

The Impacts of Information Technology Governance on Internal Auditing : A literature Review

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Abstract:

The relationship between information technology governance (ITG) and internal auditing has been subject to several studies in both past and nowadays. Interest parties in governance and ITG practically has been increased notably, due to financial scandals that shocked financial markets for some of giant companies globally, such as “Enron in 2001”. This paper aimed to trying to wading previous studies that were focusing on ITG and internal audit through reviewing 8 scientific articles that are relevant to the topic in both emerged and developed economics. This paper will also present the major findings as well as propose the future research related.

Key Words: Information Technology Governance, Internal Auditing, A literature review



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Introduction

The relationships between information technology governance (ITG) and internal auditing has been subject to a lot of studies in both past and nowadays. Financial scandals that affected some of major companies worldwide such as Enron and World.com, led to increasing attention on governance as well as ITG by researchers and professional organizations (Mohammed, 2012). ITG is considered a crucial part of the business organization to overcome with challenges that faced the business environment today. Since, IT add a competitive feature to international organizations to use technologies that have a major impact on time saving, reducing expenditure in addition to improve effectiveness. Therefore, there is an urgent need to ITG for its role in improving the employment of IT resources and manage the IT risks (Alreemy, et al, 2016). The procedures of this paper as follows: it's given the definitions of the ITG as well as internal audit. Then, previous studies presented followed by discussion and major findings. Finally, guidelines have been provided to prepare for upcoming papers.

Methods

The methodology of this research is based on gathering a sample of definitions of each of (ITG) and internal auditing through reviewing the scientific articles that were published in both domestically and internationally as well as the official sites of the professional bodies on Internet web. Moreover, analyzing these variables content and knowing the results of the previous studies that is associated to the topic, was the other part of the methods.

Theoretical Framework

Information Technology Governance

Information technology governance is considered as essential part of the corporate governance and has recently captured the attentions of many interested parties such academics and practitioners. The procedures and policies of IT governance that determine how organization control and direct the technology use as well as how to keep its information secure from IT- related risks were the mainly focus (Mohamed and Kaur, 2012). Therefore, the ITG has been defined by Information Technology Governance Institute (ITGI, 2007) as “the responsibility of executives and the board of directors, and consists of the leadership, organizational structures and processes that ensure that enterprise’s IT sustains and extends the organization’s strategies and objectives” (www.itgi.org). While, the ITG defines as “an executive-level task that ensures the effective and efficient use of IT assets within an organization through the strategic alignment of IT portfolios with business objectives at every stage of IT lifecycle in that organization” (Martin, 2013). ITG also defined by (Amali & Katili, 2018) as “the ability of top management and IT management is strategizing and implementing IT strategies in supporting their organization”.

The Internal Audit

The previous studies have been mentioned several definitions regarding the internal audit. Internal audit has been defined by (Saputra & Yusuf, 2019) as “an examination carried out both on company’s financial statements and accounting records, as well as adherence to predetermine top management policies and adherence to government regulations and the provisions of applicable professional ties”.

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Moreover, Institute of Internal Auditors (IIA) also define the internal audit as “independent, objective assurance and consulting activity designed to add value and improve an organization’s operations”. The internal audit assists the organizations to achieve its goals through evaluate and improve the risk management effectiveness as well as the governance processes and control by using a systematic disciplined approach (www.theiia.org). It is obvious from IIA definition that internal audit provides two types of services, which are advisory services and objective assurance services, where internal audit provides to organizational unit’s advice that aims to improve operations and add value to the unit. On the other hand, internal audit provides an objective examination evidences as part of its assurance services that helps to evaluate the risk management effectiveness and efficiency in addition to control system and governance processes (Siddik, et al, 2014). While, the internal audit defined as an administrative function affiliated to the management of the institution expressing an independent internal activity to establish administrative control, including accounting, to assess the extent to which the system is in line with what the management requires to work on the proper use of resources in order to achieve adequate maximum productivity (Hisham & Al-Nouri, 2020).

Literature Review

There are many previous studies that dealt with relation between internal audit and information technology governance (ITG). Some of these studies focused on banking sector, others focused on business sector. The literatures that has been selected for this review will include a variety of studies covering both emerged and developed countries.

A study conducted by (Her’oux & Fortin, 2013) aimed to identify the relationship between the internal audit function to information technology governance and study the impacts of internal audit function characteristics on the information technology governance. A survey conducted through using a sample of 130 staff opinions who is working in internal audit field in services, industrial, private as well as public sectors in Canada. The findings of this study showed that the relationship between information technology governance and internal auditing will enhance the expanded strategic role played by internal auditors, in addition to assist executives make decisions about allocating resources in companies.

Another study conducted by Hussein & Khalaf (2019), the study aimed to examine the effects of information technology governance in enhancing the quality of the internal audit using COBIT framework. The study targets 39 of the Iraqi banks that are list on the Iraqi stock exchange through using 168 a questionnaire forms that were distributed among internal auditors whose are working in banking sector. The study found that there is a strong positive relationship between ITG and the internal audit quality. Moreover, using ITG will enhance the quality of internal audit for Iraqi banks that were listed in Iraqi stock exchange.

Similar study also conducted by Alhasnawi & Almousawi (2018), the purpose of this study was to investigate the role of enhancing ITG in reducing the risk of audit through using COBIT framework of internal control for list of Iraqi private banks. In addition, the study aimed to demonstrate how ITG mechanisms can support the information system while using electronic accounting information system. The study used a questionnaire forms among auditors, accountants as well as bank branch managers for 20 Iraqi private banks. The results of this study showed that there was a strong positive relation between ITG mechanisms and audit risk. Using ITG

mechanisms will enhance internal control and reduce audit risks along with minimize information security risks.

Rubino et al (2017) conducted a study on the effects of ITG on the internal control system and control environment. The study analyzed the COBIT framework and how its impacts the control environment categories. Using (Committee of Sponsoring Organizations (COSO) framework to evaluate the effectiveness of internal control, in addition to, using COBIT framework related to the process of ITG. The main assumption of the model that was used in this study is that "IT resources are managed by IT processes to achieve the IT objectives that meet the firm's information business requirements". The study found that using COBIT framework would be a valid model to perform some process that will assist managers and auditors to better manage and evaluate the control environment as well as support the IT control.

Based on sample of (124) questionnaire forms distributed among employees in Iraqi banks, internal auditors and academic from accounting department faculty members, Hamode (2016), conducted study that aimed to proposed a framework to activating the role of internal auditors in managing IT risks in the Iraqi banking environment through applying ITG. The study targeted five of Iraqi private banks (Baghdad, Credit Bank in Iraq, Gulf Commercial Bank, Iraqi Middle East Bank and National Bank of Iraq) that deal with IT. The findings of the study showed that the proposed framework for ITG will contribute effectively to enhancing the role of internal audit in Iraqi banking environment to reduce IT risks.

In contrast with previous studies that concentrated on the impacts of ITG on internal audit, Sudanese & Mrabati (2019) conducted study on evaluate the ITG through internal audit for some of banking agencies in Algeria. A survey method was applied to professional employees that were working in three of the banking agencies in Algeria which are (BEA, BDL and CNEP). The findings of this study showed that necessity to apply ITG to meet the strategic needs for the banking agencies that were targeted. In addition, adoption the internal audit as method to evaluate the ITG for the institutions of the research sample.

Al-Obaidi & Ahmed (2019) in their study investigated the effects of ITG on the internal audit quality through using COBIT framework. The study used a total of 78 questionnaire forms distributed among internal auditors that were working in 13 commercial banks in Jordan that is list in Amman Stock Exchange. The results of this study indicated that there is a relation between ITG under COBIT 5 and the quality of internal audit in the Jordanian commercial banks sector.

Veerankutty et al (2018) conducted a study on impacts of ITG on the performance of audit technology in Malaysia. A survey conducted using of 309 questionnaire forms that were distributed among auditors that were working in Malaysian public sector. To test the influence between variables of the study, the study used SmartPLS 3.0 software analysis program. The study showed that using ITG will have direct impact on the performance of audit technology. Moreover, using an effective ITG will improve using audit technology among auditors.

Conclusion & Discussion

The review in this paper was on the effects of information technology governance (ITG) on internal audit in both developing and developed countries to deepen our knowledge, knowing the limitations and provide future research suggestions. Most of prior studies that was done in both emerged and developed

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economics indicated that using ITG will have significant positive impacts on internal audit. Organizations that implement ITG will be more willing to overcome with IT environment challenges and risks as well as preform more effectiveness. Most of previous studies used a survey method through questionnaire forms among internal auditors and professionals. Whether using this method are ideal to measure the impacts of ITG and internal audit is or not still doubtable question? The upcoming papers will pay more attention on other implications of have ITG on financial reporting quality, in addition to, new measurement methods.

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اثر حوكمة تكنولوجيا المعلومات على التدقيق الداخلي: مراجعة ادبيات

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المستخلص:

ان العلاقة بين حوكمة تكنولوجيا المعلومات والتدقيق الداخلي تم تناولها في العديد من الدراسات في الماضي والحاضر. ازداد اهتمام الاطراف المهتمة في الحوكمة وحوكمة تكنولوجيا المعلومات بشكل ملحوظ، بسبب الفضائح المالية التي هزت الاسواق المالية لبعض كبريات الشركات العالمية مثل شركة "Enron" في عام 2001. ان الهدف من هذه الدراسة هو محاولة الخوض في الدراسات السابقة التي تركز حول حوكمة تكنولوجيا المعلومات والتدقيق الداخلي من خلال مراجعة ثمانية مقالات علمية ذات الصلة بالموضوع في كل من الاقتصاديات الناشئة والمتقدمة. كما يعرض البحث النتائج الرئيسية المتعلقة بالموضوع فضلاً عن اقتراح البحوث المستقبلية ذات الصلة.

الكلمات الافتتاحية: حوكمة تكنولوجيا المعلومات، التدقيق الداخلي، مراجعة الادبيات