

# INTERNAL AUDIT INTELLIGENCE AND FIRM SUCCESS EVIDENCE FROM THAI-LISTED FIRM

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## ABSTRACT

*This research aims at investigating the relationships among five dimensions of internal audit intelligence (best internal audit concept, internal audit knowledge well-roundedness, internal audit skepticism focus, internal audit ethics awareness, and internal audit excellence mindset) and firm success through the mediating influences of internal audit planning effectiveness, best internal audit practice, and internal audit review efficiency. Governance vision, internal audit learning, internal audit competency, and stakeholder expectation become the antecedents of internal audit intelligence. In this study, data were collected by mail survey questionnaire of 126 Thai-listed firms in Thailand. The results of OLS regression analysis indicated that internal audit knowledge well-roundedness has a significant positive effect on best internal audit practice, internal audit planning effectiveness, and internal audit review efficiency on the consequents. In addition, internal and its quality consequents have a significant positive association with firm success. Furthermore, governance vision, internal audit learning and, stakeholder expectation force have a positive influence on internal audit intelligence. To verify and increase managerial and contributions of the study, future research needs to collect data from a larger population or comparative population in order to increase the reliability of the results, as well as use another sample population, such as certified public accountants (CPAs), governmental auditors (GAs), or others in Thailand. A potential discussion concerning the research results is effectively implemented in the study. Theoretical and managerial contributions are explicitly provided. The conclusion, suggestions, and directions for future research are recommended.*

## INTRODUCTION

In the era of globalization, change, and volatility, the economic environment has influenced the predictability of firms in survival and maintenance of sustainable growth in a highly competitive situation. In order to survive and grow, firms need continuous development for their operational processes that respond to economic change, to ensure survival, and to achieve firm success (Danneel, 2002). Moreover, several companies such as the Petroleum Authority of Thailand (PTT), The Siam Cement Public Company Limited (SCG), the Bangkok Petroleum Public Company Limited, and the Kasikorn Bank Public Company Limited have adopted and held to corporate governance and accountability to society and environment as an operational guideline to business growth that led to simultaneous survivability and sustainability (Hopwood, Unermab & Fries, 2010). That is consistent and in accordance with rules prescribed by the Stock Exchange of Thailand (SET). Many organizations such as the Toyota Motor Thai Company Limited, Thai Airways International Public Company Limited, and Murata Electronics (Thailand) Company Limited try to seek the appropriate management processes or methods to improve the operational practices and develop into proper firms, which lead to high performance in creating competitive advantages in the long term (Institute of Internal Auditors, 2003). Therefore, best

practices approach was used to increase firm performance, value added (James, 2003), and sustainable competitive advantages which are important goals of current businesses.

Rapid environmental change affects improvement of the internal audit function emphasizes future-orientation and continuous improvement as a dynamic, evolved and expanded that scope that of work to cover all aspects of control and, hence, apply their expertise to outside finance focusing on efficiency and effectiveness in operational activity (Cecere, 2008). The role in protecting assets is more important than the earlier-mentioned situations. Moreover, some critical points need best practice to check and present weakness issues, that is, the quality of audit work (O'Dell, 2011). Additionally, the role of the internal audit function was expanding service to support other departments within organization as well (Hass, Abdol mohammadi & Burnaby, 2006). In this situation, executives and all parties expected that the internal audit function could assess and consult concerning risk management, control system, and corporate governance effectiveness (Hermenson, 2006). Additionally, they can have the stakeholders ensure that finance information which is used in the operations and for decision-making is more use and reliable. Therefore, it is a challenge for the internal audit function to find the best guidelines or procedures for an audit task to respond to an executive's needs, in which the internal audit function can help organizations and stakeholders to ensure that the key risk was identified and controlled appropriately (Jeffrey, 2008). Moreover, it can be said that the current role of the internal audit function is both as an independent consultant and catalyst for change in the operations processes in the organization in order to be able to survive in a competitive environment and in current change (Institute of Internal Auditors, 2002).

The accounting scandals at Enron (USA), WorldCom (USA), Sumitomo (Japan), and other companies have led to a serious focus on corporate governance and internal control effectiveness (Carecello et al., 2005) due to a lack of transparency of business operations. These serious events have indicated that important role, played by the boards of directors in strengthening effective corporate governance, including disclosure, is the ultimate responsibility for internal control systems in their institutions (Al-jabali et al., 2011) As a result, the regulator's response has focused on the increasing demand for disclosure and corporate governance, and internal control and risk management such as in the United States and other countries which emphasize the importance of the investor's confidence in the financial reporting quality and the need for a quality financial report to meet expectations of current and potential investors (Al-Shetwi et al., 2001; Soh & Martinov-Bennie, 2011). Importantly, Gramling et al., (2004) stated that one of the four cornerstones of corporate governance is an internal audit function, which improves the transparency and quality of financial reporting, auditing, detecting, preventing fraud, and assessing internal control effectiveness.

Currently, the management of organizations, both in the public and private sectors has been expanded to affect increasingly complicated management, including the rapid changes in the economy, society, politics, and technology. As a result, a board of directors cannot thoroughly control the operational details of various departments. The internal audit is a tool which is used as a supporting role in management, and for audit and control measures to be effective (Gramling et al., 2004). The role of the internal audit is to help the organization achieve its objectives by way of a systematic and strict support risk management evaluation by planning, verifying the extent of compliance with policies, improving the effectiveness and efficiency of the firm's operation, control and management process, and financial report presentation (Al-Shetwi et al., 2011; Institute of Internal Auditors, 2004; Rama and Newman, 2002; Vasile et al., 2011). Similarly, Rahahleh (2010) stated that internal audit is the independent activities the operation and consulting service that is designed to add value to the organization as well as improve performance. Therefore, the internal audit is the independent

activities of an operation to help support risk management, to plan, to check the compliance with policies and financial report presentation, achieve objectivity, and add value to the organization.

From the above, the responsibility of the internal audit requires examination and evaluation of the adequacy and effectiveness of the organization's governance, risk management, and internal process (Institute of Internal Auditors, 2009). In addition, the main objective of the internal audit function is to play a role as a monitoring mechanism and assist organizations in achieving objectives effectively by providing unbiased and objective assessments and improvement of risk and internal control (Ahmad et al., 2009; Hermanson et al., 2008). Internal audit function is also used to assess internal control effectiveness (Wancharoendate & Ngamtampong, 2012). Thus, the operation of internal audit causes the internal audit function to adhere to the responsibility of practices leading to adding value to the organization (Popescu & Vasile, 2011; Spira & Page, 2003).

Knowledge, skills, and ability are major important issues in practice work. According to Palmer et al., (2004), changes in the accounting profession are necessary to enhance important skills, as well as professional knowledge. The prior research of Ahmad et al., (2009) found that auditors lack appropriate knowledge of effective auditing approaches. Similarly, Abu-Eker et al., (2011) stated that the auditors have a lack of knowledge of accounting and processes. As well, Van (2004; 2005) stated that auditors do not have sufficient knowledge to make useful support concerning knowledge of the important background of the internal audit (Swinkels, 2009).

In addition, Dittenhofer (2001) found that unskilled internal audit work affects non-achievement of objectives, because skill or ability in the operation of a business affects the quality of the audit function (Matarneh, 2011). Meanwhile, the International Standards for the Professional Practice of Internal Auditing assigns attribute standards that address the attributes of the organizations and individuals performing internal auditing on the part of proficiency, which is essential in meeting the responsibilities of the internal auditors and the internal audit activity (International Standards for the Professional Practice of Internal Auditing, 2009). Therefore, the commitment of compliance with the standards, including knowledge, skills, and abilities, are used as sufficient practices, that effectively affect achieved objectives.

## **THEORETICAL FOUNDATION, RELEVANT LITERATURE REVIEWS AND HYPOTHESES DEVELOPMENT**

### **Theoretical Foundation**

There are three main theories used to describe the relationships among the variables in this research, including the knowledge-based view of the firm, and the institution theory.

#### **Knowledge-based view of the firm**

The knowledge-based view of the firm is a concept and model of business enterprises which explains their structure and behaviors (Grant, 1996). The definition of the knowledge-based view of the firm considers the knowledge as important for firms, and is difficult to imitate (Grant 2002). In addition, this theory knowledge is at the group and firm levels for analysis as to what had been a construct. Different knowledge and ability are a key factor in the firm's sustainable competitive advantage, and leads to superior performance (Hitt, Ireland, & Hoskisson, 1999; Teece, Pisano, & Shuen, 1997). By doing so, a firm will focus on interpersonal communication, and the exchange of knowledge and construction (such as the development of performance); and finally, the impact of such interaction in order to have

competitive advantage. This knowledge is procedural, which is knowledge and skill of the sequence of operations. The process of developing procedural knowledge for a skill-based task has been shown to occur in the following three stages: (a) It presents a description of a way to perform a task, (b) One practices; it, perhaps haltingly at first but intelligence improves with continued practice and it benefits from feedback, and (c) One reaches the point at which the ability to perform the task is automatic; one no longer has to think about it (Lakshmanan et al., 2010).

The knowledge-based view of the firm is used to support the context of accounting, auditing, and internal audit (Brocheler, 2004; Hui & Fatt, 2007). In the accounting context, firms were able to use knowledge to appropriate and accumulate accounting practice, as mediated by variant structures of accountability, a leading to different performance (Toms 2006). In addition, the knowledge-based theory of the firm is applied to clarify the fact that internal audit intelligence is the crucial knowledge of the firm which creates advantage over competitors and leads to firm goal achievement. This is because internal audit intelligence is knowledge that is the most strategically significant resource of a firm, and it leads to superior performance. In an internal audit context, firm's knowledge can be advanced by either absorbing existing knowledge external to the firm or by developing new knowledge in order to increase maximization of the firm's value (Nickerson and Zenger, 2009). Similarly, Ali and Owais (2013) state that internal audit knowledge is an important resource that helps the internal auditor to maximize and add value for the firm. Moreover, in an audit context, Wangcharoendate & Ussahawanitchakit (2010) apply theory to describe the skills and knowledge in best audit practices in order to gain a competitive advantage, as well as audit effectiveness. Therefore, the firm that has different knowledge and capability will have different performance. As described earlier, knowledge and resources are considered a necessary ingredient for the survival of the company (Kaplan et al., 2001). Knowledge or capability refers to a firm's capacity to efficiently convert its inputs, which lead to valuable outputs (Nickerson and Zenger, 2004). The acquisition and use of most products, and the firm's specific knowledge from learning and experience, are made available to a greater extent, than in the case of technical knowledge acquired (Rahmeyer, 2006).

This research adopts the knowledge-based view of the firm, which explains that the firm's future growth depends on the productive integration of knowledge resources and derivative decision-making capabilities (Ding, Akoorie, & Pavlovich, 2009). A firm's competitive advantage comes from a combination of different knowledge resources at the firm level rather than the individual level through business activities (Spender, 1996). Especially, knowledge is complex, tacit, and heterogeneous, which is harder to imitate than raw materials, and provides the driving force for the alliances' competitiveness and performance (Barnery, 1991). Therefore, organizations are needed to integrate specialized knowledge for creating an advantage, and developing relevant organizational abilities (Knight and Cavusgil, 2004). Also, Ireland, Hitt, and Vaidyanath (2002) point out that the classification of "knowledge" refers to those skills, capabilities, and processes which could be critical to enhancing organizational competitiveness. Moreover, the International Standards for the Professional Practice of Internal Auditing (2008) define "intelligence" as knowledge, skills, and competencies needed to effectively carry out their professional responsibilities. In this research, internal audit intelligence focuses on the important knowledge and skills of the internal audit department to carry out internal audit work.

### **Institutional theory**

The institutional theory is a widely accepted theory which is a concept of the organization's ability to analyze organizational behavior. This theory focuses on explaining

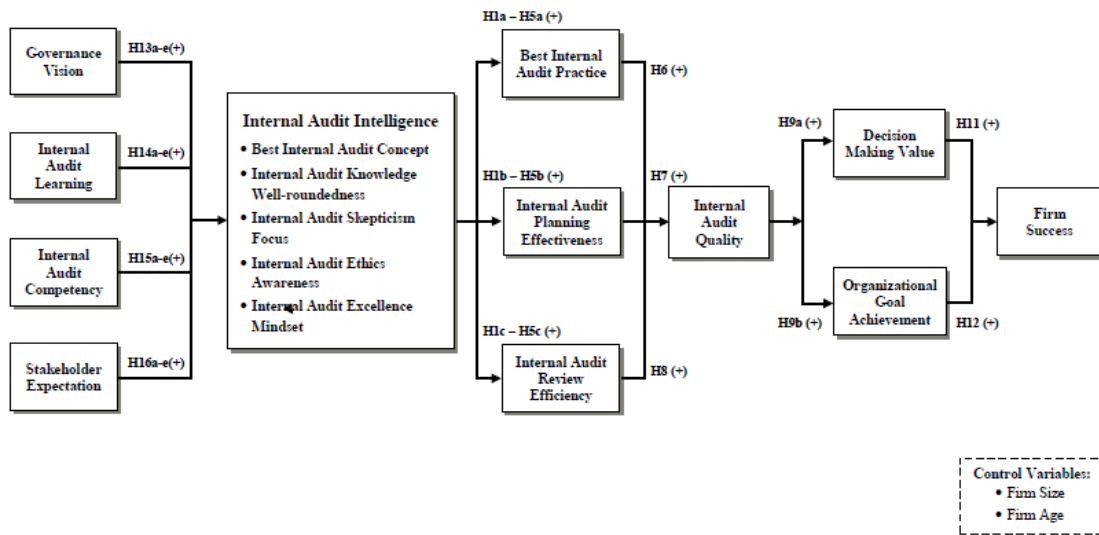
the behavior of the organization for social recognition (Meyer and Rowan, 1977; Tolbert and Zucker, 1983; Zucker, 1987). Furthermore, the key components to determinate their behaviors are institutional members and the surrounding environment, which cause pressure on themselves such as by governmental regulations, professional associations, social networks, and economic change (Arena & Azzone, 2007; DiMaggio and Powell, 1983; Meyer and Rowan, 1977). As a result, the organizations must transition and adapt themselves by implementing similar methods from the other companies, such as a similar environment in their industry, in order to gain acceptance, competitiveness, survival, and goal achievement (Al-Twajry, Brierly & Gwilliam, 2003; Sealing, Dirsmith & Fogarty, 1996; Zhou & Li, 2007). Based on the institutional theory, the process of isomorphism is divided three ways: coercive isomorphism, mimetic isomorphism, and normative isomorphism (Al-Twajry, Brierly & Gwilliam, 2003).

In the context of the internal audit departments within organizations, coercive isomorphism consists of those pressures exerted to establish internal audit departments. Coercion takes place through mechanisms of authority, legitimating the power to compel organizations to establish internal audit departments which not only review the efficiency and effectiveness of the organizational activities, but also affect organizational performance (Al-Twajry, Brierly & Gwilliam, 2003). Mimetic isomorphism is a process of internal change by the organization. Mimetic isomorphism occurs when organizations find that the internal audit function contributes to an improvement in organizational control and operational performance leading to it being adopted (DiMaggio & Powell, 1983) under uncertainty in emulating practices of other organizations (Mihret, James & Mula, 2010). Consequently, numbers increasing of organizations establish the internal audit departments over time.

To verify the relationship between internal audit intelligence and firm success, internal audit intelligence is an independent variable of the study which includes best internal audit concept, internal audit knowledge well-roundedness, internal audit skepticism focus, internal audit ethics awareness, and internal audit excellence mindset. Also, firm success is a dependent variable of the study. In addition, best internal audit practice, internal audit planning effectiveness and internal audit review efficiency are mediating variables. Furthermore, there are four antecedents of internal audit intelligence, including governance vision, internal audit learning, internal audit competency, and stakeholder expectation. Thus, the conceptual, linkage, and research models present the associations between internal audit intelligence and firm success as shown in Figure 1.



**Figure 1**  
**RELATIONSHIP MODEL OF INTERNAL AUDIT INTELLIGENCE AND FIRM SUCCESS**



### Internal Audit Intelligence

The importance of internal audit intelligence increases for the audit professional. Internal audit intelligence represents knowledge which allows expert auditors to perform auditing tasks faster, with greater consistency, and to achieve a higher quality of decision-making. Previous studies show that auditors who are intelligent in the audit task will take advantage of identifying problems, assessing risk, evaluating evidence, and performing skeptical judgment (Nelson, 2009). Internal auditing is a challenging task, particularly when faced with a critical issue involving an auditors’ professional judgment to solve their clients’ problems. Clients request professional service with a high quality of staff intelligence. Tan & Libby (1997) found that while tacit managerial knowledge is important for superior performance at the audit manager level, technical skills are important for superior performance at the staff level. The problem-solving abilities distinguish superior performance at the senior rank. These findings suggest that while personality/social attributes such as tacit managerial knowledge are more important for superior performance at higher professional ranks, judgment/technical skills are more important for superior performance at the lower professional ranks. The quality of financial statement audits is dependent on the job performance of auditors. Our understanding of the determinants of auditor job performance has evolved from concentration on the quality of judgments made, based on technical knowledge and ability in overall job performance, including tacit knowledge of a broad set of performance attributes, and the ability to objectively evaluate subordinates. However, relatively little is known about what distinguishes auditors whose overall job performance is relatively superior (McKnight & Wright, 2011). Auditors must perform in accordance with a professional standard such as the accounting standard on the auditing standard. Auditors should plan and control an audit task to sufficiently compile information and evidence in audit practice.

The early literature on intelligence in auditing focused on technical knowledge (Weber, 1980) and problem-solving ability (Bonner & Lewis, 1990). Koletar (2006) predicates that intelligence and internal audit functions are similar to each other, and ask

essentially the same question, although for different reasons: “There is something going on out there that I should be concerned about”, which Ashton (1991), and Bonner & Lewis (1990) found that industry expertise was positively correlated with an auditor’s ability to identify problems within financial statements. Likewise, audit intelligence is defined as the ability to apply specific skill to perform complex audit tasks and more provide superior quality service than competitors (Bedard, 1991; Bedard & Chi, 1993). Abbott and Parker (2000) identify industrial specialization as an auditor who acquires specific skill, experience and knowledge of client industry, and utilizes such skill to complete the audit task and provides higher quality of audit service to their clients. Moreover, auditors with high experience will gain more effective risk assessment (Bedard & Wright 1994; Yang, Moyes, Din, & Omar, 2010).

In this research, internal audit intelligence is defined as the expertise of auditors, including specific skills and experience, to perform more complex audit tasks and provide more superior quality service than other auditors (Nelson, 2009).

### **Best Internal Audit Concept**

Best internal audit concept is the first dimension of internal audit intelligence. Due to the dynamic changes in the environment, companies are trying to create an internal audit system of management to achieve a sustainable competitive advantage (Bielinska-Dusza, 2011). Internal audit practice is an audit procedure performed by a firm’s own personnel to check for completeness and accuracy (Sueyoshi et al., 2009). Internal auditing is executed in various environments and within organizations which offer in objectives, laws, and customers (Rameesh, 2003). These differences may affect the practice of internal auditing in each environment. According to Abdolmohammadi & Tucker (2002), the degree of economic development of a country will have an impact on the internal audit practice in that country.

Internal audit is a value-added activity; it is important for the internal audit to comply with the Standards for the Professional Practice of Internal Auditing (Al-Twajjry et al., 2003; Lee and Ismail, 2010), which is the best practice. The best concept for the techniques, methods, processes, and procedures combined into practice, improve business results for the organization (O’Dell & Grayson, 1997). In addition, the successful best practice of the internal audit includes project management techniques to ensure that plans are achieved and alter management techniques facilitate change (Rameesh, 2003). Hence, best practice enhances change management techniques and processes successfully, including increase of basic internal audit strategies. This research defines best internal audit concept as the ability to apply knowledge and skills of techniques, processes, methods, and procedures to keenly assess the likelihood of risky events and to identify ways of reducing the likelihood of occurring events, to achieve the audit goals effectively.

The existing literature on internal audit practice concept has differing evidence as follows: internal audit concept is not only related to risk management and value-added auditing, but also finds that the use of processes, procedures, techniques, and tools in the internal audit practice towards best practice to achieve an outcome (Allegrini & D’Onza, 2003; Gilson, 2004; Roth, 2003; Sarens & Abdolmohammadi, 2011). Moreover, the reliability and accuracy of financial reporting is a result of good accounting concepts in accordance with Generally Accepted Accounting Principles (GAAP). The accounting concept helps accounting control and audit, and systematic practice consistent with accounting standards to be transparent and easily checked (Byington & Chrisensen, 2005). In addition, Havelka & Merhout (2013) stated that operational skill affects operations and also improves the operation and performance of an organization to achieve its goals and objectives (Berber et al., 2012). Hence, best internal audit practice affects good internal audit control that leads

to financial reporting reliability, value-added, reduced risk, and increased operational efficiency. The results also show that the firms may have good accounting concept; but if they lack knowledge and understanding of practice, leads to outcomes with errors and that are unreliable (Ninlaphay et al., 2012). Therefore, the related hypothesis is postulated as follows:

*Hypothesis 1: The higher the best internal audit concept is, the more likely that internal auditors will gain greater (a) internal audit planning effectiveness, (b) best internal audit practices, and (c) internal audit review efficiency*

### **Internal Audit Well-roundedness**

Internal audit knowledge refers to the administration of business practices to create the highest level of efficiency possible within an organization. Internal audit knowledge is concerned with converting materials and labor into goods and services to maximize the profits of the organization. Moreover, well-roundedness involves a variety of aspects such as knowledge, skills, expertise, and other competencies related to internal audit knowledge. In this research, internal audit knowledge well-roundedness is defined as the ability to manage the operations of the organization relating to corporate governance, designing, and redesigning the business operation associated with converting the resources into products and services as efficiently as possible to maximize the profits of an organization.

For the organization to be successful, the organization should be successful in operational management, finance, and marketing divisions (Heizer & Render, 2008). Most especially, operational management is the activities that are performed to produce goods or services by changing inputs into outputs (Ghraiiri, 2011). Internal audit knowledge is more focused on enhancing firm effectiveness and efficiency through process improvement, planning, and control (Mentzer, Stank & Esper, 2008). Thus, attainments in internal audit knowledge are important for correct decision-making on certain matters such as quality management, service and product design, process and capacity design, location, layout design, human resources and job design, supply chain management, material requirements planning, short-term and project scheduling, and maintenance. Hence, internal audit knowledge well-roundedness affects valuable, unique decision-making because of its recognize by all parties involved, and it also affects firm success.

*Hypothesis 2: The higher the internal audit knowledge well-roundedness is, the more likely that internal auditors will gain greater (a) internal audit planning effectiveness, (b) best internal audit practices, and (c) internal audit review efficiency.*

### **Internal Audit Skepticism Focus**

Internal audit skepticism focus is the main construct in this research. Although professional skepticism is an important concept that is mentioned frequently in both audit standards and internal audit practice (Hurt, 2010; Nelson, 2009), there are some issues to be discussed. Firstly, what is skepticism? In general, skepticism refers to any questioning attitude or doubt regarding knowledge, facts, or opinions (Ditto & Lopez, 1992). From the viewpoint of auditing professions, skepticism can be considered in two positions, a neutral view and a presumptive doubt view (Nelson, 2009). From the neutral view, auditors should perform audit tasks with effort and without bias (Hurt, 2010). Hence, under the neutral view, an auditor must perform with an unbiased judgment and be alert to fraud or error indicators. In contrast, the presumptive doubt view requires auditors to work hard on evidence-gathering and pay effortful attention to evidence which indicate any misstatements (Nelson, 2009). This view requires auditors to accumulate substantial evidence to reduce risk at an acceptable level. However, most audit standards and internal audit practices utilize the neutral view as a



fundamental concept, so this research implements the neutral view of professional skepticism.

The definition of professional skepticism has been discussed from the earliest auditing standards until nowadays. For example, the International Auditing Standards 200 (IAS 200) requires auditors to diligently perform audit tasks without bias or assumption of managements' dishonesty (IAASB, 2011). Furthermore, auditors must utilize and maintain an appropriate level of professional skepticism in audit strategy formulation (IAS 300), gathering and evaluating evidence (IAS 500), and reporting (IAS 700). These similar requirements appear in a statement of auditing standards in the United States of America. Although the concept of skepticism is generally accepted in a practical matter, academic literature inconsistently defines skepticism. For example, Shaub & Lawrence (1996) identify skepticism as trust between auditors and clients, while Carpenter, Durtschi & Gaynor (2002; 2011) consider skepticism as the ability to detect fraud. In addition, Bamber, Ramsay & Tubbs (1997) indicate that skepticism is the auditors' reaction to new information or evidence obtained.

However, some research shows a congruence of definitions between academic and practical standards. Many researchers identify the definitions of professional skepticism from both viewpoints; for example, Nelson (2009) chooses the presumptive doubt view and defines professional skepticism as the auditors' care judgment and decisions based on information obtained from the clients. In contrast, Hurtt (2010) employs the neutral view and indicates that professional skepticism is multidimensional traits that reflect deferring judgment until sufficient evidence is obtained, and considering evidence providers and ability to effectively react on information obtained. According to McCoy et al., (2011), professional skepticism can be applied to an internal audit department as an evaluation process that involves in-depth analysis of audit, effective reaction to suspicious problems, and validation of information obtained. Hence, the hypothesis is posited as follows:

*Hypothesis 3: The higher the internal audit skepticism focus is, the more likely that internal auditors will gain greater (a) internal audit planning effectiveness, (b) best internal audit practices, and (c) internal audit review efficiency.*

### **Internal Audit Ethics Awareness**

The objective of the review is to ensure that the audits are in accordance with generally-accepted auditing standards, and company policies and procedures of which the effect of review is the feedback, and the effects on preparer behavior after the reviews have not received much attention (Miller, Fedor & Ramsay, 2006). The review process is shifting from a sequential to more real-time process (Wilk, 2002). An important function of the review process is to ensure the quality and work under pressure of time which may result in the reduced performance of the auditor (Agoglia, Kida, & Hanno, 2003). A review can be done by reading the workpaper and notes for following up and improve in the general review. Knowledge is the key factor in the spreadsheet. The review process will reduce the variance of the decision. The judgment will come from the review of the audit (Ramsay, 1994).

Audit reviewers play a critical role to improve the quality of the audit by ensuring that the conclusions reach prevention (Tan & Shankar, 2010). The audit review process helps public accounting firms control quality, and it also provides information for performance appraisal and timely feedback. Reviewers must objectively assess their subordinates' work for the review process to achieve objectives (Tan & Jamal, 2001). Reviewers often work with a regular group of preparers with which reviewers become familiar and with the subordinates whose performance they must assess. This familiarity with subordinates can improve the efficiency and effectiveness of the review process (Tan & Jamal, 2001).

Auditing standards require that auditors assess all relevant evidence in an unbiased and objective method (Guiral, Ruiz, & Rodgers, 2011) and require auditors to consider the reliability of the evidence they use in making judgments (Reimers & Fennema, 1999). The audit review process is an integral part of the quality control approach in audit practice and standards (Favere-Marchesi, 2006). Audit practice tends to become more interactive, including face-to-face discussions between the preparers and the reviewers (Wilk, 2002). The review process is a control mechanism implemented by CPA firms to enhance the quality of the workpaper documentation, conclusions made (Tan & Trotman, 2003), and proper rendering of the audit judgments (Tan and Shankar, 2010). The review is a part of the quality control mechanism in the implementation and auditing standards (Agoglia, Hatfield & Brazel, 2009; Favere-Marchesi, 2006; Ismail and Trotman, 1999), and as a part of quality control procedures of the financial statement audits. This documentation is prepared by the auditors and reviewed by supervisors (Miller, Fedor & Ramsay, 2006).

Internal audit ethics awareness is an important source of accountability for field auditors, and the anticipation of review increases the audit effort and improves audit performance (Payne, Ramsay & Bamber, 2010). Internal audit ethics awareness is a primary means of audit quality control and auditor training (Payne, Ramsay & Bamber, 2010). In addition, the conduct of the audit, and external quality reviews are important tools to enhance audit quality (Favere-Marchesi, 2000).

In this research, internal audit ethics awareness refers to the audits that perform tasks in accordance with generally accepted auditing standards, firm policies, and procedures, including the anticipation of review. It increases audit effort, and improves audit performance (Miller, Fedor & Ramsay, 2006; Payne, Ramsay & Bamber, 2010). Internal audit ethics awareness plays an important role in audit work. Therefore, audit review awareness has an effect on audit value increase, audit report quality and financial information usefulness. It can have consequences on audit survival because auditors wish to survive the professional auditing. As mentioned above, and based on these rationales, the following hypothesis is postulated:

*Hypothesis 4: The higher the internal audit ethics awareness is, the more likely that internal auditors will gain greater (a) internal audit planning effectiveness, (b) best internal audit practices, and (c) internal audit review efficiency.*

### **Internal Audit Excellence Mindset**

Currently, the business environment has changed. To survive more challenging competition, firms need to adapt to harmonize with a competitive and changing environment, and focus on survival in the long-term (Wheelen & Hunger, 2008). In the rapid changes, flexibility has become more important, because it is an ability of a firm to adjust and try to find a new opportunity to timely respond to an environment (Birkinshaw, 2000). According to the above reasoning, the hypothesis is formulated as below:

*Hypothesis 5: The higher the internal audit excellence mindset is, the more likely that internal auditors will gain greater (a) internal audit planning effectiveness, (b) best internal audit practices, and (c) internal audit review efficiency.*

## **The consequences of audit excellence orientation**

### **Internal Audit Planning Effectiveness**

In general, audit planning is internal audit activities about to determine audit strategy. The audit planning is updated to reflect changes in the organization's business, operations,

systems, controls, and objectives. The chief audit executive must establish risk-based plans to determine the priorities of the internal audit activity consistent with the organization's goals (Institute of Internal Auditors (IIA), 2009). The internal audit planning effectiveness should also consider those activities most affected by recent or expected changes. As a result, the planning should be flexible in order to make the change during the year as a result of strategic change management expectations of achieving firm objectives (Ljubisavljevic & Jovanovic, 2011). Planning is valuable when the information outcome is reliable and decision making relevant. Consistent with Davidson and Gist (1996), internal audit effectiveness and efficiency depends on the planning strategy process. Moreover, the audit planning process should include the assessment of audit risk (IIA, 1978; Sueyoshi et al., 2009). Especially, in the implementation of the internal audit of a firm with high growth and the expansion of existing businesses, an organization needs internal audit planning, as it helps an organization achieve its goals (American Institute of Certified Public Accountants (AICPA), 2002; IIA, 2003). The ability to combine knowledge, skill, and experience with the internal audit function, and translate them into an action plan, is more likely to improve the management of risk and added value, and improve the operation of businesses (Sampattikorn et al., 2012). Consequently, audit planning has become the main activity which auditors have implemented in order to achieve audit report efficiency, gain audit performance, and enhance audit success (Ussahawanitchakit, 2012).

The audit working papers provide the documentary evidence of audit planning in the form of an audit plan, determines the objectives and scope of the audit, and the techniques and resources to be used by the auditor (Rameesh, 2003). Hence, integrative internal audit planning refers to the ability to apply knowledge of the entity's business to formulate internal audit strategy and link a set of guidelines to goals, objectives, and resources to ensure that the goals of the organization are covered. However, Goodwin (2004) stated that the differences of each country are likely to impact aspects of the audit, including the assessment of client risks and subsequent audit planning decisions. Similarly, Martinis et al., (2011) found that the differences of a country and client type affect audit planning. Therefore, internal audit planning should be a holistic view of objectives and goals in order to reduce risk. The internal audit department must develop an audit plan that ensures a maximum coverage of the areas to be audited (Hemaida, 1997). Internal audit planning that is incomplete leads to a loss of internal audit activities to bear the risk of an organization (Popescu & Omran, 2011). In addition, planning skills can help an internal audit provide highly useful input to the enterprise risk management process (Schneider, Sheikh & Simione, 2012). On the other hand, the lack of knowledge, skill, and experience that is necessary for audit planning of internal auditors may be to ignore some critical activities as the material weakness (Backer, 2010; Ge&McVay, 2005). As a result, the usefulness of financial information for making decisions is decreased, which does not enhance organizational value (Sori, 2009). In summary, internal audit planning effectiveness is a potential possibility that affects the provide of greater firm success. However, based on the majority of prior literature, the related hypothesis is postulated as follows:

*Hypothesis 6: The higher the internal audit planning effectiveness is, the more likely that internal auditors will gain greater internal audit quality.*

### **Best Internal Audit Practice**

Due to the dynamic changes in the environment, companies are trying to create an internal audit system of management to achieve a sustainable competitive advantage (Bielinska-Dusza, 2011). Internal audit practice is an audit procedure performed by a firm's own personnel to check for completeness and accuracy (Suevoshi et al., 2009). Internal auditing is executed in various environments and within organizations which offer in objectives, laws,

and customers (Rameesh, 2003). These differences may affect the practice of internal auditing in each environment. According to Abdolmohammadi & Tucker (2002), the degree of economic development of a country will have an impact on the internal audit practice in that country.

Internal audit is a value-added activity; it is important for the internal audit to comply with the Standards for the Professional Practice of Internal Auditing (Al-Twajjry et al., 2003; Lee & Ismail, 2010), which is the best practice. Best practice refers to the techniques, methods, processes, and procedures combined into practice, and improve business results for the organization (O'Dell & Grayson, 1997). In addition, the successful best practice of the internal audit includes project management techniques to ensure that plans are achieved and Alter management techniques facilitate change (Rameesh, 2003). Hence, best practice enhances change management techniques and processes successfully, including an increase in the basic internal audit strategies. This research defines best internal audit practice as the ability to apply knowledge and skills of techniques, processes, methods, and procedures to keenly assess the likelihood of risky events, and to identify ways of reducing the likelihood of occurring events to effectively achieve the audit goals.

The existing literature on internal audit practice provides differing evidence as follows: internal audit practice does not only relate to risk management and value-added auditing, but also finds that the use of processes, procedures, techniques, and tools in the internal audit practice towards best practice achieves an outcome (Allegrini & D'Onza, 2003; Gilson, 2004; Roth, 2003; Sarens & Abdolmohammadi, 2011). Moreover, the reliability and accuracy of financial reporting is a result of good accounting practices in accordance with Generally Accepted Accounting Principles (GAAP). The best accounting practices help in accounting control and audit. Systematic practice is consistent with accounting standards to be transparent and easily checked (Byington & Chrisensen, 2005). In addition, Havelka and Merhout (2013) stated that operational skill affects operations and also improves the operation and performance of an organization to achieve its goals and objectives (Berber et al., 2012). Hence, best internal audit practice affects good internal audit control that leads to financial reporting reliability, value-added, reduced risk, and increased operational efficiency. The results also show that the firms may have good accounting practices, but lack of knowledge and understanding of a practice its lead to outcomes that have errors and are unreliable (Ninlaphay, Ussahawanitchakit & Boonlua, 2012). Thus, the hypothesis is proposed as follows:

*Hypothesis 7: The higher the best internal audit practice is, the more likely that internal auditors will gain greater internal audit quality.*

### **Internal Audit Review Efficiency**

In prior research, investors' perceptions of the credibility of internal statements having been audited can enhance the audit information value (Ball et al., 2012); which make an auditor's performance reliable and creditable, leading to usefulness for the financial users' decision-making and stakeholders' trust. The audited value asserted by the auditors ensures material misstatement detection in audit procedures (Messier et al., 2005; Keune & Johnstone, 2012). Similarly, tax professionals believe that their professional responsibilities change over time and they should be responsible for the fraud detection during planning, to consider potential client business risk (DeZoort et al., 2012). Moreover, financial reports have been audited by independent auditors to demonstrate increased disclosures reliability of the firm committed to employ greater auditor financial statement truthfulness. Avoiding litigation and constrain that impair their reputation should be included Audit failure, and all audit procedures involved are collectively put into the auditsystem in order to attain the audit goals;

such as in financial reliability, development quality, information technology security, and environmental protection activity (Gullkvist & Jokipii, 2013; Havelka & Merhout, 2013).

In this research, audit information value refers to the result of good reporting with accuracy and reliability, following the objectives of the financial report and perceived usefulness of information by inside and outside users (Dando & Swift, 2003; Al-Ajmi, 2009; Robertson & Houston, 2010). Based on prior literature, the auditor can provide confidence in the financial statements being prepared in accordance with accounting standards and legislation associated with reliable accuracy. It also ensures the validity of financial statements under the revenue code (Norman et al., 2008). The audit report is confirmed by an auditor's independent objective opinions on the financial statement for being truthful and complete, equally useful for a user's decision making (Gomez-Guillamon, 2003). Because confidence in audit reports can better reflect the accuracy and reliability of the financial position and operational performance, (including the audit report objectivity, transparency, and creditability), following accounting standards and auditing standards benefit the users (Dando & Swift, 2003; Robertson & Houston, 2010). Regulators have initiated many policies, and are determined to reduce information asymmetry and agency problems. The auditor judges the accounting appropriateness from various economic activities using unbiased and prudent judgments to meet the level of trust in the financial statement. This helps improve the role of audit opinions and helps financial report users to make accurate investment decisions (McMillan, 2004). As aforementioned, the auditor is associated with audit survival which indicates the existence in the accounting profession, both in the present and in the future, retaining existing clients who have been entrusted to among audit expression of survival for continuous professional development in the long-term (Uachanachit et al., 2012). It is measured by audit efficiency, audit effectiveness, audit performance, audit reputation, audit credibility, and audit image. Hence, this research proposes the following hypothesis:

*Hypothesis 8: The higher the internal audit review efficiency is, the more likely that internal auditors will gain greater internal audit quality.*

### **Internal Audit Quality**

Internal audit is the activities of assurance and consultation, independence and non-bias to enhance the value of firms and achieve set goals. Moreover, it also is the evaluation tool to improve the effectiveness of risk management, control, and governance processes (Mihret & Yismaw, 2007). Internal audit function is likely to affect the management and evaluation of an external auditor of the effectiveness of internal control. The lower internal audit function quality can be a material weakness in internal control, of which the existence of internal control effectiveness is to verify that firms have an incentive to obtain quality internal audits (Fadzil et al., 2005; Gramling & Vandervelde, 2006).

To assess internal audit quality, firms can be evaluated from the source to supply the internal auditors as in-house or an outsource (Hermanson, 2005). At the same time, it can be considered from the elements of internal audit quality such as objectivity, competence, work performance, and overall quality (Gramling & Vandervelde, 2006). Furthermore, internal audit quality can be assessed by the chief of the internal audit department (audit committee or management), the orientation of an internal audit group (financial oversight or business oversight), staff (generally staff with certified internal auditors or general staff with a few certified internal auditors), department funding (high or adequate), and the compensation of internal auditors (where internal auditors share in performance-based budgets) (Kaplan & Schultz, 2007). The research of Mihret & Yismaw (2007) discusses internal audit quality as



one element of internal audit effectiveness, which internal audit effectiveness should support to attain the goals and be a driving force to improve firms. Internal audit quality can be measured by staff expertise, scope of service, effective audit planning, fieldwork and controlling, and effective communication. Next, the external auditing standard is defined by the internal audit as competency and objectivity of the internal auditors and measures of internal audit quality by individual characteristics; namely, professional experience, professional certification, training, the chief audit executive, financial work of internal audit functions, and internal audit size (Prawitt et al., 2009). Gramling & Hermanson (2009) discuss the three components of internal audit quality; that is, the first element as the inputs to the internal audit activities that include the right people focused on skill and personal qualities, and tools focused on appropriate technology and decision aids; the second element as the way internal auditors conduct internal audit activities focused on the right procedure and the techniques that lead to the effectiveness and efficiency of the process; and the third element as the reliability and usefulness of internal audit reports, opinion, and recommendations. From the above reviewed literature, internal audit quality refers to the operational efficiency of internal audits by achieving the objective and goals of internal audits, to add value, and reform an organization's operations (Savcuk, 2007).

In addition to the need for a firm's internal control system effectiveness, stakeholders also expect a firm's internal audit quality to reduce errors and risks arising from a business operation. Internal audit quality is demonstrated by the ability of the internal audit function to provide beneficial findings and recommendations to add firm value and obtain reputation and reliability for stakeholders (Mihret & Yismaw, 2007). Based on the literature reviewed above, internal audit quality has a potential possibility to affect goal achievement and stakeholder credibility performance. Hence, the hypotheses are proposed as follows:

*Hypothesis 9a: The higher the internal audit quality is, the more likely that internal auditors will gain greater decision-making value.*

*Hypothesis 9b: The higher the internal audit quality is, the more likely that internal auditors will gain greater organization goal achievement.*

### **Decision-Making Value**

Decision means actions that people take to perform some tasks or solve some problems (Solomon and Trotman, 2003). Making a decision implies that there are alternative choices to be considered and to choose the highest probability of effectiveness or success that best fits with one's goals and values. Yeshmin & Hossan (2011) described decision-making as a comprehensive process consisting of identifying the problem and criteria for decision-making, allocating weights to those criteria; moving to developing, analyzing, and selecting an alternative that can solve the problem; and hence, implementing alternatives and evaluating the decision's effectiveness. In this research, decision-making value is defined as the attainment in the selection among business alternatives to have the value and uniqueness that enable firms to achieve their business objectives.

Generally, management accounting practice aims at assisting the making of decisions by management (Chong & Eggleton, 2003) to be applied to improve firm performance (Mia and Clarke, 1999). Furthermore, decision-making effectiveness could enhance the potential of corporate competency (Chenhall, 2003). Prior research indicated that information provided from management accounting practice for decision maker's information requirements, can ensure firm survival and firm sustainability through decision-making efficiency related to business strategy decisions (Chenhall & Morris, 1995; Heidmann, Schaffer & Strahringer, 2008; Mia & Clarke, 1999; Naranjo-Gil & Hartmann, 2006). Hence, the hypothesis is posited as follows:

*Hypothesis 10: The higher the decision- making value is, the more likely that internal auditors will gain greater firm success.*

### **Organizational Goal Achievement**

In this research, organizational goal achievement refers to the operational outcome or acquired results which enable the firm to achieve the objectives set, by linking the organization's missions, visions, and strategies and procedures with their goals (Ninlaphay, Ussahawanitchakit & Boonlua, 2012). Additionally, the focus on a situation that reflects the intend to acquire, develop and show off competence in a particular context, leads to goal achievement (Nasiriyani et al., 2011). Similarly, Elliot & Harackiewicz (1996) suggested goal achievement framework consisting of three components: mastery goal, performance-approach goals and performance-avoidance goals (Nasiriyani et al., 2011). In addition, Bunnoon & Ussahawanitchakit (2012) claim that goal achievement is a goal or objective that is an intended result in a business system, plan and intends to achieve organizational. At the same time, managing goal achievement increases productivity and achievement drive.

Previous research indicates that organizational goals are the challenges leading to effective strategy implementation (Hunt, 2004). Furthermore, the link between the organization's mission, vision, strategy, and goals can help the firm to achieve organizational goals (Zaccaro & Klimoski, 2001). Beside, Gollwitzer (1993) suggests goal achievements are a result from the development of implementation intentions, by eliminate classic problems associated with the control of a goal-directed action. In the meantime, benefits of organizational goals are guidelines for action, constraints in the organization, sources of legitimacy, a standard of performance and a source of motivation (<http://ryerson.ca/~meinhard/841notes/goals.html>, 02 May, 2013).

*Hypothesis 11: The higher the organization goal achievement is, the more likely that internal auditors will gain greater firm success.*

### **The antecedents of internal audit intelligence**

#### **Governance Vision**

Governance vision is a system of rules and norms for improving economic efficiency which ultimately relationships between a firm's management and group of stakeholders (Demidenko & McNutt, 2010). The main purposes of governance systems have two parts: to ensure the integrity of the management and to maximize the value created for the shareholders (Lepadatu, 2011). Many studies, including Strenberg's (1998) define governance as a structure and process among the shareholders, top management, and other stakeholders; which is relevant to the roles of process stewardship, strategic leadership, and the objectives of responsibility; and improves performance. Karagiorgos et al., (2010) identified that governance is the total operation and control of an organization, or an overall structure system of principles according to organized, managed and control of organizational operations. In addition, governance is defined by the Organization for Economic Cooperation and Development (OECD, 2004) as a system of business corporation that is directed and controlled at a senior level in order to achieve its objectives, performance, and financial management with accountability, integrity, and openness. Corporate vision is linked closely with the management of the unit and structures that cover the key concepts in the area of social responsibility and ethical business practices. Corporate vision includes various elements such as transparency and compliance with regulations. Therefore, this research

defines governance vision as the organizational work policy on transparency, integrity, and fairness that leads to the acceptance and trust of stakeholders.

In prior research, Cheung & Qiang (2002) found that the internal audit function in the organization improved good corporate governance. On the contrary, Paape et al., (2003) investigated the relationship between internal audit and corporate governance, and found that the internal audit work is perceived different from the role of corporate governance. In addition, George et al., (2011) identified that the relationship between governance and internal audit found that role of governance is critical to the results of an efficiency internal audit. Furthermore, the findings showed that the internal audit has a positive significant relationship with good governance in which the internal audit function has important roles in governing the organization such as controlling, evaluating, and monitoring. Therefore, governance vision can enhance and improve the internal audit practice which leads to the acceptance and reliability of the stakeholders. Thus, the hypothesis is proposed as follows:

*Hypothesis 12: The higher the governance vision is, the more likely that internal auditors will gain greater (a) best internal audit concept, (b) internal audit knowledge well-roundedness, (c) internal audit skepticism focus, (d) internal audit ethics awareness, and (e) internal audit excellence mindset.*

### **Internal Audit Learning**

Learning and development for acquiring and maintaining the ability to detect a specialist can be included in the following: (a) advanced professional education as an institution or program of professional organizations, (b) training in the workplace and programming experience, (c) off-the-job training, and (d) a continuing professional development program (CPD) and activities. Similarly, the International Standards for the Professional Practice of Internal Auditing (2010) indicated that internal auditors must enhance their knowledge, skills, and other competencies through continuing professional development. In addition, the IIA promotes continuing professional education as an important factor for the practice of internal auditing (Abdolmohammadi, 2009). Therefore, learning is important because it is the need for organizations to respond quickly to changes in the external environment and the organization (Coetzer & Perry, 2008; Ellinger et al., 1999). Consequently, effective learning brings about change in practice and improves performance.

From that already mentioned above, the learning characteristics of the internal audit units in these groups of organizations are importantly different. According to the institutional theory, there are main external forces to influence individuals as well as organizations: consulting or professional bodies (normative isomorphism); and the analysis of internal audit departments based on the assumption of isomorphic behavior of organizations facing similar conditions (Arena & Azzone, 2007). Internal audit learning is associated with professionalism when members are dedicated to their own professional practice. According to the Institute of Internal Auditors, it supports the internal audit activities for the global profession of internal auditing, such as providing comprehensive professional educational, developmental opportunities, standards, other professional practice guidance, and certification programs (Arena et al., 2006).

Moreover, Juma (2006) focused on the development of knowledge in the profession of internal auditing in the context of professional practice, and to determine the role of the corporate auditors. This research shows that, in the past, internal auditors needed to examine all business risks and transactions. Currently, the internal audit profession is a structure integrated of knowledge, which will make it to have the full capabilities of the profession. In addition, Steyn & Plant (2009) concluded that knowledge about the needs of education and training for internal auditors can help them to understand the expected requirements of the

experience and specifications that they must face in the path to becoming a competent internal auditor.

From the aforementioned, education and training are the major components of internal audit learning that lead to the increased ability to practice accurate and timely internal audits. Additionally, many younger auditors may believe that skills acquired through education programs result in an increase of skills, knowledge, and abilities (Seol et al., 2011). Hence, in this research, internal audit learning refers to the development of skills, knowledge, and understanding of internal auditing by training regularly, and to improve performance to ensure that a practice is accurate and timely. Therefore, the hypothesis is proposed as follows:

*Hypothesis 13: The higher the internal audit learning is, the more likely that internal auditors will gain greater (a) best internal audit concept, (b) internal audit knowledge well-roundedness, (c) internal audit skepticism focus, (d) internal audit ethics awareness, and (e) internal audit excellence mindset.*

### **Internal Audit competency**

Competency is defined as a behavior or set of behaviors that demonstrate their learning in the workplace, and can be used to define a strategy for the development of individual and team responsibilities, and decision-making, which is the general level of capability of the audit as a whole (Havelka & Merhout, 2013; Lee-Hsieh et al., 2003).

Competencies are the foundation required for the provision of quality service (Palsson et al., 2007). Harrington (2004) argues that internal auditors should have a comprehensive set of skills and abilities that will help them to respond to change and complexity in the operation. A set of skills related to the collection, storage, and processing of knowledge to applications in the future will be a competitive advantage to the organization (Hyland & Beckett, 2002). Therefore, skills are necessary for internal auditors to fulfill their responsibilities (Cooper et al., 1994). Similarly, the competency framework for internal audit emphasizes that the necessary skills are needed to be used by all internal auditors to ensure a high level of efficiency and effectiveness (Seol et al., 2011). In addition, IIA (2010) indicated that the competencies include skill, problem identification, and solution; as well as the implementation of the rules, regulations, and professional standards. Hence, in this research, internal audit competency refers to the ability of the existing internal audit operations to improve the corresponding solution on the basis of knowledge, skills, and abilities with regulations and professional standards. Thus, the hypothesis is proposed as follows:

*Hypothesis 14: The higher the internal audit competency is, the more likely that internal auditors will gain greater (a) best internal audit concept, (b) internal audit knowledge well-roundedness, (c) internal audit skepticism focus, (d) internal audit ethics awareness, and (e) internal audit excellence mindset.*

### **Stakeholder Expectation**

Freeman (1984) defined stakeholders as any group or individual who can affect or is affected by the achievement of an organization's objectives. There are two groups of stakeholders that influence organizations: internal and external stakeholders, such as shareholders, employees, competitors, suppliers, consumers, and government agencies. Similarly, Jurgens et al., (2010) defined the stakeholder as an individual or group who influences organizational objectives.

Stakeholder theory involves recognizing and identifying the relationship between a company's behavior and the impact on its stakeholders (Solomon and Lewis, 2002). The

importance of the forces in the accounting profession increases the demand for timely disclosure of firm information (Lee and Hutchison, 2005).

In the prior research of Gelb and Strawser (2001) management responds to the public force of stakeholder management by undertaking socially responsible activities that provide extensive information disclosure. Furthermore, stakeholder management increases transparent financial reporting (Mattingly et al., 2009). Similarly, Huang & Kung (2010) investigate stakeholder expectations associated with corporate environmental disclosure. The results show that the level of environmental disclosure is significantly affected by stakeholder groups' demands.

From the literature review, this research defines stakeholder expectation as society's expectation of the professional accountant who is concerned with integrity, accountability, and a moral responsibility to act in the public interest (Uachanachit & Ussahawanitchakit, 2012). Therefore, the stakeholder expectation can enhance and improve internal audit practice. Thus, hypothesis is proposed as follows:

*Hypothesis 15: The higher the stakeholder expectation is, the more likely that internal auditors will gain greater (a) best internal audit concept, (b) internal audit knowledge well-roundedness, (c) internal audit skepticism focus, (d) internal audit ethics awareness, and (e) internal audit excellence mindset.*

## RESEARCH METHODS

### Sample Selection and Data Collection Procedure

The sample of this research was obtained from the Thai-listed firms in the Stock Exchange of Thailand on its website ([www.set.or.th](http://www.set.or.th)). Based on this database, there are 602 Thai-listed firms. The data was recorded in 2014 (accessed March 15, 2014). The companies are trading in the Market for Alternative Investment (MAI) which totals 84 firms, and operate with in different regulations and legal environments. As a result, these MAI firms are not included in this study. Accordingly, an appropriate sample size is 226 firms under the 95% confidentiality rule (Krejcie & Morgan, 1970). Based on prior business research, a 20% response rate for a mail survey, without an appropriate follow-up procedure, is deemed sufficient (Aaker et al., 2001). Therefore, 1,130 firms are an appropriate sample for a distributed mail survey. However, in this research, with a population of 518 firms, the population and sample was the same group. Therefore, 518 Thai-listed firms are selected as the sample for data collection.

In this research, 226 required respondents are considered as a 20% response rate, thus the sample size for the mail survey should be equal to 1,130. Nevertheless, the number of the internal audit population was only 518. Thus, it was necessary to determine the 518 population as the sample size for the mail survey in this research.

The key informant is the chief internal auditor, the internal audit director, or the internal audit manager of each firm. They are chosen because this research investigates the relationships between internal audit intelligence and firm success, in which the internal auditor department defines the scope of the audit work that is practical; thus, they have the knowledge and experience to give actual information have a true understanding of its practices, and can also give more relevant information or comments (Abdolmohammadi & Boss, 2010; Fowler, 2002). Deducting the undeliverables from the original 515 mailed, returned responses were only 126 usable. The effective response rate was approximately 24.47%. According to Aaker, Kumar & Day (2001), the response rate for a mail survey with an appropriate follow-up procedure, if greater than 20%, is considered acceptable.



To test for potential non-response bias and to detect and consider possible problems with non-response errors, the assessment and investigation of a non-response bias was centered on two different procedures: (1) a comparison of sample statistics and known values of the population, such as gender, level of education, and experience in the audit field, and (2) a comparison of the first and second wave data as recommended by Armstrong and Overton (1977). The results revealed that neither procedure showed significant differences.

## Variables and Measurement

This research employs a questionnaire as the instrument for collecting the data. The questionnaire design was developed from a wide review of the literature, and was reviewed by academics who later improved and then chose the best possible scale of measures. This instrument was improved upon by the pre-test done with two expert academics who tested for content validity. The instrument was improved before distributing the samples. All variables were obtained from the survey, and all the items of the questions use a five-point Likert scale. The key informants were self-reported in all the constructs. The following measures were constructed for the study of the dependent, independent, antecedent, consequence, and control variables.

### Dependent Variable

#### Firm Success

Firm success is measured using four items relating to the operational outcome by linking it to the mission, vision, and strategies, including the credibility of the stakeholder. This construct is developed as a new scale based on its definition. (Bleumink et al., 1985; Nerlinger, 1998; Storey, 1994; Wever, 1984; Woud, 1997).

### Independent Variables

Best internal audit concept refers to changes in the environment. The companies are trying to create an internal audit system of management to achieve a sustainable competitive advantage. Internal audit practice is an audit procedure performed by a firm's own personnel to check for completeness and accuracy. Internal auditing is executed in various environments and within organizations which offer objectives, laws, and customers. (Ninlaphay, Ussahawanitchakit & Boonlua, 2012).

Internal audit knowledge well-roundedness refers to the ability to manage the operations of the organization relating to corporate governance, designing, and redesigning the business operation associated with converting the resources into products and services as efficiently as possible to maximize the profits of an organization (Heizer & Render, 2008). The administrations of business practice create the highest level of efficiency possible within an organization. Internal audit knowledge well-roundedness is concerned with converting materials and labor into goods and services to maximize the profits of the organization.

Internal audit ethics awareness refers to the objective of the review that is to ensure that the audits are in accordance with generally-accepted auditing standards and company policies and procedures which the effect of review, as the feedback and effects on preparer behavior after the reviews have not received much attention. (Miller, Fedor, & Ramsay, 2006; Payne, Ramsay, & Bamber, 2010). The review process is shifting from a sequential to a more real-time process. An important function of the review process is to ensure the quality and work under pressure of time which may result in the reduced performance of the auditor.

Internal audit excellence mindset refers to the business environment that has changed. To survive with more challenging competition, firms need to adapt to harmonize to a

competitive and changing environment and focus on survival in the long-term. In rapid changes, flexibility has become more important, because it is an ability of a firm to adjust and try to find a new opportunity to timely respond to the environment (Wheelen & Hunger, 2008).

### **Mediating Variables**

Best internal audit practice is defined as the techniques, methods, processes, and procedures combined into practice and that improve business results for the organization. In addition, the successful best practice of the internal audit includes project management techniques to ensure that plans are achieved and alter management techniques facilitate change. Hence, best practice enhances change management techniques and processes successfully including an increase in basic internal audit strategies. This research defines the best internal audit practice as the ability to apply knowledge and skills of techniques, processes, methods, and procedures, to keenly assess the likelihood of risky events, and to identify ways of reducing the likelihood of occurring events to achieve the audit goals effectively (Suevoshi et al., 2009).

Internal audit planning effectiveness refers to the activities most affected by recent or expected changes. (Popescu & Omran, 2011). As a result, the planning should be flexible in order to make the change during the year as a result of strategic change management expectations of achieving firm objectives. Planning is valuable when the information outcome is reliable and decision-making relevant. Consistent with internal audit effectiveness, efficiency depends on the planning strategy process. Moreover, the audit planning process should include the assessment of audit risk. Especially, in the implementation of the internal audit of a firm with high growth and the expansion of existing businesses, an organization needs internal audit planning as it helps it to achieve the goals of the American Institute of Certified Public Accountants. The ability to combine knowledge, skill, and experience to the internal audit function and translate them into an action plan is more likely to improve the management of risk, added value, and improve the operation of businesses. Consequently, audit planning has become the main activity which auditors have implemented in order to achieve audit report efficiency, gain audit performance, and enhance audit success.

Internal audit review efficiency is defined as the capability to continuously brainstorm, appraise, and reconsider the internal audit work and conclusions to ensure that the internal audit task complies with professional standards, assurance, auditing guidelines, and firm policies and procedures. (Carpenter, 2007; Gissel, 2010; Harding & Trotman, 2011; Hurtt, Eining & Plumlee, 2011; Payne, Ramsay & Bamber, 2010). It also includes an emphasis on appraise brainstorming with a questioning mind, and openness until sufficient evidence is collected. Based on considerable literature, reviewers or partners can communicate and share information among audit members which can affect audit tasks. The shared information includes internal control weakness and the likelihood of management fraud and risk assessment. However, as discussed earlier, implementing only an audit review may not be sufficient to achieve high audit quality. Internal audit functions should implement the concept of professional skepticism into their review process.

Internal audit quality is defined as the internal audit that is the activities of assurance and consultation, independence and non-bias to enhance the value of firms and achieve set goals. Moreover, it also is the evaluation tool to improve the effectiveness of risk management, control, and governance processes. Internal audit function is likely to affect the management and evaluation of an external auditor as to the effectiveness of internal control. The lower internal audit function quality can be a material weakness in internal control, of

which the existence of internal control effectiveness is to verify that firms have an incentive to obtain quality internal audits. At the same time, it can be considered from the elements of internal audit quality such as objectivity, competence, work performance, and overall quality (Mihret & Yismaw, 2007).

Decision-making value is defined as the attainment in the selection among business alternatives to have the value and uniqueness that enable firms to achieve their business objectives. To Solomon and Trotman, (2003), decision means actions that people take to perform some tasks or solve some problems. Making a decision implies that there are alternative choices to be considered, and one chooses the highest probability of effectiveness or success that best fits with one's goals and values. Decision-making as a comprehensive process consisting of identifying the problem and criteria for decision-making, allocating weights to those criteria; moving to developing, analyzing, and selecting an alternative that can solve the problem; and, hence, implementing alternatives and evaluating the decision's effectiveness

Organizational goal achievement is defined as the operational outcome or acquired results which enable the firm to achieve the objectives set by linking both the organization's missions, visions, strategies, and procedures with their goals (Ninlaphay, Ussahawanitchakit & Boonlua, 2012). Additionally, the focus on a situation that reflects the intend to acquire, develop and show off competence in a particular context, leads to goal achievement. Similarly, suggested goal achievement framework consists of three components: mastery goal, performance-approach goals, and performance-avoidance goals. In addition, claim goal achievement is a goal or objective that is an intended result of a business system plan and it intends to achieve the organizational goal.

### **Antecedent Variables**

For this research, governance vision, internal audit learning, internal audit competency, and stakeholder expectation are antecedents of internal audit intelligence.

Governance vision refers to the organization's work policy on transparency, integrity, and fairness that leads to the acceptance and trust of stakeholders. This research develops four items as a new scale, adapted with some modifications from prior research. It is measured by the perceptions of the compliance with regulations, and the awareness of their duties and responsibility to society (Ninlaphay, Ussahawanitchakit & Boonlua, 2012).

Internal audit learning is defined as the development of skills, knowledge, and understanding of internal auditing by training to improve performance regularly to ensure that practice is accurate and timely (Arena et al., 2006). This research is developed as a new scale with four items, including education and training in internal audit, accounting and auditing programs, and communication or interaction with the external environments.

Internal audit competency refers to the ability of the existing internal audit operations to improve the corresponding solution on the basis of knowledge, skills and abilities, with regulations and professional standards. It contains a four-item scale developed as a new scale and adapted with some modifications from prior research. It is measured by the firm's perception of the ability to work under the existence of knowledge, skills, and ability of each internal auditor (Havelka & Merhout, 2013; Lee-Hsieh et al., 2003).

Stakeholder expectation is defined as society's expectation of the professional accountant who is concerned with integrity, accountability, and a moral responsibility to act in the public interest. Stakeholder means any group or individual who can affect or is affected by the achievement of an organization's objectives. There are two groups of stakeholders that

influence organizations: internal and external stakeholders, such as shareholders, employees, competitors, suppliers, consumers, and government agencies (Freeman 1984).

### **Control Variables**

Two control variables are included to account for firm characteristics that may influence the hypothesized relationship which are firm size and firm age. The control variable will help reduce spurious relationships (Shianet al., 2010). The related literature is detailed as follows:

**Firm Size:** In previous research, the impact of firm size is also an important factor that affects the internal audit function (Carey et al., 2000; Chow, 1982; Goodwin-Stewart and Kent, 2006; Hajiha & Akhlaghi, 2011; Hajiha & Rafiee, 2011; Saren, 2007; Wallace & Kreutzfeldt, 1991). Because of the size of an organization, it determines the extent and frequency of internal audit activities (Carey et al., 2006). Especially, a large and complex organization is difficult to manage in its systems and control (Fisher, 1995). In this research, firm size is chosen as a control variable, which is defined as the total assets of the firm invested. It is a dummy variable in which 0 is a firm with total assets lower than 10,000,000,000 baht, and 1 is a firm that has total assets equal to or more than 10,000,000,000 baht.

**Firm Age:** In this research, firm age has an impact on internal audit activities (Doyle, Ge, & McVay, 2007). Firm age refers to the period of time the firm has been in business (Biddle, Hilary, and Verdi, 2009). The empirical evidence suggests that there is a clear relationship between firm age and growth (Capelleras & Rabetino, 2008). The questions in the questionnaire for the requirement of the number of operational years is divided into dummy variables in which 0 means that the firm has been in business less than or equal to 15 years, and 1 means the firm has been in business more than 15 years.

### **Reliability and Validity**

Factor analysis was firstly used to examine the underlying relationships of a large number of items and to determine whether they can be reduced to a smaller set of factors. The factor analyses conducted were done separately on each set of items representing a particular scale due to limited observations. With respect to confirmatory factor analysis, this analysis has a high potential to inflate the component loadings. Thus, as a higher rule-of-thumb, a cut-off value of 0.40 was adopted (Nunnally & Bernstein, 1994). All factor loadings are greater than the 0.40 cut-off and are statistically significant. The reliability of the measurements was secondly evaluated by Cronbach's alpha coefficients. In the scale's reliability, Cronbach's alpha coefficients are greater than 0.70 (Nunnally & Bernstein, 1994). The scales of all measures appear to produce internally consistent results; thus, these measures are deemed appropriate for further analysis because they express an accepted validity and reliability in this study. Table 1 presents the results for both factor loadings and Cronbach's alpha coefficients for multiple-item scales used in this study.

**Table 1**  
**RESULTS OF MEASURE VALIDATION**

Variables	Factor Loadings	Cronbach's Alpha
Firm success	0.845-0.950	0.914
Best internal audit concept	0.795-0.844	0.840
Internal audit knowledge well-roundedness	0.787-0.860	0.829
Internal audit skepticism focus	0.778-0.904	0.862
Internal audit ethics awareness	0.773-0.900	0.867
Internal audit excellence mindset	0.847-0.897	0.866
Best internal audit practice	0.788-0.865	0.843
Internal audit planning effectiveness	0.806-0.889	0.878
Internal audit review efficiency	0.802-0.928	0.894

### Statistic Techniques

The ordinary least squares (OLS) regression analysis is used to investigate the hypothesized relationships of internal audit intelligence and firm success. Because the dependent variable, independent variables, and control variables in this study were neither nominal data nor categorical data, OLS is an appropriate method for examining the hypothesized relationships (Hair et al., 2010). With the need to understand the relationships in this study, the research models of the aforementioned relationships are as follows.

$$\text{Equation 1: } BIP = \alpha_{01} + \beta_1 BIC + \beta_2 IKW + \beta_3 ISF + \beta_4 IEA + \beta_5 IEM + \beta_6 FS + \beta_7 FA + \varepsilon_{01}$$

$$\text{Equation 2: } IPE = \alpha_{02} + \beta_8 BIC + \beta_9 IKW + \beta_{10} ISF + \beta_{11} IEA + \beta_{12} IEM + \beta_{13} FS + \beta_{14} FA + \varepsilon_{02}$$

$$\text{Equation 3: } IRE = \alpha_{03} + \beta_{15} BIC + \beta_{16} IKW + \beta_{17} ISF + \beta_{18} IEA + \beta_{19} IEM + \beta_{20} FS + \beta_{21} FA + \varepsilon_{03}$$

$$\text{Equation 4: } IAQ = \alpha_{04} + \beta_{22} BIP + \beta_{23} IPE + \beta_{24} IRE + \beta_{25} FS + \beta_{26} FA + \varepsilon_{04}$$

$$\text{Equation 5: } DMV = \alpha_{05} + \beta_{27} IAQ + \beta_{28} FS + \beta_{29} FA + \varepsilon_{05}$$

$$\text{Equation 6: } OGA = \alpha_{06} + \beta_{30} IAQ + \beta_{31} FS + \beta_{32} FA + \varepsilon_{06}$$

$$\text{Equation 7: } FSU = \alpha_{07} + \beta_{33} DMV + \beta_{34} OGA + \beta_{35} FS + \beta_{36} FA + \varepsilon_{07}$$

$$\text{Equation 8: } BIC = \alpha_{08} + \beta_{37} GV + \beta_{38} IAL + \beta_{39} IAC + \beta_{40} SE + \beta_{41} FS + \beta_{42} FA + \varepsilon_{08}$$

$$\text{Equation 9: } IKW = \alpha_{09} + \beta_{43} GV + \beta_{44} IAL + \beta_{45} IAC + \beta_{46} SE + \beta_{47} FS + \beta_{48} FA + \varepsilon_{09}$$



$$\text{Equation 10: } ISF = \alpha_{10} + \beta_{49}GV + \beta_{50}IAL + \beta_{51}IAC + \beta_{52}SE + \beta_{53}FS + \beta_{54}FA + \varepsilon_{10}$$

$$\text{Equation 11: } IEA = \alpha_{11} + \beta_{55}GV + \beta_{56}IAL + \beta_{57}IAC + \beta_{58}SE + \beta_{59}FS + \beta_{60}FA + \varepsilon_{11}$$

$$\text{Equation 12: } IEM = \alpha_{12} + \beta_{61}GV + \beta_{62}IAL + \beta_{63}IAC + \beta_{64}SE + \beta_{65}FS + \beta_{66}FA + \varepsilon_{12}$$

## RESULTS AND DISCUSSION

In Table 2, the descriptive statistics and correlation matrix for all variables are presented. With respect to potential problems relating to multicollinearity, variance inflation factors (VIF) were used to provide information on the extent to which non-orthogonality among independent variables inflates standard errors. The VIFs range from 1.062 to 5.817, which is well below the cut-off value of as 10 recommended by Neter, Wasserman & Kutner (1985), means that the independent variables are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study.

Table 3 represents the results of OLS regression of the relationships among internal audit intelligence, best internal audit practice, internal audit planning effectiveness, internal review efficiency, internal audit quality, decision-making value, organizational goal achievement and firm success. Here, the first set of hypotheses (H1a-d to H7), are the results shown in Eq.1-7. Firstly, the evidence in Table 3 relates to best internal audit concept (Hypotheses 1a-d). The findings show that the best internal audit concept has no significant positive influence on best internal audit practice (H1a:  $\beta_1 = 0.059$ ,  $p > 0.10$ ), internal audit planning effectiveness (H1b:  $\beta_8 = -0.106$ ,  $p > 0.10$ ), internal audit review efficiency (H1c:  $\beta_{15} = -0.036$ ,  $p > 0.10$ ), and firm success (H1d:  $\beta_{22} = 0.109$ ,  $p > 0.10$ ). **Thus, Hypotheses 1a – 1d are not supported.** This finding supports that the firms may have a good internal control assessment; but if the internal auditors do not have enough business knowledge to make the incorrect analysis, that reduces the quality of the audit work (Baker, 2010). Similarly, Ionescu (2011) suggested that an internal auditor who did not understand the operation consistently, has ability to assess the internal controls that are different, which makes them more vulnerable. Moreover, the possible reason for this is that the internal controls do not align with the reasonable assurance that the needs and priorities of all of its key stakeholders leading to a reduction in adding value to the organization and its stakeholders (Hass et al., 2006).

**Table 2**  
**DESCRIPTIVE STATISTICS AND CORRELATION MATRIX**

Variables	BIC	IKW	ISF	IEA	IEM	BIP	IPE	IRE	IAQ	DMV	OGA	FSU	GV	IAL	IAC	SE	IAE	FA	FS
Mean	4.329	4.123	4.053	4.273	4.164	4.109	4.035	4.170	4.111	4.160	4.136	3.944	4.337	4.168	4.109	4.087	4.430	N/A	N/A
S.D.	0.500	0.532	0.560	0.517	0.581	0.526	0.550	0.557	0.551	0.517	0.639	0.664	0.544	0.559	0.520	0.597	0.549	N/A	N/A
BIC	1.00																		
IKW	.631**	1.00																	
ISF	.574**	.775**	1.00																
IEA	.649**	.685**	.717**	1.00															
IEM	.628**	.698**	.743**	.814**	1.00														
BIP	.518**	.623**	.592**	.611**	.694**	1.00													
IPE	.418**	.629**	.547**	.535**	.575**	.672**	1.00												
IRE	.498**	.614**	.542**	.660**	.673**	.778**	.757**	1.00											
IAQ	.542**	.619**	.535**	.608**	.668**	.709**	.671**	.800**	1.00										
DMV	.520**	.621**	.566**	.656**	.657**	.752**	.700**	.853**	.822**	1.00									
OGA	.549**	.582**	.572**	.536**	.576**	.511**	.444**	.502**	.558**	.604**	1.00								
FSU	.477**	.516**	.519**	.410**	.548**	.457**	.456**	.488**	.539**	.535**	.853**	1.00							
GV	.655**	.577**	.573**	.709**	.736**	.505**	.473**	.600**	.613**	.648**	.604**	.491**	1.00						
IAL	.636**	.585**	.503**	.644**	.628**	.501**	.598**	.560**	.536**	.537**	.467**	.428**	.681**	1.00					
IAC	.499**	.580**	.515**	.649**	.688**	.623**	.644**	.717**	.656**	.706**	.450**	.444**	.651**	.726**	1.00				
SE	.507**	.636**	.578**	.667**	.694**	.650**	.641**	.785**	.664**	.765**	.491**	.495**	.640**	.713**	.876**	1.00			
IAE	.616**	.468**	.560**	.588**	.638**	.594**	.434**	.613**	.522**	.610**	.571**	.568**	.625**	.546**	.604**	.660**	1.00		
FA	.204**	.011**	.042**	.072**	.039**	-.049*	-.062	.006**	.049**	-.057**	.079	.161	-.009	.104	.018	.049	-.015	1.00	
FS	.392**	.290**	.307**	.197*	.202*	.240**	.296**	.236**	.273**	.305**	.364**	.306**	.162	.217*	.141	.095	.149	.035	1.00

\*p<0.05, \*\*p<0.01

**Table 3**  
**RESULTS OF OLS REGRESSION ANALYSIS<sup>a</sup>**

Independent Variables	Dependent Variables <sup>a</sup>			
	BIP	IPE	IRE	FSU
	Model 1 H1a-H5a	Model 2 H1b-H5b	Model 3 H1c-H5c	Model 4 H1d-H5d
Best Internal Audit Concept (BIC)	0.059 (0.096)	-0.106 (0.104)	-0.036 (0.097)	0.107 (0.108)
Internal Audit Knowledge Well-roundedness (IKW)	0.218** (0.110)	0.429*** (0.118)	0.281** (0.110)	0.180 (0.123)
Internal Audit Skepticism Focus (ISF)	0.005 (0.115)	-0.028 (0.123)	-0.161 (0.115)	0.145 (0.129)
Internal Audit Ethics Awareness (IEA)	0.042 (0.119)	0.096 (0.127)	0.297** (0.119)	-0.286** (0.133)
Internal Audit Excellence Mindset (IEM)	0.459*** (0.121)	0.256** (0.130)	0.361*** (0.122)	0.449*** (0.136)
Firm Size (FS)	0.108 (0.140)	0.306** (0.151)	0.175 (0.141)	0.257 (0.157)
Firm Age (FA)	-0.379 (0.284)	-0.290 (0.306)	-0.096 (0.286)	0.565* (0.319)
Adjusted R <sup>2</sup>	0.503	0.426	0.498	0.373
Maximum VIF	3.680	3.680	3.680	3.680

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , <sup>a</sup> Beta coefficients with standard errors in parenthesis

The second hypothesis is to investigate the relationship between audit independence awareness, which is the second dimension of internal audit intelligence, and its consequences (Hypotheses 2a-d). According to Table 8, the results of the regression analysis show that the relationships among the second dimension of internal audit intelligence, three consequences of internal audit intelligence, and firm success indicate that internal audit knowledge well-roundedness has a significant positive effect on best internal audit practice ( $\beta_2 = 0.218$ ,  $p < 0.05$ ), internal audit planning effectiveness ( $\beta_9 = 0.429$ ,  $p < 0.01$ ), and internal audit review efficiency ( $\beta_{16} = 0.281$ ,  $p < 0.05$ ). The possible reason for this is that the lack of knowledge, skills, and experience that is necessary for audit planning of the internal auditors may be ignored by some critical activities such as the material weaknesses (Backer, 2010; Ge&McVay, 2005). As a result, the usefulness of financial reporting for making decisions decreases (Sori, 2009). Furthermore, errors in the audit planning stages are factors that cause inefficiency in confidence to the customers as to the quality of service that are meeting continuously (Karapetrovic & Willborn, 2000). Moreover, a lack of resources and insufficient information for planning leads to decreased effectiveness of an audit plan. This is because cooperation and teamwork requires more resources such as funding, information, time, and

people in each section to provide a comprehensive plan to make the operation more efficient (Swafford, 2009). **Thus, Hypotheses 2a, 2b, and 2c are supported.**

Thirdly, the regression analysis shows that the relationships among the third dimension of internal audit intelligence, three consequences of internal audit intelligence, and firm success indicate that internal audit skepticism focus has no significant effect on best internal audit practice ( $\beta_3 = 0.005, p > 0.10$ ), internal audit planning effectiveness ( $\beta_{10} = -0.028, p > 0.10$ ), internal audit review efficiency ( $\beta_{17} = -0.161, p > 0.10$ ), and firm success ( $\beta_{24} = 0.145, p > 0.10$ ). It may be implied that operational skills affect the operation and also improve the operation and performance of an organization to achieve an organization's goals and objectives (Havelka and Merhout, 2013). Furthermore, good internal audit practice results in the effectiveness of risk management and driving superior operations (Dembowski, 2013; Patilis, 2008). It shows that internal auditors must have sufficient knowledge and skill, processes, methods, and procedures to keenly assess the likelihood of risky events in order to achieve the audit goals effectively. **Thus, Hypotheses 3a, 3b, 3c, and 3d are not supported.**

Interestingly, internal audit ethics awareness is the fourth dimension of internal audit intelligence, which focuses on the guidelines for monitoring, verifying, and re-checking the activities of the internal audit. However, the results of the regression analysis show that internal audit ethics awareness has no significant effect on best internal audit practice ( $\beta_4 = 0.042, p > 0.10$ ) and internal audit planning effectiveness ( $\beta_{11} = 0.096, p > 0.10$ ); but, it has a significant positive effect on internal audit review efficiency ( $\beta_{18} = 0.297, p < 0.05$ ). On the other hand, internal audit ethics awareness has a negative effect on firm success ( $\beta_{25} = -0.286, p < 0.05$ ). This result is consistent with the research of Fargher et al., (2005) who stated that the reviewer has experienced different operational results in the perceive scope of review, goals of the organization, and the time to use in comment different. Houston and Stefaniak (2013) stated that the less-experienced reviewer focuses on improving the quality of internal audit in the present and future rather than the more-experienced reviewer. From the result, work experience and the period of time registered it in the Stock Exchange of Thailand of more than 15 years (which shows more experience), makes possible that internal audit review did not result in an effective internal audit. Furthermore, prior research found that workload pressure influences the review method and leads to poor performance (Agoglia et al., 2010). Another reason may be because time the pressure of internal audit is required to work with a limited budget and time. Thus, time pressure may lead to a review of the work or operation that is less than normal, especially in Thailand, which internal audit is responsible and responsive to the expectations of stakeholders and the requirements of the SET (McCoy et al., 2011). In addition, an insufficient and ineffective review of the internal audit results in insufficient information for risk management (Palfi & Muresan, 2009). Moreover, correct and complete action review is not enough, as the results impair financial reporting quality and cannot add value to the organization (Nelson & Tan, 2005; Russell, 2004). Therefore, the results of this research conclude that dynamic internal audit review cannot result in the outcomes of the internal audit which may be caused by experience, pressure of workload or both. **Therefore, Hypothesis 4c is supported, but Hypotheses 4a, 4b, and 4d are not supported.**

Finally, in light of audit skepticism mindset (Hypotheses 5a – 5d), the results of the regression analysis show that the relationships among the fifth dimension of internal audit intelligence, three consequences of internal audit intelligence, and firm success indicate that internal audit excellence mindset has a significant positive influence on best internal audit practice ( $\beta_5 = 0.459, p < 0.01$ ), internal audit planning effectiveness ( $\beta_{12} = 0.256, p < 0.05$ ), internal audit review efficiency ( $\beta_{19} = 0.361, p < 0.01$ ), and firm success ( $\beta_{26} = 0.449, p < 0.01$ ). According to prior studies, these results suggest that the help of internal audit

excellence mindset ensures best internal audit practice and internal audit planning effectiveness (Aikins, 2011; Holt, 2009; Holt & DeZoort, 2008). In particular, timely reporting reduces the uncertainty related to investment decisions and asymmetric dissemination of financial information among stakeholders as the cause of financial reporting reliability (Ika & Ghazali, 2012). Moreover, timely internal audit reporting leads to an appropriate solution to meet the situation in effectively evaluating the continuous operations of organizations (Kametovide, 2009). Furthermore, a well-timed internal audit report is the best opportunity that management uses to make decisions in a timely manner, resulting in increased value to the organization (Sparks, 2011). **Thus, Hypotheses 5a, 5b, 5c, and 5d are strongly supported.**

The results in Table 10 demonstrate that best internal audit practice has a significant positive effect on internal audit quality ( $\beta_{29} = 0.197, p < 0.05$ ). This result is consistent with the research of Ninlaphay (2012) and Gates (2009) who suggested that financial reliability can improve the effectiveness of management decisions; but to achieve business goals, could be the result of other factors such as the ability of the management team, collaboration and enthusiasm of the employees in the organization, and other environmental factors that affect the organization. **Thus, Hypothesis 6 is supported.**

In addition, the results find that internal audit planning effectiveness does not have a significant positive effect on internal audit quality ( $\beta_{30} = 0.107, p > 0.10$ ). Prior research stated that operational system efficiency has no positive effect on its consequences. It may imply that the efficiency of all systems in the firm bring success to the firm. Although the system is effective, the lack of continuous and accurate follow-through will not maximize the benefits in an organization (Ninlaphay et al., 2012). Moreover, the opinions of the informants stated that the internal audit is a service that provides confidence to the executive to achieve the audit objectives set by the need for cooperation from all parties, including the realization of the role of the internal audit about continuous operational process improvement to achieve sustainable development. As a result, the achievement of firms' goal may depend on employees' cooperation and participation. **Thus, Hypothesis 7 is not supported.**

Moreover, the results show that internal audit review efficiency has a significant positive effect on internal audit quality ( $\beta_{31} = 0.551, p < 0.01$ ). These results support that the internal audit is the activities of assurance and consultation, which are independent and non-bias audit reviews to enhance the value of the firms and to achieve set goals (Mihret & Yismaw, 2007). This is consistent with the research of Barac et al. (2009) who found that the internal audit functions were perceived of as the increased value of the organization about the recommendations of the internal audits for implementation and risk assessment. Furthermore, Roth (2003) suggests that the critical component to the added value of a firm is extensive staff expertise in a challenging work environment organizational alignment or reinvention and improved performance; and an array of audit services, which are the characteristics of added value to an organization. In addition, the consistency of the vision, mission and strategy of a firm, at both the policy level and operational level, including resistance within, also influences the ability to achieve the organizations' goals (Lines, 2004). **Thus, Hypothesis 8 is supported.**

According to Table 12, the results of the regression analysis demonstrate that internal audit quality has a strong significant positive effect on decision-making value ( $\beta_{34} = 0.802, p < 0.01$ ), organizational goal achievement ( $\beta_{37} = 0.493, p < 0.01$ ), and firm success ( $\beta_{40} = 0.487, p < 0.01$ ). This is consistent with evidence of the current recognition for the role of internal audit in risk management when it appropriately recognizes the role, led to achieve the operational goals of the organization (Zwaan et al., 2011). The risk management of the organization provides a framework for management to effectively deal with uncertainty associated risk, and opportunity; and thereby enhances its capacity in achieving firm goals



(Tamosiuniene & Savuck, 2007). Moreover, Karagiorgos (2010) found that the internal audit affected efficient risk management; and consequently, the business success and quality of the work. Likewise, a strong system of internal audit is good for an organization in risk management through early detection and prevention of errors and fraud which help to achieve performance and profitability, and prevents the loss of revenues (Vijayakumar & Nagaraja, 2012). **Thus, Hypotheses 9a, 9b, and 10 are supported.**

The results of the regression analysis in Table 14 demonstrate that decision-making value has no significant effect on firm success ( $\beta_{43} = 0.050, p > 0.10$ ). In contrast, organizational goal achievement has a strong, significant, positive effect on firm success ( $\beta_{44} = 0.819, p < 0.01$ ). This is consistent with the current evidence of the recognition for the role of internal audit in risk management when it appropriately recognizes its role, leading to achieving the operational goals of the organization (Zwaan et al., 2011). Risk management of the organization provides a framework for management to effectively deal with the uncertainty and associated risk, and opportunity; thereby, enhancing the capacity for achieving firm goals (Tamosiuniene & Savuck, 2007). Moreover, Karagiorgos et al., (2010) found that the internal audit affected efficient risk management; and consequently, the business success and quality of the work. **Thus, Hypothesis 11 is not supported, but Hypothesis 12 is supported.**

Table 4  
RESULTS OF OLS REGRESSION ANALYSIS<sup>a</sup>

Independent Variables	Dependent Variables <sup>a</sup>				
	BIC	IKW	ISF	IEA	IEM
	Model 10 H13a-H16a	Model 11 H13b-H16b	Model 12 H13c-H16c	Model 13 H13d-H16d	Model 14 H13e-H16e
Governance Vision (GV)	0.436*** (0.085)	0.217** (0.094)	0.330*** (0.098)	0.418*** (0.085)	0.459*** (0.080)
Internal Audit Learning (IAL)	0.276*** (0.097)	0.132 (0.107)	-0.007 (0.111)	0.112 (0.096)	0.004 (0.091)
Internal Audit Competency (IAC)	-0.101 (0.129)	-0.097 (0.143)	-0.144 (0.149)	0.053 (0.128)	0.146 (0.121)
Stakeholder Expectation (SE)	0.086 (0.127)	0.470*** (0.140)	0.476*** (0.146)	0.264** (0.126)	0.260** (0.119)
Firm Size (FS)	0.520*** (0.120)	0.390*** (0.133)	0.457*** (0.139)	0.141 (0.120)	0.161 (0.113)
Firm Age (FA)	0.730*** (0.259)	-0.125 (0.285)	0.073 (0.298)	0.206 (0.257)	0.108 (0.243)
Adjusted R <sup>2</sup>	0.571	0.477	0.430	0.576	0.620
Maximum VIF	4.855	4.855	4.855	4.855	4.855

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , <sup>a</sup> Bata coefficients with standard errors in parenthesis

The results of the regression analysis in Table 16 demonstrate that governance vision has a strong significant positive effect on best internal audit concept ( $\beta_{47} = 0.436, p < 0.01$ ), internal audit skepticism focus ( $\beta_{59} = 0.330, p < 0.01$ ), internal audit ethics awareness ( $\beta_{65} = 0.418, p < 0.01$ ), and internal audit excellence mindset ( $\beta_{71} = 0.459, p < 0.01$ ). Additionally,

governance vision has a significant positive effect on internal audit knowledge well-roundedness ( $\beta_{53} = 0.217, p < 0.05$ ). **Thus, Hypotheses 13a – 13e are supported.**

In recent years, business organizations have faced the challenge of increasing environmental degradation environmental issues are the key pressure for the corporation's effort to develop a business strategy that could assure sustainable development (Halme & Huse, 1997). Also, external influences make an effort to establish a corporate governance system as it underpins a capitalist system (McCarthy and Puffer, 2002).

For this research, corporate governance vision refers to the organization's policy aimed at a transparent template through operational systems that focus on firms' rights and responsibility, transparency and integrity of their stakeholders, both internal and external. Halme & Huse (1997) presented definitions of corporate governance as a process by which corporations are made responsive to the rights and wishes of stakeholders, and proposed four mechanisms that influence corporate actions: ownership, board of directors, public pressure and regulation. Tiparos & Ussahawanitchakit (2005) surveyed Thai-Listed Companies in Thailand, and concluded clearly that the component of corporate governance consists of honesty, transparency, accountability, responsibility, independence, fairness, and social responsibility. In addition, corporate governance is the exercise of power over, and responsibility for, corporate entities (McCarthy & Puffer, 2002).

Corporate governance is the tool for controlling corporate behavior that can generate firms' rights by concentrating on responsibility of their stakeholders such as transparency, integrity, ethics, and justice, including accountability of information disclosure (Phachsriphum & Ussahawanitchakit, 2009). Four governance element which Standard & Poors developed as a framework for the evaluation of corporate governance are: 1) ownership structure and influence, 2) financial stakeholders rights and relations, 3) financial transparency and disclosure, and 4) board structure and processes. Interestingly, Aaboen et al. (2006) who studied small high-tech firms, found that corporate governance systems are a key factor to improve profitability and to perform better through managers' experience and availability of business, including better knowledge of management. Moreover, Eng & Mak (2003) found that firm characteristics and organizational structure affect the different degrees of corporate governance leading to implementation performance.

Thus, corporate governance has been more important than in the past as a key element of broadening company rules, which can help companies control the relationships of internal and external stakeholders.

Moreover, ( $\beta_{54} = 0.132, p > 0.10$ ), internal audit skepticism focus ( $\beta_{60} = -0.007, p > 0.10$ ), internal audit ethics awareness ( $\beta_{66} = 0.112, p > 0.10$ ), and internal audit excellence mindset ( $\beta_{72} = 0.004, p > 0.10$ ). **Therefore, Hypothesis 14a is supported, but Hypotheses 14b – 14e are not supported.**

The rapidly changing business environment causes changes in operating procedures. For more challenging competitiveness, firms need to gain an advantage over the competitors in order to survive and grow (Danneels, 2002). Firms find it necessary to seek new procedures to develop operations including continuously learning about the competitive environment in order to build up competitive opportunity (Sumitsakun & Ussahawanitchaki, 2009). Competitive learning is a type of continuous learning and adaptation process across the enterprises that focuses on customers, competition and competitor, both new and old, include market requirements as a dynamic (Tontiset & Ussahawanitchaki, 2009). Dynamic learning or the dynamic capability concept is critical for businesses needing to operate effectively in a rapidly changing environment and in mechanisms of dynamic learning that brings advantage over competitors (Chen, Lee and Lay, 2009). Thus, if an organization promotes and supports the dynamic learning process, it will enable organizations to be a

winner so as to create a sustainable competitive advantage. Without this process, a firm will lose this advantage (Danneels, 2002; Liebowitz, 2006; Revilla, Manzoor & Liu, 2008).

Importantly, stakeholder expectation has a strong significant positive influence on internal audit knowledge well-roundedness ( $\beta_{56} = 0.470, p < 0.01$ ), internal skepticism focus ( $\beta_{62} = 0.476, p < 0.01$ ), internal audit ethics awareness ( $\beta_{68} = 0.264, p < 0.05$ ), and internal audit excellence mindset ( $\beta_{74} = 0.260, p < 0.05$ ); but has no significant effect on best internal audit concept ( $\beta_{50} = 0.086, p > 0.10$ ). **Thus, Hypothesis 16a is not supported, but Hypotheses 16b – 16e are supported.**

Stakeholders-well-known around the world are indicated as organizational success, because stakeholders drive the CSR; their exerted continuous pressure on companies calls for attention to respond to the stakeholders' expectations. Also, Heslin & Ochoa (2008) proposed that CSR practices can solidify a positive relationship between an organization and its stakeholders. The business that shows ethics and responsibility to the stakeholder (besides its owners; investors and shareholders) is included in the well being of society linked to the sustainable development movement (Henderson, 2007).

Accordingly, in the stakeholder framework, Freeman (1984) identified relevant stakeholders as anyone or group who impacts the firm. Likewise, for the stakeholder approach, Sriramesh et al., (2007: 6) stated that the stakeholder is "a set of interrelated, explicit or implicit connections between individuals and or groups of individuals" that could affect the success of the organization's objectives. Jurgens & others (2010) defined the stakeholder as an individual or group who influences organizational objectives. The stakeholder can be separated into two groups: 1) primary stakeholder (those who are directly related to the organization's operation, e.g., employees customers, and suppliers), and 2) secondary stakeholders (those who are external observers, e.g., the media and NGOs). From the literature review, this research defines stakeholder expectation as the values, attitudes, needs or desires of any individual or group of firms who potentially respond to problems that capture socially-conscious, consumer-orientated and environmental considerations (Jurgens et. al., 2010). Increasing numbers of acclaimed stakeholders are a cornerstone of accountability mechanisms that include corporate, social, environmental, economic and ethical governance (Unerman & Bennett, 2004).

## CONTRIBUTIONS AND DIRECTIONS FOR FUTURE RESEARCH

### Theoretical Contributions and Future Directions for Research

This research is intended to provide a clearer understanding of the relationships among internal audit intelligence, its antecedents, and consequents that influence these relationships, by providing unique theoretical contributions expanding on previous knowledge and literature of the aforementioned constructs. Furthermore, there are two main theories used to describe the relationships among the variables in this research. Firstly, the results of this research help to confirm the usefulness the knowledge-based view which, suggests that internal auditors have the competitive advantage for resources in terms of unique knowledge and capabilities (including the audit method, audit resource, audit scope); so, they create superior performance that leads to survive in the audit professional. Secondly, the results of this research confirms institutional theory that of the appropriateness of internal audit intelligence depends on the ability to adapt to the changing external circumstances or internal factors. Thus, internal audit intelligence is affected by contingency factors, and it brings internal audit intelligence. Consequently, an interesting point of future research should focus on the effects of the dimension of internal audit intelligence, firm success, and the other

independent variables. Further research should attempt to posit moderator variables or examine the effects of moderators in the different constructs for the analysis. To verify and increase the benefits, advantages, and contributions of the study, future research should concentrate on appropriate mediators that also fit all of firm success. Moreover, it likewise needs to collect data from a larger population or comparative population in order to increase the reliability of the results, as well as another sample population, such as certified public accountants (CPAs), governmental auditors (GAs) or others in Thailand.

### **Managerial Contributions**

This study definitely helps auditors identify and justify key components of internal audit intelligence that may be more critical in a rigorous auditing profession in order to achieve survival, and to succeed in the present and future auditing professions. Auditors need to clearly understand these variations and potentially implement them to gain advantages by putting more emphasis on them. In addition, the results may provide a useful guideline for the internal auditors about how to establish success by encourage internal audit intelligence. Moreover, auditors will manage limited resources to optimize and validate the key elements that may be seriously more important in the competitive market. Interestingly, internal audit helps lead to important audit performance which reveals internal audit knowledge well-roundedness, internal ethics awareness and internal audit excellence mindset that are used for gaining firm success. Besides, auditors should provide other resources to support these increased variations in order to achieve their effectiveness and create new opportunities in the auditing professions and environments, ultimately leading to increased firm success.

### **CONCLUSION**

Auditors have become important professionals for direct and indirect promotion of economic growth in countries. Thus, a study of their duties, practices, and activities are definitely essential. This research investigates the influences of internal audit intelligence on the firm success of internal auditors in Thailand. The instrument for data collection is a questionnaire that was mailed to 518 internal auditors in Thailand as the sample of the research. The results of OLS regression analysis show that audit professionalism focus, audit independence awareness, audit expertise orientation, and audit skepticism mindset have a significant positive influence on internal audit knowledge well-roundedness, internal audit ethics awareness, internal audit excellence mindset, and firm success; while audit creativity development has a significant positive effect on firm success. Furthermore, internal audit quality has a strongly significant positive effect on decision-making value, organizational goal achievement and firm success. Likewise, organizational goal achievement has a strongly significant positive influence on firm success. For the influences of the antecedents, the findings reveal that governance vision has a strong significant, positive effect on internal audit intelligence.

Accordingly, the need for further research is apparent to search for mediating and moderating variables, and include them in the aforementioned conceptual model. Future research is also needed to collect data from different groups of sample populations or a comparative population, such as certified public accountants (CPAs), and governmental auditors (GAs) in Thailand, in order to verify the generalizability of the study and increase its reliability.



## REFERENCES

- Abbott, L. J. & Parker, S. (2011). Audit Selection and Audit Committee Characteristics. *Auditing: A Journal of Practice and Theory*, 19(2), 47-66.
- Abdolfthiohammadi, M. J. & Boss, S. R. (2010). Factors Associated with IT Audits by the Internal Audit Function. *International Journal of Accounting Information Systems*, 11, 140-151.
- Abdolmohammadi, M. J. & Tucker, R. (2002). The Influence of Accounting and Auditing on a Country's Economic Development. *Review of Accounting and Finance*, 1(3), 27-42.
- Abdolmohammadi, M. J., Burnaby, P. & Hass, S. (2006). A Review of Prior Common Body of Knowledge (CBOK) Studies in Internal Auditing and An Overview of the Global CBOK 2006. *Managerial Auditing Journal*, 21(8), 811-821.
- Abu-Eker, E., Mohammad, F., Matarneh, B. J., ALSarayreh, M.N. & Jaradat, M. M. Falah. (2011). Assessment of Electronic Processes Internal Audit at Tourist Hotels in Aqaba. *International Research Journal of Finance and Economic*, 73, 30-37.
- Agoglia, C. P., Kida, T. & Hanno, D. M. (2003). The Effect of Alternative Justification Memos on the Judgments of Audit Review and Reviewers. *Journal of Accounting Research*, 41, 33-46.
- Agoglia, C. P., Hatfield, R. C. & Brazel, J. F. (2009). The Effects of Audit Review Format on Review Team Judgments. *Auditing: A Journal of Practice and Theory*, 28, 95-111.
- Ahrnad, H. Nasibah, Othman, R., Othman, R. & Jusoff, K. (2009). The Effectiveness of Internal Audit in Malaysian Public Sector. *Journal of Modern Accounting and Auditing*, 5(9), 53-62.
- Al-jabali, M. Ali, Abdalmanam, O. & Ziadat, K. N. (2011). Internal Audit and its Role in Corporate Governance. *Middle Eastern Finance and Economics*, 11, 161-176.
- Al-Shetwi, M., Ramadili, S. Mohamed, Chowdury, T. H. Shah & Sori, Z. Muhamad. (2011). Impact of Internal Audit Function (IAF) on Financial Quality (FRQ): Evidence from Saudi Arabia. *African Journal of Business Management*, 5(27), 11189-11198.
- Al-Twajjry, A. A. M., Breierley, J. A. & Gwilliam, D. R. (2003). The Development of Internal Audit in Saudi Arabia: An Institutional Theory Perspective. *Critical Perspective on Accounting*, 14, 507-531.
- . (2004). An Examination the Relationship between Internal and External Audit in the Saudi Arabian Corporate Sector. *Managerial Auditing Journal*, 19(7), 929-944.
- Allegrini, M. & D'Onza, G. (2003). Internal Auditing and Risk Assessment in Large Italian Companies: An Empirical Survey. *International Journal of Accounting*, 7(3), 191-208.
- Anderson, S. W. & Lanen, W. N. (1999). Economic Transition, Strategy and the Evolution of Management Accounting Practices: The Case of India. *Accounting, Organizations and Society*, 24, 379-412.
- Arena, M. & Azzone, G. (2009). Identifying Organizational Drivers of Internal Audit Effectiveness. *International Journal of Auditing*, 13, 43-60.
- Armstrong, J. S. & Overton, T. S. (1977). Estimating Non-Response Bias in Mail Surveys. *Journal of Marketing Research*, 14, 396-402.
- Baker, N. (2010). Know your business. *Internal Auditor*, 67(3), 32 - 36.
- Bamber, E. M., Bamber, L. S. & Bylinski, J. H. (1988). A Descriptive Study of Audit Managers' Working Paper Review. *Auditing: A Journal of Practice and Theory*, 7(2), 137-149.
- Barney, J.B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17, 33-46.
- Bamber, E.M., Ramsay, R. J. & Tubbs, R. M. (1997). An Examination of the Descriptive Validity of the Belief-Adjustment Model and Alternative Attitudes to Evidence in Auditing. *Accounting, Organizations and Society*, 22(3-4), 249-268.
- Berber, N., Pasula, M., Radosevie, M., Ikonov, D & Vugdelija, V. S. (2013). Internal Audit of Compensations and Benefits: Tasks and Risks in Production Systems. *Inzinerine Ekonomika-Kngineering Economics*, 23(4), 414-424.
- Bedard, J. & Chi, M. (1993). Expertise in Auditing, *Auditing: A Journal of Practice and Theory*, 20(3), 21-45.
- Bedard, J. & Wright, Arnold M. (1994). The Functionality of Decision Heuristics: Reliance on Prior Audit Adjustment in Evidential Planning. *Behavioral research in Accounting*, 6, 62-89.
- Bielinska-Dusza, E. (2011). Analysis of Internal Audit Function in Poland-Empirical Research Findings. *Business, Management and Education*, 9(2), 236-247.
- Boone, T. & Ganesham, R. (2001). The Effect of Information Technology on Learning in Professional Service Organizations. *Journal of Operations Management*, 19, 485-495.
- Bonner, S. & Lewis, B. N. (1990). Determinants of Auditor Expertise. *Journal of Accounting Research*, 28(Supplement), 1-20.
- Brocheler, W. (2004). Auditor Human Capital and Audit Firm Survival: The Dutch Audit Industry in 1930-1992. *Accounting, Organizations and Society*, 29(7), 627-646.
- Byington, R. & Christensen, J. A. (2005). SOX 404: How Do You Control Your Internal Control?. *The Journal of Corporate Accounting & Finance*, 4(3), 36-38.



- Carecello, J. V., Hermanson, D.R. & Raghunandan, K. (2005). Changes in Internal Auditing During the Time of the Major US Accounting Scandals. *International Journal of Auditing*, 9, 117-127.
- Carey, P., Subramaniam, N. & Ching, K.W.C. (2006). Internal Audit Outsourcing in Australia. *Accounting and Finance*, 46(1), 11-30.
- Carpenter, V. L. & Feroz, E. H. (2001). Institutional Theory and Accounting Rule Choice: an Analysis of Four US State Governments' Decisions to Adopt Generally Accepted Accounting Principles. *Accounting, Organizations and Society*, 26, 565-596.
- Carcello, J.V., Hermanson, D. R & Ye, Z. (2011). Corporate Governance Research in Accounting and Auditing: Insights, Practice Implications, and Future Research Directions. *Auditing: A Journal of Practice and Theory*, 30(3), 1-31.
- Carpenter, T., Durtschi, C. & Gaynor, L. M. (2012). *The Role of Experience in Professional Skepticism, Knowledge Acquisition, and Fraud Detection*. Working paper, 2002, [online]. Available from: <<http://ssrn.com/abstract=1914557>> [accessed 15 December 2014].
- . (2011). The Incremental Benefits of a Forensic Accounting Course on Skepticism and Fraud-Related Judgments. *Issues in Accounting Education*, 26(1), 1-21.
- Cecere, M. (2008). Optimizing internal audit. *CA Magazine, Canadian Institute of Chartered Accountants*, 24(4), 47 – 50.
- Chang, R.D. & Wei, J.T. (2011). Effects of Governance on Investment Decisions and Perceptions of Reporting Credibility: Investment Experience of Taiwanese Individual Investors. *Asia Pacific Journal of Management*, 28, 139 - 155.
- Chen, F., Hope, O. K., Li, Q. & Wang, X. (2011). Financial Reporting Quality and Investment Efficiency of Private Firms in Emerging Markets. *The Accounting Review*, 86(4), 1255-1288.
- Chenhall, R.H. (2003). Management Control Systems Design within its Organizational Context: Findings from Contingency-Based Research and Directions for the Future. *Accounting, Organizations and Society*, 28, 127-168.
- Chenhall, R. H. & Morris, D. (1986). The Impact of Structure, Environment, and Interdependence on the Perceived Usefulness of Management Accounting Systems. *The Accounting Review*, 61(1), 16-35.
- . (1995). Organic Decision and Communication Processes and Management Accounting Systems in Entrepreneurial and Conservative Business Organizations. *Omega*, 23(5), 485-497.
- Chong, V. K. & Eggleton, I. R. C. (2003). The Decision-Facilitating Role of Management Accounting Systems on Managerial performance: The Influence of Locus of Control and Task Uncertainty. *Advances in Accounting*, 20, 165-197.
- Danneel, E. (2002). The Dynamics of Product Innovation and Firm Competences. *Strategic Management Journal*, 23, 1095-1121.
- Davidson, R. A. & Gist, W. E. (1996). Empirical Evidence on the Functional Relation between Audit Planning and Total Audit Effort. *Journal of Accounting Research*, 34(1), 111-124.
- Demidenko, E. & McNutt, P. (2010). The Ethics of Enterprise Risk Management as a Key Component of Corporate Governance. *International Journal of Social*, 38(2), 131-143.
- DiMaggio, P.J. & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 113-123.
- Ding, Q., Akoorie, M.E.M. & Pavlovich, K. (2009). A Critical Review of Three Theoretical Approaches on Knowledge Transfer in Cooperative Alliances. *International Journal of Business and Management*, 4(1), 47-55.
- Dittenhofer, M. (2001). Internal Auditing Effectiveness: an Expansion of Present Methods. *Managerial Auditing Journal*, 16(8), 443-450.
- Ditto, P. H. & Lopez, D. F. (1992). Motivated Skepticism - Use of Differential Decision Criteria for Preferred and Nonpreferred Conclusions. *Journal of Personality and Social Psychology*, 63(4), 568-584.
- Duncan, R. B. (1972). Characteristics of Organizational Environments and Perceived Environmental Uncertainty. *Administrative Science Quarterly*, 17, 313-327.
- Elliott, M., Dawson, R. & Edwards, J. (2007). An Improved Process Model for Internal Auditing. *Managerial Auditing Journal*, 22(6), 552 - 565.
- Eng, L.L. & Mak, Y.T. (2003). Corporate Governance and Voluntary Disclosure. *Journal of Accounting and Public Policy*, 22, 325-345.
- Fadzil, Faudziah Hanim, Haron, Hasnah & Jantan, Muhamad. (2005). Internal auditing practice and internal control system. *Managerial Auditing Journal*, 20, 844-866.
- Fadzil, Faudziah H., Haron, H. & Jantan, M. (2005). Internal Auditing Practices and Internal Control System. *Managerial Auditing Journal*, 20(8), 844-866.
- Flesher, D.L. & Zanzig, J.S. (2000). Management Accountants Express a Desire for Change in the Functioning of Internal Auditing. *Managerial Auditing Journal*, 15(7), 331-337.
- Freeman, R.E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.

- Freeman, R.R. (1984). *Strategic Management: A Stakeholder Approach*. Massachusetts: Pitman.
- Gelb, D. S. & Strawer, J. A. (2001). Corporate social responsibility and financial disclosures: An alternative explanation for increased disclosure. *Journal of Business Ethics*, 33(1), 1235-1240.
- George, D., Panagiotis, P., Rania, V. & Evanthis, K. (2011). Assessment of Corporate Governanace via Internal audit. *New horizons in industry, Business and Education*, 1-5, 458-469.
- Ge, W. & McVay, S. (2005). The Disclosure of Material Weakness in Internal Control after the Sarbanes-Oxley Act. *Accounting Horizons*, 19(3), 137 – 147.
- Ghrairi, A. M. (2011). Management Control and Performance: A Comparative Study of Tunisia Firms vs Developed Countries Firms. *International Journal of Global Business*, 4(1), 73-86.
- Gollwitzer, P.M. (1993). Goal Achievement: The Role of Intentions. *European Review of Social Psychology*, 4, 141-185.
- Goodwin-Stewart, J. & Kent, P. (2006). The Use of Internal Audit by Australian Companies. *Managerial Auditing Journal*, 21(1), 81-101.
- Gramling, A, Maletta, M.J. & Schneider, Church B.K. (2004). The role of the internal audit function in corporate governance. *Journal of Accounting Literature*, 23, 194-244.
- Grant, R. M. (1996). Toward a Knowledge-Based Theory of the Firm. *Strategic Management Journal*, 17, 109-122.
- Gramling, A. A. et al. (2004). The Role of the Internal Audit Function in Corporate Governance: A Synthesis of the Extant Internal Auditing Literature and Directions for Future Research. *Journal of Accounting Literature*, 23, 194-244.
- Grant, R.M. (2002). The Knowledge-based View of the Firm. In Choo, C.W. and Bontis, N. (Eds.), *The Strategic Management of Intellectual Capital and Organizational Knowledge*. Oxford: Oxford University Press. p. 133-148.
- Gramling, Audrey A. & Hermanson, Dana R. (2009). Internal audit quality: Would we know it if we saw it? *Internal Auditing*, 24, 36-39.
- Grmaling, Audrey A. & Vadervelde, Scott D. (2006). Assessing internal audit quality. *Internal Auditing*, 21, 26-33.
- Havelka, D. & Merhout, J.W. (2013). Internal Information Technology Audit Process Quality: Theory Development Using Structured Group Processes. *Internal Journal of Accounting Information Systems*, 4(6), 1-28.
- Hass.S., Abdolomhamadi, M. & Burnaby, P. (2006). The Americas literature Review on Internal Auditing. *Managerial Auditing Journal*, 21(8), 844.
- Hemaida, R. (1997). A Zero-one Programming Model for Internal Audit Planning. *Managerial Auditing Journal*, 12(7), 331-335.
- Hermanson, D.R., Ivancevich, D.M. & Ivancevich, S.H. (2008). Building and Effective Internal Audit Function: Learning from SOX Section 404 Reports. *Review of Business*, 28, 13-28.
- Heidmann, M.U. & Strahringer, S. (2008). Exporing the Role of Management Accounting Systems in Strategic Sensemaking. *Information Systems Management*, 25, 244-257.
- Henderson, J.C. (2007). Corporate Social Responsibility and Tourism: Hotel Companies in Phuket, Thailand, After the Indian Ocean Tsumani. *Hospitality Mangement*, 26, 228-239
- Heizer, J. & Render, B. (2008). *Operations Management*. Upper Saddle River, NY: Prentice Hall.
- International Accounting Standards Board: IAS around the world, how IAS are being used. <http://www.iasb.org.uk> International Accounting Standards Board (IASB). (2010). *The Conceptual Framework for Financial Reporting*. London, U.K.: IASC Foundation. [online]. Available from: <[http://www.aasb.gov.au/admin/file/content102/c3/Oct\\_2010\\_AP\\_9.3\\_Conceptual\\_Framework\\_Financial\\_Reportmg\\_2010.p](http://www.aasb.gov.au/admin/file/content102/c3/Oct_2010_AP_9.3_Conceptual_Framework_Financial_Reportmg_2010.p)>[accessed 15 December 2014].
- Institute of Internal Auditors.(IIA). (2009). The Role of Internal Auditing in Enterprise-wide Risk Management Position Paper, The Institute of Internal Auditors, Altamonte Springs, FL. Institute of Internal Auditors. (IIA). (2010). *International Standards for the Professional Practice of Internal Auditing. The Institute of Internal Auditors Homepage*. [online]. Available from: <<http://www.theiia.org/guidance/standards-and-guidance/ippf/standards/>> [accessed 18 December 2014]
- International Standards for the Professional Practice of Internal Auditing (ISPPIA).(2009). *Introduction to the International Standards*. The Institute of Internal Auditors, Altamonte Springs, FL.
- Institute of Internal Auditors (HA). (2002). *Practice Advisory 1110-2: Chief Audit Executive (CAE) Reporting Lines*, [online]. Available from: <<http://www.som.csudh.edu/Depts. adjunct.>> [accessed 19 December 2014].
- Institute of Internal Auditors (IIA).(2003). *Simply Good Business*. Tone at the Top.s.l.:s.n.
- Jamers, R. (2003). How do internal auditors add value?. *The Internal Auditor*, 60(1), 33-37.
- Jeffery, C. (2008). How internal audit adds strategic value. *Financial Executive*, 24(10), 19.

- Jokipii, A. (2010). Determinants and Consequences of internal control in firms: a contingency theory based analysis. *Journal of Management Governance*, 14, 115-144.
- Johnsson, F., Reiner, D., Itaoka, K. & Herzog, H. (2010). Stakeholder Attitudes on Carbon Capture and Storage- An International Comparison. *International Journal of Greenhouse Gas Control*, 4, 410-418.
- Jurgens, M., Berthon, P., Papania, L. & Shabbir, H.A. (2010). Stakeholder Theory and Practice in Europe and North America: The Key to Success Lies in a Marketing Approach. *Industrial Marketing Management*, 39(5), 769-775.
- . (2010). Stakeholder Theory and Practice in Europe and North America: The Key to Success Lies in a Marketing Approach. *Industrial Marketing Management*, 39(5), 769-775.
- Kaplan, S., Schenkel, A., Krogh, G. V & Weber, C. (2001). Knowledge-Based Theories of the Firm in Strategic Management: A Review and Extension. *International Journal of Project Management*, 25, 1-47.
- Karapetrovic, S. & Willborn, W. (2002). Self-audit of Process Performance. *International Journal of Quality & Reliability Management*, 19(1), 24-45.
- Koletar, Joseph W. (2006). Intelligence Gathering and the Future of Internal Audit. *CPA Journal*, 76(4), 16-17.
- Knight, G.A. & Cavusgil, S.T. (2004). Innovation, Organizational Capabilities and the Born-Global Firm. *Journal of International Business Studies*, 35(2), 124-141.
- Lee, D. & Ismail, I. (2010). Internal Audit Practices of Listed Construction Companies in Malaysia: Some Preliminary Evidence. *Internal Auditing & Risk Management*, 3(19), 65-73.
- Lepadatu, G.V. (2011). Corporate Governance and Audit Activity. *Economy Transdisciplinarity Cognition*, 14(1), 44-49.
- Ljubisavljevic, S. & Jovanovic, D. (2011). Empirical Research on the Internal Audit Position of companies in Serbia. *Economic Annals*, 1(191), 123-141.
- Matarneh, Ghassan. F.A. (2011). Factors Determining the Internal Audit Quality in Banks: Empirical Evidence from Jordan. *International Research Journal of Finance and Economics*, 73, 110-119.
- Mattingly, J. E., Harrast, S. A. & Olsen, L. (2006). Governance implications of the Effects of stakeholder management on financial reporting. *Corporate Governance*, 9(3), 271.
- Martinis, M. D., Fukukawa, H. & Mock, T. J. (2011). Exploring the role of country and Client type on the auditor's client risk assessments and audit planning decisions. *Managerial Auditing Journal*, 26(7), 543- 565.
- McCarthy, D. & Puffer, S. (2002). Corporate Governance in Russia: Towards a European, US, or Russian Model? *European Management Journal*, 20(6), 630-640.
- Mccoy, N. et al. (2011). Internal Audit: How to Develop Professional Skepticism. *The Journal of Corporate Accounting and Finance*, May/June, 3-14.
- McKnight, C. A. & Wright, William F. (2011). Characteristics of Relatively High-Performance Auditors Auditing. *A Journal of Practice & Theory*, 30(1), 191-206.
- McMillan, J.J. & White, R. A. (1993). Auditors' Belief Revisions and Evidence Search: The Effect of Hypothesis Frame, Confirmation Bias, and Professional Skepticism. *The Accounting Review*, 68(3), 443-465.
- Mentzer, J. T., Stank, T. P. & Esper, T. L. (2008). Supply Chain Management and Its Relationship to Logistics, Marketing, Production, and Operations Management. *Journal of Business Logistics*, 29(1), 31-46.
- Meyer, J. W. & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *Am. J. Sociol.*, 83, 340-363.
- Mihret, D. Getie & Yismaw, A. Wondim. (2007). Internal Audit Effectiveness: an Ethiopian Public Sector. *Managerial Auditing Journal*, 22(5), 470-484.
- Mihret, D. Getie., James, K. & Mula, J. M. (2010). Antecedents and Organizational Performance Implications of Internal Audit Effectiveness: Some Propositions and Research Agenda. *Pacific Accounting Review*, 22(3), 224-252.
- Miller, C. L., Fedor, D. B. & Ramsay, R. J. (2006). Effects of Discussion of Audit Reviews on Auditors' Motivation and Performance. *Behavioral Research in Accounting*, 18, 135-146.
- Narajo-Gil, D. & Hartmann, F. (2006). How Top Management Teams Use Management Accounting Systems to Implement Strategy. *Journal of Management Accounting Research*, 18, 21-53.
- Nasiriyana, A., Azar, H.K., Noruzy, A. & Dalvand, M.R. (2011). A Model of Self-Efficacy, Task Value, Achievement Goals, Effort and Mathematics Achievement. *International Journal of Academic Research*, 3(2), 612-618.
- Nelson, M. (2009). A Model & Literature Review of Professional Skepticism in Auditing. *Auditing : A Journal of Practice and Theory*, 28(2), 1-34.
- Nickerson, J.A. & Zenger, T.R. (2004). A Knowledge-Based Theory of the Firm-The Problem-Solving Perspective. *Organization Science*, 15(6), 617-632.

- Ninlaphay, S., Ussahawanitchakit, P. & Boonlua, S. (2012 a). Internal Control System Effectiveness and Ongoing Firm Sustainability: Evidence From Financial Business in Thailand. *Journal of International Finance & Economics*, 12(4), 61-84.
- . (2012 b). International Control System Effectiveness and Ongoing Firm Sustainability: Evidence from Financial Business in Thailand. *Journal of International Finance and Economics*, 12(3), 19-216.
- O'Dell, C. & Jackson, Grayson C. (1997). Identifying and Transferring Internal Best Practices. *American Productivity & Quality Center*, Houston, TX, USA. p. 601-622.
- O'Dell, T. (2011). Internal audit best practices. *Indian Gaming*, 14(5), 38-39.
- Organization for Economic Cooperation and Development (2004). *Principles of Corporate Governance*. [online]. Available from: <<http://www.oecd.org/daf/corporateaffairs/oecdprinciplesofcorporategovernance.htm>> [accessed 12 February 2013].
- Paape, L., Scheffe, J. & Snoep, P. (2003). The Relationship between the Internal Audit Function and corporate Governance in the EU- a Survey. *International Journal of Auditing*, 7, 247-262.
- Palmer, K.N., Ziegenfuss, D. E. & Pinsker, R. E. (2004). International Knowledge, Skills, and Abilities of Auditors/Accountants: Evidence from Recent Competency Studies. *Managerial Auditing Journal*, 19(7), 889-896.
- Payne, E. A., Ramsay, R. J. & Bamber, E. M. (2010). The Effect of Alternative Types of Review on Auditors' Procedures and Performance. *A Journal of Practice and Theory*, 29, 207-220.
- Parchsriphum, S. & Ussahawanitchakit, P. (2009). Corporate Social Responsibility (CSR) Information Disclosure and Firm Sustainability: An Empirical Research of Thai –Listed Firms. *Journal of International Business and Economics*, 9(4), 40-59.
- Popescu, M. & Vasile, E. (2011). Internal Auditing Value Added Concept. *Internal Auditing and Risk Management*, 2(22), 49-64.
- Prawitt, Douglas F. Smith, Jason L & Wood, David A. (2009). Internal audit quality and earnings management. *The Accounting Review*, 84, 1255-1280.
- Rahahleh, M. Yassein. (2010). Regulating the Profession of Internal Auditing in Jordan. *European Journal of Economics, Finance and Administrative Sciences*, 20, 162-180.
- Rameesh, K. (2003). Best Practices for Internal Audit in Government Departments. *Centre for Good Governance Collected*, Working Paper 2, p. 1-15.
- Ramsay, R. J. (1994). Senior/Manager Differences in Audit Workpaper Review Performance. *Journal of Accounting Research*, 32, 127-135.
- Sampattikorn, S., Ussahawanitchakit, P. & Boonlua, S. (2012). Best Internal Audit Practices and Goal Achievement Sustainability: an Empirical Examination of Thai Listed Firms. *Journal of International Business and Economics*, 12(5), 40-66.
- Sarens, G. & Abdolmohammadi, M. J. (2011). Factors Associated with Convergence of Internal Auditing Practices: Emerging vs Developed countries. *Journal of accounting in Emerging Economies*, 1(2), 140-122.
- Sausser, B. J., Reilly, R. R. & Shenhar, A.J. (2009). Why Projects Fail? How Contingency Theory can Provide New Insights - A Comparative Analysis of NASA's Mars Climate Orbiter Loss. *International Journal of Project Management*, 27, 665-679.
- Savcuk, O. (2007). Internal Audit Efficiency Evaluation Principles. *Journal of Business and Economic Management*, 13(4), 275 - 284.
- Schneider, G. P., Sheikh, A. & Simone, K. A (2012). Holistic Risk Management: an Expanded Role for Internal Auditors. *Academy of Accounting and Journal*, 16(1), 25-33.
- Seol, I., Sarkis, J. & Lefley, F. (2011). Factor Structure of the Competency Framework for Internal Auditing (CFIA) Skills for Entering Level. *International Journal of Auditing*, 15, 217-230.
- Sori, Z. M. (2009). Accounting Information Systems (AIS) and Knowledge Management: A Case Study. *American Journal of Scientific Research*, 4, 36-44.
- Solomon, I. & Trotman, K.T. (2003). Experimental Judgment and Decision Research in Auditing: The First 25 years of AOS. *Accounting, Organizations and Society*, 28(4), 395-412.
- Solomon, A. & Lewis, L. (2002). Incentives and disincentives for corporate environmental disclosure. *Business Strategy and the Environment*, 11(3), 154.
- Spender, J.C. (1996). Making Knowledge the Basis of the Dynamic Theory of the Firm. *Strategic Management Journal*, 17, 45-62.
- Srikarsem, U. & Ussahawanitchakit, P. (2009). Management Audit Effectiveness and Organizational Survival of Thai-Listed Firms: Mediating Role of Value Added Performance, Governance Outcome and Outperforming Market Position. *International Journal of Business Research*, 10(5), 1-25.
- Sriramesh, K., Ng, C.W., Ting, S.T. & Wanyin, L. (2007). Corporate Social Responsibility and Public Relations: Perceptions and Practices in Singapore. *International Public Relations Symposium*, 12(3), 25-41.



- Sueyoshi, T., Shang, J. & Chiang, Wen-Chyuan. (2009). A Decision Support Framework for Internal Audit Prioritization in a Rental Car Company: A Combined Use between DEA and AHP. *European Journal of Operational Research*, 199, 219-231.
- Stewart, J. & Subramaniam N. (2010). Internal Audit Independence and Objectivity: Emerging Research Opportunities. *Managerial Auditing Journal*, 25(4), 328-360
- Tan, H.T. & Libby, R. (1997). Tacit Managerial versus Technical Knowledge as Determinants of Audit Expertise in the Field. *Journal of Accounting Research*, 35(Spring), 97-113.
- Tiparos, K. & Ussahawanitchakit, P. (2005). Corporate Governance in Thailand: A survey of Thai-Listed Companies. *UTCC international Journal of Business and Economics*, 25(1), 254-268.
- Toms, S. (2006). Accounting for Entrepreneurship: A Knowledge-Based View of the Firm. *Critical Perspectives on Accounting*, 17, 336-357.
- Tusek, B. & Pokrovac, I. (2010). The Role of Internal Audit Function in Risk Management Process: Croatia and Europe comparison. *Conference Proceedings: International Conference of the Faculty of Economics Sarajevo (ICES)*. 2010, 1-21.
- Uachanachit, D & Ussahawanitchakit, P. (2012). Audit Competency and Audit Survival of CP As in Thailand: An Empirical Investigation of the Antecedents and Consequences. *Review of Business Research*, 12(3), 105-132.
- Unerman, J. & Bennett, M. (2004). Increased Stakeholder Dialogue and Internet: Towards Greater Corporate Accountability or Reinforcing Capitalist Hegemony?. *Accounting Organizations and Society*, 29, 685-707.
- Ussahawanitchakit, P. (2012). Effects of Audit Planning on Audit Quality of Certified Public Accountants (CPAs) in Thailand. *Journal of Academy of Business and Economics*, 12(3), 1-9.
- Van Peurse, K. (2004). Internal Auditors' Role and Authority: New Zealand Evidence. *Managerial Auditing Journal*, 19(3), 378-93.
- Van Peurse, K. (2005). Conversations with Internal Auditors: The Power of Ambiguity. *Managerial Auditing Journal*, 20(5), 489-512.
- Wangcharoendate, W. (2010). *Best Audit Practices of CPAs in Thailand: Effects on Audit Independence, Judgment, Performance and Credibility*. A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Accounting at Mahasarakham University,
- Wangcharoendate, S. & Ngamtampng, N. (2012). Internal Audit Outsourcing: Effect on Operational Effectiveness and Firm Stability of Thai-Listed Firms. *Journal of International Finance and Economics*, 12(2), 60-76.
- Weber, R. (1980). Some Characteristics of the Free Recall of Computer Controls by EDP Auditors. *Journal of Accounting Research*, 18(1), 214.
- Woods, M. (2009). A Contingency Theory Perspective on the Risk Management Control System Within Birmingham City Council. *Management Accounting Research*, 20, 69-81.
- Yang, W., Moyes, G.D., Din, H.F.M. & Omar, N.H. (2010). Demographic factors that influence Malaysian Auditors' perspective of the fraud-detecting effectiveness of red flag. *Journal of Business and Accounting*. 3(1), 81-109.
- Yeshmin, F. & M. A. Hossan. (2011). Significance of Management Accounting Techniques in Decision-Making: An Empirical Study on Manufacturing Organizations in Bangladesh. *World Journal of Social Sciences*, 1(1), 148-164.
- Zaccaro, S. J. & Klimoski, R. J. (2001). *The Nature of Organizational Leadership: an Introduction*. San Francisco: CA7 Jossey-Bass.



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