The Role of Internal Audit of Integrated Management System ISO 9001:2015 and ISO 14001:2015 in Improving Employee Performance

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Abstract: Internal audit is an important function in a corporate organization that implements an Integrated Management System (IMS) ISO 9001:2015 and ISO 14001:2015 with findings and provides suggestions and recommendations to management and all employees. Internal audit is one of the mandatory requirements for implementing the ISO 9001 and ISO 14001 which is integrated into the IMS. This study involved 48 employees at Company 'X" to prove that the role of internal audit in IMS can improve employee performance. The result of SEM-PLS for the model Internal Audit as a mediating variable has an impact on employee performance preceded variable by planning, management commitment and IMS implementation

Keywords: Internal Audit, IMS, ISO 9001, ISO 14001, Employee Performance.

Introduction

Tight Competition in the industrial world is bringing all companies want to be excellence in operation and services. One of the efforts to achieve the excellecent company to be more competitive in reaching a larger market is by implementing an Integrated Management System. Integrated Management System (IMS) is an integrated system of business components (Simon, [1]). IMS is a management system that combines all components into one comprehensive system so as to support its goals and missions (Olaru, *et.al*, [2]). IMS is a system integration that focuses on quality, environment, and occupational health and safety and their processes, practices and documentation. IMS implementation consists of ISO 9001 Quality Management System, ISO 14001 Environmental Management System and ISO 45001 Occupational Health and Safety Management System. (BSI, [3]). Integration is the blending of conflicting internal management practices into a single system, so that these systems are interrelated to form an integral part of the management system. The benefits derived from implementing IMS are increased business focus, holistic approach in individuals, implementation of duplication and utilization, internal audit, reduction of clashes between effective and more effective external management systems, and simpler facilitation of new management system standards that need to be adopted by organizations. (Standard, [4]).

In addition, the application of IMS can clarify the certification process, save human resources, reduce management costs and reduce internal management changes (Zeng *et al*, [5]). System integration can save time and costs in organizations (Zutshi & Sohal, [6]). In addition, improvements related to the existence of an integrated system are operational benefits, increased customer satisfaction and also increased employee motivation (Alexandra *et al*, [7]). IMS implementation starts from a good design & planning, management commitment, and internal audit.

Internal Audit is part of the Check in the PDCA (Plan-Do-Check-Act) cycle, which means starting to build and plan an Integrated Management System. The role of internal audit brings IMS successfull in implementing a system and controlling and evaluating the system to the impact of improving performance. Company "X" is a company that conducts business in the field of port service operations and operations, as well as increasing the value of the company by optimizing the utilization of the company's resources to produce high-quality and highly competitive goods and/or services to gain/pursue profits and increase customer satisfaction. Company "X" is committed to meet the required international standards by designing, implementing, and controlling an IMS by conducting an integrated Internal Audit to improve the company's performance, especially employee performance in controlling the IMS.

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Methods

This research was conducted quantitative by taking a sample of 48 employees as a random sample from all employees at company "X". The search for respondent data used a questionnaire given to the respondent and data verification was carried out by interview. The questionnaire was prepared to determine the data of each variable used in the study covering aspects of Design & Planning, Management Commitment, IMS Implementation, Internal Audit and Employee Performance. The research variables were arranged using a Likert scale with scores ranging from numbers 1 to 10 ranging from statements strongly disagree to scale statements strongly agree.

The data analysis technique uses SEM-PLS (SmartPLS3 software) to perform structural analysis (relationships between variables) and measurement analysis (relationships between indicators and variables) where SEM-PLS is variant-based to test new theories or develop theories that do not have a concrete foundation (Ghozali, [8]). The first step is to create a research model in the form of a path diagram, then analyze the outer model, analyze the inner model, and test the hypothesis. Outer model analysis is used to test the validity and reliability of indicators that explain the formation of variables starting with (a) Convergent Validity which measures the magnitude of the correlation between the loading value and the latent variable. Each indicator meets the criteria if the outer loading value is above 0.6. (b) Discriminant Validity is used to see the cross-loading value of each indicator with its construct, if the cross-loading value of the indicator on the construct is greater than the other variables, then the indicator is declared valid. (c) Composite Reliability is used to declare a reliable indicator if the CR value is > 0.7. (d) Average Variance Extracted displays a reliable indicator if the AVE value is > 0.5. Furthermore, (e) Cronbach's Alpha is used to test the reliability of the indicator if the CA value > 0.5.

Inner Model Analysis is used to measure the level of fit of the data in the model, through the test of the relationship between endogenous variables (R2) and the test of predictive relevance (Q2). While the Q2 model predictive relevance test if the value is more than zero (> 0) then the model is considered to have predictive relevance or vice versa. The final stage is the hypothesis test with the estimate path coefficient procedure to get the coefficient value through the t-statistic test. If the p-value <0.05 or below the cut-off value of 0.05, then there is a significant relationship.

Hypotheses

The researchers started with a literature study to define the hypothesis that the role of Internal Audit in Improving Employee Performance. The four hypotheses are determined from Design and Planning, Management Commitment, Implementation to Internal Audit and the Impact of Audit Internal to Employee Performance

- Hypothesis 1 (H1): Examining the influence of Design & Planning IMS on Internal Audit
- Hypothesis 2 (H2): Examining the influence of Management Commitment on Internal Audit
- Hypothesis 3 (H3): Examining the influence of IMS Implementation on Internal Audit
- Hypothesis 4 (H4): Examining the influence of Internal Audit on Employee Performance

Conceptual Model

From the hypotheses, The Endogenous and exogenous variables can be built to Conceptual Model. For the variables to be measured, each variable needs to have indicators summarized from several sources of books and journals. These indicators include indicators for Audit Internal dan Employee Performance (endogenous variables) and indicators of Design & Planning, Management Commitment and Implementation which are exogenous variables in this study as shown in Figure 1.
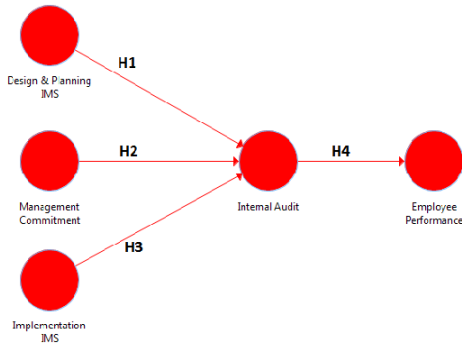
Figure 1. Conceptual Model

Results and Discussion

Data are collected 48 respondent with percentage of Male 77.1 % and female percentage 22.9 %. Average age of respondent is 33.1 years old and length of work aroud 4.5 years. The next step is testing the hypothesis through several stages start from the formation of the model, validity and reliability test. Figure 2 shows a path diagram of the Design & Planning, Management Commitment and IMS Implementation as Exogenous variables to Internal Audit and Employee Performance as endogenous variables.
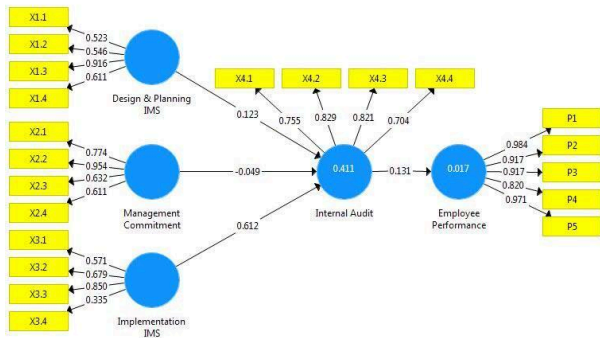
Gambar 2. Path diagram and outer model values

Figure 2 shows several indicators with a loading factor value above 0.6 except for indicators X1.1, X1.2, X3.1 and X3.4 below 0.6 which means that these indicators are not valid for measuring latent variables Design & Planning (X1) and

IMS Implementation (X3). The next process is to test validity and reliability with the second phase model after the invalid indicators are removed. The results of the outer loading factor values for each indicator in the second phase are shown in Table 1. All loading Factor values in table 1 are above 0.6 which means that all of these indicators are valid.

Reliability testing is carried out by taking into account the Cronbach Alpha (CA) > 0.5, or Composite Reliability (CR) > 0.7, or the Average Variance Extracted (AVE) > 0.5. The results of the reliability test are shown in table 2. Table 2 shows that All latent variables Design & Planning, Management Commitment, IMS Implementation, Internal Audit and Employee Performance are reliable.

Table 1. Loading Factor for Second Model

	Design& Planning	Mgm Commit ment	IMS Implem entatio n	Internal Audit	Employee Performa nce
X1.3	0.943				
X1.4	0.624				
X2.1		0.771			
X2.2		0.953			
X2.3		0.628			
X2.4		0.616			
X3.2			0.707		
X3.3			0.914		
X4.1				0.748	
X4.2				0.833	
X4.3				0.823	
X4.4				0.706	
P1					0.987
P2					0.925
P3					0.925
P4					0.835
P5					0.976

Inner model for Hyphotesis Testing through boostrapping analysis can be shown on Table 3 and Figure 3.

Table 2. Outer loading analysis based on Cronbach's Alpha, Composite Reliability and AVE

Variabel Latent	Cronbach's Alpha (CA)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Design & Planning Managemen t	0.593	0.772	0,639
Commitmen t	0,788	0,836	0,669
IMS Implementation	0,529	0,798	0,668
Internal Audit	0,789	0,860	0,608
Employee Performance	0,984	0,970	0,867

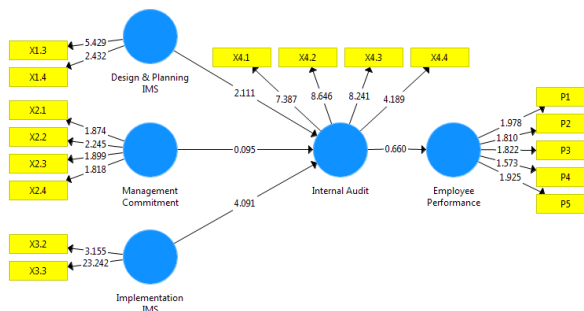Figure 3. Model Bosstrapping Second phase

Table 3 shows the results of hypothesis testing from the four hypotheses that have been stated previous with the following results:

Tabel 3. Inner model for Hypotheses Testing

	t-statistics	P – values	Hypo-theses	Sig
Design& Planning to Internal Audit	1.981**	0,048	H1	Sig
IMS Implementatio n to Internal Audit	4.415***	0,000	H3	Sig
Management Commitment	0.100	0,921	H2	Not
to Internal Audit				Sig
Internal Audit to Employee Performance	1.643*	0,058	H4	Sig

Note: *sig at 10%, **sig at 5% , ***sig at 1%

In Table 3, shows that Hypotheses 1, 3 and 4 are significant. Hypothesis 1 has been proven to be significant that Design & Planning affects the success of Internal Audit. Hypothesis 3 has been proven to be significant that IMS Implementation affects the success of Internal Audit and Hypothesis 4 has been proven to be significant that the success of Internal Audit affects employee performance. While Hypothesis 2 has not been proven to be significant that Management Commitment does not affect the Success of Internal Audit.

Conclusion

Based on the results of research conducted by the author at Company "X" found that the role of the Internal Audit of Integrated Management System ISO 9001 and ISO 14001 has an effect on employee performance.

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