non-normality data is 15 respondents for each parameter estimated in the model. The researcher should always provide a sufficient sample size to minimise the sampling error's impact although some estimation methods could deal with non-normal data (L. Wang, Fan, & Willson, 1996). This study employs 11 parameters to be estimated in the model, thus a sample size of 274 is considered sufficient to minimize this problem. The result of data distribution is discussed in Chapter 6.

5.7.3.4 Model's Goodness-of-Fit (GOF)

Goodness-of-fit (GOF) indices under SEM are defined by Henri (2007, p. 95) as "an attempt to measure the degree to which the actual or observed input matrix is predicted by the estimated model". SEM provides a range of fit indices to assess the overall fit of the entire structural model, however, it can generally be classified into three types, namely absolute fit measures, incremental measures and parsimonious fit measures.

a. Absolute Fit Measures

Absolute fit measures are a direct measure of how well the model specified by the researcher reproduces the observed data (Kenny & McCoach, 2003). The absolute fit indices provide the most basic assessment of how well a researcher's theory fits the sample data. The most commonly used absolute fit indexes include the chi-square (χ^2) GOF, goodness-of-fit index (GFI), root means square residual (RMSR), standardized root mean residual (SRMR) and root mean square error of approximation (RMSEA).

Chi-square (χ^2) statistic

The most fundamental and commonly used absolute fit index is χ^2 statistic. Basically, it is the same as the χ^2 statistic used in non-metric measures to examine whether a relationship exists. However, in SEM, the researcher is searching for similarity between matrices (i.e., low χ^2 values) to support the model as representative of the data. In other applications using the χ^2 statistic, the researcher is looking for differences (i.e., large χ^2 values) to support a relationship between the non-metric measures. Therefore, in SEM, we require a small χ^2 value, which corresponds with a large *p*-value (i.e. > .05), that indicates no statistical significance between the matrices.

However, χ^2 statistic suffers from two problems, first, sample size and second, model complexity. For the former, χ^2 statistic will increase in line with the increase in sample size. Indeed, according to Smith and Langfield-Smith (2004), χ^2 is not reliable for samples larger than 200. Similarly, the χ^2 statistic is likely to increase when the number of variables increases (Holmes-Smith, 2005). Because of this, χ^2 statistic cannot be used as the sole indicator of SEM fit. Therefore, to overcome these problems, Holmes-Smith (2005) suggested the use of a "normed χ^2" where χ^2 is divided by the degrees of freedom for the model to give a χ^2 measure per degree of freedom. The normed χ^2 should be greater than 1.0 but smaller than 2.0 (although values between 2.0 and 3.0

indicate a reasonably good fit), however, a value less than 1.0 indicates overfit (Holmes-Smith, 2005).

Goodness-of-Fit index (GFI)

The GFI is an early attempt to produce a fit statistic that is less sensitive to sample size. Marsh et al. (1988) found that GFI outperforms all other absolute fit indices and is easy to interpret. The GFI value is 0 to 1 with higher values indicating better fit. The general threshold for GFI values is that it should be greater than 0.95 although a value greater than 0.9 is considered good (Hair, et al., 2006).

Root Mean Square Residual (RMSR) and Standardized Root Mean Residual (SRMR)

RMSR is an average of the residuals between individual observed and estimated covariance and variance terms. SRMR is the alternative statistic based on residuals. It is a standardized value of RMSR and thus is more useful for comparing fit across models. Better fit is represented by lower RMSR and SRMR values. RMSR and SRMR are also known as "badness-of-fit" measures in which high values are indicative of poor fit. Hair et al. (2006) argued that it is difficult to decide the cut-off value when a residual is too high, however, according to Holmes-Smith (2005), RMSR should be less than 0.05

Root Mean Square Error of Approximation (RMSEA)

RMSEA is a measure that attempts to correct for the tendency of the χ^2 GOF test statistic to reject models with large samples or a large number of observed variables. Similar to RMSR and SRMR, lower values of RMSEA represents a better fit. Thus, RMSEA is also known as badness-of-fit. Values of below 0.05

indicate the most acceptable model, however, values between 0.05 and 0.08 also indicate a reasonable fit (Holmes-Smith, 2005).

b. Incremental Fit Measures

Incremental fit indexes measure the proportionate amount of improvement in fit when a target model is compared with a more restricted, nested baseline model (Hu & Bentler, 1998). The most common baseline model is referred to as the "null model", in which no relationships amongst the variables are assumed (Hair, et al., 2006). In other words, the incremental fit indexes measure how much better the model that assumes at least some relationships is compared to a model with no relationships. The incremental fit indexes can be categorised into three types. A Type 1 incremental fit index compares the fit function of a baseline model to the specified model. Type 1 fit indexes include Normed Fit Index (NFI), a drawback to Type 1 fit indexes is that they "are influenced by the badness of the null model as well as the goodness of fit of the target model" (Hu & Bentler, 1998, p. 448). Type 2 fit indexes impose additional constraints, including the assumption that the fit function of the estimated model follows a chi-square distribution with the degrees of freedom of the estimated model (Hu & Bentler, 1998). The most widely used Type 2 fit index is the Tucker Lewis Index (TLI), also known as the Nonnormed Fit Index (NNFI) (Kenny & McCoach, 2003). Type 3 fit indexes assume a noncentral chi-square distribution (Hu & Bentler, 1998). These noncentrality-based fit indexes include the Comparative Fit Index (CFI) and the Relative Noncentrality Index (RNI).

Normed Fit Index (NFI)

NFI is one of the original incremental fit indices. It is a ratio of the difference in the χ^2 value for the fitted model and a null model divided by the χ^2 value for the null model. The value ranges between 0 and 1 and a model with perfect fit would produce an NFI of 1.

Tucker Lewis Index (TLI)

The TLI is one of the incremental fit indices that can exceed a value of 1 and one of the most widely applied indices (Hair, et al., 2006). Models with good fit have values close to 1, and a model with a higher value suggests a better fit than a model with lower value. In general, TLI should be greater than 0.95 although values greater than 0.9 indicate reasonable fit (Holmes-Smith, 2005).

Comparative Fit Index (CFI)

CFI is similar to TLI except that it is constrained to fall between 0 and 1, with higher values indicating better fit (Hair, et al., 2006). Holmes-Smith (2005) and Hair et al. (2006) suggested that a value greater than 0.9 is an indicator for reasonable fit. The CFI is among the most widely used indices because it is not sensitive to model complexity (Hair, et al., 2006).

Relative Noncentrality Index (RNI)

Similar to other incremental fit indices, a higher value represents better fit and the values range between 0 and 1. Values lower than 0.9 are usually not associated with a good model fit (Hair, et al., 2006).

c. Parsimony Fit Measures

The Parsimony fit measure is achieved either by a better fit or by a simpler model (Hair, et al., 2006). According to Holmes-Smith (2005), the more parameters added to a model the more sample specific the model becomes and the less likely it is that a different sample could support such a highly specific model. Therefore, the more parsimonious the model, the more likely the model could be generalised to the population. Hence, the smallest model parsimony fit measure is the best model. The Akaike Information Criterion (AIC) and Consistent Akaike

Information Criterion (CAIC) are some of the functions used to measure model parsimony. The model that fits with the smallest value of AIC/CAIC is the most parsimonious fitting model (Holmes-Smith, 2005). The Adjusted Goodness-of-fit (AGFI) is also used to measure model parsimony. The AGFI ranges from 0 (poor fit) to 1 (perfect fit) with a cut-off 0.90 indicating a good fit.

However, the discussion on what constitutes an adequate or good fit have received much attention from researchers, especially with the expanding and increasing number of fit indices (Hair, et al., 2006). Since no consensus has been reached on the "best measure", the researcher is generally encouraged to employ multiple measures of fit and gain a consensus across those measures as to the acceptability of the proposed model (Bollen, 1989). The use of multiple indices provides insurance that researchers do not opportunistically select a supportive index (Shook, et al., 2004). In addition, academic journals are satisfied with SEM results citing a 0.90 value on key indices, such as the TFI, NFI or GFI, as indicating an acceptable model (Hair, et al., 2006). Hair et al. (2006) however, argued that it is not practical to apply a single set of cut-off rules that apply for all SEM models of any type.

Hair et al. (2006) advocated the use of different types of multiple fit indices to asses a model's GOF which include, the χ^2 value and the associated degree of freedom, at least one of absolute index (i.e., GFI, RMSEA, RMSR or SMSR), one incremental index (i.e., NFI, CFI, TLI or RNI) and at least one of a badness-fit index (i.e., RMSR, SRMR, or RMSEA). In addition to that, they also suggested an adjustment to the index cut-off values based on model characteristics. Their guidelines are presented in Table 5.4. The guidelines consider different sample sizes, model complexity and degrees of error in model specification to examine how accurately various fit indices perform.

Table 5.4: Guidelines for Establishing Acceptable and Unacceptable Fit

	N < 250			N > 250		
Statistic	**m ≤ 12**	**12 < m < 30**	**m ≥ 30**	**m < 12**	**12 < m < 30**	**m ≥ 30**[7]
χ^2	Insignificant p-values expected	Significant p-values can result even with good fit	Significant p-values can be expected	Insignificant p-values can result with good fit	Significant p-values can be expected	Significant p-values can be expected
CFI or TLI	.97 or better	.95 or better	Above .92	.95 or better	Above .92	Above .90
RNI	May not diagnose misspecification as well	.95 or better	Above .92	.95 or better, but do not use with N > 1000	Above .92, but do not use with N > 1000	Above .90, but do not use with N > 1000
SRMR	Could be biased upward, use other indices	.08 or less (with CFI or .95 or higher)	Less than .09 (with CFI above .92)	Could be biased upward, use other indices	.08 or less (with CFI above .92)	.08 or less (with CFI above .92)
RMSEA	Values < .08 with CFI = .97 or higher	Values < .08 with CFI of .95 or higher	Values < .08 with CFI above .92	Values < .07 with CFI of .97 or higher	Values < .07 with CFI of .92 or higher	Values < .07 with CFI of .90 or higher

m = number of observed variables; N applies to number of observations per group when applying CFA to multiple groups at the same time.

5.8 Summary

This chapter discusses the research methods used in this study, which include the research design, sampling procedure, questionnaire and variable developments and data collection process. In addition to that, this chapter also discusses the methods used to test the hypotheses developed in Chapter 4. The next chapter, Chapter 6 presents a detailed analysis of the data and the presentation of the results from the survey questionnaire.

[7] Data in this study fall within this range.

CHAPTER 6: DATA ANALYSIS AND HYPOTHESES TESTING

6.1 Introduction

This chapter presents and discusses the empirical results based on the survey questionnaires and their respective measurement. The first section reports the response rate of the study. The second section presents the preliminary analyses, notably for normality and the goodness-of-fit of measurement, using PASW Statistic version 18.0 (formerly known as SPSS). The subsequent section discusses the profile of the respondents and is followed by descriptive analyses, focusing on Reduced Audit Quality Practices (RAQP) and budget pressure. Structural Equation Modeling analysis is then discussed in the following section. Finally, this chapter ends with the summary of the results from hypotheses testing.

6.2 Response Rate

Questionnaires were sent to 1,756 MIA members who were working as external financial statement auditors (as at 31 December 2009). Two hundred and ninety six questionnaires were returned (16.9% response rate). Out of these, seven incomplete questionnaires were received, with three accompanied by apology letters. All of the apology letters gave reasons for non-response in that they are not working as an external auditor, thus not in the position to answer the questionnaire. In addition to that, fifteen questionnaires were excluded mainly because the respondents were not working as an external auditor. This leaves two hundred and seventy four usable questionnaires, which constituted a 15.6% usable response rate.

This low response rate is expected and considered normal for surveys sent through the mail where no follow-up is permitted (Dillman, 2000; Morris, Greer, Hughes, & Clark, 2004; Sekaran, 2006) despite the extreme care taken in the survey administration. Indeed, the low response rate in mail survey studies has been well acknowledged in

various fields of study in Malaysia and developing countries, given that participants are typically reluctant to participate in mail surveys (see Jusoh, Ibrahim, & Zainuddin, 2008; Jusoh & Parnell, 2008; Lai, 2008; Othman, Abdul-Ghani, & Arshad, 2001; Salleh & Dali, 2009; Shaari, 2010). In addition to that, the sensitive and confidential nature of the information requested may have contributed to the low response rate (Jusoh & Parnell, 2008). The outcome of this study, however is similar to that in other studies conducted in Malaysia, with response rates ranging from only 12.3% to 22.7% (see Jusoh, et al., 2008; Jusoh & Parnell, 2008; Lai, 2008; Othman, et al., 2001; Salleh & Dali, 2009; Shaari, 2010).

6.3 Preliminary Analysis

Preliminary analysis is used to address the normality, reliability and factor analysis of the data. This is the process of examining the data before further analysis can be done.

6.3.1 Normality Analysis

Table 6.1 shows the summaries of the normality test for the variables used in the study. The Kolmogorov-Smirnov significant value should be higher than .05, which indicates the data is normally distributed (Hair, et al., 2006). Based on the normality test results, only Type A Behaviour Pattern (TABP) had a non-significant result (significant value of more than .05) indicating normality. The other variables had significant values of Kolmogorov-Smirnov test, suggesting violation of the normality assumption.

However, Hair et al. (2006) and Tabachnick and Fidell (2007) recommended inspecting the shape of the distribution by using a graphical plot. In this study, the distribution of the data was also inspected based on the normal probability plots (labeled as Normal Q-Q Plot). In this plot, the observed value for each score is plotted against the expected value from the normal distribution. Based on the normal probability plots (Appendix 4),

all of the variables had a reasonably straight line close to the expected normal distribution line, suggesting proximity to a normal distribution.

In addition to that, further analyses on Skewness and Kurtosis support the normality distribution of the data as both values fallen within the range of -1 to +1. Values falling outside of this range indicate a non-normal distribution of data (Hair, et al., 2006). Based on these results, it could be concluded that the data were normally distributed.

Table 6.1: Test of Normality

Variables	Skewness	Kurtosis	Kolmogorov-Smirnov		
			Statistic	df	Sig.
Workload	0.114	-0.021	0.131	274	0.000
Budget Attainability	-0.515	0.448	0.249	274	0.000
Budget Emphasis	-0.208	-0.790	0.181	274	0.000
Role Ambiguity	0.020	-0.611	0.79	274	0.000
Role Conflict	-0.026	0.058	0.066	274	0.000
Considerate Leadership	0.127	-0.432	0.083	269	0.000
Structure Leadership	0.219	-0.670	0.101	269	0.000
Type A Behaviour Pattern	0.022	-0.378	0.051	274	0.078
Job Stress	-0.195	-0.266	0.059	274	0.021
Job Performance	-0.039	-0.332	0.078	274	0.000
RAQP	0.147	0.293	0.119	274	0.000

6.3.2 Assessing the Goodness-of-fit of Measurement

Goodness-of-fit was measured based on reliability and factor analysis. Reliability is a measure of the internal consistency of a set of scale items. One of the most commonly used methods to measure reliability is through Cronbach's Alpha. Cronbach's Alpha values range between 0 and 1. According to Hair et al. (Hair, et al., 2006), an appropriate level of internally consistent reliability is greater than .70. Similarly, according to Sekaran (2006), reliabilities of less than .60 are poor, .70 are acceptable and over .80 are good.

Reliability analysis of the individual variables indicated that all variables had high reliability, Cronbach's Alpha were ranged from .70 to .90, as shown in Table 6.2.

Table 6.2: Reliability Analysis

Variables	Cronbach's Alpha
Job stress	.82
Job performance	.90
RAQP	.80
Role Ambiguity	.80
Role conflict	.70
Workload	.74
Budget emphasis	.81
Structure leadership	.88
Considerate leadership	.75
Type A behaviour pattern	.85

6.3.2.1 Factor Analysis

Factor analysis was conducted for four variables namely job stress, role ambiguity, role conflict and workload in order to explore and summarise the underlying correlation structure for the data set as well as to simplify the data by revealing a smaller number of underlying factors. This process was also undertaken to eliminate redundant, unclear and irrelevant variables. The results of the factor analysis test are further discussed in the following paragraph.

A principal component analysis (PCA) was conducted on the 32 items that are used to measure job stress, role ambiguity, role conflict and workload. The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis, KMO = 0.85.

The value is adequate for factor analysis as Kaiser (1974) recommended 0.5 as a minimum value, values between 0.5 and 0.7 as mediocre, values between 0.7 and 0.8 as good, values between 0.8 and 0.9 as great and values above 0.9 as superb (Field, 2009). Bartlett's test of sphericity χ^2 (496) = 3960.05, $p < .001$, indicated that correlations between items were sufficiently large for PCA to be conducted.

According to Hair et al. (2006), the determination of the number of factors should not solely be based on eigenvalues, in fact, they suggested that a predetermined number of factors were based on prior research and that these should also be based on the scree plot. The inspection of the scree plot (Appendix 5) on the initial analysis that was based on eigenvalues, revealed that the point of inflexion occurred at the five data point (factor). Thus, only the four factors to the left of the point of inflexion should be retained. Furthermore, as the items for the questionnaire were based on previous studies, it is reasonable to specify that the four factors in the factor analysis represent job stress, role ambiguity, role conflict and workload.

A second analysis was run on four factors using PCA with varimax rotation and the items were grouped as expected, except for several items, which were more likely to be grouped under other factors (Appendix 6). Factor 1 consists of 7 items which are all from job stress items, therefore, Factor 1 is categorised as job stress. Factor 2 (role ambiguity) consists of 10 items, which included all items from role ambiguity measurement, two items from job stress and one item from job stress and role conflict. Factor 3 has seven items which consist of two items from workload measurement, four items from job stress and one item from role conflict. Detailed examination of the items showed that all of these items focused on workload, thus, Factor 3 is labelled as workload. Factor 4 (role conflict) consists of six items from the role conflict measurement and two items from the job stress measurement.

Table 6.3: Factor Loading for Job Stress, Role Ambiguity, Role Conflict and Workload

	Question no.		Factor loading			
			1	2	3	4
Job stress	I12	I do not know what my co-workers expect of me	**.772**	-.114	.003	.197
	I7	I do not know what my supervisor thinks of me and how he/she evaluates my performance	**.709**	-.212	.235	.083
	I11	I am unable to influence my immediate supervisor's decisions/actions that affect me	**.689**	-.160	.079	.209
	I8	I cannot get information needed to carry out my job	**.65**	-.156	.152	.128
	I6	I am not fully qualified to handle my job	**.629**	-.196	-.008	-.071
Role Ambiguity	J2	There are clear, goals and objectives for my job	-.173	**.823**	-.037	-.016
	J6	I know what my responsibilities are	-.114	**.734**	.131	-.019
	J9	I know exactly what is expected of me	-.302	**.622**	.153	.087
	J1	I feel certain about how much authority I have	-.222	**.621**	.104	-.045
	J13	I feel I am given clear explanation of what has to be done	-.137	**.59**	-.115	-.149
	J4	I know that I have divided my time properly	-.06	**.539**	-.034	-.102
Workload	I4	I have too heavy a work load, one that I cannot possibly finish during an ordinary workday	.208	-.107	**.81**	.087
	F2	It often seems like I have too much work for one person to do	-.101	.085	**.749**	.077
	F3	The performance standards on my job are too high	.111	.252	**.596**	.123
	I15	My job tends to interfere with my family life	.111	-.15	**.529**	.327
Role Conflict	J11	I do things that are apt to be accepted by one person and not accepted by others.	.199	.041	.109	**.729**
	J10	I receive incompatible requests from two or more people	.003	-.057	.271	**.711**
	J12	I receive an assignment without adequate resources and materials to execute it	.158	-.106	.319	**.606**
	J8	I work in different teams with staff members who operate quite differently	-.178	-.093	.134	**.508**

However, in order to ensure measurement has high reliability, only variables that had factors loaded at .35 or higher, and did not load at .35 or greater on any other factor were included. According to Hair et al.(2006), for samples above 250, items loading at .35 or higher can be considered statistically meaningful. Therefore, inclusion of variables which loaded at .35 or higher on two factors might confound meaningful interpretation of each factor. The inspection of factor loadings showed that several items were loaded on other factors (refer Appendix 6). I3 and I14 in Job stress (Factor 1) had factors loaded on Factor 2 (-.434) and Factor 4 (.426), respectively. Thus, these two items were deleted from Factor 1. Factor 2 had three items which were loaded on other factors, I1 (Factor 1: .428), I2 (Factor 1: .425) and F1 (Factor 3:

.391), thus these items were deleted. Item J3 was also deleted from Factor 2 as it had a low loading of .278, which was below the cut-off of 0.35. Factor 3 (workload) had three factors that loaded significantly on the other factors, such as I5 (Factor 1: .404), I15 (Factor 1: .38) and J5 (Factor 4: .475), thus these items were deleted from this factor. Four items were deleted from Factor 4, three of them mainly because of a cross-loading problem with Factor 1 (I9, I10, J7) and one item, J14 had factor loading below the cut-off value. Table 6.3 presents the factor structure after varimax rotation for the items loading significantly on each factor. These items were then used for further analysis in SEM.

6.4 Demographic Description of Respondents

The survey questionnaire required respondents to answer five demographic questions reflecting their gender, age, number of years of audit experience, position and the size of the firm they currently work for. This section summarises the general frequency distribution of respondents on the different demographic items as shown in Tables 6.4 to 6.8.

As can be seen in Table 6.4, the majority of the respondents are female (59.9%). With regards to the age group, Table 6.5 shows that respondents below 35 years old represented the majority with 63.9%. This study also shows that the majority of the respondents had 6 to 10 years of audit experience (43.8%), followed by three to five years of audit experience (33.6%) and more than 10 years of audit experience (22.6%). None of the respondents had audit experience of less than three years (see Table 6.6). This is not surprising as this study used MIA members as its respondents and MIA requires three years relevant experience to qualify for membership. Because of this, the lowest position of the respondents in this study was senior auditors and not staff auditor (0%) as shown in Table 6.7. The majority of the respondents were at manager level (46%), followed by senior auditors (40.5%). This is again not surprising if we refer back to the age group table, where the majority of the respondents were below 35 years of

age. At these age groups, most of the auditors have moved forward in their career, either from staff auditor to senior auditor or from senior to audit manager.

Table 6.4: Respondents Profile: Gender

Gender	Frequency	Percent (%)
Male	110	40.1
Female	164	59.9
Total	274	100

Table 6.5: Respondents Profile: Age Group

Age Group	Frequency	Percent (%)
29 and below	69	25.2
30-34	106	38.7
35-39	71	25.9
40-44	13	4.7
45 and above	15	5.5
Total	274	100.0

Table 6.6: Respondents Profile: Respondents Auditing Experience

No of years auditing experience	Frequency	Percent (%)
Below 3 years	0	0
3-5	92	33.6
6-10	120	43.8
11 and above	62	22.6
Total	274	100.0

In addition, these descriptive results also show that the accounting graduates see working as external auditors as a good starting point in their career, thus the majority of audit staff have moved on to other organisations or commercial companies (T. H. Lee, Ali, & Kandasamy, 2008) once they have gained sufficient experience. This could be

the reason why the majority of the respondents were within the 30 to 35 age group and either in the position as a manager or senior auditor. The result of the study also showed that the majority of the respondents worked in non-Big four audit firms (85.4%), with only 14.6% working in Big-four firms (see Table 6.8).

Table 6.7: Respondents Profile: Respondents Position in Audit Firm

Position	Frequency	Percent (%)
Staff	0	0
Senior	111	40.5
Supervisor	14	5.1
Manager	126	46.0
Partner	12	4.4
Director	11	4.0
Total	274	100.0

Table 6.8: Respondents Profile: Size of Firm

Firm's Size	Frequency	Percent (%)
Big Four	40	14.6
Non-Big Four	234	85.4
Total	274	100.0

6.5 Descriptive Analysis

6.5.1 RAQP

The survey questionnaire used five Reduced Audit Quality Practices (RAQP) items similar to those used by Kelley and Margheim (1990) and Otley and Pierce (1996b). The five items are prematurely signing-off on a audit program step, reduced work below what you considered reasonable, failed to research an accounting principle, made superficial reviews of documents and accepted weak client explanation. Table 6.9 presents the summary of respondents' response on specific RAQP.

As shown in Table 6.9, in general, the mean for all RAQP items was close to "2", which represented the "rarely" category. The standard deviation also showed that the individual RAQP was not widely spread. Similar to the results of pilot testing (see Section 5.6.1), the most common practice engaged in by respondents was "superficial reviews of client's documents" followed by "reduced audit work below what they considered reasonable" with 24.1% and 16% of the respondents at least "often" involved in these kinds of practices. Almost 13% of the respondents engaged in "premature sign-off", whereas only 9.1% and 8% were at least "often" engaging in the "accepted weak client explanation" and "failed to research an accounting principle", respectively. Fifteen percent to 29% of the respondents reported that they "never" involved in any of the RAQP, however, out of these, only 5.11% indicated that they were "never" involved in all of five types of RAQP, thus showing that RAQP could be a normal practice among auditors during the auditing process.

Table 6.9: The Frequencies of Specific RAQP Engaged by Auditors

RAQP	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation
Prematurely signing-off on a audit program step	24.8%	(68)	27.7%	(76)	34.7%	(95)	9.5%	(26)	3.3%	(9)	2.39	1.06
Reduced work below what you considered reasonable	14.6%	(40)	31.4%	(86)	38.0%	(104)	14.2%	(39)	1.8%	(5)	2.57	0.97
Failed to research an accounting principle	28.5%	(78)	35.4%	(97)	28.1%	(77)	6.9%	(19)	1.1%	(3)	2.17	0.96
Made superficial reviews of documents	24.1%	(66)	21.2%	(58)	30.7%	(84)	16.8%	(46)	7.3%	(20)	2.62	1.22
Accepted weak client explanation	22.3%	(61)	38.0%	(104)	30.7%	(84)	7.3%	(20)	1.8%	(5)	2.28	0.95

Respondents' profiles, such as gender, firm's size, auditing experience and position are analysed against the RAQP. Tests for correlation were performed to examine any correlation relationship between respondents' profiles and RAQP. Further, T-test and ANOVA were performed to investigate any significant differences among the respondents in specific profile groups.

6.5.1.1 Gender

Table 6.10 shows that gender had only a significant negative correlation with "reduced work below what you considered reasonable". It shows that males are less likely to "reduced work below what you considered reasonable" than female auditors. Further analysis, an independent-samples t-test was conducted to compare the RAQP scores for male and females respondents. The result indicated that there was no significant difference in scores for males (M = 2.49, SD = 0.78) and females (M = 2.35, SD = 0.76); t (272) = 1.52, p > .05 (two-tailed).

Table 6.10: Pearson Correlations between Gender and RAQP

RAQP	Pearson Correlation
Premature sign-off	-.059
Reduced work	-.162**
Failed to research an accounting principle	-.004
Superficial review of documents	-.029
Accept weak explanation	-.099

**P < .01 (two-tailed)

6.5.1.2 Firm size

Table 6.11 presents the effect of size of firm on the RAQP. The table indicates that there were weak significant correlations between size of firm and all reduced audit quality practices except for "reduced work below what you considered reasonable". T-tests were performed to investigate the relationship between firm size and RAQP. The results indicated that non-Big four firms auditors (M = 2.50, SD = 0.76) had a significantly higher mean for engaging in RAQP than Big-four firm auditors (M = 1.88, SD = 1.88; t (272) = -4.86) at p < .01 (two-tailed).

Table 6.11: Pearson Correlations between Firm Size and RAQP

RAQP	Pearson Correlation
Premature sign-off	.229**
Reduced work	.074
Failed to research an accounting principle	.181**
Superficial review of documents	.286**
Accept weak explanation	.265**

**P < .01 (two-tailed)

6.5.1.3 Auditing Experience

The relationship between respondents' auditing experience and each RAQP was investigated using Pearson correlation. Table 6.12 indicates that there were significant correlations between these variables, with more auditing experience associated with lower levels of engagement in RAQP. ANOVA analysis was conducted to explore the impact of auditing experience on audit quality, as measured by the RAQP. Respondents were divided into three groups according to their years of experience in auditing (Group 1: 3 to 5 years; Group 2: 6 to 10 years; Group 3: 11 years and above). There was a statistically significant difference at the $p < .05$ level in RAQP for the three experience groups: $F (2, 271) = 7.39$. Despite reaching statistical significance, the actual difference in mean scores between the groups was small. The effect size, calculated using eta squared, was 0.05. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 2.63$, $SD = 0.77$) was significantly different from Group 2 ($M = 2.35$, $SD = 0.74$) and Group 3 ($M = 2.17$, $SD = 0.75$). On the other hand, Group 2 did not differ significantly from Group 3.

Sensitivity analysis was performed to determine whether the result will be change if the years of audit experience groups were changed to other values. First, the groups were changed from 3 to 5 years to 3 to 6 years for group 1, 7 to 10 years for group 2 and more than 11 years for group 3. ANOVA test revealed that there was a

significant difference at the $p < .05$ level in RAQP for the three experience groups: $F(2, 271) = 8.64$. The post-hoc results showed that the mean score for Group 1 ($M = 2.62$, $SD = 0.73$) was significantly different from Group 2 ($M = 2.30$, $SD = 0.77$) and Group 3 ($M = 2.17$, $SD = 0.75$). Contrary to the earlier result, the results suggested that, the auditors with auditing experience of less than 6 years could have a higher tendency to engage in RAQP.

Table 6.12: Pearson Correlations between Auditing Experience and RAQP

RAQP	Pearson Correlation
Premature sign-off	-.183**
Reduced work	-.213**
Failed to research an accounting principle	-.165**
Superficial review of documents	-.122*
Accept weak explanation	-.168**

**P < .01 (two-tailed)

*P < .05 (two-tailed)

In order to confirm this outcome, another sensitivity analysis was performed with the minimum audit experience in group 1 changed to seven years, group 2 represented by 8 to 10 years, and group 3 as 11 years and above. ANOVA test revealed that there was a significant difference at the $p < .05$ level in RAQP for the three experience groups: $F(2, 271) = 6.19$. However, the post-hoc results revealed that Group 1 ($M = 2.56$, $SD = 0.78$) was only significantly different from Group 3 ($M = 2.17$, $SD = 0.75$), but not with group 2 ($M = 2.33$, $SD = 0.71$). Therefore, this supports the conclusion that auditors with six years or less experience had a higher tendency to engage in RAQP than those who had more than six years experience.

6.5.1.4 Position

As with auditing experience, the Pearson correlation test revealed that position level in audit firms is significantly associated with all RAQP, however, the strength of the relationships were weak as shown in Table 6.13. ANOVA test was used to investigate the effect of positions, namely senior auditor, supervisor, manager, partner and director on RAQP. There was a significant effect of position on RAQP engagement, $F(4, 269) = 7.12$, $p < .05$. Further analysis revealed that auditors at the "senior" level had a significantly higher mean for engaging in RAQP than those at "manager" level (senior auditor, $M = 2.68$, $SD = 0.71$; manager, $M = 2.17$, $SD = 0.77$; $p < .05$).

Table 6.13: Pearson Correlations between Position and RAQP

RAQP	Pearson Correlation
Premature sign-off	-.167**
Reduced work	-.181**
Failed to research an accounting principle	-.189**
Superficial review of documents	-.235**
Accept weak explanation	-.181**

**P < .01 (two-tailed)

6.5.2 Budget Attainability

With regards to budget attainability, respondents were asked about their perception of the budget in the last year as shown in Table 6.14. In general, almost half of the respondents indicated that the budget for the last year that they worked on was attainable although with considerable effort. In addition, of some concern is the fact that, 3.3% of respondents felt that it was impossible to achieve their budget and almost 12% of respondents felt that their budget was very tight to attain.

Table 6.14: The Frequencies of Budget Attainability

RAQP	% of Respondents	
Very easy to achieve	2.2%	(6)
Attainable with reason able effort	34.3%	(94)
Attainable with considerable effort	48.5%	(133)
Very tight, practically unattainable	11.7%	(32)
Impossible to achieve	3.3%	(9)
Mean	3.20	
Standard Deviation	.80	

Further tests were conducted to investigate any significant differences among respondents' profiles. In general, except for firm size, there was no significant difference found in respondents' gender, year of auditing experience and position. On average, respondents from non-Big four firms felt that the budget was easier to attain ($M = 3.25$, $SD = 0.80$) compared to respondents from Big-four firms ($M = 2.93$, $SD = 0.76$), $t(272) = -2.41$, $p < .05$ (two-tailed). With regard to respondents' gender, female respondents felt that the budget was easier to attain ($M = 3.26$, $SD = 0.76$) than male respondents ($M = 3.13$, $SD = 0.85$). However, this difference was not significant. Similarly, ANOVA tests showed that there was no significant effect of position, $F(4, 269) = 0.88$, $p > .05$ and auditing experience, $F(2, 271) = 0.64$, $p > .05$ on budget attainability.

The respondents were also asked how they reacted when they felt a time budget to be unattainable. A summary of the responses is presented in Table 6.15. The results showed that more than half of respondents at least "often" tended to work harder (58.4%) and to under-report time (51.1%) when facing a tight budget. Although only 10.6% of the respondents would at least "often" engage in RAQP under tight budget conditions, the results show that time budget pressure could have a detrimental effect on auditor's behaviours which consequently could influence audit quality.

Table 6.15: The Frequencies of Auditors' Responses to Tight Budgets

Respond	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation
Work harder but charge all time properly	5.5%	(15)	9.5%	(26)	26.6%	(73)	38.3%	(105)	20.1%	(55)	3.58	1.08
Under-report time by working on personal time	9.1%	(25)	12.4%	(34)	27.4%	(75)	33.9%	(93)	17.2%	(47)	3.38	1.17
Reduce the quality of audit work to meet budget	39.1%	(107)	33.2%	(91)	17.2%	(47)	8.4%	(23)	2.2%	(6)	2.01	1.05
Request and obtain an increase in the budget	7.7%	(21)	13.9%	(38)	43.8%	(120)	30.3%	(83)	3.6%	(10)	3.08	0.95
Shift time to a non-chargeable code	22.6%	(62)	29.2%	(80)	35.8%	(98)	7.3%	(20)	5.1%	(14)	2.43	1.07
Shift time to a different client	37.2%	(102)	23.0%	(63)	24.1%	(66)	10.9%	(30)	4.4%	(12)	2.22	1.19

6.5.3 Budget Emphasis

With regard to budget emphasis, respondents were asked questions about their perception of the desired importance of budget achievement in performance evaluation, as used by Otley and Pierce (1996b). Table 6.16 shows 30.3% of the respondents perceived budget achievement to be highly emphasized by their firm as part of performance evaluation. The desired level of importance of budget achievement closely matches (25.5%) the perceived level of importance of budget achievement. In general, the majority of the respondents felt that budget achievement was at least "quite important" for their performance evaluation. These results indicate that either, audit firms may place budget achievement as one important criterion in promoting their staff, or respondents feel that it is necessary to include budget achievement in their performance evaluation.

Further tests were conducted to investigate any significant differences among respondents' profiles in budget emphasis. There was no significant effect of gender (Male, M = 7.85, SD = 1.45; Female, M = 7.97, SD = 1.53; t(272) = -0.63), firm size (Big-four, M = 7.63, SD = 1.85; non-Big four, M = 7.93, SD = 1.42; t(272) = -1.14),

years of auditing experience, F (2, 271) = 1.08 and positions, F (4, 269) = 0.27 on budget emphasis.

Table 6.16: The Frequencies of Budget Emphasis

RAQP	Actual (Perceived)		Desired	
Not important	0%	(0)	0%	0
Little importance	4.0%	(11)	2.2%	(6)
Some importance	27.7%	(76)	23.4%	(64)
Quite important	38%	(104)	48.9%	(134)
Very important	30.3%	(83)	25.5%	(70)
Mean	3.95		3.98	
Standard Deviation	.86		.76	

6.6 Assessing Assumption for SEM

Table 6.2 has displayed the reliability results. The internal reliability (Cronbach's alpha) ranged from .70 for the "role conflict" construct to .90 for "job performance". These exceeded .70 suggesting adequate reliability. Table 6.17 showed the correlation matrix among the constructs. As can be seen from the table, all constructs had correlation lower than .70, with the highest correlations being .67 between "Considerate Leadership" and "Structure Leadership". According to Holmes-Smith (2005), if correlation between constructs are greater than .80 or .90, it suggests a lack of discriminant validity. Therefore, the result does not suggest problems with discriminant validity.

Multicollinearity tests were conducted to ensure no variables were highly correlated with each other. The test was examined through the Variance Inflation Factor (VIF) test. High values of VIF show higher degrees of multicollinearity. A common cut-off threshold is that VIF should be lower than 10 (Hair, et al., 2006). Table 6.17 showed that none of the variables had VIF value exceeding 10. This means that none of the

variables are highly correlated to each other. Therefore, it can be concluded that there is no collinearity problem within the variables/constructs.

Table 6.17: Correlation Matrix among the Constructs

	Workload	Budget Attainability	Budget Emphasis	TABP	Role Ambiguity	Role Conflict	Structure Leadership	Considerate Leadership	Job Stress	Job Performance	RAQP
Workload	1										
Budget Attainability	-.093 *1.224*	1									
Budget Emphasis	.211** *1.186*	.121* *1.177*	1								
TABP	.131* *1.196*	-.049 *1.187*	.148* *1.192*	1							
Role Ambiguity	.146* *2.209*	.294** *2.163*	.194** *2.255*	.158** *2.258*	1						
Role Conflict	.326** *1.618*	-.107 *1.691*	.065 *1.689*	.188** *1.632*	-.136* *1.681*	1					
Structure Leadership	.075 *2.503*	.153* *2.458*	.165** *2.446*	.207** *2.470*	.581** *2.219*	-.137* *2.493*	1				
Considerate Leadership	-.082 *2.060*	.270** *1.983*	-.043 *1.998*	.078 *2.074*	.401** *2.076*	-.127* *2.072*	.669** *1.298*	1			
Job Stress	.258** *1.871*	-.216** *1.931*	.050 *1.920*	-.026 *1.920*	.458** *1.711*	.533** *1.584*	-.327** *1.939*	-.304** *1.931*	1		
Job Performance	.230** *1.650*	.072 *1.671*	.250** *1.633*	-.273** *1.590*	-.499** *1.489*	-.017 *1.666*	.297** *1.671*	.113 *1.667*	-.195** *1.671*	1	
RAQP	-.002 *1.376*	-.085 *1.347*	.040 *1.367*	.053 *1.366*	.191** *1.379*	.339** *1.285*	-.081 *1.379*	.001 *1.377*	.282** *1.368*	-.338** *1.231*	1

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

Note: Values below the diagonal are correlation estimates with VIF values shown in italics on the line below.

With regard to sample size, this study used 274 respondents, which exceeded the minimum sample size suggested by previous studies. According to MacCallum et al. (1999), samples between 100 and 200 are sufficient if the communalities (AVE) are in the range of 0.5. In this study, the minimum communalities (AVE) was 0.50, thus, a sample size of 274 is considered sufficient for use with SEM. In addition, the sample

size of 274 also met the minimum 15 samples per variable requirement as suggested by Hair et al. (2006). This study employed 11 variables to be estimated in the model, thus a minimum sample for this study is 165.

Another important assumption for SEM is multivariate normality. Accessing the multivariate normality assumption is very important because it will affect the estimation method decision and the possibility of producing inaccurate results and erroneous conclusions. Based on the result of normality analysis discussed in Section 6.3.1, the data of this study did not violate this assumption. Thus, this study employed Maximum Likelihood Estimation (MLE). As a conclusion, results presented in this section showed that the data in this study met all the assumptions required by SEM.

6.7 Correlation among the Hypothesised Variables

Table 6.18 summarises the correlation coefficients among the hypothesised variables. From the table, it can be seen that almost all of the correlation coefficients were of the expected sign and strength. However, these results do not necessarily indicate causation or directness of association. Therefore, SEM modeling was performed to provide greater insight into these relationships, within the conceptual model of this study.

Table 6.18: Pearson Correlation Matrix among Hypothesised Variables

Hypotheses	Correlation Coefficient	Significance	Resulting Sign	Expected Sign
H1a: Workload → Job stress	.258	P < .01	Positive	Positive
H1b: Workload → Job performance	.230	P < .01	Positive	Positive
H1c: Workload → RAQP	.002	P > .05	Negative	Negative
H2a: Budget attainability → Job stress	.216	P < .01	Negative	Negative
H2c: Budget attainability → Job performance	.072	P > .05	Positive	Positive
H2d: Budget attainability → RAQP	.085	P > .05	Negative	Negative
H3a: Budget emphasis → Job stress	.050	P > .05	Positive	Positive
H3b: Budget emphasis → Job performance	.250	P < .01	Positive	Negative
H3c: Budget emphasis → RAQP	.040	P > .05	Positive	Positive
H4a: Role ambiguity → Job stress	.458	P < .01	Positive	Positive
H4b: Role ambiguity → Job performance	.499	P < .01	Negative	Negative
H4c: Role ambiguity → RAQP	.191	P < .01	Positive	Positive
H5a: Role conflict → Job stress	.533	P < .01	Positive	Positive
H5b: Role conflict → Job performance	.017	P > .05	Negative	Negative
H5c: Role conflict → RAQP	.339	P < .01	Positive	Positive
H6a: Considerate leadership →Job stress	.304	P < .01	Negative	Negative
H6b: Considerate leadership → Job performance	.113	P > .05	Positive	Positive
H6c: Considerate leadership →RAQP	.001	P > .05	Positive	Negative
H7a: Structure leadership → Job stress	.327	P < .01	Negative	Positive
H7b: Structure leadership → Job performance	.297	P < .01	Positive	Negative
H7c: Structure leadership → RAQP	.081	P > .05	Negative	Positive
H8a: TABP → Job stress	.026	P > .05	Negative	Negative
H8b: TABP → Job performance	.273	P < .01	Negative	Negative
H8c: TABP → RAQP	.053	P > .05	Positive	Positive
H9: Job stress →Job performance	.195	P < .01	Negative	Negative
H10: Job stress →RAQP	.282	P < .01	Positive	Positive
H11: Job performance → RAQP	.338	P < .01	Negative	Negative

6.8 Measurement Model

Stage four of SEM comprised the measurement of all instruments in the measurement model by using a confirmatory factor analysis (CFA). The final stage involved constructing the structural model by specifying the relationship between the latent variables. A CFA was assessed using AMOS version 17.0. The distinctive feature of exploratory factor analysis (EFA) is that the EFA is used to identify the groups (factors) for a set of items, whereas with CFA, the researcher must identify the number of groups (factors) that exist within a set of items (Byrne, 2001; Hair, et al., 2006). In this study, Maximum Likelihood Estimation (MLE) was used for the estimation technique (refer 5.7.3.2 for detail).

In this study, the latent variables were role ambiguity, role conflict, budget emphasis, workload, structure leadership, considerate leadership, job stress, job performance and RAQP. The CFA model is shown in Figure 6.1. The initial analysis of CFA showed a very poor fit[8] of the model to the data, χ^2 (1503, N=274) = 4976.87, p = .000, normed χ^2 = 3.31, CFI = .58, IFI = .58, RMSEA = .09 and AIC (saturated) = 5276.87 (3306.00). This indicates that some modification in specification is needed in order to determine a model that better represents the sample. The close examination of standardised loading estimates showed that 10 items had loadings below 0.5 (refer Table 6.19). A standardised loading of .5 or higher indicates high convergent validity (Hair, et al., 2006), thus these items were deleted from the measurement model. Eight items were from the job performance instrument, whereas, one item each were from the role ambiguity and role conflict instrument. In addition, three items from the considerate leadership instrument (Panel I Table 6.19) that had negative loadings, were also removed.

[8] A value of greater than .9 is considered good for CFI and IFI (Hair, et al., 2006; Holmes-Smith, 2005). For RMSEA, values between .05 and .08 indicate a reasonable fit, normed χ should be between 1.0 and 3.0 (Holmes-Smith, 2005) and AIC should be less than for the saturated model (Baines & Langfield-Smith, 2003).

The second analysis was based on a respecification of the measurement model after deletion of 11 items from the original model. The results of the measurement model still showed a very poor fit of the model, χ^2 (866, N=274) = 2391.76, p = .000, normed χ^2 = 2.76, CFI = .74, IFI = .75 and AIC (saturated) = 2639.76 (1980.00). Only RMSEA is a marginally good fit, with .08.

A review of the modification index (MI) indicated the presence of factor cross-loadings among several items and latent variables. High modification indices (4 or higher) suggest that the fit could be improved significantly by freeing the corresponding path (Hair, et al., 2006). The items with high modification indices were shown in Appendix 7. Given that the modification indices for these items were high, it was suggested that these items should be deleted as part of the development of the measurement models. The deletion of these items substantially improved the model's goodness-of-fit. The overall new model χ^2 was 517.23 with 263 degrees of freedom. The *p*-value associated with this result was .000. However, given the problems associated with using this test alone (refer 5.7.3.4 for detail of problems associated with χ^2), it is important to examine other fit measurements. The value for CFI was .91, normed χ^2 was 1.97, IFI was .91, RMSEA was .06 and AIC (saturated) was 693.23 (702.00); all were above the guidelines. These results suggest that the measurement model provides a reasonably good fit. All of the remaining items had a critical ratio significant at P <.001. Table 6.19 designated "Modified Model" indicates the adjustments made based on the previously described indicators. The modified measurement items are shown in the structural model of Figure 6.2.

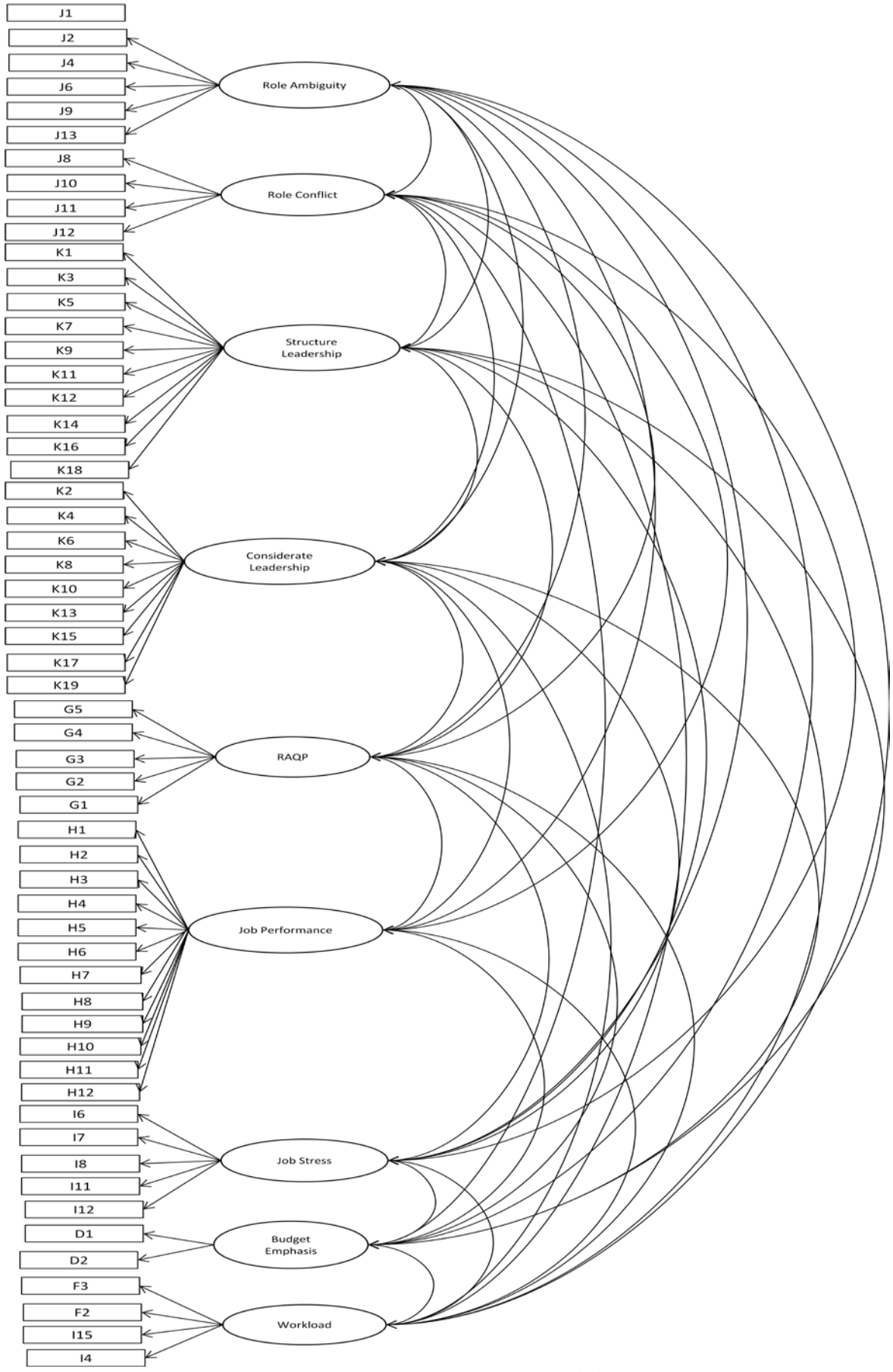

Figure 6.1: Measurement Model

Table 6.19: Items and Properties of the Latent Variables

	Full Model		Modified Model	
	Loading Estimate	R^2	Loading Estimate	R^2
Panel A: Budget Emphasis (Section D)				
D1. Under the present system for evaluating performance in your organisation, what level of importance is placed on meeting time budgets?	.88	.77	.71	.50
D2. Under the present system for arriving at an overall evaluation of performance, what level of importance would you place on meeting time budgets?	.79	.62	.98	.96
			Average Variance Extracted: .73	
			Construct Reliability : .89	
Panel B: Workload (Section F)				
F2. It often seems like I have too much work for one person to do.	.66	.44		
F3. The performance standards on my job are too high.	.56	.31		
I4. I have too heavy a work load, one that I cannot possibly finish during an ordinary workday.	.73	.53	.75	.56
I15. My job tends to interfere with my family life	.64	.41	.70	.49
			Average Variance Extracted: .53	
			Construct Reliability: .65	
Panel C: RAQP (Section G)				
G1. Prematurely signing-off on an audit program step	.77	.59	.73	.53
G2. Reduced work below what you considered reasonable	.59	.35		
G3. Failed to research an accounting principle or technical issue when you were unsure of the answer	.67	.45	.65	.42
G4. Made superficial reviews of supporting client documents	.69	.48	.75	.56
G5. Accepted weak explanations from clients	.63	.40		
			Average Variance Extracted: .50	
			Construct Reliability: .73	
Panel D: Job Performance (Section H)				
H1. Maintaining quantity of work	.12	.01		
H2. Maintaining quality of work	.31	.10		
H3. Communicating orally	.40	.16		
H4. Communicating in writing	.59	.35		
H5. Accepting responsibility and initiating action	.78	.61	.73	.53
H6. Exercising professional skills and due care	.32	.10		
H7. Following policies and procedures	.19	.04		
H8. Planning and organising work	.86	.74	.90	.81
H9. Adapting to different job situations	.11	.01		
H10. Getting along with others within the firm	.39	.15		
H11. Dealing with clients outside the firm	.35	.12		
H12. Supervising others.	.75	.56	.80	.64
			Average Variance Extracted: .66	
			Construct Reliability: .83	
Panel E: Job Stress (Section I)				
I6. I am not fully qualified to handle my job	.52	.27		
I7. I do not know what my supervisor thinks of me and how he/she evaluates my performance	.74	.55		
I8. I cannot get information needed to carry out my job	.60	.36	.56	.31
I11. I am unable to influence my immediate supervisor's decisions/actions that affect me	.79	.62	.80	.64
I12. I do not know what my co-workers expect of me	.81	.66	.83	.69
			Average Variance Extracted: .55	
			Construct Reliability: .80	

Panel F: Role Ambiguity (Section J)				
J1. I feel certain about how much authority I have	.59	.35	.60	.36
J2. There are clear, goals and objectives for my job	.81	.66		
J4. I know that I have divided my time properly.	.49	.24		
J6. I know what my responsibilities are	.67	.45	.70	.49
J9. I know exactly what is expected of me	.71	.50	.81	.66
J13. I feel I am given clear explanation of what has to be done	.55	.30		
			Average Variance Extracted: .50	
			Construct Reliability: .79	
Panel G: Role Conflict (Section J)				
J8. I work in different teams with staff members who operate quite differently	.35	.12		
J10. I receive incompatible requests from two or more people	.68	.46	.70	.49
J11. I do things that are apt to be accepted by one person and not accepted by others	.69	.48	.71	.50
J12. I receive an assignment without adequate resources and materials to execute it	.74	.55	.74	.55
			Average Variance Extracted: .51	
			Construct Reliability: .73	
Panel H: Structure Leadership (Section K)				
K1. The person-in-charge let the audit team know what was expected of them.	.62	.38		
K3. The person-in-charge encouraged the use of standard procedures.	.73	.53		
K5. The person-in-charge tried out his/her ideas in the audit team.	.55	.30		
K7. The person-in-charge made his/her attitudes clear to the group.	.69	.48	.67	.45
K9. The person-in-charge decided what should be done and how it should be done.	.59	.35		
K11. The person-in-charge assigned audit team members to particular tasks.	.62	.38		
K12. The person-in-charge made sure that his/her part in the audit team was understood by the audit team members.	.79	.62	.79	.62
K14. The person-in-charge scheduled the work to be done.	.68	.46	.64	.41
K16. The person-in-charge maintained clearly defined standards of performance.	.80	.64	.82	.67
K18. The person-in-charge asked that the audit team members follow standard rules and regulations.	.54	.29		
			Average Variance Extracted: .54	
			Construct Reliability: .85	
Panel I: Considerate Leadership (Section K)				
K2. The person-in-charge was friendly and approachable.	.60	.36		
K4. The person-in-charge did little to make it pleasant to be a member of the team.	-.12	.01		
K6. The person-in-charge put suggestions made by the audit team into operation.	.65	.38	.66	.44
K8. The person-in-charge treated all audit team members as his/her social equal	.70	.49		
K10. The person-in-charge gave advance notice of changes	.68	.46	.70	.49
K13. The person-in-charge looked out for the personal welfare of the audit team members	.73	.53		
K15. The person-in-charge was willing to make changes.	.73	.53	.78	.61
K17. The person-in-charge refused to explain his/her actions	-.39	.15		
K19. The person-in-charge acted without consulting the audit team	-.48	.23		
			Average Variance Extracted: .51	
			Construct Reliability: .79	

The construct reliability ranged from .65 to 89 which indicated that the model's construct validity was good. A minimum guideline for this indicator is 0.6 (Hair, et al., 2006). The average variance extracted (AVE) ranged from .50 to .73, which exceeded the .50 rule of thumb suggested by Hair et al. (2006). This suggests an adequate convergent validity for the construct.

6.9 Structural Equation Modeling Analysis

This section discusses the structural model which involves specifying the structural model (stage five) and assessing the structural model validity (stage six). The structural equation model is developed based on confirmatory factor analysis (stage four: assessing measurement model validity) which has been discussed in Section 6.8.

Table 6.20: Descriptive Statistics for Final Variables

Variable	Possible range	Actual Range	Mean	Median	Standard deviation
Budget Attainability	1-5	1-5	3.20	3.00	0.80
Budget Emphasis	2-10	4-10	7.92	8.00	1.49
Workload	1-5	1-5	3.49	3.50	0.86
TABP	38 - 190	69-106	86.03	85.50	7.95
Role Ambiguity	6 - 30	12-30	22.34	22.00	3.54
Role Conflict	8 - 40	9-36	23.37	24.00	5.09
Considerate Leadership	5–25	8-25	16.46	16.23	2.88
Structure Leadership	12-60	26-60	43.28	43.27	7.18
Job Stress	15-75	18-67	39.47	40.00	9.56
Job Performance	12-60	21.50-42.27	32.56	32.67	4.28
RAQP	1-5	1-5	2.41	2.40	0.77

Table 6.20 lists the descriptive statistics for each variable in the study. The reliability measures (Cronbach's alpha) for each variable ranged from .70 to .90. These exceeded the minimum acceptable value of .70 (Sekaran, 2006). High reliability measures also provide confidence that the items in each variable are measuring a single construct (Baines & Langfield-Smith, 2003). In addition to that, all the constructs are exceeded the construct and convergent validity guideline (refer Table 6.19).

6.9.1 Hypothesised Model

The structural model was developed and tested based on the hypotheses of the study (refer to Chapter 4). The relationships from one construct to another were assigned based on the theoretical model using path analysis. Job stress, job performance and RAQP are each endogenous constructs in the model. Job stress and job performance are used as outcomes in some hypotheses as well as predictors in others. This dual role and a test of all hypotheses can be conducted with one structural model in SEM, which would not be possible in a regression model because it would be limited to a single dependent variable.

The structural model in this study used the Maximum Likelihood Estimation (MLE) estimation technique and was analysed using AMOS for Windows version 17.0. Figure 6.2 shows the path diagram with the standardised structural parameter estimates included on the paths. For the budget attainability and TABP variables, which have only single-item measure, their error variance is fixed to zero (Hair, et al., 2006; Kenny, 2011).

The fit measures in the final model indicate a reasonable good model fit, with five paths significant at $p<0.01$ and five paths significant at $p<0.05$. The model's fit statistic shows that χ^2 was 571.57 with 297 degrees of freedom ($p< .05$). The normed χ^2 =1.92 was within the acceptable level value. The CFI = .90, RMSEA = .06 and AIC (saturated) = 789.57 (812.00) all exceed the accepted minimum guidelines. On the other hand, TLI (.88) and GIF (.88) measures are slightly below the acceptable value of .90. In order to improve the model's goodness of fit, a number of insignificant paths were therefore removed from the model.

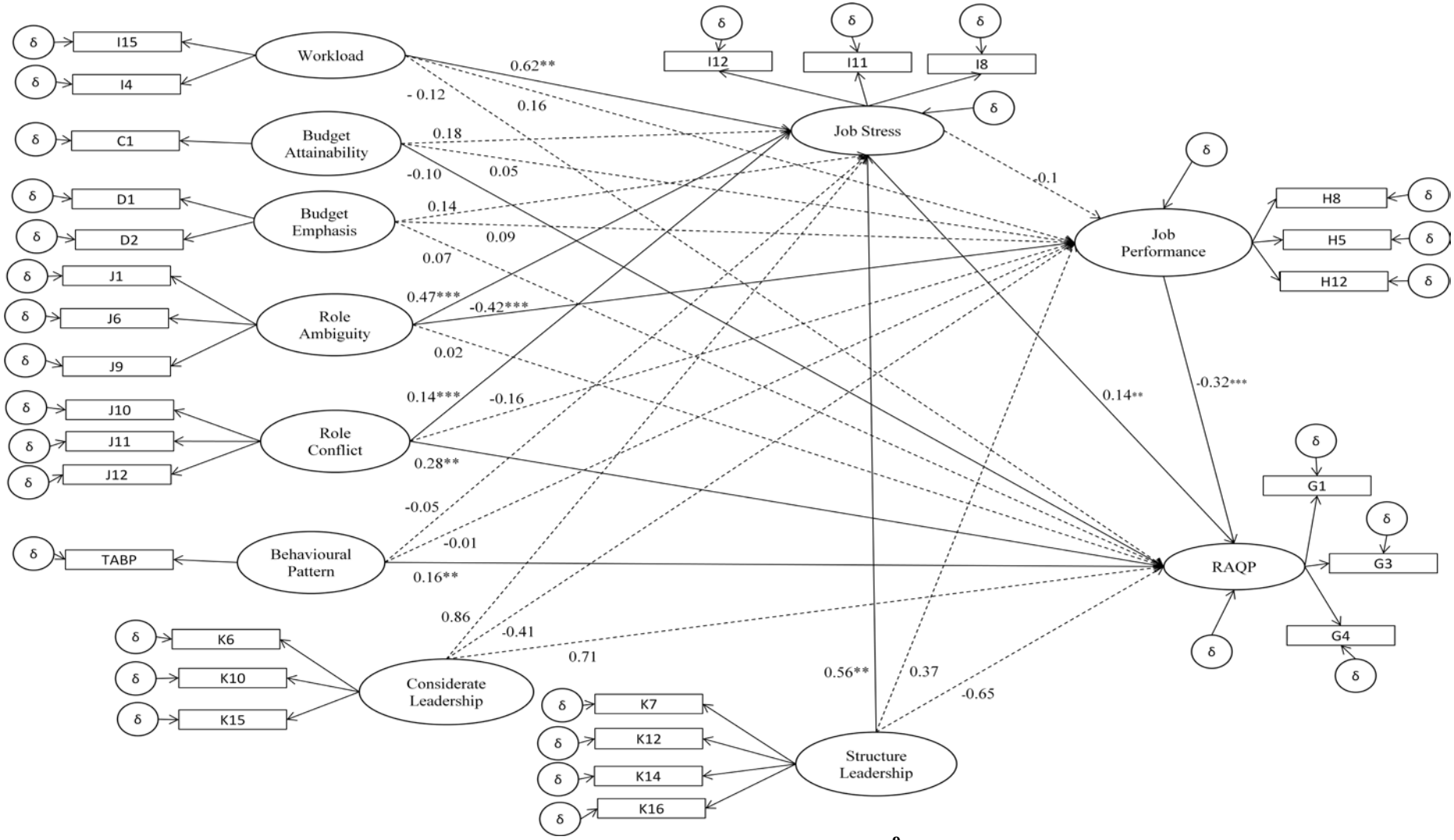

Figure 6.2: Hypothesised Model[9]

[9] Each significant (***p<.01; **p<.05; *p<.1) structured pathway is represented by a solid line and non-significant pathways by a dotted line.

6.9.2 Modified Model

Figure 6.3 shows a modified model after removing several insignificant paths. The outcome of these deletions was an improvement in model fit. The model goodness of fit indices were assessed from multiple fit indices which include the normed χ^2 value and the associated degree of freedom, one of absolute index (i.e., GFI, RMSEA, RMSR or SMSR), one incremental index (i.e., NFI, CFI, TLI or RNI) and at least one of badness-fit index (i.e., RMSR, SRMR or RMSEA).

The χ^2 (207, N=274) = 371.10 was significant at 0.05, and a normed χ^2 was within the acceptable range of 1 to 3 (χ^2/df = 1.79). These results showed that there was no difference between the observed sample and SEM estimated covariance matrix. It can be said that the specified model is a feasible representation of the data it purports to portray.

The overall fit statistics showed that all of the other important indices were above the recommended criteria[10], suggesting a good overall fit. An RMSEA value, 0.05 was less than the threshold value of 0.08. This suggested that the model has close approximate fit in the population. The value of GFI (0.90) provides more evidence of a well fitting model.

The incremental fit indexes measure how much better is the model, which assumes at least some relationships, compared to a model with no relationships. The values of TLI and CFI were .90 and 0.92, respectively, indicating a good model fit. The AIC were used to measure model parsimony. The AIC should be less than the saturated model value. The AIC value (509.10) was less than the saturated model (552.00), indicating a parsimonious model. The final structural model is presented in Figure 6.3 with the paths and standardised structural parameter estimates.

[10] Refer to threshold value in Chapter 5

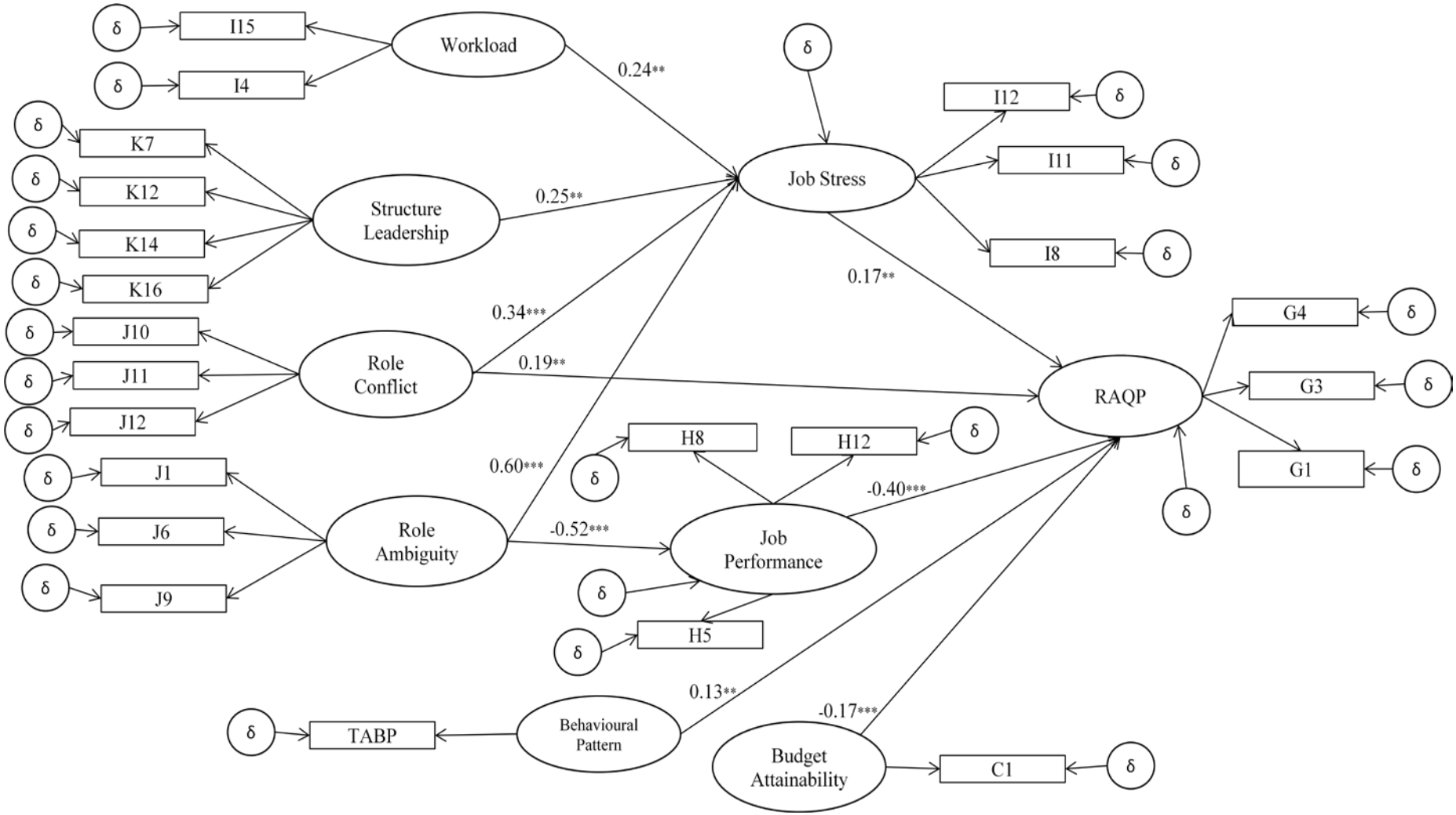

Figure 6.3: Modified Model[11]

[11] ***p<.01; **p<.05.

6.9.3 Assessing the Structural Model Validity

The final stage involves the validity test of the structural model and its corresponding hypothesised theoretical relationship. The structural model validity could be accessed based on the goodness of fit (GOF) value and estimated parameter (Hair, et al., 2006). The χ^2 value and other fit indices establish the validity of the structural model. Results of GOF values discussed in Subsection 6.9.2 demonstrated that the structural model had a good fit, thus suggesting the validity of the model.

The other criterion to achieve structural model validity is that the estimated parameters are statistically significant and in the predicted direction. Figure 6.3 showed that all estimated parameters in the final structural model were statistically significant. Details of these results are discussed in the following sections. In conclusion, the structural model used in this study is considered acceptable when it demonstrates acceptable model fit and the path estimates representing each of the hypotheses are significant and in the predicted direction.

6.9.4 Hypotheses Testing

In the proposed structural model, 27 hypotheses, embracing eleven variables, were tested using SEM. Eight exogenous constructs were tested against three endogenous constructs, namely job stress, job performance and RAQP. Job stress and job performance were also examined against RAQP. The fit measures in the final structural model (Figure 6.3) indicate a good fit with five paths significant at the 1% level ($p < 0.01$) and five paths significant at the 5% level ($p < 0.05$). The results of the tests of hypotheses are presented in Table 6.21.

Table 6.21 shows that workload had a significant relationship with job stress at the 5% level, with the structural coefficient for the paths being 0.24. Therefore, Hypotheses 1a

is supported. These results suggest that workload affects the auditors' job stress level. However, there were no significant relationships found between workload and job performance, nor between workload and RAQP. Therefore, Hypotheses 1b and 1c are rejected.

The second group of Hypotheses (2a, 2b and 2c) examined the effect of budget attainability towards auditors' job stress, job performance and RAQP. While Hypothesis 2c is supported, no significant relationships were found between budget attainability and job stress, nor between budget attainability and job performance. Therefore, Hypotheses 2a and 2b are rejected. The structural coefficient for the path between budget attainability and RAQP (Hypothesis 2c) was -0.17. The negative sign of the structural coefficient indicates that budget attainability negatively affects RAQP, which suggests that if the budget is easy to achieve, it will reduce the intention of auditors to engage with RAQP.

Hypotheses 3a, 3b and 3c examined the impact of budget emphasis on auditors' job stress, job performance and RAQP, respectively. The structural coefficient between budget emphasis and job stress was 0.14; the correlation between the two variables was positive but not significant within any accepted significance level. Therefore, Hypothesis 3a was rejected. Budget emphasis had a positive association with RAQP with a structural path coefficient of 0.07. Although the estimate is in the hypothesised direction, it is not significant. The result, therefore, was not consistent with the study prediction and Hypothesis 3c is rejected. Similarly, no significant association was found between budget emphasis and job performance, thus Hypothesis 3b is rejected.

Hypotheses 4a, 4b and 4c examined the relationships between role ambiguity and job stress, job performance and RAQP, respectively. Hypotheses 4a and 4b are both supported at the 1% level ($p < .01$), however, the relationship between role ambiguity and RAQP was not significant, resulting in the rejection of Hypothesis 4c. The

structural coefficient between role ambiguity and job stress (Hypothesis 4a) and between role ambiguity and job performance (Hypothesis 4b) were 0.60 and -0.52, respectively. Both were in the predicted direction. Although the relationship between role ambiguity and RAQP was in the hypothesised direction with a structural coefficient of 0.02, it was not significant, leading to the rejection of Hypothesis 4c.

Hypotheses 5a, 5b and 5c predicted that role conflict will increase the auditors' job stress, reduce job performance and increase the intention to engage with RAQP. A positive significant relationship was found between role conflict and job stress. The structural coefficient of the path between the two constructs was 0.34. The relationship was significant at the 1% level ($p < .01$), therefore, Hypothesis 5a is supported. A positive significant ($p < .01$) relationship was also found between role conflict and RAQP, with a structural path coefficient of 0.19. Accordingly, Hypothesis 5c is accepted. The structural coefficient between role conflict and job performance was -0.16 and in the predicted direction. However, this relationship was not significant, therefore, Hypothesis 5b is rejected.

It was posited that there is a relationship between leadership behaviour and job stress, which consequently affected the auditors' job performance and auditors' dysfunctional behaviour. Hypotheses 6a, 6b and 6c proposed that considerate leadership could have a negative effect on job stress, thus improving auditors' job performance and reducing auditors' dysfunctional behaviour. On the other hand, Hypotheses 7a, 7b and 7c propose that structure leadership could increase auditors' stress level, thus affecting their job performance and increasing their intention to engage in RAQP. The results showed that only one of these hypotheses is supported (Hypothesis 7a). The structural coefficient between structure leadership and job stress was 0.25 and significant at the 5% level ($p < .05$).

Hypotheses 8a, 8b and 8c examined the impact of an individual behavioural pattern (either Type A or B) on job stress, job performance and RAQP respectively. In this study, individual behavioural pattern is coded as 1 for Type A and 2 for Type B. The positive (negative) coefficient indicates that Type B (Type A) characteristics are more likely to associate with job stress, job performance and RAQP (Gundry & Liyanarachchi, 2007; Rayburn & Rayburn, 1996). Results showed that the individual behavioural pattern had a significant relationship with RAQP ($p < .05$). The structural coefficient of the path between behavioural pattern and RAQP was 0.13. The positive structural coefficient suggests that a Type B individual pattern tends to engage more in RAQP compared to Type A. Accordingly, Hypothesis 8c is supported. With regards to the association between individual behavioural pattern and job stress, the structural coefficient showed a negative association of -0.05, suggesting that a Type A individual was associated with job stress. However, although the result was in the hypothesized direction, no significant relationship was found between the constructs. Therefore, Hypothesis 8a is rejected. Similarly, the negative structural coefficient of the path between behavioural pattern and job performance suggested that the association preference of behavioural pattern is towards Type A; however, the relationship between the two constructs was not significant, therefore, Hypothesis 8b is rejected.

Consistent with the theory, both job stress and job performance were significantly related to RAQP in the predicted directions. As shown in Table 6.21, job stress was significantly positively associated to RAQP at the 5% level ($p < .05$). Table 6.21 showed a 0.17 structural coefficient of these constructs, and therefore, supported Hypothesis 10. The association between job performance and RAQP showed a -0.40 structural coefficient significance at the 1% level ($p < .01$). The negative structural coefficient suggested that high job performance will reduce the intention to engage in RAQP. Therefore, Hypothesis 11 is also supported. While Hypothesis 10 and 11 are supported, no significant relationship was found between job stress and job performance. The structural coefficient for these constructs was -0.10. Only the negative sign of the relationship coincided with the expected hypothesis; therefore, Hypothesis 9 is rejected.

6.9.5 Indirect Effect

The review of the path diagram in Figure 6.3 suggested indirect effects for several variables on RAQP through job stress and job performance. These variables were workload, role ambiguity, role conflict and structure leadership.

The indirect effect or association of workload on RAQP was measured by the intervening variable of job stress. The indirect effects of workload on RAQP were calculated based on the values of path standardised estimates in Figure 6.3. The estimate of the direct effect of workload on job stress was 0.24 and the estimate for the direct effect of job stress on RAQP was 0.17. The predicted estimate between workload and the RAQP equalled the standardized indirect effect, which was estimated at 0.04 (0.24 x 0.17). According to Hair, et al. (2006), only an indirect effect in excess of an absolute amount of 0.08 may be considered meaningful and important in analysis. In this result, the total indirect effect is below this threshold, therefore no further discussion was contemplated.

The indirect effect of role ambiguity on RAQP was then measured by the intervening variables of job stress and job performance. The indirect effect of role ambiguity on RAQP was calculated as follow.

Path (1)	Role ambiguity – Job stress - RAQP	0.60 X 0.17	=	0.102
Path (2)	Role ambiguity – Job performance - RAQP	-0.52 X -0.40	=	0.208
	Total indirect effect			0.310

Path (1) indicates that the indirect effect through job stress was 0.102 and Path (2) indicates that the indirect effect via job performance was 0.208. Together both paths revealed an indirect effect of 0.31, which is in excess of an absolute amount of 0.08.

This result suggests that both job stress and job performance mediated fully the relationship between role ambiguity and RAQP. This suggests that the effect of role ambiguity on RAQP is indirect through these intervening variables.

The indirect effect between role conflict and RAQP was measured by the mediating variable of job stress. The estimate of the direct effect of role conflict on job stress is 0.34 and the estimate for the direct effect of job stress on RAQP is 0.17. A higher level of role conflict is associated with high levels of job stress, which consequently will increase the intention of auditors to engage with RAQP. The indirect effect of role conflict on RAQP was estimated at 0.058, which was below the absolute threshold amount of 0.08.

The indirect effect of structure leadership on RAQP was measured by the intervening variable of job stress. The estimate of the direct effect of the structure leadership on job stress was 0.25 and the estimate for the direct effect of job stress on RAQP was 0.17. Thus, the indirect effect of structure leadership on RAQP was only 0.043, which was below the absolute threshold amount of 0.08 and too low to be considered meaningful.

6.10 Summary

In this chapter, descriptive statistics for respondents' profile and the frequencies of the type of RAQP engaged in by auditors were reported. The structural equation modeling technique was employed to examine the hypotheses developed in the study. This study has provided empirical evidence of an association between several factors of stress antecedents to reduced audit quality practices (RAQP) within the context of a developing country, Malaysia. Table 6.21 presents the summary of the results of the hypotheses tested. A total of 27 hypotheses were examined and 10 hypotheses were supported by the data analysis. Beside the analysis on the hypothesised model, this

study also investigated the indirect associations of the variables on RAQP. The implications of these results are discussed in the next chapter.

Table 6.21: Result of Hypotheses Testing[12]

Hypotheses	Standardized value	Support/Reject
H1a: Workload → Job stress	0.24**	Accepted
H1b: Workload → Job performance	0.16	Rejected
H1c: Workload → RAQP	-0.12	Rejected
H2a: Budget attainability → Job stress	0.18	Rejected
H2b: Budget attainability → Job performance	0.05	Rejected
H2c: Budget attainability → RAQP	-0.17**	Accepted
H3a: Budget emphasis → Job stress	0.14	Rejected
H3b: Budget emphasis → Job performance	0.09	Rejected
H3c: Budget emphasis → RAQP	0.07	Rejected
H4a: Role ambiguity → Job stress	0.60***	Accepted
H4b: Role ambiguity → Job performance	-0.52***	Accepted
H4c: Role ambiguity → RAQP	0.02	Rejected
H5a: Role conflict → Job stress	0.34***	Accepted
H5b: Role conflict → Job performance	-0.16	Rejected
H5c: Role conflict → RAQP	0.19**	Accepted
H6a: Considerate leadership → Job stress	0.86	Rejected
H6b: Considerate leadership → Job performance	-0.41	Rejected
H6c: Considerate leadership → RAQP	0.71	Rejected
H7a: Structure leadership → Job stress	0.25**	Accepted
H7b: Structure leadership → Job performance	0.37	Rejected
H7c: Structure leadership → RAQP	-0.65	Rejected
H8a: TABP → Job stress	-0.05	Rejected
H8b: TABP → Job performance	-0.01	Rejected
H8c: TABP → RAQP	0.13**	Accepted
H9: Job stress → Job performance	-0.1	Rejected
H10: Job stress → RAQP	0.17**	Accepted
H11: Job performance → RAQP	-0.40***	Accepted

[12] *** $p < 0.01$; ** $p < 0.05$

CHAPTER 7: DISCUSSION AND CONCLUSIONS

7.1 Introduction

This study investigated the stress antecedents that influence reduced audit quality practices (RAQP), categorised in terms of job characteristics (workload, budget attainability), firm characteristics (budget emphasis, role ambiguity, role conflict, leadership styles) and individual characteristic (Type A behavioural pattern). In addition to the stress antecedents, this study also examined the consequences of job stress and job performance on RAQP. In this study, Structural Equation Modeling (SEM) was employed to test the hypotheses in the research model. The chapter begins with a discussion of the 27 hypotheses developed after an extensive literature review. Then contributions of the study to theoretical, methodological, and practical are presented in Section 3, followed by limitations in Section 4. Suggestions for further research and conclusions are presented in Sections 5 and 6. A summary of the chapter is presented in the final section.

7.2 Discussion of Findings

In this section, the results of the analyses are discussed in greater depth with possible explanations and implications being considered. The discussion was facilitated by grouping the hypotheses according to the exogenous variables. The results of the hypotheses testing are summarised in Table 7.1 and are discussed in this chapter in conjunction with the literature review.

Table 7.1: Summary of Hypotheses Testing

	Hypotheses	Support/Reject
H1a	High workload will be associated with an increase in job stress	Supported
H1b	High workload will be associated with an increase in job performance	Rejected
H1c	High workload will be associated with a decrease in RAQP	Rejected
H2a	Low levels of budget attainability will be associated with an increase in job stress	Rejected
H2b	Low levels of budget attainability will be associated with a decrease in job performance	Rejected
H2c	Low levels of budget attainability will be associated with an increase in RAQP	Supported
H3a	High perceived emphasis on meeting time budgets in performance evaluation will be associated with an increase in job stress	Rejected
H3b	High perceived emphasis on meeting time budgets in performance evaluation will be associated with a decrease in job performance	Rejected
H3c	High perceived emphasis on meeting time budgets in performance evaluation will be associated with an increase in RAQP	Rejected
H4a	High perceived role ambiguity will be associated with an increase in job stress	Supported
H4b	High perceived role ambiguity will be associated with a decrease in job performance	Supported
H4c	High perceived role ambiguity will be associated with an increase in RAQP	Rejected
H5a	High perceived role conflict will be associated with an increase in job stress	Supported
H5b	High perceived role conflict will be associated with a decrease in job performance	Rejected
H5c	High perceived role conflict will be associated with an increase in RAQP	Supported
H6a	High levels of consideration in the leadership style of seniors/managers/partners will be associated with a decrease in job stress	Rejected
H6b	High levels of consideration in the leadership style of seniors/managers/partners will be associated with an increase in job performance	Rejected
H6c	High levels of consideration in the leadership style of seniors/managers/partners will be associated with a decrease in RAQP	Rejected
H7a	High levels of structure in the leadership style of seniors/managers/partners will be associated with an increase in job stress	Supported
H7b	High levels of structure in the leadership style of seniors/managers/partners will be associated with a decrease in job performance	Rejected
H7c	High levels of structure in the leadership style of seniors/managers/partners will be associated with an increase in RAQP	Rejected
H8a	Type A individuals will be associated with higher job stress compared to Type B individuals	Rejected
H8b	Type A individuals will be associated with better job performance compared to Type B individuals	Rejected
H8c	Type A individuals are less likely to use greater RAQP compared to Type B individuals	Supported
H9	High levels of job stress will be associated with a decrease in job performance	Rejected
H10	High levels of job stress will be associated with an increase in RAQP	Supported
H11	High levels of job performance will be associated with a decrease in RAQP	Supported

7.2.1 Workload

The public accounting workplace has long been acknowledged as a high stress environment partly due to work overload during the peak period (Campbell, et al., 1988; Dalton, et al., 1997; Sweeney & Summers, 2002). Although auditors are said to work more than 60 hours per week during peak periods (Dalton, et al., 1997), these workloads do not always decrease during the off-peak period (Sweeney & Summers, 2002; Ward & Albright, 2009). Therefore, it was hypothesized that an increase in workload will be associated with an increase in job stress. Consistent with the previous studies (Campbell, et al., 1988; Law, et al., 2008; Sweeney & Summers, 2002), this study found a significant positive relationship between workload and job stress among auditors in Malaysia.

On the other hand, workload did appear to have a positive influence on job performance, but the association was not significant. The positive sign may indicate that workload eventually has marginal positive effect on job performance as the auditors may view workload as a challenge (K. J. Smith, et al., 2007). However, this effect may be mitigated by the possible negative consequences of work overload on various health problems such as cardiovascular diseases, mental health, fatigue, emotional exhaustion and sleep disturbances (Friedman, et al., 1958; Hulst, 2003; Laaksonen, et al., 2006; Liu & Tanaka, 2002). The possibility of health problems, combined with job stress may reduce the positive effects of workload.

Similarly, workload did not have a significant influence on RAQP. Although the result is in the hypothesized direction, the effect of workload is not strong enough to influence auditors to engage in RAQP. Another plausible explanation is that the association between workload and RAQP may be reduced by the "eustress[13]" component of workload. This could be explained by the positive sign of relationship between workload and job performance. In addition to that, this result suggests that management

[13] Eustress or good stress is a positive form of stress that is healthful, gives one a feeling of fulfilment, that enhances one's performance (K. J. Smith, et al., 2010).

may want to enhance the positive effect of workload, keeping workload reasonably high to maintain its motivating effects while minimising the dysfunctional effects (Fogarty, et al., 2000; Lepine, et al., 2005).

7.2.2 Time Budget Pressure

One of the unique characteristics that exist in auditing work setting is time budget pressure. It has been suggested that time budget pressure is an important feature of the auditors' work condition (Alderman & Deitrick, 1982; Kelley & Margheim, 1990; Kelley & Seller, 1982). Time budget has been used as a control mechanism in the audit firm. However, excessive use of time budgets could lead to a negative effect among the auditors. In this study, two variables were used to measure budget pressure, budget attainability and budget emphasis. It was postulated that a low level of budget attainability was associated with higher tension among the auditors, which consequently will affect their performance and influence them to engage in RAQP. On the other hand, high perceived emphasis on budget achievement in performance evaluation was hypothesised to be associated with high job stress, low job performance and high intention to engage in RAQP.

Surprisingly, for budget attainability, the results showed that only a hypothesis between budget attainability and RAQP was supported, whereas no significant association was found between budget attainability and job stress, or between budget attainability and job performance. The adverse effect of time budget pressure on audit quality is consistent with previous studies (E. Cook & Kelley, 1988; Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Otley & Pierce, 1996b). It is argued that under tight budget pressure, auditors tend to behave unprofessionally and are more likely to be involved in RAQP. Although Table 6.15 showed only 27.8% of the auditors would engage in RAQP under tight budget conditions, the fact that time budget pressure could have a detrimental effect on auditors' behaviour, and consequently could influence the audit quality, cannot be ruled out. This statistical result provides evidence

that auditors may see RAQP as a way out once they perceived time budget pressure as a threat.

On the other hand, the possible reason for insignificant association between budget pressure and job stress could be because most of the auditors in this study perceived that the budget that they worked on in the previous audit year was generally attainable. Table 6.14 showed that only 3% of the respondents felt the budget was impossible to achieve and less than 12% felt their budget was very tight. In contrast, Otley and Pierce (1996b) found almost 17% and 29% of the auditors in their sample indicated that the budget was impossible or very tight to achieve, respectively. This inconsistency may be due to the fact that their respondents were all from Big four firms, whereas the majority of respondents in this study are from non-Big four firms (85.4%). Generally, non-Big four firms have a different environment and client structure. It can be said that time budget is a reflection of the firm's client structure. The majority of non-Big four firms' clients are non listed[14] companies, with less complex accounting structure and guidelines. This may explain why the auditors in this study felt less pressure from time budgets, which consequently did not affect their performance.

With regards to budget emphasis, no significant relationships were found with job performance, job stress or RAQP. Although Hirst (1983) argued that the methods used (e.g., budget-constrained) to evaluate job performance could increase the dysfunctional behaviour among the auditors, this study found contrary results, which were in agreement with those of Otley and Pierce's (1996b). This could suggest that the findings are closely related to budget attainability, when the auditors do not perceive the budget as their main problem when it could generally be achieved. High emphasis placed on budget achievement for performance evaluation would not create tension and intention to involve with RAQP among the auditors. Indeed, auditors are more willing to use budget achievement as their performance indicator. Support for this explanation is seen in the fact that 68% of the auditors in this study perceived budget achievement

[14] 83% of the public listed companies in Malaysia were audited by Big firms in 1998 (Johl, et al., 2007).

as at least “quite important” in their career development and 74% felt budget achievement should be part of their performance evaluation (see Table 6.16). This could also be the reason for the unexpected positive association between budget emphasis and job performance. Another explanation is that a budget-conscious environment has been accepted as a feature in auditing work setting (Otley & Pierce, 1996b), therefore, auditors may respond positively to time budget pressure.

7.2.3 Role Ambiguity

As mentioned in the literature review, role ambiguity exists when an employee is unclear about the expectations of others when they carry out their duties. Therefore, it was proposed that with a lack of information, the employees are more likely to be inefficient and misdirected to accomplish their role in an effective way, and thus may increase their stress level and prevent them performing better. This could consequently influence the employee to engage in dysfunctional behaviour.

The results of this study indicate that role ambiguity is capable of stimulating job stress. This study confirms that auditors with a lack of information experienced high job stress, which is consistent with previous studies (e.g., Fogarty, 1996; Fogarty, et al., 2000; Law, et al., 2008). The result also showed that role ambiguity is negatively associated with job performance. This indicates that unsure auditors are less effective in performing their duty, which finally affects their performance. The finding further supports previous studies which suggest that insufficient information and guidance in performing organisational tasks could severely affect employees’ performance (Fisher, 2001; Fogarty, 1996; Jones, et al., 2010; Rebele & Michaels, 1990). It seems possible that role ambiguity does exist in an audit firm due to the complexity of the firms, constraints in the communication of information which could be caused by hierarchical structure (partner, manager and senior level) of the firm, or the nature of the audit work itself, which it subject to numerous rules and regulations that keep changing over time.

On the other hand, auditors that perceived high role ambiguity did not engage in RAQP. The existence of role ambiguity in the public accounting environment did not affect RAQP directly. However, role ambiguity does impact RAQP indirectly through job stress and job performance. If role ambiguity increases the auditors' stress level and affects their performance, it will increase RAQP. This result suggests that when auditors experience stress due to unclear instructions or lack of information in performing their duties, which could jeopardise their performance, they tended to engage in dysfunctional behaviours. It seems logical because role ambiguity has been labelled as "hindrance stressors" which could prevent personal growth and goal attainment (Lepine, et al., 2005). Furthermore, a high level of role ambiguity may lead to high levels of insecurity within the individual (Mackay & Cooper, 1987). Auditors may begin to doubt their own ability once they do not perform well and as a consequence, feel insecure about their job, thus forcing them to engage in RAQP in order to move forward in the auditing profession. Another possible reason is that, as auditors perceive high role ambiguity as part of the auditing profession (K. J. Smith, et al., 1998), and something which is thus unavoidable, so RAQP is a way to mitigate the negative effect of job performance caused by role ambiguity.

7.2.4 Role Conflict

Role conflict exists when employees experience incompatible expectations. This may be the result of inconsistent supervision caused by violations of the chain of command (Rizzo, et al., 1970). As role conflict could have a deleterious effect on job outcomes, it was postulated that high role conflict will increase job stress and RAQP, as well as reducing auditors' job performance.

In terms of the hypothesis related to role conflict and job stress, this study produced a result that is consistent with previous studies: role conflict is positively related to job stress (Fogarty, 1996; Rebele & Michaels, 1990; Senatra, 1980; K. J. Smith, et al., 2007). The result provides support for the contention that auditors may experience stress because of a violation in the chain of command, which results in incompatible orders or

expectations from superiors or management. This occurs from the unwritten rules, policies, performance standards and responsibilities that may exist in firms. The auditors may be unaware of some informal rules or policies that exist in the firms, which could create a potential for conflict. For example, in the process for determining the number of samples that need to be selected in the audit procedure: if there is no explicit formalised procedure on this matter, auditors may struggle to determine the appropriate and sufficient number of samples to not only meet the audit objectives, but also to satisfy his or her superior.

On the other hand, although auditors perceiving high role conflict will experience high job stress, this study found that role conflict did not affect auditors' job performance. The possible reason for this could be that auditors may view conflict to be an inherent part of the job, thus it may not affect the way they perform audit tasks. Hamner and Tosi (1974) argued that individuals might perceive role conflict as a given in the organisational setting, and because it is expected, it does not produce dissatisfaction. Similarly, as role conflict is expected to exist in the audit firm environment, it may not result in job dissatisfaction (Senatra, 1980), and hence may not affect job performance. Auditors, from time to time, are expected to receive incompatible orders or expectations from more than one superior while performing their duties, which obviously will increase their stress level, however, as the orders are from their superior, inevitably, they need to fulfil the orders. Alternatively, the significant effect of role conflict on job performance may have been attenuated by role ambiguity. According to Schaubroeck et al. (1989), the significant correlation of role stressors with one another may reduce an otherwise significant finding. In this study, role conflict was significantly correlated with role ambiguity (refer Table 6.17). As a result, a significant relationship between role conflict and job performance may have been accorded reduced emphasis. This argument is also supported by the findings reported by K. J. Smith et al. (2007).

This study also found that auditors experiencing high conflict tend to engage in RAQP. This could be the possible reason why high role conflict does not affect auditors' job

performance. The result may suggest that when auditors receive conflicting orders from their superiors, which might be contrary to their beliefs or be beyond their capabilities, one way to accomplish the task without jeopardising their performance, is by engaging in one or several types of RAQP. For example, managers may request the senior auditor to perform extra or alternative tests to achieve specific audit objectives. However, due to time and budget constraints, senior auditors may prepare a working paper pretending they had performed the extra or alternative test, though in actual fact, the procedures were never carried out. Therefore, in this study, it shows that RAQP could be a means for auditors to receive a better job performance evaluation and survive in the auditing profession.

7.2.5 Leadership Behaviours

Hypotheses 6 predicted considerate leadership to be negatively correlated with job stress (Hypothesis 6a) and RAQP (Hypothesis 6c) but positively correlated with job performance (Hypothesis 6b). On the other hand, Hypotheses 7 predicted structure leadership to be positively associated with job stress (Hypothesis 7a) and RAQP (Hypothesis 7c), but negatively correlated with job performance (Hypothesis 7b). The results indicated that only structure leadership was associated with job stress, which is consistent with previous studies (Madlock, 2008; Somech, 2006; Tsai, 2008). This result confirms that auditors experienced high job stress if their superiors exercised structure leadership style.

On the other hand, the study found insignificant results for other hypotheses. The findings, therefore, do not lend support to previous studies' (Kelley & Margheim, 1990; Otley & Pierce, 1996b; Pratt & Jiambalvo, 1981) suggestions that auditor behaviour can be significantly influenced by leadership style. A potential explanation for the absence of a significant relationship between leadership behaviours and dependent variables, except for a relationship between structure leadership and job stress, is that these leadership styles may not be applicable to the Malaysian context. According to Ahmad (2001, p. 84), "many of them are not culturally appropriate or relevant to Malaysians

because of their underlying assumptions and values which are alien to the Malaysian workforce". This could be true when Malaysians had low levels of individualism (Hofstede, 1991), but most of the management theories covering such key areas as leadership, motivation and organisation have been developed by United States researchers, influenced by extreme individualism, which may make the relevance of some of their theories in other cultural environments doubtful (Hofstede, 1980). In addition, the working environment in Malaysia is complicated as it composed of three major ethnic groups, namely Malays, Chinese and Indians which may not share similar values in leadership behaviour.

Another possible explanation is that leadership behaviour traits may have been redundant or overlapping with each other. This can be problematic when "inter-correlations between the individual components of these dimensions may hinder the ability of researchers to identify specific leader behaviours that significantly influence subordinate performance and satisfaction" (Apostolou, Pasewark, & Strawser, 1993, p. 111).

7.2.6 Type A Behavioural Pattern

It was hypothesized that the Type A Behavioural Pattern (TABP) will be associated with higher job stress, better job performance and a lesser likelihood to use greater RAQP compared to a Type B individuals. With respect to job stress, it was found that TABP did not have a significant relationship, although it was in the hypothesized direction. The failure of a Type A individual in this study to exert a significant influence over job stress may be due to methodological distinctions between this study and other previous studies. For instance, 50% of respondents in Choo (1986) were staff/junior auditors and Haskins et al. (1990) used audit seniors as their respondents. In this study, 54% (refer Table 6.7) of the respondents were at managerial levels (manager, partner and director) and almost 70% of the respondents had more than six years of audit experience (refer Table 6.6). At these levels of position and experience, the positive characteristics of the Type A individual, such as competitiveness, persistence,

commitment to work and ambition, may reduce the impact of the negative components of Type A; thus stressors within the work environment itself may have enhanced Type A behaviour patterns (M. J. Davidson & Cooper, 1980). Although high-stress is said to be associated with the auditing profession (Campbell, et al., 1988; Gaertner & Ruhe, 1981), it is most likely that auditors with this positive personality disposition would be able to absorb the heavy and challenging workloads imposed upon them (K. J. Smith, et al., 1998). There is support for this argument in the findings reported by K. J. Smith et al. (1998), K. J. Smith et al. (1995) and Law et al. (2008). With almost the same percentage of respondents at manager levels (56% and 54% respectively), K. J. Smith et al. (1998) and K. J. Smith et al. (1995) found that TABP was not associated with stress arousal. Law et al. (2008) found that there was no relationship between TABP and exhaustion. On average, their respondents had almost 10 years working experience in auditing profession. Results from this study therefore support those of K. J. Smith et al. (1998), K. J. Smith et al. (1995) and Law et al. (2008) in suggesting that auditors at managerial level with Type A characteristic may exhibit the positive attributes of Type A, and therefore are able to cope with high workloads. Another possible reason for this result could be due to job satisfaction experienced by auditors. Auditors with low job satisfaction were more likely to experience stress (Fisher, 2001; Rebele & Michaels, 1990; Senatra, 1980) and Type A individuals are said to be more satisfied with their jobs compared to Type B individuals (Fisher, 2001; K. J. Smith, et al., 1998), hence, the Type A individuals are likely to experience lower stress levels. Auditors who are more satisfied with their job may respond positively to challenging work conditions, thus reducing their stress levels.

Similarly, the results of this study showed that TABP did not have a significant relationship with job performance. Previous studies in accounting had suggested that tight deadlines were a silent feature of the auditors' work environment (Alderman & Deitrick, 1982; Kelley & Margheim, 1990; Kelley & Seller, 1982) and "one of the most important items to affect auditor behaviour during an engagement" (Alderman & Deitrick, 1982, p. 58). Therefore, the auditing work setting provides a perfect environment for Type A auditors to excel. However, the stressful environment of auditing work may not be extreme enough for a Type A individual (Fisher, 2001) to

perform better than Type B. This is supported by the descriptive results (refer Table 6.14) that showed only 3.3% of the auditors felt it was impossible to achieve their budget and 11.7% felt that their budget was very tight to attain. Previous studies had speculated that Type A outperform Type B only in difficult situations that require persistence and endurance (Matthews, 1982). Matthews (1982) further argued that the performance of Type A will be superior to Type B when "in order to achieve a series of goals as quickly as possible, it is necessary to work rapidly, persist in spite of fatigue or the possibility of failure, and ignore potentially interfering distractions" (p. 301). Therefore, the descriptive results (refer Table 6.14) of this study indicated that the time budget, particularly in the Malaysia environment, did not provide the extreme environment for Type A to excel.

With regards to RAQP, the result showed a significant relationship between behavioural pattern and RAQP. However, the result indicates that auditors displaying Type B characteristics were more likely to engage in RAQP rather than auditors displaying Type A characteristics. Several explanations for this result can be offered. A Type A individual was said to be more ethically oriented than Type B (Rayburn & Rayburn, 1996); thus it is no surprise that a Type B individual will be more likely to engage in RAQP. In this study, Type A auditors did not experience stress, therefore, it could be said that they did not need to resort to RAQP since there was no pressure for them to do so. Alternatively, the stressful environment of auditing work is not extreme enough for Type A individuals (Fisher, 2001) to induce them to engage in dysfunctional behaviours as discussed in previous paragraph. TABP is also characterised as an individual with a high need for approval (Friedman & Rosenman, 1974) and auditors' need for approval is found to be inversely related to the likelihood of engaging in RAQP (Malone & Roberts, 1996). The potential of the auditors with TABP to engage in RAQP would be less as it would jeopardise approval of their superiors (Gundry & Liyanarachchi, 2007).

7.2.7 Job Stress

Hypotheses 9 and 10 proposed positive associations between job stress and job performance; and job stress and RAQP, respectively. It was hypothesised that job stress will affect job performance negatively and increase the tendency of the auditors to engage in RAQP. These relationships between job stress and RAQP have not been examined by previous studies and the results of this study fill this gap in knowledge.

Much of the accounting literature shows a negative significant relationship between stress and job performance (e.g., Fogarty, 1996; Fogarty, et al., 2000; K. J. Smith, et al., 2007). This is due to the fact that the auditing profession is said to be stressful in nature, therefore many accountants have been reported to have health problems (Gaertner & Ruhe, 1981). Choo (1986) argued that pressure could negatively affect auditors' job performance. Under high work pressure, auditors may not be able to work effectively and may not be able to detect material misstatements or fraud. However, the results in this study show that job stress did not jeopardise auditors' job performance. The plausible reason for this could be that auditors that are working in Malaysian audit firms are aware that stress is part of the auditing work environment, thus, the inescapable nature of stress in the auditing work environment has been accepted by the auditors. This suggests that the ability to constructively manage stressful situations, which is referred to as coping skills, may mitigate the influence of job stress on work outcomes (Fogarty, 1996).

In addition, stressors in the auditing environment may not be extreme enough (Fisher, 2001) to trigger stress among the auditors. Stress occurs only when the individual perceived a stressor as a threat (K. J. Smith, et al., 2007). These arguments are supported by the results of this study where only four stressors (workload, role ambiguity, role conflict and structure leadership) significantly affect auditors' job stress. Furthermore, Choo (1986, p. 28) suggested that a "certain amount of stress seems necessary to maintain the auditors' performance, and given that auditor performance drops once stress becomes excessive." This led some researchers to speculate that stress

could also have positive implications such as increased work efficiency, increased focus on task and problem solving, and decreased attention to irrelevant information (E. Cook & Kelley, 1988; DeZoort & Lord, 1997; Kelley & Seller, 1982; McDaniel, 1990).

This study also found that auditors are most likely to engage in RAQP when they experience stress and explains why auditors' job performance was not affected by job stress. It seems that auditors tend to engage in dysfunctional behaviours when they are experiencing stress, so that they can maintain their performance. It may be the case that auditors use RAQP, such as premature signing-off, reduced audit works, failure to research an accounting principle, making superficial reviews and accepting weak clients' explanations, as means to manage their stress level, so that it will not adversely affect their performance. Therefore, this result suggests that job stress is most likely to influence the way an auditor behaves in executing their task. The worst scenario of this behaviour is that those who experienced high stress may resort to RAQP which may not be detected by management as they do not display any deleterious effects on their performance in achieving their time budget. However, in the long term, it may negatively affect not only to individual, but also the firm. The individual may experience psychological and physical health problems, and the firms may experience employee turnover and liability costs for substandard service quality in the future.

7.2.8 Job Performance

In auditing, job performance is a key outcome and relates to the quality of audits (Kalbers & Cenker, 2008). Poor performance may lead to the potential for errors, legal liability and loss of credibility (Fisher, 2001). The results of this study seem to support this statement by demonstrating that there is a negative relationship between job performance and RAQP. The result indicates that the incidence of dysfunctional behaviours is influenced by the auditors' performance. The auditors that have better performance may feel more secure towards their job, thus preventing them from becoming involved in any dysfunctional activities. On the other hand, the result indicates that auditors with poor performance may suffer from anxiety about securing

their job, which can force them to engage in RAQP in order to improve their performance. For example, the auditor that had received a bad performance evaluation, mainly due to being unable to complete their tasks within the given deadline, is most likely to become involved in RAQP (e.g., reduced audit procedures or superficial review of audit evidence), so that they can complete the job within the time and budget given, and consequently improve their performance evaluation. This could suggest that when promotion prospects are closely related to auditors' performance, RAQP is a way of demonstrating improved performance (Hirst, 1983).

7.2.9 Reduced Audit Quality Practices

This study provides some important findings in relation to audit quality threatening behaviours specifically Reduced Audit Quality Practices (RAQP). In general, the most RAQP engaged in by the auditors were "superficial reviews of client's documents" followed by "reduced audit work" with 24% and 16% of the auditors at least being "often" involved in these practices, respectively. The less likely RAQP were "accepted weak client explanation" and "failed to research an accounting principle". Almost 13% of the auditors had been involved in "premature sign-off". One of the major concerns highlighted by this study is the high incidence of RAQP among auditors in Malaysia. This study found that almost 95% of the auditors engaged in some of the RAQP. Although RAQP does not mean the audit opinion is inappropriate, the probability of this occurring is higher (Coram, et al., 2003) especially when senior auditors are the ones who are involved directly in the audit fieldwork and whose work forms the basis for the audit opinion. The empirical result seems to add weight to this argument when it is found that senior auditors have a significantly higher mean for involvement in RAQP (see Section 6.5.1.4).

Several explanations could be given for the high involvement of auditors with RAQP. Empirically, this study shows that job stress and job performance will influence the behaviour of the auditors. Several stress antecedents such as role conflict, role ambiguity, budget attainability and behavioural patterns create the potential sources for

auditors to engage in RAQP. This suggests that, under high pressure and poor performance, auditors resort to quality reduction as a strategy for reducing pressure levels and in the worst scenario, avoiding getting a bad performance evaluation.

One other possible reason for the high incidence of RAQP could be weak enforcement by related agencies, such as the Malaysian Institute of Accountants (MIA). Although there is 'The Financial Statements Review Committee' established under MIA to ensure published accounts comply with legal and professional requirements, the effectiveness of this committee is questionable (Tay, 1995). Further, the findings of the committee were not made public and so were not subjected to scrutiny by legal, financial or public oversight (Johl, et al., 2007). In addition to that, the MIA is said to have failed to take disciplinary action against errant auditors (A. Ali, Haniffa, & Hudaib, 2006; Tay, 1995) and there have been no litigation cases against auditors in Malaysia (Johl, et al., 2007).

In summary, the dysfunctional behaviour found in this study may lead to long term quality problems and potential legal liability. Increasing job pressures, which are the primary source of RAQP need to be properly managed by audit firms. There is also evidence that these behaviours show an increasing trend, for example, Otley and Pierce (1996b) and Coram et al. (2003) found 12% and 37% of respondents indicated "never" for all types of RAQP. However, in this study, only five percent of respondents indicated that they "never" involved themselves in any type of RAQP.

7.3 Contributions to Knowledge

The findings of this study have a number of contributions for the existing body of knowledge in this area. They are divided into theoretical, methodological and practical contributions. Each of these contributions is discussed below.

7.3.1 Theoretical Contributions

This study has added new knowledge to the auditing area, organisational and psychological literature in developing economic settings, especially in the Malaysian auditing environment. Although, related studies have been conducted in other developing countries and in Malaysia (e.g., Paino, et al., 2010), they do not specifically test the variables using a structural model and job stress model. Moreover, different economic and cultural characteristics between Malaysia and other developing countries mean the findings of this study provide a better understanding of RAQP issues in a developing country.

This study has also filled a gap in the literature concerning audit quality theory. While many studies have examined a direct association between stressors (e.g., budget pressure, individual characteristic, etc) and RAQP, this study is the first to empirically examine the issue of RAQP from the job stress theoretical model. The theoretical framework of this study, therefore, was developed based on a job stress two level outcomes model, integrated with several variables that were discussed in audit quality, organisational and psychology studies. This integration is useful in gaining a deeper understanding of the factors that affect behaviour which threatens the audit quality. In addition, this study has also contributed to the argument as to whether job stress and job performance affect the RAQP. This study has filled this gap by confirming that job stress and job performance both have significant implications for RAQP.

Third, the results of this study extended the earlier work on RAQP by examining the role ambiguity, role conflict and workload variables in the audit quality model. Although these three stressors have been extensively used in psychology and organisational studies, none of the previous studies attempted to investigate the implication of these stressors toward audit quality, especially RAQP. Therefore, this study is the first to investigate the affect of these stressors on audit quality. In addition to that, the use of a broader set of stress antecedents based on the previous RAQP and job stress model enabled this study to further explain the phenomena of RAQP.

This study also contributes to the existing job stress and organisational theories. The results of this study add additional knowledge to the factors that contribute to high stress among employees, especially auditors, and the factors that contribute to the auditors' job performance.

7.3.2 Methodological Contributions

Unlike many other studies on dysfunctional behaviour and RAQP that focused on specific audit positions, such as staff (junior) and senior auditor, this study included all positions except for the staff level. Staff position was not intentionally excluded from this study, but no survey responses were received from employees at this level. This is not surprising as this study used MIA members as its respondents, and MIA imposes a minimum three years experience as a membership requirement. Normally, with those years of experience, most of the auditors have become at least senior members. By investigating almost all levels of audit positions, this study provides a deeper insight into auditors' response to job stress and stress related outcomes.

This study also examined small firms, acknowledged by Pierce and Sweeney (2004) as a required focus in the audit quality area, since many of the previous studies are more focused on Big four firms. Obviously, investigating small firms, which have different types of environments, clients' structure, audit approach and level of pressure, extended our understanding of small firms' auditors' behaviours toward stress.

This study has used SEM as its tool of analysis. One of the SEM assumptions is that the data should be normally distributed. The use of non-normally distributed data could result in inaccurate findings. Although there are estimation techniques in SEM that do not require multivariate normality of the data, most of the previous studies using SEM did not discuss the normality issue (Henri, 2007; Hult, et al., 2006; Shook, et al., 2004).

Therefore, in this study, the normality test was carried out for each of the variables used to ensure the validity of the measure.

7.3.3 Practical Contributions

The findings of the study have a number of implications for audit practice in Malaysia. The results of this study provided support for the contention that auditors' dysfunctional behaviours are influenced by job stress. One of the ways to reduce this job stress is by eliminating or reducing the stress antecedents. This study showed that job stress is influenced by workload, role conflict, role ambiguity and structure leadership. Although these stressors are unavoidable in an auditing environment, they could be reduced if the audit firm were to take the necessary actions to manage the level of stress. Audit firms may implement appropriate treatment strategies to reduce stress levels among the auditors. First, audit firms should try to reduce violations in the chain of command which result in incompatible orders or expectations from more than one superior. The degree of stress experienced by a subordinate may be reduced if they receive clear instruction from one superior at a time. Normally, this problem occurs when auditors need to work on the latest audit engagement, while at the same time attempting to complete a previous engagement. This means, auditors are working on different engagements with different superiors (manager or partner) in a specific period of time. If this problem could be solved effectively by firms, it may reduce the stress level among the auditors.

Second, firms should formalise any unclear rules and procedures, so that auditors have a better guide to perform their duties efficiently. Firms should conduct in-house training pertaining to any new rules or regulations issued by authorities. This will help auditors to always update any new rules and regulations from time to time. The degree of stress experienced by auditors may be reduced if auditors could be made aware of these new changes. Similarly, the auditors should be clearly informed of how their performance is being evaluated, providing another means to reduce stress.

Third, firms should carefully manage workload to enhance its eustress component, without increasing the negative effects. The results of this study suggest that reasonably high workloads could enhance auditors' job performance, however, if the workload is too high, it could increase the level of stress experienced by the auditors. Therefore, it is necessary for a firm to balance these effects so that it can minimise its dysfunctional effects.

Fourth, audit firms and the regulatory body, such as the Malaysian Institute of Accountants (MIA) should implement training programs, not only focusing on the technical accounting issues, but also on how to manage the stress in the auditing working environment. It is important that efforts be made to reduce stress in the auditing environment as the results of this study revealed that high job stress could influence the RAQP. Indeed, this study also indicated that stress antecedents could influence the auditors' performance, which consequently leads to unprofessional behaviour among the auditors. Failure to properly manage this issue could potentially lead to substandard audit quality. It may be impossible to totally eliminate stress; therefore it should be managed at tolerable levels. The implementation of training programs focusing on job stress, along with accounting technical training, will help auditors to mitigate the effects of stress. By helping the profession and organisation to reduce the stress experienced by auditors, it may also minimise the phenomenon of RAQP. MIA can make stress management training part of their Continuing Professional Education (CPE) programmes, which are mandatory for all members. In addition to that, firms and MIA should promote and support a healthy lifestyle program to reduce the stress among auditors.

Fifth, in order to reduce the RAQP, the MIA should make mandatory a Peer Review process to all its member firms, which should be conducted on an annual basis. Currently, it is not normal practice for a firm to be audited by other firms. The Big four firms normally conduct a peer review process within their own branches. This could be another reason why the Big four firms are less likely to incur the RAQP as found in this

study. Although the idea that one audit firm be audited by another firm could be controversial, if the benefit of this practice could prevent the audit quality being compromised, then, efforts should be made by MIA to implement this process. Such a practice could also prevent those auditors that intentionally involve themselves in RAQP, for the purpose of reducing the audit cost, from doing so. RAQP may be reduced if they are aware that their audit work will be scrutinised by auditors from other firms.

In addition to that, MIA should be more serious when it comes to taking disciplinary action among its members. MIA is too lenient in terms of disciplinary action against errant auditors: MIA failed to take disciplinary action (A. Ali, et al., 2006; Tay, 1995) and there were no litigation cases against auditors in Malaysia (Johl, et al., 2007). This could be another reason for the high number of auditors being involved in RAQP, as found by this study. A high penalty, such as suspending auditors' membership, should be imposed on those who are involved in these kinds of behaviours. The penalty and disciplinary actions should be communicated to all auditors so that they are well aware of the consequences of involving themselves with RAQP. Indeed, MIA should be regularly promoting high standards of professional conduct among its members, so that it can increase the professional behaviour among auditors.

Seventh, the results of this study showed that budget should be managed with proper care because it could lead to RAQP. The audit budget is one of the essential elements in the auditing environment, which means, it is unavoidable. However, firms could minimise, if not eliminate, the negative effect of time budget on the auditors' behaviours. The results of this study suggested that if auditors perceived the budget as being very difficult to achieve, they will engage with RAQP. Therefore, extra concern should be placed on budget management. The audit budget needs to be realistic, which means it must consider the nature of the engagement, and the abilities and experience of the auditor assigned to it. Indeed, it should be more flexible, so that can be adjusted based on any unforeseen circumstances during the audit engagement.

7.4 Limitations

The results of this study should be interpreted in light of certain limitations inherent in the study. Although this study has significantly contributed to our understanding of how auditors behave under the stress environment, there are also some limitations that need to be highlighted. First, due to the relatives small sample size, the auditors in the study may not be representative of the population of auditors in Malaysia; therefore, some caution should be exercised in extrapolating the results of this study to auditors at large. Furthermore, the auditors who participated in the study were predominantly from non-Big four firms, which may also limit the generalisability of the results.

Second, given that responses were anonymous (no list of members was available from MIA), it was not possible to assess the nature and significance of non-response bias. Third, this study only employed self-reported measures (questionnaire). Given the sensitive nature of the RAQP issue asked in the questionnaire, the respondents may not reveal their true behaviours on RAQP.

Despite these limitations, this study helps us understand how stress affects the auditors' behaviours. This study also represents a significant part of the continued effort into understanding this phenomenon in the context of a developing country, especially Malaysia.

7.5 Future Study

There are several important issues to be considered for future research. The results of this study suggest that the audit environment is complicated. Only four of the stress antecedents are associated with job stress. Therefore, there are potentially other sources of stress which are not explored by this study. Further investigation of the other stress antecedents which may influence the auditors' job stress, could consequently affect auditors' behaviour. They should be considered in order to get a better understanding of

the auditing environment, as well as examining its impact on other important job outcomes, such as job satisfaction and turnover intention.

In light of the limitations discussed, the future study could use a different data collection method such as interviews. This could allow for a more flexible approach in researching antecedents or even moderating variables of RAQP. In addition to that, a future study might include a balanced proportion of auditors from both, Big-four and non-Big four firms.

This study has identified job stress as one of the important variables that influences the tendency of auditors to engage with RAQP. Thus, another area could be researched relating to the auditors coping ability to reduce distress and its dysfunctional influences. In addition to that, the ability of the auditors to constructively manage stressful conditions could be the reason for the insignificant stress antecedent variables in this study. This ability is referred to as coping ability (Fogarty, 1996). It suggests that, the results could be due to the fact that the coping skills of the auditors have mitigated the negative effect of stress antecedents. Therefore, future research might be carried out to test how coping ability may affect job stress and RAQP in the Malaysian environment.

In addition to that, those variables found to be statistically insignificant in this study cannot be totally disregarded, as the unique characteristic of Malaysian demographics, such as ethnicity, culture and religiosity may influence future research outcomes. For example, leadership behaviour was not found to be significant to all of the dependent variables: job stress, job performance and RAQP. These results may be influenced by the unique characteristic of Malaysian demographics. Therefore, it may be worth considering a re-examination of these factors in any future study of stress and RAQP in the Malaysian environment.

The results of this study indicate that there is a possibility of the auditor using RAQP as a mechanism to maintain and improve their job performance under high stress conditions. If this assertion is true, then, it could devastate the auditing profession in the future. It demonstrates that auditors are willing to use any means, although they could jeopardise audit quality, to achieve high performance. If this unprofessional behaviour is not prevented, it could become a culture and harm not only the firm but also the profession. Therefore, it is important to conduct further empirical studies which examine this issue.

This study used a self-reported measure of job performance. Although self-reported performance measures had less "halo-error" than evaluation by superiors (Heneman, 1974), if the job performance measure is evaluated by superiors, it may give different results. Therefore, a future study could consider the use of performance evaluation based on superior's rating along with self-reported performance measures.

7.6 Conclusions

There has been increased attention devoted to the reduced audit quality practices (RAQP) among auditors in the audit firm since the report issued by the American Institute of Certified Public Accountants' (AICPA) Cohen Commission in 1978 regarding auditors' behaviours. Previous studies have found that RAQP are really a major problem in audit firms, with a relatively high number of auditors involved in RAQP (e.g., Coram, et al., 2003; Otley & Pierce, 1996b). It is also suggested that certain stressors that exist in the auditing environment had significant negative implications toward auditors' professional behaviours. The tendency of auditors to involve in one or several types of RAQP, such as premature sign-off, superficial reviews of client's documents, reduced audit work below what is considered reasonable, accepted weak client explanation and failing to research an accounting principle, is high once these stressors are unmanageable by the auditors. However, previous studies have focused on the direct relationship between these stressors and RAQP and have not investigated them from a job stress model perspective. Therefore, to bridge this gap in

previous knowledge, this study integrates relevant variables that exist and have been found to affect auditors' behaviours, stress measure (job stress) and stress consequences (job performance and RAQP) in one model.

The current study investigated an extended model of the RAQP from a job stress theoretical perspective. As outlined in Chapter 1 (Introduction), the analyses addressed the following primary question:

"What are the effects of job stress on reduced audit quality practices?"

In addressing this primary question, this study focuses on the influences of stress antecedents that exist in the auditing work environment that will influence the behaviour of the auditors. More specifically, this study attempts to answer the following research questions:

1) What are the stress antecedents that influence auditors' job stress?
2) What are the stress antecedents that influence auditors' job performance?
3) What are the stress antecedents that influence reduced audit quality practices?
4) What are the relationships between job stress, job performance and reduced audit quality practices?

The stress antecedents used were workload, budget attainability, budget emphasis, role ambiguity, role conflict, considerate leadership, structure leadership and type A behavioural pattern. These variables were adopted from previous studies and these variables provide preliminary confidence of the relevance and reliability of these measures. The respondents to this study were external financial auditors that were members of the Malaysian Institute of Accountants, ranging from senior to partner position.

This study is the first to empirically examine the RAQP from the job stress model developed by Parker and Decotiis (1983). The model consists of two level outcomes, namely job stress (first level outcomes) and strain (second level outcomes). They argued that job stress is a response to stress antecedents, whereas, strain is a consequence of job stress. In this study, job performance was used as a second level outcome along with RAQP. In addition to that, this study is also the first to empirically investigate the association between job performance and RAQP. As job performance is suggested to affect the quality of audits (Kalbers & Cenker, 2008), it could also influence the tendency of the auditors to engage in RAQP. The combinations of stress antecedents in audit work environment, with the job stress measure and the use of job performance and RAQP, as the consequences of job stress in one model, were the main contribution of this study.

High stress, in this study, appears to result from excessive workload, role ambiguity, role conflict and structure leadership. By revealing the relationship between stressors and job stress, management may be able to implement appropriate strategies to manage these stressor levels among the auditors. High workload can be managed by delegating the size and number of assignments based on the auditors experience and position. In addition to that, management should always review the time budget of those assignments based on previous actual time incurred to ensure appropriate time budget is allocated to the assignments. The results show the need for the management to reduce the role ambiguity and conflict that exists in the firm's environment. This could be done by clearly writing the job descriptions, delineating expectations for and responsibilities of individuals and clarity of decision making. In addition to that, firms should consider adopting measures for identifying and counselling auditors that are susceptible to stress in order to reduce the job stress that may occur from these unavoidable stressors.

Conclusions regarding the second research question are more equivocal. This study provides support for a direct relationship between role ambiguity and job performance. None of the other stress antecedents influence the auditors' job performance,

particularly in Malaysia. However, the close examination of the results showed that there are clearly unique findings for workload and budget emphasis, although neither of the stressors is significant. These two stressors are found to be positively associated with job performance. The results show that workload and budget emphasis could increase auditors' job performance. This is probably due to the fact that workload in the auditing environment is dominated by its eustress component, especially at a managerial level. In addition to that, as time budget is an inherent part of the auditing environment, auditors may view this as a challenge, and thus respond positively toward budget emphasis. The results also indicate that the firm should be especially alert to the possibility of poor job performance among the auditors when there is unclear information and guidance in performing audit tasks. This suggests that the management of stress, especially to reduce the role ambiguity has become an important issue which needs to be dealt with by the firm.

In terms of the third research question, the empirical results did confirm some prior findings and also provided several new insights. In order to analyse a comprehensive set of potential stress antecedents in the audit environment that affect RAQP, the study drew on theoretical support from prior research in psychology, organisational behaviour, audit quality and RAQP. However, this study found that many of the stress antecedents in RAQP are unexplained. This could be due to the fact that the audit environment is complex and the factors associated with auditors incidences of RAQP are difficult to model (Malone & Roberts, 1996). Only role conflict, budget attainability and type B individuals are associated with incidence of RAQP. The results suggest that auditors who perceived high role conflict, low budget attainability and with Type B characteristic have high tendency to engage with RAQP. While the study supports the findings of previous studies (e.g., Coram, et al., 2003; Gundry & Liyanarachchi, 2007; Otley & Pierce, 1996b) on budget attainability and individual characteristics, the significant finding on role conflict provides evidence that audit firms should strive to increase the clarity of expectations in order to reduce the negative effect on audit quality. In addition, role ambiguity indirectly affects RAQP through job stress and job performance. It suggests that once the auditors experience stress as the result of role

ambiguity and it has negative consequence on their performance, the auditors will resort to RAQP.

The analyses also rendered equivocal findings for the fourth research question. Although the hypothesised effects on RAQP were significant for both, job stress and job performance, job stress was not significantly linked to job performance. The findings may be important because previous studies (e.g., Gundry & Liyanarachchi, 2007; Kelley & Margheim, 1990; Malone & Roberts, 1996; Otley & Pierce, 1996b) did not assess these relationships. All of the previous studies examined direct relationships between stress antecedents and RAQP but did not assess the direct relationships between job stress, job performance and RAQP. Based on the results of this study, it could be concluded that job stress does influence the behaviour of the auditors to engage in RAQP. The result shows that once the auditors experience stress, the tendency for them to engage in RAQP is high. The result of this study provides additional knowledge about the consequences of job stress on auditors' job outcomes.

On the other hand, auditors' job performance is inversely related to the incidence of RAQP. In addition to that, the lack of a significant relationship between job stress and job performance indicates that auditors may not experience detrimental consequences of high tension; or it could be because RAQP has been used to maintain the high job performance, as shown in the findings of this study. This finding raises an interesting question for future research. It may be that a majority of auditors face a situation in which job stress is beyond their control, thus RAQP is perceived to be their best option to mitigate the stress effects on job performance. If so, audit firms should implement a proper monitoring system to prevent any behaviour that could compromise audit quality. If this is true, then it sheds light on the need to further investigate this issue.

This study provides evidence that RAQP is highly problematic in the auditing profession, particularly in Malaysia. It seems that in Malaysia, there are a high number

of auditors involved in RAQP compared to the findings in other countries (e.g., Coram, et al., 2003; Otley & Pierce, 1996b). Although only 14% of the respondents admitted to engaging in one or more of the RAQP at least "often", the fact that almost 95% of the respondents engaged in at least one of the RAQP in Malaysia provides evidence of the critical level of this problem in the Malaysian auditing environment, which could have a detrimental effect specifically on the audit opinion. Descriptive analysis showed that auditors are most likely to engage in "superficial reviews of client's documents" followed by "reduced audit work below what they considered reasonable", "premature sign-off", "accepted weak client explanation" and "failed to research an accounting principle".

In addition to that, supplementary analyses have been performed on the respondents' profiles, such as gender, firm's size, auditing experience and position against the RAQP. Consistent with previous studies (e.g., Margheim & Pany, 1986), the results showed that auditors in non-Big four firms were more likely to engage in RAQP compared to Big four firms. The Big four firms may have more effective quality control systems and review procedures to prevent any unprofessional behaviour. Malone and Roberts (1996) found that if the auditors perceived that their firm is able to detect and punish those who commit RAQP, they will be less likely to engage with RAQP.

With regard to gender, there is no difference in terms of RAQP between male and female auditors, although the number of female respondents is greater than male, and this is consistent with the previous study (see Coram, et al., 2003). This shows that under pressure, to some extent, both genders respond similarly.

The analysis revealed that those who have worked less than six years had a tendency to engage with RAQP. The study also found that "senior" level had a significantly higher mean for engaging with RAQP than manager which supports the findings of previous studies (Alderman & Deitrick, 1982; Gundry & Liyanarachchi, 2007). One possible

explanation is that, senior auditors are responsible to directly supervise the audit team, and at the same time responsible to report to manager or partner. However, they are not directly supervised by a manager or partner while carrying out fieldwork, thus providing opportunities for dysfunctional behaviour to occur (Otley & Pierce, 1996b). Kelley and Seller (1982) argued that the senior position is the most pressurised position in the firm, which could motivate them to engage in dysfunctional behaviours.

It could be concluded that certain stress antecedents could have significant implications in term of auditors' physical and psychological well being, as well as negative organisational consequences. Therefore, it is important for the firm to identify and properly manage these stressors so that it could have a minimal impact, if not be fully avoided, on the auditors.

7.7 Summary

In summary, this study contributes to the academic literature on RAQP, job stress and job performance and its antecedents by developing and testing an integrated model of hypothesised relationships with direct and indirect effects on RAQP. Stress antecedents, such as workload, role conflict and role ambiguity were introduced as attributes that have considerable direct or indirect influence on RAQP. This study was one of the first to examine RAQP using the job stress model. The results also provide direction to practitioners about the importance of job stress and its antecedents in the auditing job environment.

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APPENDICES

Appendix 1: Questionnaire

This is an anonymous questionnaire. You should read the Information Letter carefully as it explains fully the intention of the research project. Please ensure that you do not write your name (or any other comments that could identify you) on the questionnaire. By completing the questionnaire, you are consenting to take part in this research.

Please answer ALL questions

Section A

This section relates to demographic information about you and your firm. Please **TICK (√)** the appropriate box. All answers will remain strictly confidential and anonymous.

1. What is your gender?

☐ Male ☐ Female

2. What is your age? _____

3. How many years of audit experience do you have? _____

4. What is your current job level?

☐ Audit Junior
☐ Audit Senior
☐ Audit Manager
☐ Audit Partner
☐ Other (please specify)_____

5. What type of firm do you work for?

☐ Big Four Firm[15] ☐ Other

Section B

Below is a set of adjectives. Please **CIRCLE** the number that best describes you. Answer all questions.

	False → True				
1. Energetic	1	2	3	4	5
2. Idealistic	1	2	3	4	5
3. Quiet	1	2	3	4	5
4. Outspoken	1	2	3	4	5
5. Self-confident	1	2	3	4	5
6. Cooperative	1	2	3	4	5
7. Peaceable	1	2	3	4	5
8. Aggressive	1	2	3	4	5

[15] Big Four Firms refer to Ernst & Young, KPMG, PricewaterhouseCoopers and Deloitte Touche Tohmatsu.

Please turn to next page

	False →				True
9. Quick	1	2	3	4	5
10. Helpful	1	2	3	4	5
11. Calm	1	2	3	4	5
12. Forceful	1	2	3	4	5
13. Enterprising	1	2	3	4	5
14. Unrealistic	1	2	3	4	5
15. Relaxed	1	2	3	4	5
16. Headstrong	1	2	3	4	5
17. Tense	1	2	3	4	5
18. Unstable	1	2	3	4	5
19. Enthusiastic	1	2	3	4	5
20. Irritable	1	2	3	4	5
21. Informal	1	2	3	4	5
22. Ambitious	1	2	3	4	5
23. Dominant	1	2	3	4	5
24. Assertive	1	2	3	4	5
25. Sly/Cunning	1	2	3	4	5
26. Argumentative	1	2	3	4	5
27. Excitable	1	2	3	4	5
28. Snobbish	1	2	3	4	5
29. Mild	1	2	3	4	5
30. Loud	1	2	3	4	5
31. Individualistic	1	2	3	4	5
32. Stingy	1	2	3	4	5
33. Easy-going	1	2	3	4	5
34. Talkative	1	2	3	4	5
35. Outgoing	1	2	3	4	5
36. Original	1	2	3	4	5
37. Cautious	1	2	3	4	5
38. Strong	1	2	3	4	5

Section C
Please **CIRCLE** the number, using the following response scale, corresponding to your level of agreement.

	Impossible to achieve →				Very easy to achieve
1. In general, were the time budgets for jobs you worked on in the last year:	1	2	3	4	5

Please turn to next page

Section D

Please **CIRCLE** the number, using the following response scale, corresponding to your level of agreement.

		Not important →				Very important
1.	Under the present system for evaluating performance in **your organisation**, what level of importance is placed on meeting time budgets?	1	2	3	4	5
2.	Under the present system for arriving at an overall evaluation of performance, what level of importance would **you** place on meeting time budgets?	1	2	3	4	5

Section E

How do you respond when you feel a time budget is unattainable? **You may tick more than one box**.

		Never →				Always
1.	Work harder but charge all time properly	1	2	3	4	5
2.	Under-report time by working on personal time	1	2	3	4	5
3.	Reduce the quality of audit work to meet budget	1	2	3	4	5
4.	Request and obtain an increase in the budget	1	2	3	4	5
5.	Shift time to a non-chargeable code	1	2	3	4	5
6.	Shift time to a different client	1	2	3	4	5

Section F

Please CIRCLE the number, using the following response scale, which best describes your level of agreement with the workload statements.

		Strongly disagree →				Strongly agree
1.	I am given enough time to do what is expected of me on my job.	1	2	3	4	5
2.	It often seems like I have too much work for one person to do.	1	2	3	4	5
3.	The performance standards on my job are too high.	1	2	3	4	5

Please turn to next page

Section G

Please **CIRCLE** the number that indicates how often you have acted in the following manner when carrying out an audit during the past year.

		Never →				Always
1.	Prematurely signing-off on an audit program step	1	2	3	4	5
2.	Reduced work below what you considered reasonable	1	2	3	4	5
3.	Failed to research an accounting principle or technical issue when you were unsure of the answer	1	2	3	4	5
4.	Made superficial reviews of supporting client documents	1	2	3	4	5
5.	Accepted weak explanations from clients	1	2	3	4	5

Section H

Please **CIRCLE** the number, using the following response scale, which best describes your performance.

		Unsatisfactory →				Outstanding
1.	Maintaining quantity of work	1	2	3	4	5
2.	Maintaining quality of work	1	2	3	4	5
3.	Communicating orally	1	2	3	4	5
4.	Communicating in writing	1	2	3	4	5
5.	Accepting responsibility and initiating action	1	2	3	4	5
6.	Exercising professional skills and due care	1	2	3	4	5
7.	Following policies and procedures	1	2	3	4	5
8.	Planning and organising work	1	2	3	4	5
9.	Adapting to different job situations	1	2	3	4	5
10.	Getting along with others within the firm	1	2	3	4	5
11.	Dealing with clients outside the firm	1	2	3	4	5
12.	Supervising others.	1	2	3	4	5

Section I

Below is a series of statements designed to indicate how you feel about working in your present organisation. Using the following response scale below, **CIRCLE** the number that best describes how often you have this feeling towards your job.

		Never →				Always
1.	I have too little authority to carry out the responsibilities assigned to me.	1	2	3	4	5
2.	The scope and responsibilities of my job are unclear.	1	2	3	4	5
3.	I do not know what opportunities for promotion exist for me.	1	2	3	4	5

Please turn to next page

		Never →				Always
4.	I have too heavy a work load, one that I cannot possibly finish during an ordinary workday.	1	2	3	4	5
5.	I think I will not be able to satisfy the conflicting demands of various people over me.	1	2	3	4	5
6.	I am not fully qualified to handle my job	1	2	3	4	5
7.	I do not know what my supervisor thinks of me and how he/she evaluates my performance.	1	2	3	4	5
8.	I cannot get information needed to carry out my job.	1	2	3	4	5
9.	I have to decide things that affect the lives of people I know.	1	2	3	4	5
10.	I may not be liked and accepted by the people I work with.	1	2	3	4	5
11.	I am unable to influence my immediate supervisor's decisions/actions that affect me.	1	2	3	4	5
12.	I do not know what my co-workers expect of me.	1	2	3	4	5
13.	The amount of work I have to do may impact how well I do it.	1	2	3	4	5
14.	I have to do things on the job that are against my better judgment.	1	2	3	4	5
15.	My job tends to interfere with my family life.	1	2	3	4	5

Section J

The following statements relate to the conditions that may exist in your working environment. Please **CIRCLE** the number, using the following response scale, corresponding to your level of agreement.

		Strongly disagree	→			Strongly agree
1.	I feel certain about how much authority I have.	1	2	3	4	5
2.	There are clear, goals and objectives for my job.	1	2	3	4	5
3.	I have to do things that should be done differently.	1	2	3	4	5
4.	I know that I have divided my time properly.	1	2	3	4	5
5.	I receive an assignment with insufficient staff to complete it.	1	2	3	4	5
6.	I know what my responsibilities are.	1	2	3	4	5
7.	I have to violate a rule or policy in order to carry out an assignment.	1	2	3	4	5
8.	I work in different teams with staff members who operate quite differently.	1	2	3	4	5
9.	I know exactly what is expected of me.	1	2	3	4	5
10.	I receive incompatible requests from two or more people.	1	2	3	4	5
11.	I do things that are apt to be accepted by one person and not accepted by others.	1	2	3	4	5

Please turn to next page

	Strongly disagree → Strongly agree				
12. I receive an assignment without adequate resources and materials to execute it.	1	2	3	4	5
13. I feel I am given clear explanation of what has to be done.	1	2	3	4	5
14. I work on unnecessary things.	1	2	3	4	5

Section K

If you are the partner in the firm and are not reporting to anybody, please ignore this section. Please **CIRCLE** the number, using the following response scale, which best describes your level of agreement with the statements about your immediate superior to whom you report to.

	Never → Always				
1. The person-in-charge let the audit team know what was expected of them.	1	2	3	4	5
2. The person-in-charge was friendly and approachable.	1	2	3	4	5
3. The person-in-charge encouraged the use of standard procedures.	1	2	3	4	5
4. The person-in-charge did little to make it pleasant to be a member of the team.	1	2	3	4	5
5. The person-in-charge tried out his/her ideas in the audit team.	1	2	3	4	5
6. The person-in-charge put suggestions made by the audit team into operation.	1	2	3	4	5
7. The person-in-charge made his/her attitudes clear to the group.	1	2	3	4	5
8. The person-in-charge treated all audit team members as his/her social equal.	1	2	3	4	5
9. The person-in-charge decided what should be done and how it should be done.	1	2	3	4	5
10. The person-in-charge gave advance notice of changes.	1	2	3	4	5
11. The person-in-charge assigned audit team members to particular tasks.	1	2	3	4	5
12. The person-in-charge made sure that his/her part in the audit team was understood by the audit team members.	1	2	3	4	5
13. The person-in-charge looked out for the personal welfare of the audit team members.	1	2	3	4	5
14. The person-in-charge scheduled the work to be done.	1	2	3	4	5
15. The person-in-charge was willing to make changes.	1	2	3	4	5

Please turn to next page

	Never → Always				
16. The person-in-charge maintained clearly defined standards of performance.	1	2	3	4	5
17. The person-in-charge refused to explain his/her actions.	1	2	3	4	5
18. The person-in-charge asked that the audit team members follow standard rules and regulations.	1	2	3	4	5
19. The person-in-charge acted without consulting the audit team.	1	2	3	4	5

Thank you for your time and co-operation in completing this questionnaire. Your opinions are valuable and your participation is required for the completion of this project. Please return the completed questionnaire in the postage-paid, self addressed envelops provided. Please also ensure that you have answered **ALL** questions.

Mohd Nazli Mohd Nor

mmohdno0@our.ecu.edu.au

End of Questionnaire

Appendix 2: Information Letter

AUSTRALIA ECU UNIVERSITY EDITH COWAN

JOONDALUP CAMPUS
270 Joondalup Drive,
Joondalup
Western Australia 6027
Telephone 134 328
Facsimile (08) 9300 1257

ABN 54 361 485 361

CRICOS IPC 00279B

Dear Participants,

Re: Survey on Auditors Stress: Antecedents & Relationship to Audit Quality

Your information has been obtained from the Malaysia Institute of Accountants. You are invited to participate in a study which is being conducted as a requirement toward the degree of Doctor of Philosophy (Accounting) at Edith Cowan University, Perth, Western Australia (WA). The study will focus on organisational, individual and job characteristics and their impact on external auditors' job behaviour in conducting financial statement audits. The results of this study could be used to improve your working environment, firm quality control and potentially auditing standards.

This survey is divided into twelve sections and would take a total time of about 20 to 30 minutes to complete. It is important that you complete all sections. The usefulness and outcome of the study will depend upon the honesty and care with which you answer the questions. Please read the instructions for each section carefully. Choose a response that gives the best indication of how you would typically think, feel and experience.

This is an anonymous questionnaire and participation in this project is entirely voluntary. No personally identifiable information will be collected from you. All data will be treated with the strictest confidence and will only be used for the purposes of this study. No information other than group data that does not identify any individual will be shared with your employer or MIA. If the information you provide is published, your response will not be individually identified in any written work as presentation of the data will be aggregated. Your assistance to the successful completion of this survey is invaluable and is greatly appreciated.

Should you have any questions or require any further information regarding this research, please contact:

Mohd Nazli Mohd Nor
24 Voyage Road
Heathridge, WA 6027
Perth, Australia.
Email: mmohdno0@our.ecu.edu.au
Tel: +61420879150

Professor Malcolm Smith
(Principal Supervisor)
Edith Cowan University
Faculty of Business and Law
270 Joondalup Drive
Joondalup, WA 6027
Perth, Australia.
Email: malcolm.smith@ecu.edu.au

If you have any concerns or complaints about the study and wish to speak to an independent person, you may contact:

Research Ethics Officer
Edith Cowan University
Phone: +61 8 63042170
Email: research.ethics@ecu.edu.au

Thank you very much for your participation.

Your faithfully,

Mohd Nazli Mohd Nor
Doctoral Candidate
Edith Cowan University

Appendix 3: MIA's Approval Letter

MALAYSIAN INSTITUTE OF ACCOUNTANTS
ACCOUNTANTS: MANAGERS OF VALUE

PROUD HOST:
World Congress of Accountants 2010
www.wcoa2010kualalumpur.com

19 November 2009

En. Mohd Nazli Mohd Nor
Edith Cowan University
School of Accounting, Finance & Economics
270 Joondalup Drive, Joondalup
Western Australia 6027

Dear En. Mohd Nazli

APPROVAL TO CONDUCT RESEARCH ON "AUDITOR STRESS: ANTECEDENTS & RELATIONSHIP TO AUDIT QUALITY"

We refer to email dated 22 October 2009 with regard to the above matter.

We are pleased to inform that the Institute had considered your request favorably and as such, you may conduct a research among our members as specified in your email.

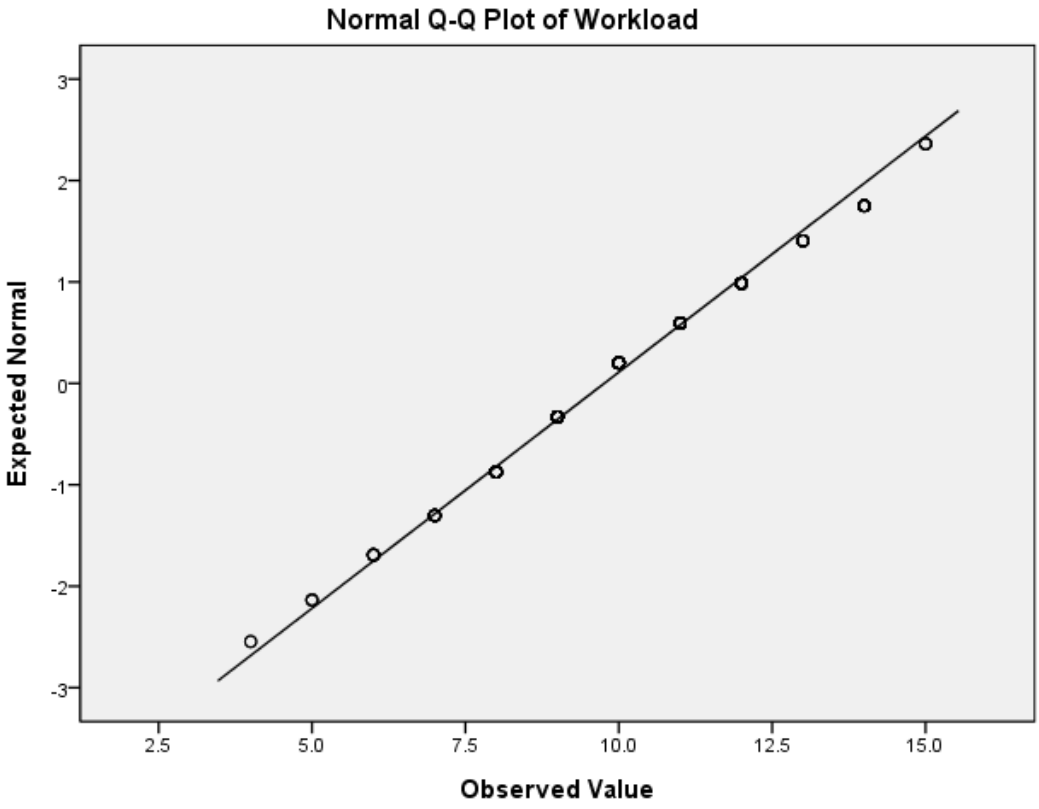
Thank you.

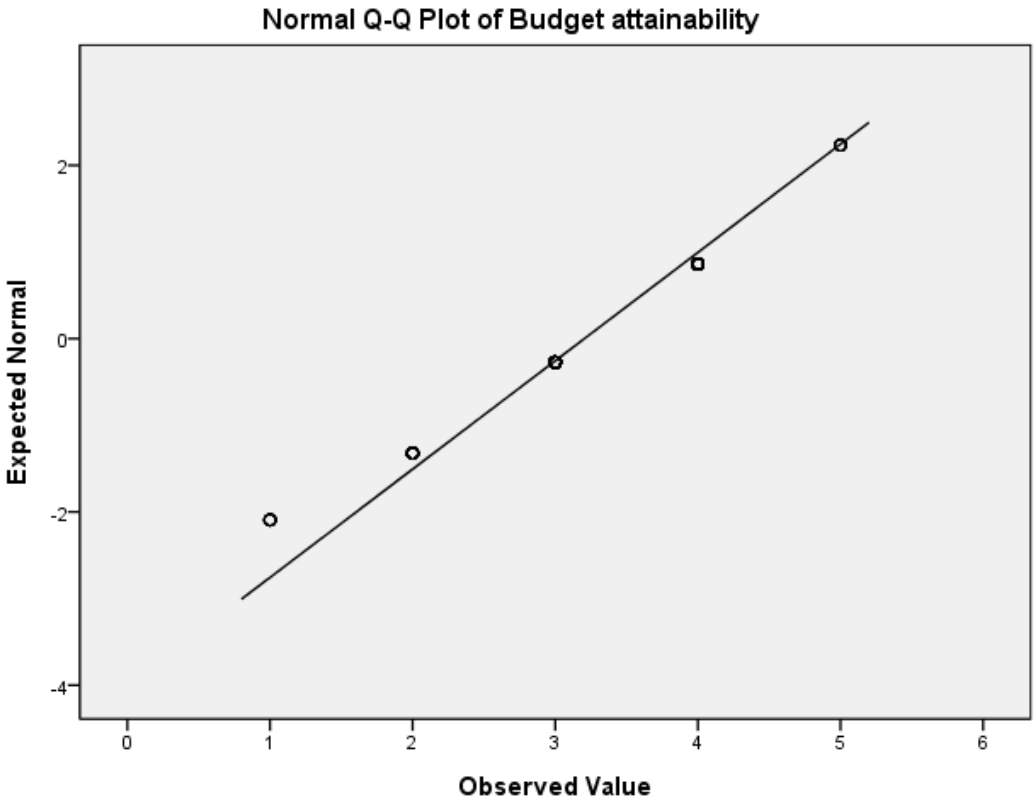
Yours faithfully
MALAYSIAN INSTITUTE OF ACCOUNTANTS

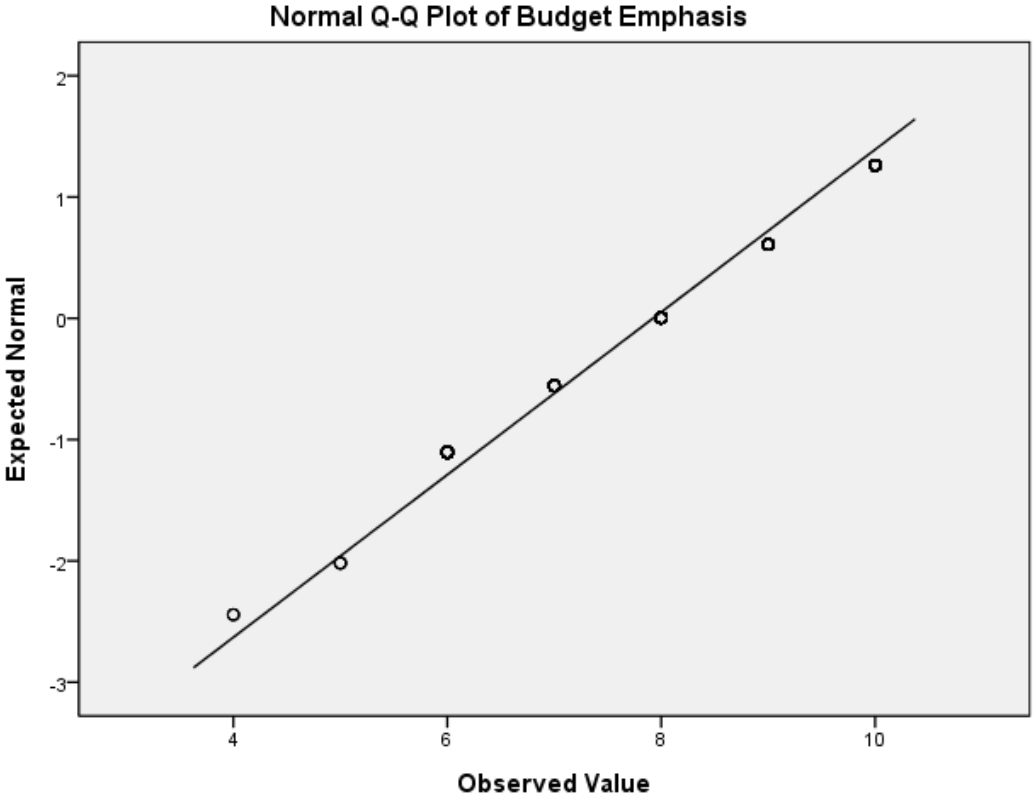
HO FOONG MOI (MS)
Executive Director

Dewan Akauntan, 2 Jalan Tun Sambathan 3, Brickfields 50470 Kuala Lumpur, Malaysia
[Web] http://www.mia.org.my [Phone] + 60 3 2279 9200 [Fax] + 60 3 2274 1783

Appendix 4: Normal Q-Q Plot






Normal Q-Q Plot of Budget Emphasis
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Observed Value
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-1
-2
-3
4
6
8
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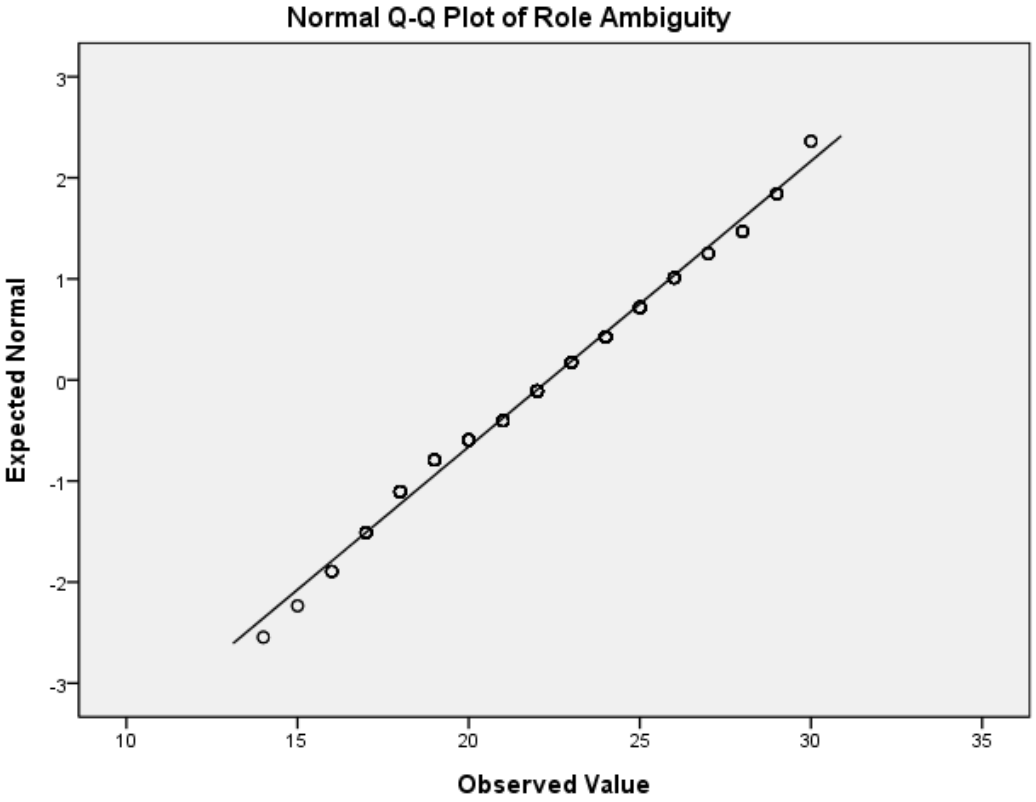
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Expected Normal
Observed Value
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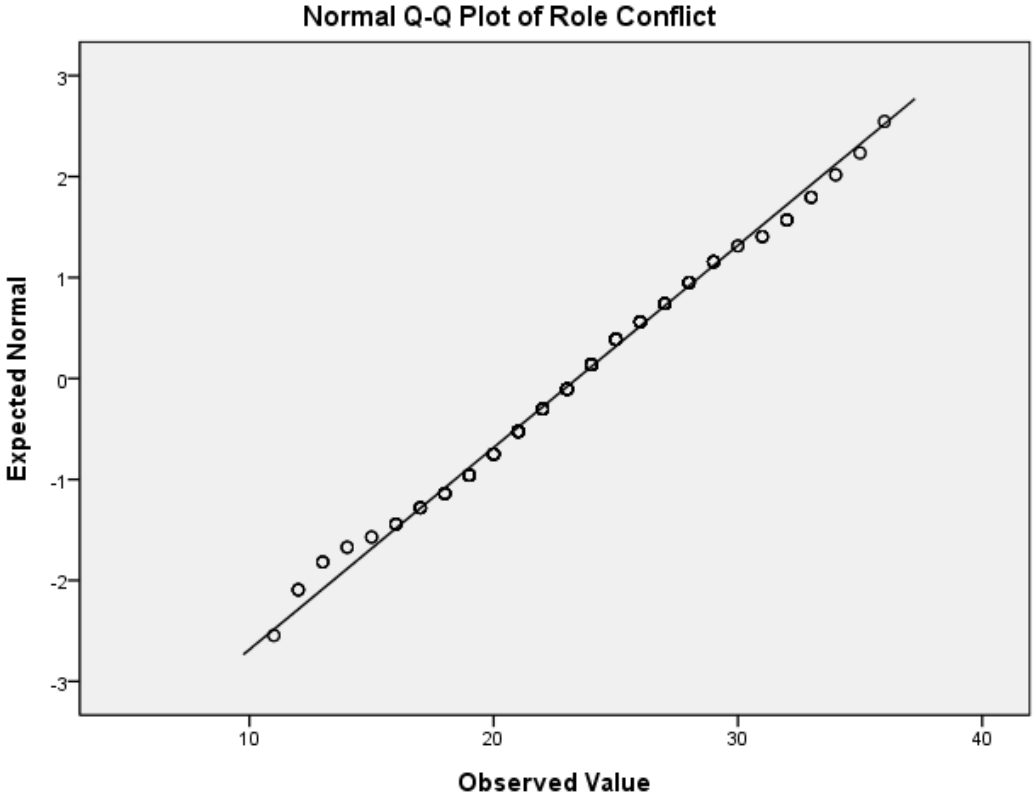
-1
-2
-3
10
15
20
25
30
35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Observed Value
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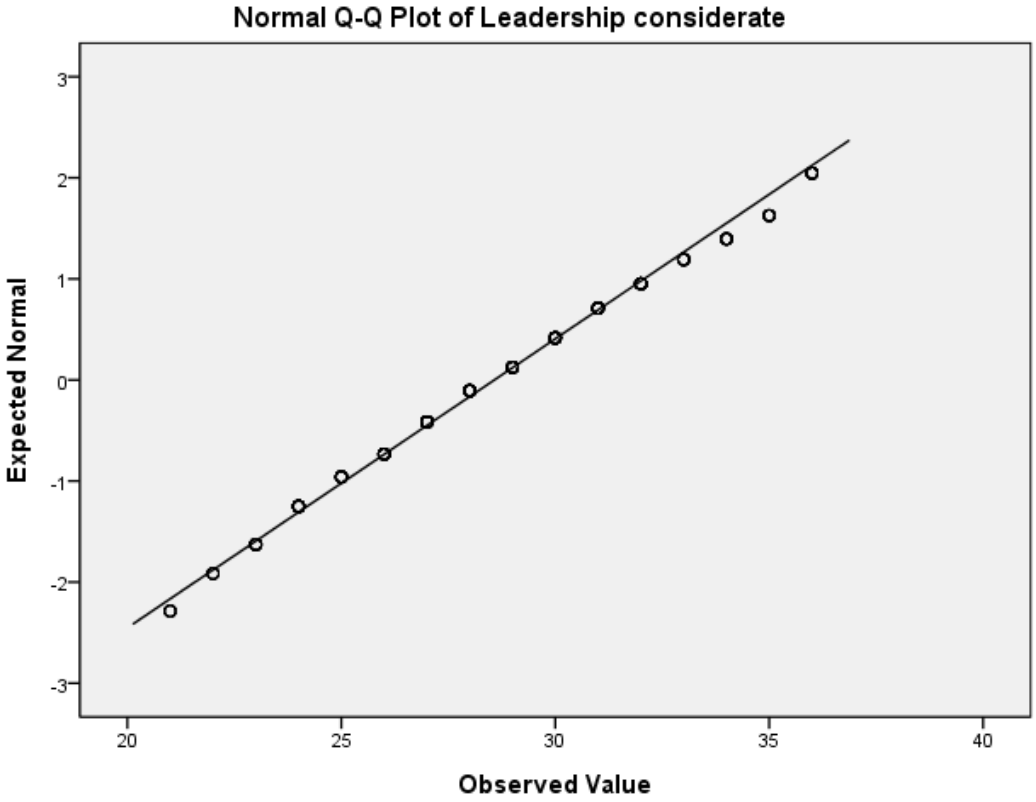
-3
10
20
30
40


Normal Q-Q Plot of Leadership considerate
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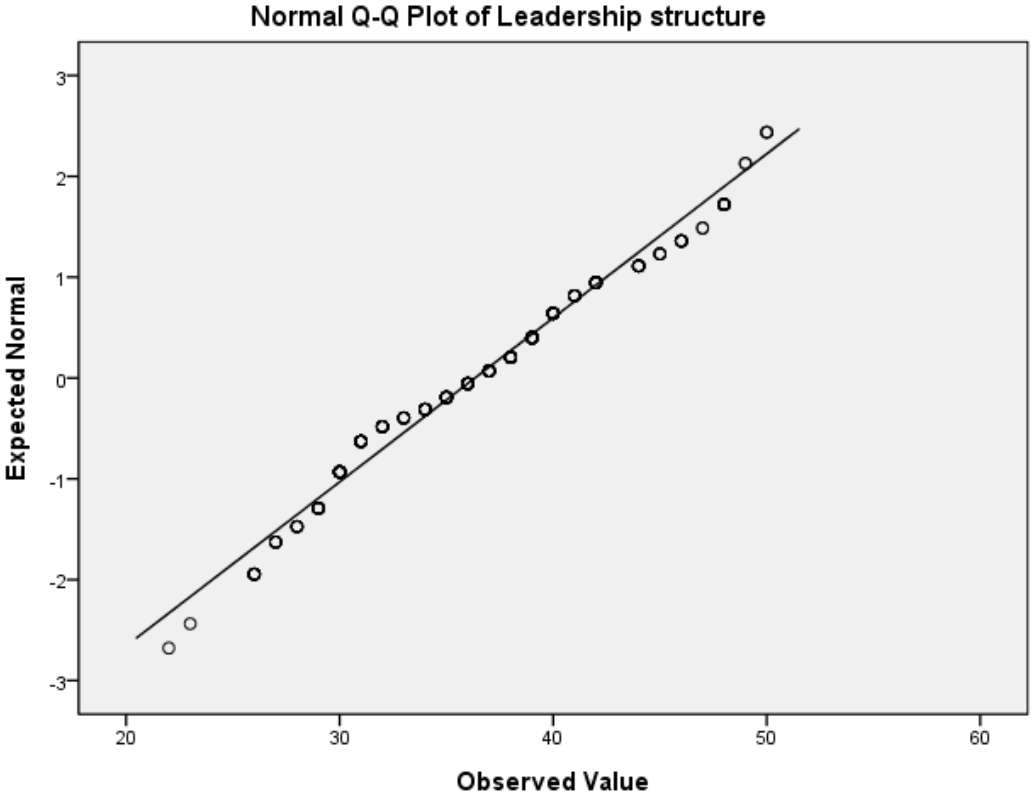
-1
-2
-3
20
25
30
35
40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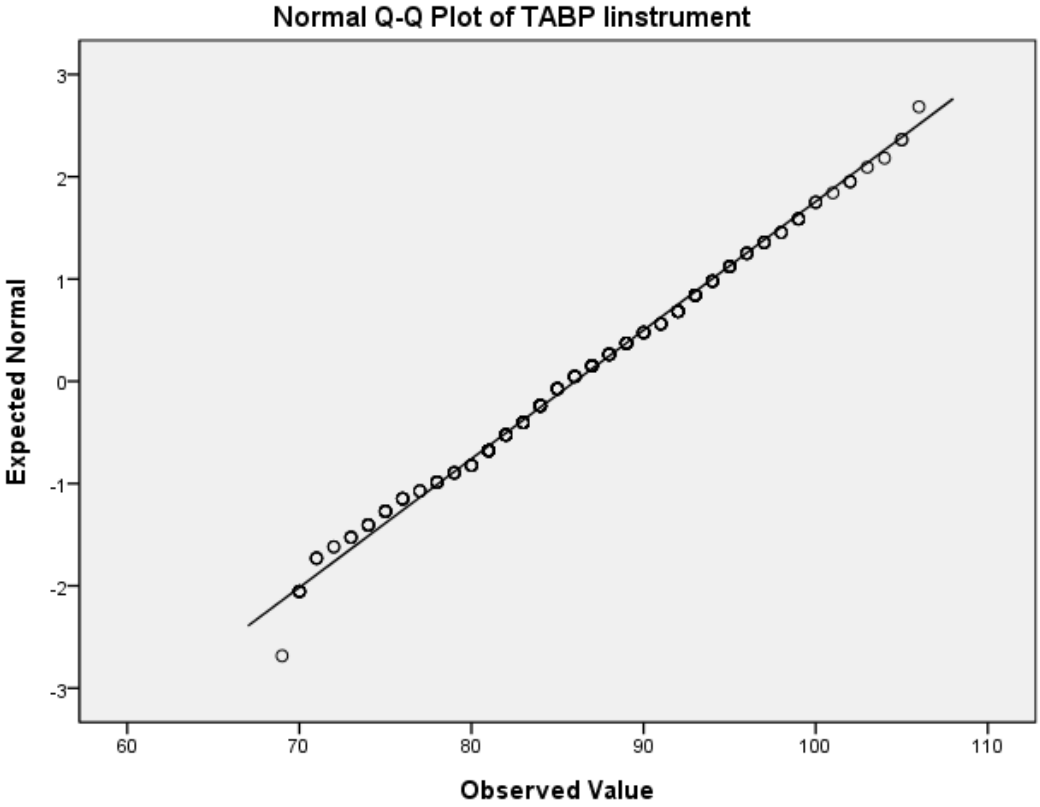
Normal Q-Q Plot of TABP linstrument
Expected Normal
Observed Value
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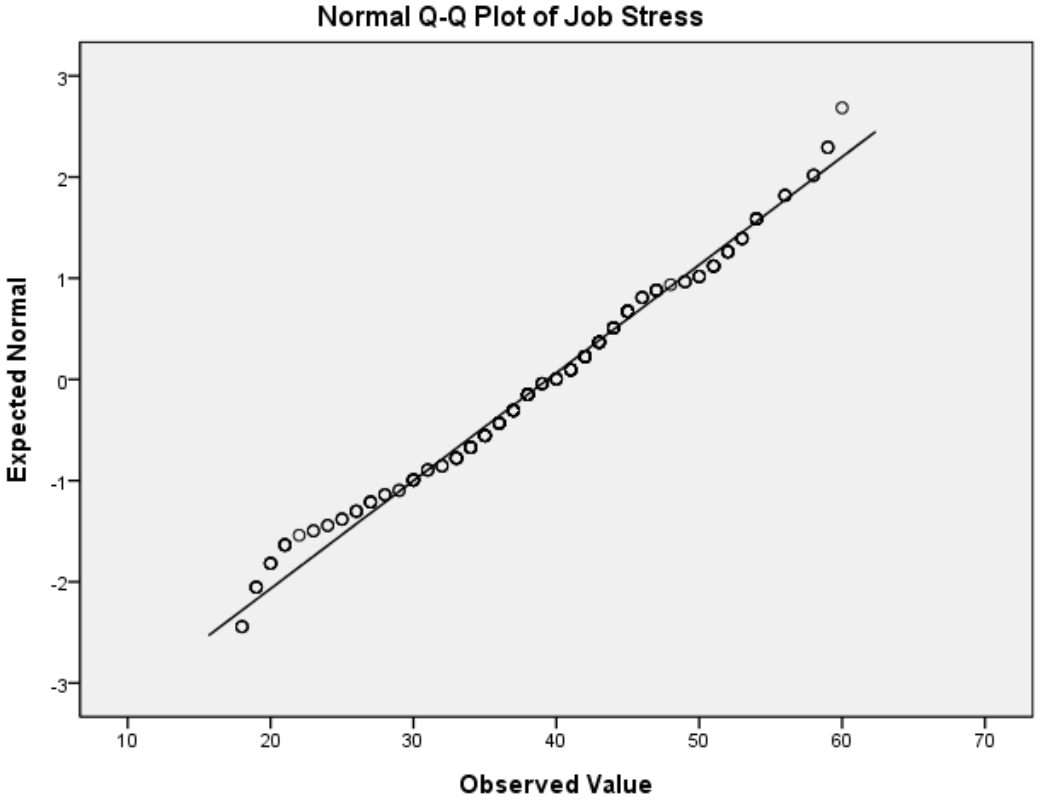
-2
-3
60
70
80
90
100
110


Normal Q-Q Plot of Job Stress
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Observed Value
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-2
-3
10
20
30
40
50
60
70


Normal Q-Q Plot of Job Performance
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Observed Value
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35
40
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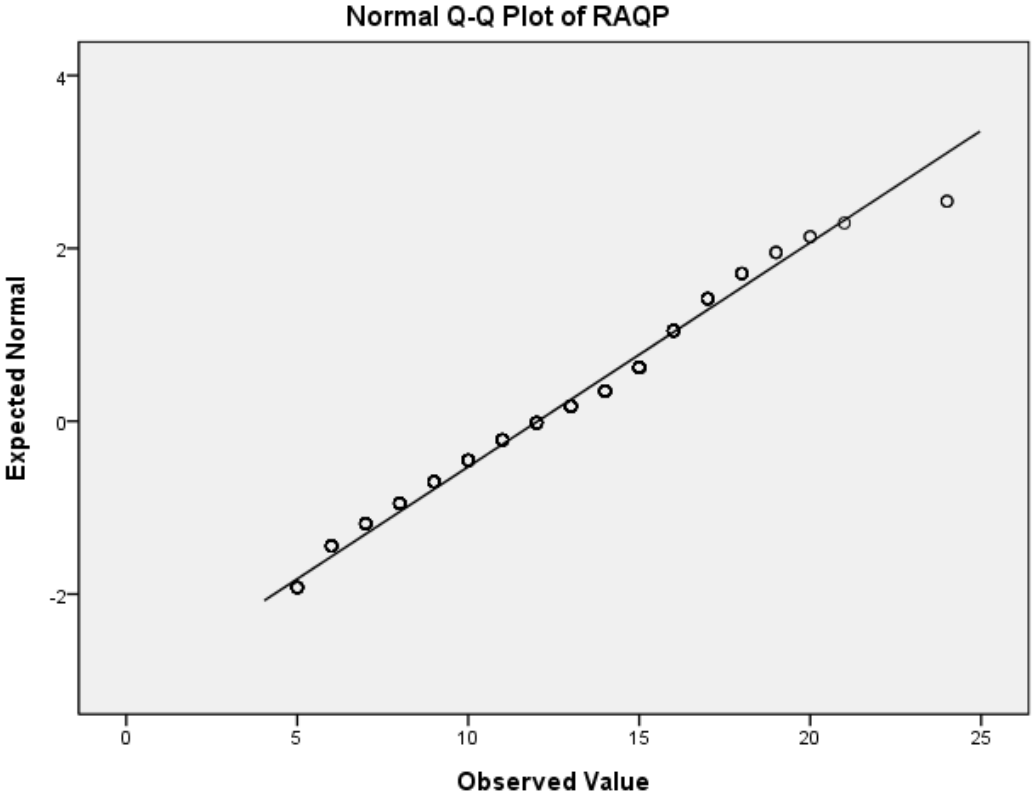
Normal Q-Q Plot of RAQP
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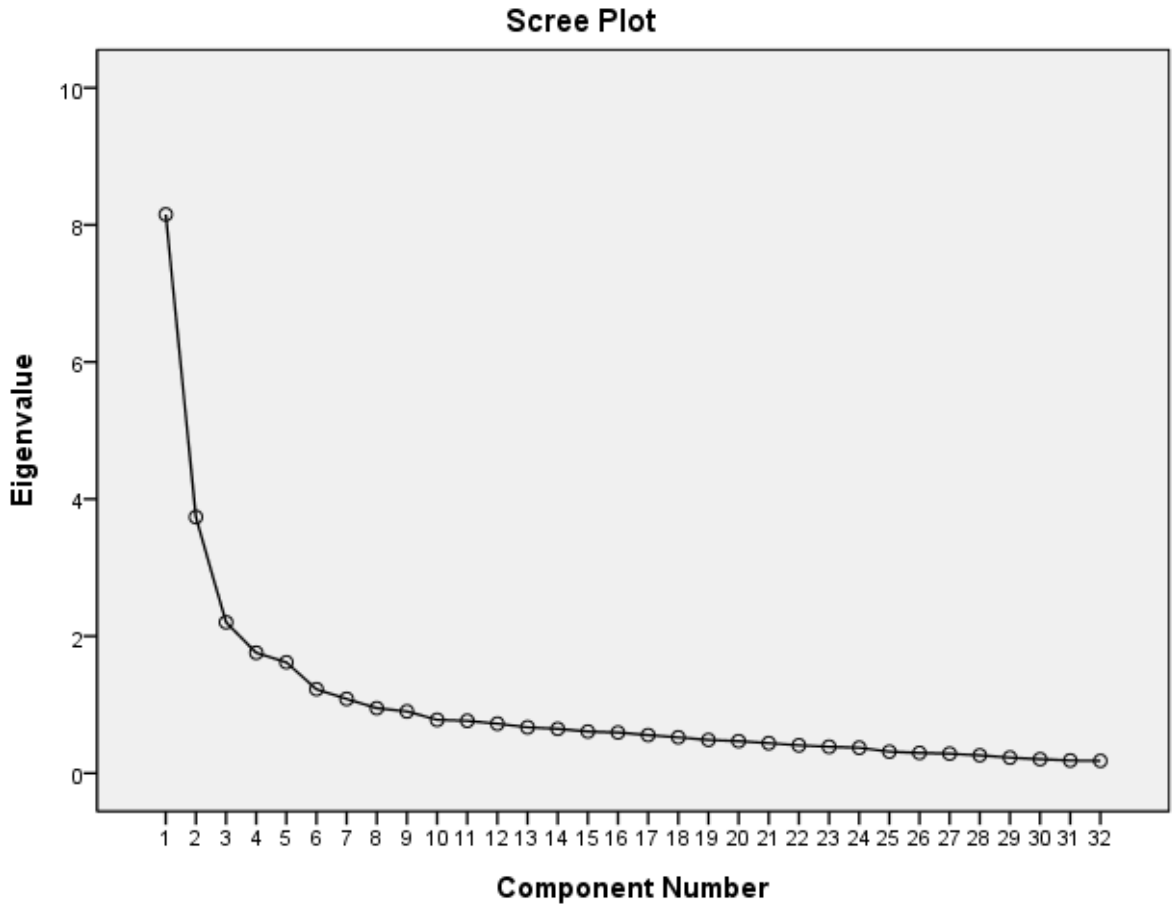
Appendix 5: Scree Plot



Appendix 6: Factor Analysis

	Question no.		Factor loading			
			1	2	3	4
Job stress	I12	I do not know what my co-workers expect of me	**.772**	-.114	.003	.197
	I7	I do not know what my supervisor thinks of me and how he/she evaluates my performance	**.709**	-.212	.235	.083
	I11	I am unable to influence my immediate supervisor's decisions/actions that affect me	**.689**	-.160	.079	.209
	I8	I cannot get information needed to carry out my job	**.65**	-.156	.152	.128
	I6	I am not fully qualified to handle my job	**.629**	-.196	-.008	-.071
	I14	I have to do things on the job that are against my better judgment	**.579**	-.147	.198	**.426**
	I3	I do not know what opportunities for promotion exist for me	**.567**	**-.434**	.242	.115
Role Ambiguity	J2	There are clear, goals and objectives for my job	-.173	**.823**	-.037	-.016
	J6	I know what my responsibilities are	-.114	**.734**	.131	-.019
	J9	I know exactly what is expected of me	-.302	**.622**	.153	.087
	J1	I feel certain about how much authority I have	-.222	**.621**	.104	-.045
	J13	I feel I am given clear explanation of what has to be done	-.137	**.59**	-.115	-.149
	I2	The scope and responsibilities of my job are unclear	**.425**	**-.547**	.322	.094
	J4	I know that I have divided my time properly	-.06	**.539**	-.034	-.102
	I1	I have too little authority to carry out the responsibilities assigned to me	**.428**	**-.516**	.102	.022
	F1	I am given enough time to do what is expected of me on my job	-.273	**-.504**	**.391**	.172
	J3	I have to do things that should be done differently	.042	**.278**	.114	.241
Workload	I4	I have too heavy a work load, one that I cannot possibly finish during an ordinary workday	.208	-.107	**.81**	.087
	F2	It often seems like I have too much work for one person to do	-.101	.085	**.749**	.077
	F3	The performance standards on my job are too high	.111	.252	**.596**	.123
	I5	I think I will not be able to satisfy the conflicting demands of various people over me	**.404**	-.192	**.58**	.093
	J5	I receive an assignment with insufficient staff to complete it	.002	-.004	**.569**	**.475**
	I15	My job tends to interfere with my family life	.111	-.15	**.529**	.327
	I13	The amount of work I have to do may impact how well I do it	**.38**	.102	**.498**	.081
Role Conflict	J11	I do things that are apt to be accepted by one person and not accepted by others.	.199	.041	.109	**.729**
	J10	I receive incompatible requests from two or more people	.003	-.057	.271	**.711**
	J12	I receive an assignment without adequate resources and materials to execute it	.158	-.106	.319	**.606**
	I9	I have to decide things that affect the lives of people I know	**.399**	.075	.021	**.557**
	I10	I may not be liked and accepted by the people I work with	**.409**	-.031	-.027	**.539**
	J8	I work in different teams with staff members who operate quite differently	-.178	-.093	.134	**.508**
	J7	I have to violate a rule or policy in order to carry out an assignment	**.351**	-.185	-.117	**.480**
	J14	I work on unnecessary things	.296	-.241	.223	**.322**

Appendix 7: Modification Indices for Cross-Loading Estimates

Item	Modification index[16]
F2	RAQP(8.85); JP(8.70); CL(6.59); SL(6.66); RA(12.33); JS(23.49); J1(19.53); I11(25.95); I12(24.46)
F3	BE(10.76); RAQP(5.04); CL(6.45); SL(10.99); RA(10.23); K3(36.75); G4(18.72)
G2	BE(4.24); JP(6.45); WL(9.63); K13(17.43); I4(12.99)
G5	BE(5.22); JP(4.51); SL(6.42); RC(8.52); RA(5.36); K1(16.332); J12(15.43)
H4	K16(10.31)
I6	JP(7.66); WL(4.1); RC(6.16); G3(17.17); J9(12.80)
I7	RAQP(4.31); CL(14.48); SL(6.81); WL(5.50); K10(19.53)
J2	RAQP(8.78); JP(11.99); H5(16.11); G3(11.78)
J13	BE(4.46); CL(7.97); SL(6.85); WL(7.39); RC(9.66); K11(11.15)
K1	BE(10.90); D1(10.84); G5(11.89); K2(20.58)
K2	RA(7.56); JS(14.44); K1(16.44)
K3	BE(8.58); WL(4.185); F3(28.14); K18(33.47)
K5	K6(42.72)
K8	BE(5.62); G2(7.92)
K9	WL (8.46)
K11	K14(29.97)
K18	WL(10.49); K3(25.41); H5(11.42)

[16] BE: Budget emphasis; WL: Workload; SL: Structure leadership; CL: Considerate leadership; JP: Job performance; RC: Role conflict; RA: Role ambiguity; JS: Job stress