

Impact of Internal Control on Audit Program Effectiveness: The Case of Vietnam

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Abstract

This research is conducted to examine the relationship between components of risk assessment, environmental control and control activities of internal control system and the effectiveness of the audit program in Vietnamese firms. Data were collected by sending questionnaires to management, internal auditors, and accountants of Vietnam firms and feedback of 87 responses. By testing Cronbach's Alpha, Exploratory Factor Analysis (EFA), Analysis of Variables (ANOVA), the results show that control environment, risk assessment and control activities contribute significantly to an effective audit program. These results indicate that Vietnamese firms lack required experiences to cope with the current instruments of internal control assessment.

Keywords: internal control, audit program, effectiveness, Vietnam

1. Introduction

In Vietnam today, businesses are generally aware of the role of internal control in managing and operating a unit. However, the establishment of internal control and effectiveness of the audit program in Vietnamese firms are not much interested from management, but only focus on the implementation of the plan, budget and finance. As a result, it can limit the effect of internal controls. In fact, in some firms, internal controls can be formal and costly. On the other hand, auditors often claim quality of the intended internal control of the business to define and plan the level and process of auditing (Gaumnitz et al., 1982). In generally accepted auditing standards (GAAS), it emphasizes the need to assess the quality of internal controls from both external & internal auditors and to gain a full understanding of the entity pre-audit internal control environment (Mautz and Mini, 1966). Vietnam complies with GAAS and Auditing Standard No. 265 on "Dealing in internal control deficiencies with the management and management of the audited entity", Auditing Standard No. 315 "Risk of material misstatement through knowledge of the audited entity and its environment". Internal control has five components including environmental control, risk assessment, controls, information and communication, and monitoring.

Rahahleh (2011) found that internal control in Jordan's public institutions suffered problems such as lacking qualified staff and major components, inability to utilize the technical tools needed and lacking specialized staff. Accordingly, we want to discuss the internal control and effectiveness of the audit program aimed at risk management in enterprises for improving management capacity, ensuring and maintaining sustainable development. In particular, some studies have investigated the relationship between internal control quality and audit efficiency (e.g. Karagiorgos et al., 2011), internal control assessments and program modifications (Mautz & Mini, 1966). Other studies have investigated the relationship between audit program structure and audit performance (McDaniel, 1990). Thus, this study attempts to clarify the relationship between some components of the internal control and the effectiveness of the audit program. This, however, will narrow the gap in previous studies and contribute to knowledge in this area, particularly in the context of Vietnam.

In response to a research question, we employ quantitative research methods incorporated in this study. Based on the responses of internal auditors working for Vietnamese firms, the research results show the impacts of components of internal control on an effective audit program of auditees.

This research is structured as follows. Section 2 reviews the suitable literature. Section 3 describes the data sample collection and methodology employed in the conduct of the research. Section 4 sets out a discussion of

key results, while Section 5 shows some key conclusions of the study practice and potential further research.

2. Literature Review

The development of the audit industry in Vietnam has played a significant role in the development of internal controls. Internal controls have different meanings. Indeed, it is hard to just give an optimal definition for internal controls. This is because it can be explained and seen from different perspectives (Cristina et al., 2010). Internal control, however, is defined as a process, influenced by the actions of the board of directors and other levels of organizational structure within an entity, and is designed to ensure reasonable attainment of corporate goals, plans and strategies in accordance with the laws, relevant policies and regulations. Recently, large firms have begun to include detailed management reports on the effectiveness of internal controls in the annual reports as an indicator for a good corporate governance practice (Leng & Li, 2011; Saha & Arifuzzaman, 2011). The effectiveness of an enterprise's internal control is often considered as a prerequisite for the audit process as it is a key determinant of timing, extent and nature of an audit.

However, according to Xiao (2011), firms can combine different procedures to enhance and develop their internal control. For example, the division of responsibilities, the creation of internal audit department, the use of effective electronic information tools, and more attention to the skills of employees. Internal controls have some aspects that need to be assessed before starting audit procedures in which their assessment relates to a general assessment of the reliability all evidence gathered about different strengths and weaknesses of different aspects of internal control and then prepared a proper audit program (Weber, 1978). Therefore, it seems that internal control assessment is a prerequisite for the audit planning process, which is the prerequisite of the audit process math.

Coustan et al. (2004) have argued that external and internal auditors collect, evaluate and combine information in developing opinions about the fairness and reliability of financial statements by assessing the expertise in identifying the type and level of information collected and examining well-prepared audit programs. Accordingly, the audit planning process involves the preparation of audit programs in which internal control is assessed (Murphy & Brown, 1992).

This means that auditors must assess internal controls as part of audits (Abdel-Khalik et al., 1983). However, the audit program represents all the details of the audit work required to achieve a professional job (Mautz and Mini, 1966). Overseas regulatory agencies focus on the importance of the audit planning phase and propose many details on the issue. For instance, SAS No. 47 emphasizes that the auditor's audit planning stage and considers how much evidence is needed to evaluate the financial statements during the audit.

However, this helps auditors achieve all the necessary work effectively to meet the needs of the users of financial statements and compliance with professional auditing standards (Read & Mitchell, 1987). Number SAS 82 is more focused on risk assessment, which is one of the control components risk, as it provides specific indicators of high fraud risk and instructs auditors on how to assess fraud risk and revise their audit plans (Glover et al., 2003), the results indicate that the audit planning phase showed a higher sensitivity to fraud risk due to the presence of SAS No. 82. In particular, the findings suggest that auditors are more aware of the need to modify the audit plan and are more likely to increase the scope and number of audits they make. However, SAS No. 99 has focused on a variety of audit planning issues, particularly those related to risk. It requires the auditor to collect and fully evaluate all information necessary to adequately identify the risk of material misstatements, whether due to fraud, evaluate these risks after assessing the organization's internal audit and control program and feedback (Ramos, 2003).

3. Research Methodology

3.1 Research Model

Al Sawalqa and Qtish (2012) initiate and use quantitative and qualitative research to develop and validate the effectiveness measurement of the audit program, including control environment, risk assessment, and control activities. This study suggests that the relationship between the different components of internal control and the effectiveness of the audit program is positive. This is because a strong internal control is a prerequisite for an effective audit program as presented in literature review. In this research, we investigate the impact levels of three components of internal control in Vietnamese firms on designing effective audit program, so the model is below:

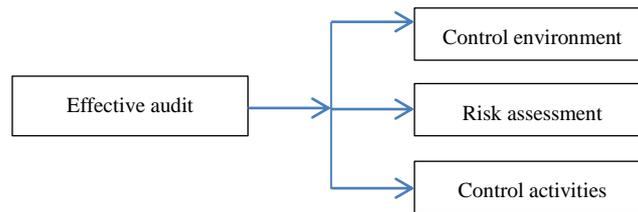


Figure 1. Research model

Based on the results of prior studies, nature of internal control and interview results with management, internal auditors, accountants, determinants and its attributes with coding as presented in Table 1.

Table 1. Variables and coding

Variables	Coding
Control Environment (first component)	
- Communicating the importance of integrity and ethical behavior	CE
- Have organizational structure providing the framework within which the segregation of duties is determined	CE1
- Clear objectives for all the personnel taking actions and responsibility	CE2
- Management style and management philosophy	CE3
	CE4
Risk Assessment (second component)	
- Estimating the obstacles regarding the achievement of business objectives	RA
- Evaluating the implication of relevant risks on financial reporting	RA1
- Determining the appropriate internal audit scope	RA2
- The risk assessment process for participatory financial reporting involves, for example, senior finance personnel.	RA3
- There is a risk management board in the organization	RA4
	RA5
Control Activities (third component)	
- Describing policies and procedures of all functions and jobs	CA
- Reviewing and evaluating internal control systems in a periodic basis	CA1
- Having integrated accounting systems	CA2
- The company has established good information and communication channels	CA3
	CA4
Effectiveness of Audit Program (dependent variable)	
- Stability of audit program	EAP
- Proposed quantity of tested items	EAP1
- Proposed time of testing	EAP2
- Proposed details of audit program	EAP3
	EAP4

3.2 Methodology

The questionnaire of this study was sent to management, auditors and accountants in Vietnamese enterprises. In particular, 105 questionnaires were distributed with 87 questionnaires feedback. This brings the response rate to 82.8%, very good. The questionnaire used the Likert scale with 5 levels of “absolutely disagree” to “totally agree”.

Based on the data collected, we test the reliability of variables by running Cronbach’s anpha, verify exploratory factor analysis (EFA), then run Pearson matrix and the last is to run analysis of variables (ANOVA).

4. Results and Discussion

4.1 Descriptive Analysis

Of the 87 responses, there are 16 people as board of directors, accounting for 18.4%, and 42 internal auditors, accounting for 48.6% and others of accountants making up 33%, which is presented in Table 2 as below:

Table 2. Descriptive statistics of participants by positions

	Frequency	Percent	Valid Percent	Cumulative Percent
Director / Board of Directors	16	18.4	18.4	18.4
Internal auditors	42	48.6	48.6	67.0
Others	29	33.0	33.0	100.0
Total	87	100.0	100.0	

Table 3 shows that of the total 87 respondents, 34 experienced people with less than 5 years accounted for 39.1% and 29 experienced from 5-10 years working, illustrated in Table 3.

Table 3. Descriptive statistics of participants by working experiences

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <5 years	34	39.1	39.1	39.1
> 10 years	24	27.6	27.6	66.7
From 5 to 10 years	29	33.3	33.3	100.0
Total	87	100.0	100.0	

For achieving the objective, nine items have been adjusted from previous studies (Johnstone et al., 2011; Karagiorgos et al., 2011) to measure the effectiveness of internal control. However, these items represent three components of internal control, namely environmental control, risk assessment and control activities. For having an effective audit program, four variables were adapted from (McDaniel, 1990) to measure it.

Table 4. Descriptive statistics for independent and dependent variables

Variables	Min	Max	Mean	Standard Deviation
Control Environment				
Communicating the importance of integrity and ethical behavior	1	5	3.161	1.2929
Haven organizational structure providing the framework within which the segregation of duties is determined	1	5	3.460	1.1793
Clear objectives for all the personnel taking actions and responsibility	1	5	3.713	1.1902
Management style and management philosophy	1	5	3.506	1.1995
Risk Assessment				
Estimating the obstacles regarding the achievement of business objectives	1	5	3.483	1.3017
Evaluating the implication of relevant risks on financial reporting	1	5	3.575	1.2634
Determining the appropriate internal audit scope	1	5	3.586	1.290
The risk assessment process for participatory financial reporting involves, for example, senior finance personnel.	1	5	3.709	1.0723
There is a risk management board in the organization	1	5	3.563	1.2361
Control Activities				
Describing policies and procedures of all functions and jobs	1	5	3.414	1.3255
Reviewing and evaluating internal control systems in a periodic basis	1	5	3.609	1.3061
Having integrated accounting systems	1	5	3.425	1.2725
The company has established good information and communication channels	1	5	3.871	1.1317
Effective Audit Program				
Stability of audit program	1	5	3.115	1.3067
Proposed quantity of tested items	1	5	2.920	1.3226
Proposed time of testing	1	5	3.034	1.2147
Proposed details of audit program	1	5	3.368	1.2306

4.2 Results

4.2.1 Cronbach's Alpha Testing

Table 5 presents the Cronbach's Alpha value of the scale. The scale is rated good when the value is greater than 0.6. However, there is a measurement less than 0.3: CE4, so CE4 is deleted in this analysis. The results of running Cronbach's Alpha test as below:

Table 5. Results of testing cronbach's anpha

Variables	No. of items	Mean	Cronbach's Alpha
Control environment	4	3.460	0.722
Risk assessment	5	3.591	0.711
Control activities	4	3.571	0.761
Effectiveness of the audit program	4	3.109	0.65

4.2.2 Exploratory Factor Analysis (EFA)

The results of Table 5 show that KMO (Kaiser-Meyer- Olkin) = 0.769, satisfies condition $0.5 < \text{KMO} < 1$, so EFA analysis is appropriate for actual data. Bartlett's test has Sig < 0.05 , so that the observed variables are linearly correlated with dependent variable and data used for the analysis is reliable and appropriate.

Table 6. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.769
Bartlett's Test of Sphericity	Approx. Chi-Square	268.989
	df	66
	Sig.	.000

Note. The matrix results rotate the factors.

Table 7. Rotated component Matrix^a d

Attributes	Component		
	1	2	3
CE1			.767
CE2			.813
CE3			.747
RA1		.601	
RA2		.813	
RA3		.692	
RA4		.607	
RA5	.621		
CA1	.816		
CA2	.693		
CA3	.735		
CA4	.700		

Note. Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

12 attributes in determinants of internal control components and effective audit programs are put in the model. The results in the Table 7 show that 12 attributes are merged into three groups as:

- (i) Group 1 (F1 of CA): RA5, CA1, CA2, CA3, CA4.
- (ii) Group 2 (F2 of RA): RA1, RA2, RA3, RA4.
- (iii) Group 3 (F3 of CE): CE1, CE2, CE3.

To achieve the objective, we run Pearson correlation and multiple regression. However, Pearson correlation analysis is the basis for regression analysis and is conducted to assess the nature and direction of the relationship between dependent and independent variables, as well as the nature of the relationship among all the variables of the study.

Table 8 shows the Pearson correlation matrix for both dependent and independent variables. On the other hand, the results showed that the control activity correlated strongly ($r = 0.426$, $p < 0.01$) with the efficiency of the audit program.

Table 8. Correlation matrix (Pearson's)

	(1)	(2)	(3)	(4)
1. Control environment	1			
2. Risk assessment	0.272*	1		
3. Control activities	0.426**	0.216*	1	
4. Audit program effectiveness	0.272*	0.426**	0.216*	1

Note. ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

The relationship between dependent and independent variables are presented in the equation as

$$EAP = \alpha_0 + \beta_1 \times F_1 + \beta_2 \times F_2 + \beta_3 \times F_3 + e$$

Where:

EAP = Effective audit program

F1 = Control activities

F2= Risk assessment

F3= Control environment

Table 9. Linear regression results - model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549 ^a	.301	.275	.85958994

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.509	3	8.503	11.508	.000 ^b
	Residual	59.112	80	.739		
	Total	84.621	83			

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	VIF
		B	Std. Error	Beta				
1	(Constant)	-.006	.094			-.065	.948	1.000
	CA	.274	.094	.272		2.907	.005	1.000
	RA	.430	.094	.426		4.554	.000	1.000
	CE	.218	.094	.216		2.309	.023	1.000

Table 9 shows that overall F value is statistically significant at 0.000. R² indicates that the regression model explains 30.1% variance in the effectiveness of audit program with adjusted R² of 27.5%. This result provides an important indicator that the selected factors represent, to a significant degree, internal control in Vietnam. It is noteworthy that the current study ignores some internal control components such as monitoring, and information and communication.

We have the final equation as

$$EAP = 0.272 \times F_1 + 0.426 \times F_2 + 0.216 \times F_3 + e_i$$

5. Conclusion

The aim of this research is to assess whether different components of the internal control impact significantly on the effectiveness of audit program. To achieve this goal, 87 well-designed questionnaires were analyzed basing on the answers of the auditors and members of the board of directors, members of the board of supervisors, and accountants. The results indicate that the three components of the internal control system employed, namely control environment, risk assessment and control activity, impact significantly on an effective audit program.

For control environment and control activities, the analysis shows that they influence substantially an effective audit program. These results indicate that Vietnamese firms face many obstacles in applying an effective internal control and they direct their efforts to investigate the risks that they may have to face. These results also show that Vietnamese firms lack the necessary experiences to cope with the current technical tools of internal control assessments. Accordingly, researchers, managers and auditors are responsible for this deficiency. A shared training, study and workshop are required in internal control systems. Management in Vietnamese firms are

responsible for designing and maintaining effective internal control. Therefore, qualified and well-trained personnel are required to develop an internal control that is an important prerequisite for the entire audit process.

Current research contributes significantly to the development of internal control systems in Vietnam. The study clarifies a number of key factors ($R^2 = 0.301$) that may affect the audit planning. In addition, research also contributes to knowledge in this area. Despite these features and applications, current research has some limitations. Small sample study is a limitation. Accordingly, future research may follow a longitudinal approach to overcome the limitations of current research and may incorporate other components of the internal control. Another opportunity for future research will be to evaluate the effectiveness of various components of internal control over subsequent adjustments of the audit program in Vietnamese firms. Future research may outline the obstacles facing internal control in Vietnam and propose alternative tools for applying different processes of internal control.

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