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A measure of Internal Auditors' perception on Accounting Information Systems, Professional Skepticism and Judgment and Audit efficiency

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Abstract

Accounting information systems are designed instruments and tools, which are blended with Information Technology System used for managing the organization's economic and financial position. Internal audit should be carried out in order to monitor the financial activities and performance of the organization, be it private or public institutions. The auditors are responsible for any financial information, which will be disclosed to the management. In this context, there is a triggering question on what ERP or any similar application is used by the internal auditors in their organizations to extract accounting information? How reliable is the system they are using? Knowledge sharing within an audit firm can lead to higher audit efficiency?. Hence, there is a need for a measurement tool, which can be used to measure the internal auditors' perception on the usage of Accounting Information System for Professional Judgement and Skepticism for improving the Audit efficiency.

Keywords: Measure, Perception, Accounting Information Systems, Professional Skepticism and Judgment and Audit efficiency

Introduction

General public has placed enormous trust on auditors in recent years due to frequent financial statement frauds have been uncovered in many parts of the world. (Spathis, 2002) A survey conducted by Association of Certified Fraud Examiners (ACFE, 2014) testified that a typical organization loose around five percent of its revenue every year to fraud and it is approximately 3.7 trillion dollar. Dealing with fraud and misconduct has never been challenge before, but due to advancement in technology and digital data processing across business spectrum, this captured more attention on corporate

boardroom. The complexity of frauds especially related to financial statement has received considerable importance and it will continue to cause a concern for the future (Normah, 2015).

The trait "professional skepticism" has received much attention in the recent past among regulatory authorities and regulatory bodies due to mushrooming cases of financial statement fraud. The stakeholders has placed their trust and belief on auditors to behave skeptically in every step of a financial statement audit. (Sayeed, 2015) Although there are many Information Technology (IT) assisted models and methods are available for auditors to track and trace financial statement frauds, this paper investigate how accounting information system can be used by an auditor.

The issue regarding the lack of skepticism attitude has attracted much attention from public and audit regulatory bodies following the increasing cases of fraudulent financial statement, which has been a common phenomenon nowadays. Generally, the public has placed their trust and belief on auditors to behave skeptically in tracing any financial statement fraud. There is a high expectation from the public because of the increasing cases of financial statement fraud.

Accounting information systems are designed instruments and tools which are blended with Information Technology System used for managing the organization's economic and financial position (Soudani, 2012), further; it was concluded that AIS has an effect on organizational performance. An information system is useful for generating the data, process them provided the information to the users in the organizations. AIS was explained as a procedure of collecting, storing, managing, processing, retrieving the data that can be used by accounting practitioners, these data are relevant to manpower, equipment which are part of the financial data (Sumaryathi, et.al., 2020)

(Salehi and Abdipour, 2011) disclosed that the success of the organization is affected by the use of AIS, which implies that the AIS users should apply it and use in a correct manner for them to achieve their goals. For more than two decades that passed, AIS is proven to be useful as revealed by the study of (Borthick and Clark 1990) it is vital to all organizations. It was also found out that AIS has significant impact on corporate governance, the system is very beneficial to the primary users in accomplishing their daily task, thus help the management in reviewing the daily transactions, (Fatima, et.al. 2021). It was further proven that the AIS usage is predicted by information and system quality and user satisfaction, and if there is good quality of the system users would be happy and the end can positively affect the net benefits (Al Hatmi, 2021).

Professional judgment is the application of knowledge and experience, it is important in making decisions relevant to an audit, accounting standards and ethical code (DELIU, 2020), it should be applied objectively, completely and with prudence and the be responsible to the consequences of the judgement. An auditor is obliged to consider a certain level of risk however; he should also maintain certain dose of skepticism regardless of enough knowledge to clients. Skeptical reasoning should be considered because there is possibility of false information that even professionals are prone to errors or mistakes. (Nurkholis, et.al., 2021) Nurkholis disclosed that the auditor's experience and professional skepticism was proven to be effective on fraud detection.

What then lead to skepticism? Auditors professional skepticism are affected by their questioning minds, suspension of judgement, searching for knowledge, understanding interpersonal relationship self-confidence, determination and by their social conservatism (Ghaseminezhad et. al, 2020). Further

concluded that the psychological characteristics of auditors in judging decision-making are among the influential factors. According to ISA 240, an auditor must exercise professional skepticism while planning and performing audit for obtaining reasonable assurance. Professional skepticism is required when an auditor gather audit evidence to support error or material misstatement. (McMillan & White, 1993). "Questioning mind" refers to the ability of the person to continue questioning the validity of certain things of the audit work.(Fogelin, 1994). In the process of auditing, Hurtt (Hurt, 2010) has identified 6 skepticism traits such as questioning mind (QM), Suspension of Judgment (SJ), self-confidence Searching for knowledge (SK), , self-determination and understanding of interpersonal relationship The importance of professional skepticism is stressed by Audit Inspection Unit of UK, Public Company Audit Oversight Board of US, Security and Investment commission of Australia.

Internal audit should be carried out, in order to monitor the financial activities and performance of the organization, be it private or public institutions. The auditors using the AIS is responsible to any information they will disclose to the management. In this context, there is a triggering question on what ERP is being used by the internal auditors in their organization? How reliable is the system they are using? Knowledge sharing within an audit firm can lead to higher audit efficiency, (Duh, et. Al. 2020). The internal audit efficiency has an impact on the completion of task of the public service, (Postula, et.al., 2020). Hence, there is a need for a measurement tool, which can be used to measure the internal auditors' perception on the usage of Accounting Information System for Professional Judgement and Skepticism improving the Audit efficiency.

Review of Literature

According to Kokina (2019), big auditing companies are heavily investing in artificial intelligence to reap its benefits for accounting and auditing. The result of the study showed that use of Artificial intelligence and other technologies improved integrity of financial statements and reduced probability of errors. It also creating a new generation of auditing on continuous assurance.

Khan (2021), compared manual audit tools with that of AI assisted auditing techniques. The result shows that use of artificial intelligence in auditing (fuzzy front-end (FFE)) led to 92% improvement in audit efficiency and 95% effective comparing to human auditor.

Roszkowska (2021) studied about the impact of use of AI and ML tolls on audit practices. The result shows that block chain, internet of things, smart contracts and artificial intelligence solutions can effectively use for solving financial reporting and audit related issues. These innovative technologies have potential to enhance the reliability of information in financial statements.

Albitar (2021) investigated how the audit quality can be improved during the period of social distancing due to pandemic. The study strongly recommend auditing firms to invest more in digital technologies such as artificial intelligence, block chain, data function etc. because this is expected to enhance the effectiveness and flexibility of communication between auditor and client.

Nonnenmacher (2021) used auto coders (a techniques based on AI) as an unsupervised method evaluated in auditing in a practical case study. The result shows that auto coders can support auditors in the audit execution and in the audit planning process steps to improve the quality of internal audit engagement.

Albawwat (2021) examined the AI and its perceived ease of use, usefulness, and contribution to audit quality in Jordanian audit firms. The result indicates that auditors perceive assisted and augmented AI system as an ease of use in auditing and autonomous audit system are difficult to use. The result also shows that there is significant differences between the perceived contribution to audit quality and three AI systems.

Methodology

The study used inductive method to figure out the items, which reflected the Auditors' perception on AIS, Professional skepticism and judgment and Audit efficiency. Based on the responses from the Auditors, preliminary scale was developed with 22 items.

The questionnaire is divided into two parts consisting of demographic profile as the first part and auditors perception on AIS, Professional skepticism and Judgment and Audit efficiency as the second part with 22 items. The questionnaire was uploaded in Google forms and it was distributed among various company Auditors with the help of friends and relatives working in those companies. We were able to collect 153 responses from Auditors of different sectors and the demographic profile of Auditors are presented in Table 1.

Results and discussion

Table 1- Demographic profile of respondents

Demographic profile		**Numbers**	**Percent**
Total Sample size		**153**	**100**
Experience in years	0- 5 years	55	35.9
	6- 10 years	54	35.3
	11- 15 years	26	17.0
	More than 15 years	18	11.8
Sector	Cement	17	11.1
	Oil and Gas	38	24.8
	Food processing	33	21.6
	Banking and Insurance	28	18.3
	Manufacturing	17	11.1
	Others	20	13.1
Qualification	Diploma	34	22.2
	Bachelor	56	36.6
	Masters	40	26.1
	ACCA or equivalent	23	15.0
Use of AIS	Less than 5 years	71	46.4
	More than 5 years	82	53.6

Source: Primary data (Questionnaire)

Table 1 displays the demographic profile of respondents. Most of the internal auditors have less than ten years of experience and only twenty-six have 11-15 years' experience and 18 have more than 15

years of experience. Highest number of the internal auditors taken for the study belong to Oil and gas sector followed by food processing, banking and insurance sector respectively. Out of 153 respondents, 23 respondents have ACCA or Equivalent qualification. More than 50% of the respondents agreed that their organization uses Accounting Information System for more than 5 years.

Reliability statistics

Table 2- KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.900
Bartlett's Test of Sphericity	Approx. Chi-Square	1184.796
	Df	105
	Sig.	,.001

Table 2 shows the KMO and Barlett's test value which is conducted to test whether the data is adequately sampled and to check whether factor analysis can be performed on the data. The KMO value of 0.900 with significance of ,0.001 proved that the sample is adequate and factor analysis can be performed on the data.

Table 3- Descriptive, Correlation and reliability statistics of factors

Factors	Mean	SD	AIS and Auditing	AIS enabled Professional skepticism & Judgement	Audit efficiency
AIS and Auditing	3.86	0.76	(0.875)		
AIS enabled Professional skepticism & Judgement	3.74	0.56	0.721**	(0.818)	
Audit efficiency	3.62	0.64	0.661**	0.718**	(0.827)

Source: Authors' calculation

**- Correlations are statistically significant at ,0.01 level, values inside parenthesis indicate Cronbach Alpha.

Table 3 shows the descriptive, Correlation and reliability statistics. According to Nunnally, J. (1967), a Cronbach Alpha value of more than 0.7 is acceptable. All the factors have a good reliability with Cronbach Alpha values of 0.875, 0.818 and 0.827. All the Correlations are statistically signification at 1% level.

Exploratory factor analysis

According to Kelloway (1995), in the initial stages of scale development, exploratory factor analysis will be useful. In our study, to determine the factor structure of internal auditors' perception,

exploratory factor analysis was used. The results of the Exploratory factor analysis is presented in Table 4.

Principal component analysis with Varimax rotation with 22 items were used in the study. Seven factors were excluded as they did not load on any factor. Finally, fifteen items with three factors of Eigen values of more than one was retained for the study. The total variance of these three factors were 63.565%.

The first factor which had a total variance of 46.631% consisted of seven items, which was labelled as AIS and Auditing. The second factor had a total variance of 10.112% and consisted of four items. The third factor also had four items with a total variance of 6.822%.

Table 4- Exploratory Factor Analysis

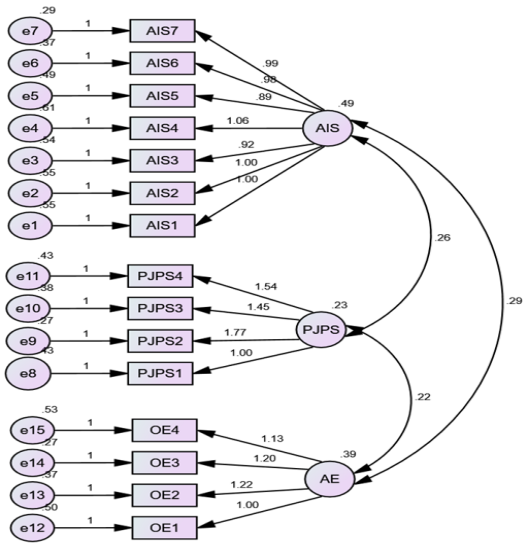
Factor structure	**AIS and Auditing**	**AIS enabled Professional skepticism & Judgement**	**Audit efficiency**
Our company uses the latest Accounting information system(AIS1)	.759		
Accounting information system is user friendly(AIS2	.800		
Auditors are trained to use the Accounting Information system(AIS3),	.721		
AIS is continuously updated to suit the present requirement(AIS4),	.673		
AIS ensures proper internal control in the organization(AIS5)	.545		
AIS helps to identify accuracy and reliability of financial information supplied by the client(AIS6)	.607		
AIS supplies accurate data for analytical procedures(AIS 7)	.590		
Usage of AIS enables an auditor to access all types of information necessary for their professional judgment (PJPS1)		.675	
Reliable and accurate data supplied by AIS clears the auditor's skepticism (PJPS2)		.693	
Accessibility to original data through AIS makes an auditor to assess the potential areas of risk in the financial statements (PJPS3)		.787	
AIS supplied data supplemented the auditor for analytical procedures and audit estimates (PJPS4)		.508	

Better Professional Judgement and Professional skepticism through AIS leads to overall audit efficiency (AE1)			.680
AIS enhances risk assessment in auditing and that helps an auditor to focus on more critical areas , thereby ensuring overall audit efficiency (AE3)			.856
AIS data helps to identify fraud indicators in financial statement, hence improve overall audit efficiency (AE5)			.766
AIS supported auditing reduces the audit risk to the minimum, hence overall audit efficiency can be obtained (AE6)			.635

Source: Authors' calculation using primary data

Confirmatory factor analysis

Confirmatory factor analysis was performed to evaluate the fitness of the model. The results of the Confirmatory factor Analysis is presented in figure- 1. In order to achieve incremental fit, NFI and AGFI value should be greater than 0.8(Forza and Filippini (1998)), CFI value should be greater than 0.9(Byrne (1995) & Hair et al.(2010)), TLI value should be greater than 0.9 according to Vandenberg and Scarpello (1994). In our study, NFI and AGFI value was 0.856 and 0.819, CFI value was 0.921 and TLI value was 0.905. This shows that our model achieved incremental fit. In order to achieve Absolute fit, GFI value should be greater than 0.8(Forza and Filippini (1998) and Greenspoon and Saklofske(1998)) and RMSEA value should be between 0.05 and 0.1(Browne and Cudeck (1993)). GFI value in our study is 0.869, which is greater than 0.8 and RMSEA value was 0.081 which is in the range. Hence, our model has absolute fit. In order to achieve Parsimonious fit, Chi square/*df* should be less than 5.0(Marsh and Hocevar (1985)). In our study, the Chi square/*df* value was 2.009. So, our study has achieve Parsimonious fit too.



CMIN/DF - 2.009

GFI – .869

AGFI-.819

NFI - .856

TLI - .905

CFI - .921

RMSEA- 0.081

Figure 1: Confirmatory Factor Analysis

Conclusion

Accounting Information system plays a major role in Audit efficiency and Professional skepticism and Professional Judgement. Yet, measurement models were not developed to measure the same. Hence, this study focused on developing measurement model for assessing the perception of internal auditors on Accounting Information System, Professional Skepticism and Judgement and Audit Efficiency. Exploratory factor Analysis identified three factors, which measured the opinion of auditors' perception on Accounting Information System, Professional skepticism and judgement and Audit efficiency. Confirmatory factor analysis also proved the good fitness of the model. However, this is study is only a beginning. Even though Auditors from almost all the sectors responded to the questionnaire, the sample size is relatively small. Still further studies need to be conducted to prove the authenticity of the model.

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