

# Best internal audit practices and achieving organizational success: an empirical examination of ISO 9000 manufacturing firm in Thailand

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## Keywords

Internal Audit Practices, Organizational Risk Reduction, Operational Excellence, Fraud Detect Effectiveness, Organizational Success, Executive Vision, Employee involvement, External Environment Change, Audit Committee Competency

## Abstract

*The primary objective of this research is to examine the effects of best internal audit practices impact on organization success of ISO 9000 manufacturing firm in Thailand. The data were collected by a questionnaire survey from the 1,187 internal audit executive of each ISO 9000 manufacturing firm from Thai-listed firms, which 186 responses are returned completely. The results indicate that best internal audit practices clarity positively relates to organizational risk reduction, operational excellence and fraud detect effectiveness. The results indicated that those are supported as the outcomes of best internal audit practices. Additionally, this research tests the effects of executive vision, employee involvement and external environment change are treated as the antecedents of best internal audit practices. The results that volatile business environment both internal and external is the key effect to acquire best internal audit practices. Finally; the moderating effects, the results indicate that external environment change and audit committee competency has the positive effect on the best internal audit practices, particular internal audit plan, internal audit review and internal audit monitoring. In order to contribute more theoretically to best internal audit practices, future research should be considered other moderating variables such as the enforcement marks to enhance the relationships among variables. Moreover, future research could be conducted on different samples and on a larger scale to widen the generalizability of its findings.*

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## 1. Introduction

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 (Danneels, 2002). Hence internal audit was viewed as a priority.

The reason that internal auditing is “an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes” (IIA, 2007b). Recently, there has been growing interest in internal audit research. Previous research has confirmed the cause of the economic failure, whether in the Thailand, as a result of administrative corruption and the lack of reliability in corporate governance and internal audit. Thus, the IA became an important role and a key mechanism of corporate governance (Sarens and Abdolmohammadi, 2011) and organization success. Further, Parveen et al., (1992) suggest that in one of the important areas of activity which will affect the future of internal auditing is Automated Manufacturing Systems (AMS) environments. However, evidence has also been found to demonstrate that IA practices are related to, for example, the IA clients (Flesher and Zanzig, 2000; Goodwin and Yeo, 2001; Mihret and Yismaw, 2007; Sarens and De Beelde, 2006; Sarens et al., 2009) or risk management and internal control practices (Selim and McNamee, 1999; Allegrini and D’Onza, 2003). Importantly, using best practices in an internal audit can enhance the quality of audit work including the probability of significant, successful transformation (Hughes, 2004) and added organizational value in the end (Burnaby, Hass and Abdolmohammadi, 2009).

However, there is no clear evidence as to the best practices of internal audit, particularly insight about the processes of firm under mechanism of International Organization for Standardization (ISO). Also it is not clear about dimensions which is a component of best internal audit practices. Thus, this study is motivated to provide empirical evidence on the best internal audit practices currently employed in ISO 9000 manufacturing firm in Thailand. The previous literature gives an overview of the situation with best internal audit practices which entail research objectives are as follows. (1) To investigate the effects of each dimension of best internal audit practices on internal audit outcome compose of organizational risk reduction, operational excellence, and fraud detect effectiveness. (2) To examine the influences of internal audit outcome on achieving organizational success. (3) To examine the relationships among a) executive vision, b) employee involvement, c) external environment change, and d) audit committee competency and each dimension of best internal audit practices. 4) To test the moderating effects of audit committee competency on the relationships among a) executive vision, b) employee involvement, c) external environment change, and best internal audit practices. The main research question is framed as: "How do best internal audit practices impact on achieving organizational success of ISO 9000 manufacturing firm in Thailand?"

This paper is organized into seven sections: theoretical framework, literature reviews and hypotheses development, research methods, results and discussion, theoretical contributions and managerial implications, conclusions, limitations and directions for future research.

## 2. Theoretical Framework

This concept used by executive management depending on the situation and external environment that affect the operation of the firm, which has different ways depending on the situation and management needs. Under this theory, there is no best way to manage an organization. Organizational design and sub-systems must be optimal with the organization environment, which are not only appropriate with the environment but also align with their sub-systems as well (Lawrence and Lorsch, 1967; Gingsberg and Venkatraman, 1985). Internal and external factors have an effect on the organization and are imposed on manager's behavior. Internal factors are environmental factors inside the organization that impacts operational forms such as organizational culture, technology, policy or firm size (Lawrence and Lorsch, 1967). External factors such as competition, market uncertainty, technological change and economic conditions affect firm performance (Sauser, Reilly and Shenhar, 2009). So, it leads to establish or improve management strategies that are appropriate with changed situations in order to obtain growth and survive (Chenhall and Langfield-Smith, 1998). This study implements the contingency theory to explain the antecedent effects of internal and external factors. Thus, tend to increasingly bring best internal audit practices.

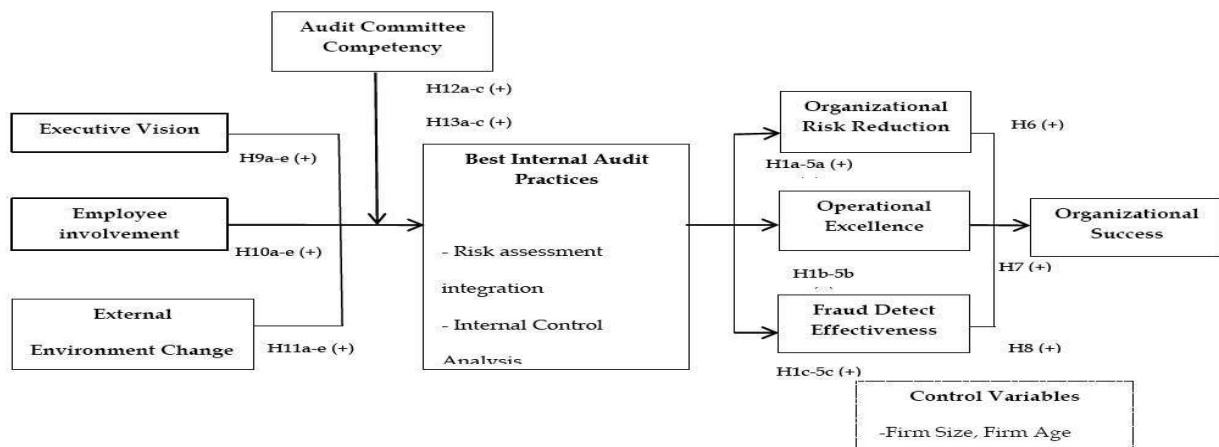


Figure 1

### 3. Literature Reviews and Hypotheses Development

In this study, the best internal audit practices are the main determinant of organizational success through mediation functions of organizational risk reduction, operational excellence, and operational excellence. The dimension can be described as follows.

#### 3.1 Best Internal Audit Practices

##### 3.1.1 Risk assessment integration

Risk assessment integration is an assessment of the opportunities of potential uncertainties which prevent the corporation to achieve corporate objectives (Koutoupis and Tsamis, 2009). The risk assessment evaluates both the quantitative approach by considering the consequences as a value of the damage occurred, and the qualitative approach by specifying the level of likelihood and severity. Modern IA is risk based (Spira and Page, 2003), "a good IA service gets to the heart of the issues facing the organization" (NAO, 2012, p. 5).

The focus on critical risks and issues, and the importance of risk-based IA is supported by literature (Allegrini and D'Onza, 2003; Burnaby and Hass, 2009; Ernst & Young, 2012; PWC, 2010). Sarens and De Beelde (2006a, p. 76) stated that along with the rise of institutionalized enterprise risk management functions "internal auditors are concerned about their capacities to play an important role in risk management". Prior study indicates that risk assessment as a basis to determine the way to manage important risk respectively, both inherent and residual risk, affects confidence in internal audit efficiency (Savčuk, 2007). Risk assessment would affect audit designation that can save audit cost both in planning times and resources. Moreover, the risk of audit failure should be reduced. (Chang et al., 2008). Therefore, the hypotheses are posited as follows:

*H1a-c: Risk assessment integration will be positively related to (a) Organizational risk reduction, (b) Operational excellence, and (c) Fraud detect effectiveness.*

##### 3.1.2 Internal Control Analysis

The internal control system plays an important role in the internal auditing practices since the internal auditors might be considered as being specialists in management control (Chambers et al., 1987). Internal auditing practices appraise the effectiveness of internal control systems, which is a definition of internal auditing and which also includes an appraisal of the actions by management to correct situations, which are at variance with planned outcomes. The definition of internal control systems reveals that it is not fundamentally different from management control, which has an essential component of control such as planning, organizing, staffing and directing (Chambers et al., 1987).

According to Domnişoru & Vinătoru, 2008; Li & Wei, (2008) internal control is defined as a process, affected by the actions of board of directors and other organizational structure levels in the firm, designed to provide reasonable assurance toward achieving firm's objectives, plans and strategies under the related laws, rules, polices and regulations.

Terrell, (1974) states that the effectiveness of a company's internal control system is generally recognized as a prerequisite to the auditing process as it is considered the major determinant of the selection, timing, and the extent to which auditing procedures should be applied or restricted. Therefore, the hypotheses are posited as follows:

*H2a-c: Internal control analysis will be positively related to (a) Organizational risk reduction, (b) Operational excellence, and (c) Fraud detect effectiveness.*

##### 3.1.3 Internal Audit Plan

Audit planning consists of the details of internal audit activity to cover audit objectivity, audit resources and procedures to perform, which audit plan must cover potential business risk, and be consistent with the organization goals (IIA, 2008). If an organization needs internal audit planning

strategy, it helps an organization achieve its goals by carrying out a dynamic of the higher firm growth and expansion of existing businesses (AICPA, 2002; IIA, 2003).

Audit planning is important in the audit process and crucial to audit success (Ridge, 2006). A good plan can help to ensure efficient and effective audit work to achieve audit goals under the terms of limited resources. Thus, IAF should prepare a risk-based approach and apply the results of risk assessment as a tool to determine the audit methods and allocates audit resources needing to be used in order to achieve audit objectives (COSO, 2004). Moreover, the planning process contributes to implementation in the company whose goal is to become better performing and more competitive in the actual market (Morariu and others, 2009).

The quality of the audit plan that can help one to understand the significance of integrating process (Cohen, Krishnamoorthy and Wright, 2008) which is more likely to improve the management of risk, add value, and improve the operation of businesses (Diaz and Loraas, 2010; Weidenmier and Ramanooriti, 2006; Elliott, Dawson and Edwards, 2007; Curtis and Payne, 2008; Vuchnich, 2008). Therefore, the hypotheses are posited as follows:

*H3a-c: Internal audit plan will be positively related to (a) Organizational risk reduction, (b) Operational excellence, and (c) Fraud detect effectiveness.*

### **3.1.4 Internal Audit Review**

Review process as a quality control mechanism shows the capacity of the audit functions. These suggest that reviewers' task-specific experience may help reduce the previously observed "flow-through" effect of preparer work paper deficiencies on reviewer judgments and provide support for new regulations emphasizing the role of experience during the control assessment process. (Rich, Solomon and Trotman, 1997; Gibbins and Trotman, 2002; Agoglia, Beaudoin and Tsakumis, 2009) and is necessary to ensure the maintenance of professional standards.

Audit review is the role of the superior in the audit team to ensure that each member is prepared to follow guidance and provides adequate and complete evidence to the audit team to draw conclusions based on the evidence in the prepared documents of the working papers (Tan, 1995; Agoglia, Hatfield and Brazel, 2009).

Furthermore, choosing audit review method appropriately and efficiently can gain the audit evidence correctly and leads to reducing audit risk better (Bedard, Mock and Wright, 1999). However, the audit review effectiveness not only depends on the quality of the evidence documented by the preparer, but also relates to review methodology or format and task-specific experience of reviewer as well (Agoglia, Beaudoin and Tsakumis, 2009; Agoglia, Hatfield and Brazel, 2009; Favere-Marchesi, 2006). Typically the popular review format such as face-to-face review (reviewer and preparer), reviews of documentation working paper, and electronic review such as electronic working paper of both formats, affect audit review efficiency (Favere-Marchesi, 2006) and team judgment. Moreover; these results suggest that the effect of review mode can persist to the reviewer's judgment through its influence on preparer work paper documentation and the resulting documentation quality assessment gap (Agoglia, Hatfield and Brazel, 2009). It is based upon the literature review among key concepts. Therefore, the hypotheses are posited as follows:

*H4a-c: Internal audit review will be positively related to (a) Organizational risk reduction, (b) Operational excellence, and (c) Fraud detect effectiveness.*

### **3.1.5 Internal Audit Monitoring**

Internal audit monitoring is an on-going process usually directed by management to ensure processes are working as intended. Monitoring is an effective detective control within a process. According to Fadzil, Haron and Jantan (2005) in performing the audit work, the internal auditors will identify better risk management framework and risk management policy and also better procedures should be installed in monitoring the applications of policies and procedures of the organization. This is also true for audit programs and audit reporting. The better the audit program and audit

reporting, the installation of the procedures and application of policies in assessing the risk of the organization will further improve.

In addition to their monitoring role, internal auditors may also occupy an advisory role. For example, in assessing the effectiveness and efficiency of operations, internal auditors must also possess a comprehensive understanding of their firms when evaluating internal controls across the organization and its divisions, operational units or functions (Internal Control –Integrated Framework; COSO, 2013). To maximize profits, they are expected to provide internal reports to management on how to improve operations based on a thorough understanding of those operations (Hermanson and Rittenberg, 2003; Allegrini et al., 2006; Cooper et al., 2006). Therefore, the hypotheses are posited as follows:

*H5a-c: Internal audit monitoring will be positively related to (a) Organizational risk reduction, (b) Operational excellence, and (c) Fraud detect effectiveness.*

### **3.2 Organizational Risk Reduction**

Organizational risk reduction is the organization succeeded in risk management. The risk reduction covers four areas; risk mitigation strategies, reduces the operational risk, reduces the financial risk, and reduce the risk of legal regulations. IIA Standards for the Professional Practice of Internal Auditing defined risk assessment as “a systematic process for assessing and integrating professional judgments about probable adverse conditions or events”. Together, COSO framework defined risk as an event assembles from constraint and uncertainty causes to organization failure. Generally, two elements of risk are divided, namely, financial risk and operational risk (Kleffner, Lee and McGannon, 2003). Hui and Fatt (2007) bring strategy paradigm to auditing domain on the audit risk reduction and firms’ economic performance. They suggest that both auditors and firms receive sustain beneficial performance form the integrative of risk audit process and organizational condition.

Consequently, they are important for seeking the procedure to eliminate by risk factor specification and control for efficiency and effectiveness (Gramling, 2010). Therefore, risk management aims to minimize the opportunity of risk by controlling internal and external factor that affect firm, also, increase beneficial internal audit source on reliance decisions. In this research, organization risk reduction is defined as firm’s operational decrease opportunity of risks from many risk factors that affect organization which managers control those risks reasonably (Krishnamurthy, Jegen and Brownell, 2009). Therefore, the hypotheses are posited as follows:

*H6: The higher the organization risk reduction is, the more likely that firms will gain greater organizational success.*

### **3.3 Operational Excellence**

The European Foundation for Quality Management (EFQM guidelines, 1999) is the definition of excellence means to manage a successful and makes organizations achieve their goals with nine elements include, targets, leadership and a clear purpose, continuous learning, social responsibility, management by facts and process, developed in cooperation, updates and innovations, customer focus, and involvement and employee development. It consists of organizational management and learning functions that are standard, including the right employees to the work which will involve the accomplishment of goals and value added to the firm (Badri and Davis, 2000).

It is the review of Pansuppawatt and Ussahawanichakit, (2011) that the best operation is considered of significant strategic, long-term process and making the development of ongoing operations affect competitiveness (Pansuppawatt and Ussahawanichakit, 2011). The ability of organization excellence has relationships with clients and staff satisfaction, product and service quality (Gordon et al., 2009). Internal audit departments provide audit findings and recommendations based on business excellence evaluation (Driessen and Molenkamp, 1993; Reding and DiGirolamo, 1994).

In discussing the operational excellence, most of the researchers and practitioners like to relate it with manufacturers.

The fact is; manufacturing operation is one of the prime strategic functions in any business. Manufacturing operation whether achieves its competitive position and strategic potential or not solely depends on how it runs its business (Fok-Yew et al., 2013; Yusuff, 2004). The hypotheses are proposed as follows:

*H7: The higher the operation excellence is, the more likely that firms will gain greater organizational success.*

### **3.4 Fraud Detect Effectiveness**

The ACFE report comes to the conclusions on the effectiveness of the internal audit after analyzing the size and scope of a large sample of international fraud cases. Consistent with the ACFE reports in 2010 and 2012; the 2014 report indicates that internal audits detect about 14 percent of fraud activity within organizations. A strong internal audit function was also found to limit the overall losses sustained because of fraud. Internal audit functions also serve a strong preventative function as fraud participants are not likely to act if there is a strong likelihood of review and possible detection of their activities. Therefore, the hypotheses are posited as follows:

Norman et al., (2010), shows investigate the effects of fraud risk decomposition on risk assessments made by internal auditors. They are found that fraud risk assessment decomposition does not have the same effects on internal auditors as it has on external auditors, and the effects of decomposition do not align with the expected benefits of decomposition. There are found that internal audit function can play a substantial role in fraud detection and fraud risk assessment (e.g., Green & Calderon, 1996; Welch, Holmes and Strawser, 1996). Therefore, the hypotheses are posited as follows:

*H8: The higher the fraud detect effectiveness is, the more likely that firms will gain greater organizational success.*

### **3.5 Organizational Success**

The previous literature gives an overview about the organizational success. In general can understand the goal of the firm was a challenge that led to the implementation of an effective strategy, which linked the organization's mission, vision, and strategic goals to help them achieve their firm's goals. As the firm to create opportunities through business procedures lead to continuously maximize their profitability, market share and competitiveness in the long-term (Holiday, 2001; Deepen et al., 2008; Mohamed, 2008). This research defines organizational success as the operational outcome linked the mission, vision, and strategic goals including the achieving organizational success for excellence in quality and the efficiency of operations within the organization.

### **Antecedents of Best Internal Audit Practices**

#### **3.6 Executive Vision**

Previous research, found that executive vision refers to describe inspiring, optimizing and confidence of a leader to state future direction of the organization related to enhance firm performance (Yeunyong and Ussahawanitchakit, 2009).

Executive vision is a role in to the policies, goals, visions, missions and work plans, including support and control in order to achieve goals (Cairns and Saier, 2010).

Consequently, management's vision is the overall purpose of a firm that reflects the expectations and value of organizations (Johnson and Scholes, 1999). In addition, board of directors, as the body midway between ownership and management, has the priority function of supervising the conduct of directors and to resolve agency conflicts that may arise between management and shareholders (Denis and McConnell, 2003; Jensen and Meckling, 1976). Given its importance, it is interesting to know what the factors are that contribute to the diligent performance of this governing body.

This research defines executive vision as setting executive vision and values and deploying them through the organization's transparency system to stakeholders as appropriate. In addition, promoting an organizational environment that fosters, requires, and leads to legal and ethical behavior creating internal control systems.

Therefore, the hypotheses are posited as follows:

*H9a-e: The greater the executive vision is, the more likely that firms will achieve higher the (a) risk assessment integration (b) internal control analysis, (c) internal audit plan, (d) internal audit review, and (e) internal audit monitoring.*

### **3.7 Employee involvement**

In the USA, the observed higher interest of Chief Executive Officers (CEO) and Chief Financial Officers (CFO) in risk management and internal controls is largely attributable to Sections 302 and 404 of the Sarbanes-Oxley-Act (SOX), whereas in the Belgian context, corporate governance requirements were only emerging, so "it is hard to convince people in organizations of the value of the internal audit function" (Sarens and De Beelde, 2006a, p. 74). The most important that collaboration is powerful and useful. Because an ability to cooperate and is willing to collaborate with the others, which is a key factor of improving supply chain performance (McCormack, 2001). Therefore, the hypotheses are posited as follows:

*H10a-e: The greater the employee involvement is, the more likely that firms will achieve higher the (a) risk assessment integration (b) internal control analysis, (c) internal audit plan, (d) internal audit review, and (e) internal audit monitoring.*

### **3.8 External Environment Change**

According to Fadzil et al., (2005) suggest that the performance of audit work of the internal auditing practices positively influences the control environment aspect of the quality of the internal control system while professional proficiency and objectivity of the internal auditing practices negatively influences the control environment aspect of the quality of the internal control system. Savčuk (2007) indicates that the understanding of the internal environment of an organization covers all of its activities and focuses on corporate strategy, objectives, missions, visions, risks, and the interrelationships that a necessary to ensure internal audit efficiency. Therefore, the hypotheses are posited as follows:

*H11a-e: The greater the external environment change is, the more likely that firms will achieve higher the (a) risk assessment integration (b) internal control analysis, (c) internal audit plan, (d) internal audit review, and (e) internal audit monitoring.*

### **3.9 The Moderating Effect of Audit Committee Competency**

According to Magrane, and Malthus, (2010) indicate that the audit committee is responsible for oversight in four primary areas: 1) external financial reporting, 2) Internal controls, 3) risk management, and 4) internal and external audits.

Several studies and reports have emphasized that the audit committees should consist of independent non-executive directors, who are less likely to be influenced by the management, and therefore; can carry out financial reporting process more effectively (Beasley 1996). According to Scarbrough et al. (1998) indicate that non-executive directors in AC are more likely to establish a symbiotic relationship between the AC and the IAF, i.e. the AC support of the IAF facilitates their work, in turn, the work of IA may enhance the effectiveness of the AC.

KPMG (2009) argues that only about one quarter of board and audit committee members have the full knowledge of IA's activities and are very confident that the company's IA function (IAF) delivers the value to the organization that it should.

Other studies have demonstrated that audit committees play more of a mediating role between auditor, both internal and external, and management as opposed to a role as arbiter or judge (De Zoort et al., 2003; Knapp, 1987), Therefore, the hypotheses are posited as follows:

*H12a-e: Audit committee competency will positively moderate (a) executive vision and risk assessment integration, (b) executive vision and internal control analysis, (c) executive vision and internal audit plan, (d) executive vision and internal audit review, (e) executive vision and internal audit monitoring.*

*H13a-e: Audit committee competency will positively moderate (a) employee involvement and risk assessment integration, (b) employee involvement and internal control analysis, (c) employee involvement and internal audit plan, (d) employee involvement and internal audit review, (e) employee involvement and internal audit monitoring.*

*H14a-e: Audit committee competency will positively moderate (a) external environment change and risk assessment integration, (b) external environment change and internal control analysis, (c) external environment change and internal audit plan, (d) external environment change and internal audit review, (e) external environment change and internal audit monitoring.*

## **4. Research Methods**

### **4.1 Sample Selection and Data Collection**

The population of this study selected ISO 9000 manufacturing firm in Thailand, 1,187 firms are data from the database of Thai Industrial Standards Institute: TISI. The key informant is the internal audit executive of each firm. They are chosen because this research investigates the relationships between best internal audit practices and organization success, in which the internal auditor department defines the scope of audit work that is practical; thus, they can give actual information and have a true understanding of its practices and can also give more relevant information or comments (Fowler, 2010).

The questionnaire-mailed survey is used to collect data. It is appropriate because it is a widely-used method for large-scale data collection in a geographical area, and besides, mailing questionnaires is effective (Neuman, 2006). Therefore, the 1,187 questionnaire surveys are sent by direct mail. Then, from which 186 responses are returned, the complete questionnaires are sent back to the researcher. This research uses all of received questionnaires which produced a response rate for regression analysis. Moreover, to protect against possible non-response bias problems between test respondents and non-respondents, a t-test comparison of the means of all variables between early and late respondents is 50 implemented and corresponds with the test for non-response bias by Armstrong and Overton (1997). The results find no statistically significant difference between early and late respondents demonstrates represent non-respondents. Therefore, a non-response bias is not a problem in this study.

### **4.2 Questionnaire Development and Variables Measurement**

#### **4.2.1 Questionnaire Development**

In this study questionnaire design has been developed from a wide review of the literature by academics to improve and meet the best possible scale of measures; which all constructs with multiple-item scales, all are divided into seven parts. Part one asks for general internal audit executive such as gender, age, education, etc.,. Part two contains questions about information of business, such as forms of business, type of business, firm age, number of employees etc.,. Part three – part six of the feedback information about best internal audit practices as well as the antecedents and consequently in conceptual model and the final part is an open-ended questions for suggestions and opinions.

#### **4.2.2 Dependent Variable**

Organizational success is measured by the operational outcome by linking it to the mission, vision, and strategies including the credibility of stakeholder. This construct is measured using four-item new scale.

#### **4.2.3 Independent Variables**

*Risk assessment integration* is measured by the competency of a firm to combine and participate to assessment of the opportunities of potential uncertainties which prevent the corporation to achieve corporate objectives. The risk assessment evaluates both the quantitative



approach by considering the consequences as a value of the damage occurred, and the qualitative approach by specifying the level of likelihood and severity. Includes managing inherent risk and residual risk, considering both internal and external events that affect achieve business goal. This construct is measured using four-item new scale.

*Internal control analysis* is measured by the analysis of a firm in accounting and auditing is a process for assuring achievement of an organization's objectives in operational effectiveness and efficiency, reliable financial reporting, and compliance with laws, regulations and policies. A broad concept, internal control involves everything that controls risks to an organization. This construct is measured using four-item new scale.

*Audit planning* is measured by the planning of a firm of the details of internal audit activity to cover audit objectivity, audit resources and procedures to perform, which audit plan must cover potential business risk, and be consistent with the organization goals. This construct is measured using four-item new scale.

*Audit review* is measured by the role of the superior in the audit team to ensure that each member is prepared to follow guidance and provides adequate and complete evidence to the audit team to draw conclusions based on the evidence in the prepared documents of the working papers. Includes an ability of a firm to choose and audit review format that can detect and initiate corrections and adjustment to audit work. This construct is measured using four-item new scale.

*Internal audit monitoring* is measured by an on-going process usually directed by management to ensure processes are working as intended. What is more the monitoring is an effective detective control within a process. This construct is measured using four-item new scale.

#### **4.2.4 Mediating Variables**

*Organizational risk reduction* is measured by the organization succeeded in risk management. The risk reduction covers four areas; risk mitigation strategies, reduces the operational risk, reduces the financial risk, and reduce the risk of legal regulations. This construct is measured using four-item new scale.

*Operational excellence* is measured by the assessment of excellence that is the process of evaluating an organization against a model for continuous improvement in order to highlight what has been achieved and what needs improving. Clearly, that operational excellence is not just a matter of cost reduction and quality improvement, but also being smart about how to handle people and resources. This construct is measured using five-item new scale.

*Fraud detect effectiveness* is measured by the ability of organizations to manage and control the various activities including processes by reducing the likelihood that it will cause damage to both the current and future to levels adaptable. The policy is audit results compared to plan periodic report must cover the risks that are significant and the existing controls, including the risk of fraud. This construct is measured using four-item new scale.

#### **4.2.5 Antecedent Variables**

*Executive vision* is measured by the setting executive vision and values and deploying them through the organization's transparency system to the workforce, to key suppliers and partners, and to customers and other stakeholders as appropriate. Including, promoting an organizational environment that fosters, requires, and leads to legal and ethical behavior creating a sustainable organization. This construct is measured using four-item new scale.

*Employee involvement* is measured by the practice within an organization whereby employees regularly participate in making decisions on how their work areas operate, including making suggestions for improvement, planning, goal setting, and monitoring performance. This construct is measured using four-item new scale.

*External environment change* is measured by the adapting abilities of a firm to external environmental change are events that take place outside of the organization and are harder to predict and control. Some examples of external environmental factors are noted below; changes to the

economy, threats from competition, political factors, government regulations and the industry itself. This construct is measured using four-item new scale.

#### 4.2.6 Moderating Variables

*Audit committee competency* is measured by the ability of the audit committee operations in function and responsibility on the basis of knowledge, skills, and abilities with regulations and professional standards. This construct is measured using four-item new scale.

#### 4.2.7 Control Variables

The control variables may affect the relationship. Therefore, the control variables that are being controlled are the firm age and firm size. Firm age is a proxy of the firm's experience measured by the number of years in proceeding as the listed firm. The previous study found that firm age has an effect on firm survival (Agarwal and Gort, 2002; Sapienza and others, 2006; Loderer, and Waelchli, 2009; Talebna and others, 2010). Firm size is measured by the number of employees in the firm. Operating current (Dechow and Mouritsen, 2005) Prior study indicates that the effect of firm size is an important factor that affects both structure and other control systems (Abdel-Kader and Luther, 2008), including behaviors and practices to retain competitive intensity in their industry (Christie, Joye and Watts, 2003).

#### 4.3 Reliability and Validity

This research reliability of the measurements evaluated by Cronbach's alpha coefficients and the reliability to scale, Cronbach's alpha coefficients are greater than 0.70 (Nunnally and Bernstein, 1994). In this study the alpha coefficients range from 0.69 to 0.90. For testing the validity, this study uses and exploratory factor analysis (EFA) to examine the construct validity by investigating the relationships of a large number of items and to determine whether can be reduced to confirmatory a smaller set of factor loadings each construct show a value more than 0.07. In this study factor loadings range from 0.57 to 0.94. This analysis has a high potential to inflate the component loading. Therefore, as a higher rule-of-thumb, a cut-off value of 0.04 is accepted (Hair et al., 2010). All factor loadings greater than the 0.04 cut-off are statistically significant. Therefore, these measures are considered appropriate for further analysis because they indicate an adopted validity and reliability in this study, Table 1 presents the results for both factor loadings and Cronbach's alpha for multiple-item scales in this study.

VARIABLES	Factor Loadings	Cronbach's Alpha
Organizational Success(OSC)	.838-.930	.895
Risk assessment integration(RAI)	.691-.817	.759
Internal Control Analysis(ICA)	.571-.827	.693
Internal Audit Plan(IAP)	.721-.842	.792
Internal Audit Review(IAR)	.701-.866	.774
Internal Audit Monitoring(IAM)	.840-.945	.898
Organizational Risk Reduction(ORR)	.634-.931	.808
Operational Excellence(OEC)	.629-.812	.811
Fraud Detect Effectiveness(FDE)	.763-.817	.815
Executive Vision(EIV)	.852-.901	.885
Employee involvement(EIM)	.870-.901	.904
External Environment Change(EEC)	.733-.905	.863
Audit Committee Competency (ACC)	.771-.917	.883

Table 1: Result of Measure Validation

#### 4.4 Statistic Test

The ordinary least squares (OLS) regression analysis is used to examine and test the hypothesized effect of best internal audit practices on organizational success via organizational risk reduction; operational excellence and fraud detect effectiveness. Likewise the ordinary least squares regression analysis test antecedent to consisted executive vision, employee involvement, and external environment change. In addition; they are audit committee competency moderators. All categorical

data to test OLS is an appropriate method for examining the hypothesized and relationships between all independent variables and all dependent variables (Hari et al., 2010). This study presents relationship that was tested model using by the equation following:

$$\text{Equation 1: } \text{ORR} = \alpha_{01} + \beta_1 \text{RAI} + \beta_2 \text{ICA} + \beta_3 \text{IAP} + \beta_4 \text{IAR} + \beta_5 \text{IAM} + \beta_6 \text{SIZE} + \beta_7 \text{AGE} + \varepsilon$$

$$\text{Equation 2: } \text{OEC} = \alpha_{02} + \beta_8 \text{RAI} + \beta_9 \text{ICA} + \beta_{10} \text{IAP} + \beta_{11} \text{IAR} + \beta_{12} \text{IAM} + \beta_{13} \text{SIZE} + \beta_{14} \text{AGE} + \varepsilon$$

$$\text{Equation 3: } \text{FDE} = \alpha_{03} + \beta_{15} \text{RAI} + \beta_{16} \text{ICA} + \beta_{17} \text{IAP} + \beta_{18} \text{IAR} + \beta_{19} \text{IAM} + \beta_{20} \text{SIZE} + \beta_{21} \text{AGE} + \varepsilon$$

$$\text{Equation 4: } \text{OSC} = \alpha_{04} + \beta_{22} \text{ORR} + \beta_{23} \text{OEC} + \beta_{24} \text{FDE} + \beta_{25} \text{SIZE} + \beta_{26} \text{AGE} + \varepsilon$$

$$\text{Equation 5: } \text{RAI} = \alpha_{05} + \beta_{27} \text{EVI} + \beta_{28} \text{EIM} + \beta_{29} \text{EEC} + \beta_{30} \text{SIZE} + \beta_{31} \text{AGE} + \varepsilon$$

$$\text{Equation 6: } \text{RAI} = \alpha_{06} + \beta_{32} \text{EVI} + \beta_{33} \text{EIM} + \beta_{34} \text{EEC} + \beta_{35} \text{ACC} + \beta_{36} (\text{EVI} * \text{ACC}) + \beta_{37} (\text{EIM} * \text{ACC}) + \beta_{38} (\text{EEC} * \text{ACC}) + \beta_{39} \text{SIZE} + \beta_{40} \text{AGE} + \varepsilon$$

$$\text{Equation 7: } \text{ICA} = \alpha_{07} + \beta_{41} \text{EVI} + \beta_{42} \text{EIM} + \beta_{43} \text{EEC} + \beta_{44} \text{SIZE} + \beta_{45} \text{AGE} + \varepsilon$$

$$\text{Equation 8: } \text{ICA} = \alpha_{08} + \beta_{46} \text{EVI} + \beta_{47} \text{EIM} + \beta_{48} \text{EEC} + \beta_{49} \text{ACC} + \beta_{50} (\text{EVI} * \text{ACC}) + \beta_{51} (\text{EIM} * \text{ACC}) + \beta_{52} (\text{EEC} * \text{ACC}) + \beta_{53} \text{SIZE} + \beta_{54} \text{AGE} + \varepsilon$$

$$\text{Equation 9: } \text{IAP} = \alpha_{09} + \beta_{55} \text{EVI} + \beta_{56} \text{EIM} + \beta_{57} \text{EEC} + \beta_{58} \text{SIZE} + \beta_{59} \text{AGE} + \varepsilon$$

$$\text{Equation 10: } \text{IAP} = \alpha_{010} + \beta_{60} \text{EVI} + \beta_{61} \text{EIM} + \beta_{62} \text{EEC} + \beta_{63} \text{ACC} + \beta_{64} (\text{EVI} * \text{ACC}) + \beta_{65} (\text{EIM} * \text{ACC}) + \beta_{66} (\text{EEC} * \text{ACC}) + \beta_{67} \text{SIZE} + \beta_{68} \text{AGE} + \varepsilon$$

$$\text{Equation 11: } \text{IAR} = \alpha_{011} + \beta_{69} \text{EVI} + \beta_{70} \text{EIM} + \beta_{71} \text{EEC} + \beta_{72} \text{SIZE} + \beta_{73} \text{AGE} + \varepsilon$$

$$\text{Equation 12: } \text{IAR} = \alpha_{012} + \beta_{74} \text{EVI} + \beta_{75} \text{EIM} + \beta_{76} \text{EEC} + \beta_{77} \text{ACC} + \beta_{78} (\text{EVI} * \text{ACC}) + \beta_{79} (\text{EIM} * \text{ACC}) + \beta_{80} (\text{EEC} * \text{ACC}) + \beta_{81} \text{SIZE} + \beta_{82} \text{AGE} + \varepsilon$$

$$\text{Equation 13: } \text{IAM} = \alpha_{013} + \beta_{83} \text{EVI} + \beta_{84} \text{EIM} + \beta_{85} \text{EEC} + \beta_{86} \text{SIZE} + \beta_{87} \text{AGE} + \varepsilon$$

$$\text{Equation 14: } \text{IAM} = \alpha_{014} + \beta_{88} \text{EVI} + \beta_{89} \text{EIM} + \beta_{90} \text{EEC} + \beta_{91} \text{ACC} + \beta_{92} (\text{EVI} * \text{ACC}) + \beta_{93} (\text{EIM} * \text{ACC}) + \beta_{94} (\text{EEC} * \text{ACC}) + \beta_{95} \text{SIZE} + \beta_{96} \text{AGE} + \varepsilon$$

## 5. Results and Discussion

The descriptive statistics and correlation matrix for all variables are shown in Table 2. This study is to detect possible problems multicollinearity by relationship between the variables included in the regression analysis. In this way, by using the coefficients, we can measure the degree of linear association between pairs of variables. Values of tolerance and the inverse of the variance inflation factors (VIF) were also calculated for the descriptive statistics and their relationship is shown in Table 2, this study examines the variance inflation factor (VIF) from 1.01 to 4.98, well below the cut-off value of 10 recommended by Neter, Wasserman and Kutner (1985). Moreover multicollinearity problems by intercorrelations relationship between the independent variables. Therefore, there are not substantial multicollinearity problems encountered in this study.

Variable	RAI	ICA	IAP	IAR	IAM	ORR	OEC	FDE	OSD	EVI	EIM	EEC	ACC	AGE	SIZE
Mean	4.147	4.036	4.077	4.019	4.134	3.872	3.940	4.098	3.976	4.288	4.277	4.176	4.050	0.586	0.565
s.d.	.500	.539	.596	.591	.613	.569	.599	.589	.618	.540	.541	.588	.595	.494	.497
RAI															
ICA	.771***														
IAP	.713***	.605***													
IAR	.731***	.640***	.842***												
IAM	.744***	.657***	.784***	.825***											
ORR	.542***	.553***	.509***	.603***	.539***										
OEC	.597***	.599***	.512***	.632***	.560***	.769***									
FDE	.636***	.569***	.400***	.567***	.472***	.619***	.813***								
OSD	.522***	.451***	.442***	.477***	.492***	.530***	.681***	.674***							
EVI	.518***	.468***	.514***	.535***	.412***	.572***	.643***	.655***	.591***						
EIM	.567***	.519***	.439***	.482***	.483***	.527***	.657***	.722***	.672***	.727***					
EEC	.585***	.544***	.529***	.465***	.495***	.444***	.493***	.549***	.429***	.639***	.574***				
ACC	.653***	.486***	.616***	.679***	.538***	.599***	.589***	.620***	.564***	.580***	.561***	.508***			
AGE	-.022	.035	-.028	-.109	-.002	-.056	-.109	-.073	-.237***	-.007	-.032	.048	-.202***		
SIZE	-.073	.024	-.117	-.180**	-.208***	.090	-.066	-.119	-.021	-.010	-.067	.035	-.020	.098	

Table 2: Descriptive statistics and correlation matrix

In Table 3 the first set of hypotheses test H1a-c to H4a-c in equation 1-4. The dimensions best internal audit practices compose risk assessment integration (a), internal control analysis (b), internal audit plan (c), internal audit review (d) and internal audit monitoring (e) on organizational risk reduction, operational excellence, and fraud detect effectiveness by equation 1-3. Frist, this results show that internal control analysis has significant positive influence on organizational risk reduction, operational excellence, and fraud detect effectiveness (H2a:  $\beta_2=0.25, p<0.01$ ), (H2b:  $\beta_3=0.32, p<0.01$ ), and (H2c:  $\beta_{16}=0.20, p<0.05$ ) respectively. Thus, H2a-c are supported. Similarly, the audit internal review has significant positive influence on organizational risk reduction, operational excellence, and fraud detect effectiveness (H4a:  $\beta_4=0.43, p<0.01$ ; H4b:  $\beta_{11}=0.43, p<0.01$ ; H4c:  $\beta_{18}=0.54, p<0.01$ ) respectively. Thus, H4a-c are supported.

These findings indicated that internal control analysis are dimensions of best internal audit practices that are more powerful and useful. It plays an important role in the internal auditing practices (Chambers et al., 1987; Terrell, 1974). For audit internal review as a quality control mechanism shows the capacity of the audit function (Rich, Solomon and Trotman, 1997; Gibbins and Trotman, 2002; Agoglia, Beaudoin and Tsakumis, 2009).

Whereas, the results show that risk assessment integration has significant positive influence on fraud detect effectiveness (H1c:  $\beta_{15}=0.47, p<0.01$ ), but not significant on H1a, b. Thus, H1c is supported only. While, the finding that audit internal plan has negative influence on organizational risk reduction, operational excellence, especially on fraud detect effectiveness has significant (H3b:  $\beta_{17}= -0.36, p<0.01$ ). Thus, H3 is not supported. It is suggested that some dimensions cannot use cover an outcome. Evidently that internal audit plan may not make in order to fraud detect.

Therefore, an organization needs internal audit planning strategy, it helps an organization achieve its goals by carrying out a dynamic of the higher firm growth and expansion of existing businesses (AICPA, 2002; IIA, 2003). Additionally, the finding audit internal monitoring has significant negative influence on the fraud detect effectiveness (H5c:  $\beta_{19}=-0.19, p<0.10$ ). It does not concern because that significant minimum. Thus, H5a-c is not supported.

Lastly, hypotheses test H6-8 in equation 4. The results show that operational excellence and fraud detect effectiveness has significant positive influence on organizational success (H7:  $\beta_{23}=0.36, p<0.01$ ; H8:  $\beta_{24}=0.36, p<0.01$ ) respectively. This result confirms that organizational management and learning functions are standard, including the right employees to the work which will involve the accomplishment of goals and value added to the firm (Badri and Davis, 2000). It is certain that

internal audit function can play a substantial role in fraud detection and fraud risk assessment (e.g., Green & Calderon, 1996; Welch, Holmes, & Strawser, 1996). Thus, H7-8 are supported.

While the organizational risk reduction is not significant, (H6:  $\beta_{22}=0.01$ ) it shows that H6 is not supported. This result indicated that firm may not focus organizational risk reduction in order to achieve organizational success. Which has different ways depending on the situation and management needs under contingency theory situation (Lawrence and Lorsch, 1967; Gingsberg and Venkatraman, 1985). However, when the organizational risk reduction variables were separated to test individual, its finding has significant positive influence on organizational success (H6 $\beta_{22}=.518$ ,  $p<0.01$ ).

Independent Variables	Dependent Variables			
	EQ. 1 ORR	EQ. 2 OEC	EQ. 3 FDE	EQ. 4 OSC
RAI	.060 (.108)	.119 (.100)	.476*** (.099)	
ICA	.259*** (.094)	.322*** (.086)	.207** (.086)	
IAP	-.078 (.117)	-.096 (.108)	-.366*** (.107)	
IAR	.434*** (.128)	.439*** (.118)	.547*** (.117)	
IAM	.027 (.115)	-.039 (.106)	-.191* (.105)	
ORR				.010 (.080)
OEC				.369*** (.108)
FDE				.367*** (.087)
AGE	-.036 (.121)	-.087 (.111)	.003 (.110)	-.375*** (.104)
SIZE	-.009 (.127)	-.331*** (.117)	-.240** (.116)	.173 (.110)
Adjusted R2	(.391)	.483	.492	.547

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

Table 3: Results of OLS Regression Analysis<sup>a</sup>

In table 4 presents the results of OLS regression analysis relationship between the antecedents compose executive vision, employee involvement and external environment change on each dimension of best internal audit practices (a) risk assessment integration (b) internal control analysis (c) internal audit plan (d) internal audit review (e) internal audit monitoring and via audit committee competency are moderating. The final set hypothesis test executive vision (H9a-e), employee involvement (H10a-e), external environment change (H11a-e), with five dimensions by equation 5, 7, 9, 11 and 13.

These results show that one of three factors has influence on dimension of best internal audit practices is fully. That is, external environment change has significant positive influence on each dimension (H11a:  $\beta_{29}=0.37$ ,  $p<0.01$ ), (H11b:  $\beta_{43}=0.35$ ,  $p<0.01$ ), (H11c:  $\beta_{57}=0.33$ ,  $p<0.01$ ), (H11d:  $\beta_{71}=0.19$ ,  $p<0.05$ ), (H11e:  $\beta_{85}=0.33$ ,  $p<0.01$ ) respectively. Thus, H11a-e are supported. This result confirms that abilities of a firm to external environmental change are events that take place outside of the organization and are harder to predict and control. Because the performance of audit work of the internal auditing practices positively influences the control environment aspect of the quality of the internal control system (Fadzil et al., 2005).

This finding shows that employee involvement has significant positive influence on dimension of best internal audit practices. That is risk assessment integration (H10a:  $\beta_{28}=0.31$ ,  $p<0.01$ ) and internal control analysis (H10b:  $\beta_{42}=0.29$ ,  $p<0.01$ ) and internal audit monitoring (H10e:  $\beta_{84}=0.31$ ,  $p<0.01$ ), but it is not significant with the internal audit plan and internal audit review. Thus, H10a, b, e are supported, but Hc, d are not supported. Conversely, the finding shows executive vision and employee involvement has a significant on some dimensions.

The executive vision has significant positive influence on internal audit review (H9b:  $\beta_{41}=0.30$ ,  $p<0.01$ ), but not significant on other dimensions. Thus, H9b is supported only. These relations are found meaningful opportunities to extend the literature related to the context of internal organization factor under contingency theory.

Independent Variables	Dependent Variables <sup>a</sup>									
	RAI		ICA		IAP		IAR		IAM	
	EQ. 5	EQ. 6	EQ. 7	EQ. 8	EQ. 9	EQ. 10	EQ. 11	EQ. 12	EQ. 13	EQ. 14
EVI	.050 (.090)	-.090 (.083)	.028 (.094)	-.023 (.095)	.263 (.096)	.135 (.086)	.304*** (.096)	.143* (.083)	-.032 (.098)	-.139 (.090)
EIM	.315*** (.084)	.211*** (.078)	.297*** (.089)	.217** (.090)	.057 (.090)	-.022 (.081)	.148 (.091)	.040 (.078)	.312*** (.092)	.234*** (.085)
EEC	.374*** (.075)	.269*** (.069)	.355*** (.079)	.295*** (.079)	.330*** (.080)	.249*** (.072)	.199** (.081)	.080 (.069)	.337*** (.083)	.257*** (.075)
ACC		.478*** (.070)		.261*** (.080)		.433*** (.073)		.545*** (.070)		.390*** (.076)
EVI*ACC		-.158 (.095)		.025 (.109)		-.226** (.099)		-.271*** (.095)		-.253** (.103)
EIM*ACC		-.025 (.086)		-.196** (.099)		.020 (.090)		-.015 (.086)		-.097 (.094)
EEC*ACC		.134* (.071)		.140* (.081)		.333*** (.074)		.339*** (.071)		.418*** (.077)
AGE	-.051 (.117)	.152 (.112)	.029 (.123)	.116 (.129)	-.115 (.125)	-.018 (.114)	-.218 (.126)	-.049 (.1120)	.010 (.128)	.091 (.122)
SIZE	-.049 (.120)	-.121 (.110)	.144 (.126)	.137 (.126)	.192 (.128)	.082 (.117)	-.043* (.129)	-.164 (.109)	-.153 (.131)	-.259** (.119)
Adjusted R <sup>2</sup>	0.408	0.531	0.348	0.386	0.326	0.493	0.317	0.534	0.290	0.451

\*\*\* $p<.01$ , \*\* $p<.05$ , \* $p<.10$ , <sup>a</sup> Beta coefficients with standard errors in parenthesis.

Table 4: Results of OLS Regression Analysis<sup>a</sup>

The next testing is moderating audit committee competency hypothesis 12 to 14a-e by equation 6, 8, 10, 12, 14. This result shows that external environment change - audit committee competency is significant positive on best internal audit practices dimensions fully. (H14a:  $\beta_{38}= 0.13$ ,  $p<0.10$ ; (H14b:  $\beta_{52}= 0.14$ ,  $p<0.10$ ; (H14c:  $\beta_{66}= 0.33$ ,  $p<0.01$ ; H14d:  $\beta_{80}= 0.33$ ,  $p<0.01$ ; H14e:  $\beta_{94}= 0.41$ ,  $p<0.01$ ) respectively.

This finding, supported by prior research, reveals that the audit committees should consider which not just a matter of internal environment is, but also being smart about how to external environment change. Because, both internal and external to support of responsible for oversight in primary areas (De Zoort et al., 2003; Knapp, 1987; Magrane, and Malthus, 2010)

Surprisingly, this research finds the moderator that executive vision- audit committee competency has significant negative on internal audit plan, internal audit review and internal audit monitoring (H12c:  $\beta_{60}= -0.22$ ,  $p<0.05$ ; H12d:  $\beta_{74}= -0.27$ ,  $p<0.01$ ; H12e:  $\beta_{88}= -0.25$ ,  $p<0.05$ ) respectively. While, other dimensions are risk assessment integration and internal control analysis found not a statistical significance. Lastly, these results show that employee involvement - audit committee competency has significant negative on a dimension that is internal control analysis (H13b:  $\beta_{51}= -0.19$ ,  $p<0.05$ ). Likewise, this research does not find the moderating effect of audit committee competency on the relationships between employee involvement and dimensions of best internal audit practices. Thus, H14c, d, e are supported, but H12 and 13 are not supported.

The evidence seems to indicate that relationships have conflict between the executive vision and audit committee competency. Although executive vision has a role into the policies, goals, visions, missions and work plans, including support and control in order to achieve goals (Cairns and Saier, 2010). However, this result confirms the importance of board of directors, as the body midway between ownership and management that focus on the context of Thailand firm. That is,

possibly has the conduct of directors and to resolve agency conflicts that may arise between management and shareholders (Denis and McConnell, 2003; Jensen and Meckling, 1976).

## **6. Theoretical Contributions and Managerial Implications**

### **6.1 Theoretical contribution**

The results in this research confirmed and concluded that the relationships of the best internal audit practices and achievement organizational success are able to explain contingency theories. The contingency theory argues that firm focuses on improving the internal audit practices to appropriate with operational activities can improve management strategies in changed situations in order to obtain growth and survive of firm. Internal factor composes executive vision and employee involvement and for part external factor is external environment change. These are the key factors that contribute to best internal audit practices. Particularly, this research concludes that executive vision has sensibility on determinant. These influences are potentially supported by contingency theory. Regarded as the conceptual model, this research provides theoretical and managerial contributions. More importantly, there was a significant interaction measurement and the assessed influence of the moderating factor.

### **6.2 Managerial Implications**

The internal audit practices consider as an important role in operational firm. The results of the study regarding this factor shows that each dimension will have differences both affect from antecedents and influence on performance. This study helps owners, executive and managers internal audit, including internal audit committee to have an understanding of a variety of best internal audit practices in the performance. One interesting managerial implication from the study would be of association between both dimensions such as internal control analysis and internal audit review. Because that it can improve on internal audit outcome, these findings have positively and completely. It can apply to be appropriate with ISO 9000 manufacturing firm Thai-listed firms. Therefore, internal auditors should be careful to consider more than just the internal audit practices and make sure that the well-known practices they carry meet the functional and non-functional needs of their organizational.

## **7. Conclusions**

This research contributes significantly toward understanding how best internal audit practices that lead to organization success. The study data collected from ISO 9000 manufacturing firm in Thailand, which 186 responses are returned the complete questionnaires. This research uses all of received questionnaires which produced a response rate for OLS regression analysis. The best internal audit practices focus five dimensions consisted risk assessment integration, internal control analysis, internal audit plan, internal audit review, and internal audit monitoring.

Firstly, the results show that the evidence reveals five dimensions of best internal audit practices have influence on internal audit outcome. The results that internal control analysis and internal audit review are positively statistically significant on organizational risk reduction, operational excellence, and fraud detect effectiveness. For part risk assessment integration has positively statistically significant on fraud detect effectiveness only while internal audit plan has negatively statistically significant on internal audit outcome. Lastly, internal audit monitoring is not statistically significant on internal audit outcome. More importantly, consequences that internal audit outcome influences that are potentially supported achieving organizational success.

Second, concerning the influence of the antecedents of best internal audit practices, the results show that external environmental change factors are positively statistically significant on best internal audit practices that is supported with complete dimensions. While employee involvement and executive vision are positively statistically significant that are three and two of the five dimensions respectively. Therefore, it is considered to become an antecedent key effect to acquire best internal audit practices. Third, the moderating effects, the results indicate that best internal audit practices positively moderate the relationship between external environment change and audit

committee competency. Contrast, it negatively moderates the relationship between executive vision and audit committee competency.

In summary, the key research question is supported by the empirical evidence. In addition, the specific research questions are partially supported.

#### 8. Limitations and directions for future research

A main limitation of this study was that all respondents were from same demographic group. This research is derived from the data only collected from ISO 9000 manufacturing firm. Thus, these findings may be lacking generalized ability.

Future studies need to consider more diverse population segments. Additionally, some of the research hypotheses are not statistically significant. Therefore, future research should test in other moderating variables the enforcement marks, such as Sarbanes-Oxley Act.

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