opción

Revista de Antropología, Ciencias de la Comunicación y de la Información, Filosofía, Lingüística y Semiótica, Problemas del Desarrollo, la Ciencia y la Tecnología

89

Año 25, enero 2010 [illegible]

Depósito de Ciencias Humanas y Sociales
ISSN: [illegible]
Depósito Legal: [illegible]

Universidad del Zulia
Facultad Experimental de Ciencias
Departamento de Ciencias Humanas
Maracaibo - Venezuela

Opción, Año 35, No.89 (2019): 2337-2365 ISSN 1012-1587/ISSNe: 2477-9385

INTERNAL AUDIT PERFORMANCE AND CORPORATE GOVERNANCE QUALITY

Salim Awad Hadi Al-Zabari, Post Graduate Institute for Accounting and Financial Studies/University of Baghdad
Ali Kadhim Hussein Al-Fatlawi, Baghdad College of Economic Sciences University

Abstrac
The purpose of this study is to evaluate the association of enterprise risk management and quality of corporate governance. In this aspect, the internal audit performance has been analyzed as the mediating force in the organizations. The problem of this study identified from the fact that corporate governance in Iraq is diagnosed with symptoms of health hazards in areas of laws. Yet, enterprise systems proved its benefits in Iraqi firms. Therefore, the aim of this research is to examine this association. The population covers all firm listed on Amman stock exchange, the sample consists of 168 firms, they have been chosen based on being listed and based on the existence of enterprise risk management system. The respondents are risk management specialists and internal auditors. Structural equation model is used for the statistical analysis. The results reveal a direct positive relationship between the enterprise risk management and the corporate governance quality. It also reveals the partial mediating effect of the internal audit performance, since the relationships become stronger and more justified. The findings highlight that organizations require implementing different practice for effectively allocating resources in adopting enterprise risk management. It also emphasized on that the firms should take into consideration human factors of usability and necessity of training before the adoption. Besides, it is considered as a first international study examine the relations (mediating effect of internal audit performance) in this frame.

Keywords: Enterprise Risk Management, Internal audit performance, corporate governance.

RENDIMIENTO DE AUDITORÍA INTERNA Y CALIDAD DEL GOBIERNO CORPORATIVO

Resumen

El propósito de este estudio es evaluar la asociación de la gestión de riesgos empresariales y la calidad del gobierno corporativo. En este aspecto, el desempeño de la auditoría interna ha sido analizado como la fuerza mediadora en las organizaciones. El problema de este estudio se identificó por el hecho de que el gobierno corporativo en Irak es diagnosticado con síntomas de riesgos para la salud en áreas de leyes. Sin embargo, los sistemas empresariales demostraron sus beneficios en las empresas iraquíes. Por lo tanto, el objetivo de esta investigación es examinar esta asociación. La población cubre todas las empresas que cotizan en la bolsa de valores de Amman, la muestra consta de 168 empresas, que se han elegido en función de su inclusión y en función de la existencia de un sistema de gestión de riesgos empresariales. Los encuestados son especialistas en gestión de riesgos y auditores internos. El modelo de ecuación estructural se utiliza para el análisis estadístico. Los resultados revelan una relación positiva directa entre la gestión del riesgo empresarial y la calidad del gobierno corporativo. También revela el efecto mediador parcial del desempeño de la auditoría interna, ya que las relaciones se vuelven más fuertes y más justificadas. Los hallazgos resaltan que las organizaciones requieren implementar diferentes prácticas para asignar recursos de manera efectiva en la adopción de la gestión de riesgos empresariales. También hizo hincapié en que las empresas deberían tener en cuenta los factores humanos de usabilidad y la necesidad de capacitación antes de la adopción. Además, se considera como un primer estudio internacional que examina las relaciones (efecto mediador del desempeño de la auditoría interna) en este marco.

Palabras clave: Gestión de riesgos empresariales, desempeño de auditoría interna, gobierno corporativo.

INTRODUCTION

Both of developing and developed economies of the world are extending their boundaries to the maximum limit. It has been identified that most of the countries are becoming members of the World Trade Organization (WTO). Additionally, different countries are taking part in several commercial treaties,

which facilitate cooperation and free trade between two countries or group of countries. As a result, these have increased the concerns among regulatory authorities of the countries (McCahery et al., (2016). It has been found that growing competition and the need for developing new policies that would function as a moderator within these countries have significantly increased (Brack, 2017). According to the study of Al_Sufy et al., (2013); McCahery et al., (2016) that these policies are supposed to be the primary element of corporate governance which are concerned with economic, legal and social efforts. Additionally, these are associated with the benefits of individuals, industries, and societies to achieve a comprehensive development. In relation to this, the recent reputational crises were due to the collapse of different business activities, which was incurred due to inappropriate risk management framework reimplementation (Al_Sufy et al., 2013; McCahery et al., 2016).

Sinchuen and Ussahawanitchakit (2009) identified that audit play an important role in the development of corporate governance and managing risk to the business. The performance of audit in the business becomes crucial, as it is demanded by shareholders for attaining greater protection from financial performance and any fraud. In this regard, the auditors are liable to provide accurate information and quality, which include relevance, timeliness, reliability, and accuracy of information. Moreover, the auditors play an essential role in developing standards in business with high level of direction controlling risk in the business. The auditing standards provide appropriate guidelines for planning and controlling different business activities to produce the quality of information in the business (Sinchuen and Ussahawanitchakit, 2009). With consideration of the role of audit in business and association of corporate governance with risk management, this paper analyses the mediating role of auditor performance in the business for development of corporate governance practices and managing risk of the Iraqi business environment as an example of the emerging countries.

BACKGROUND OF THE STUDY

The professional world's revolutions result in adopting modern information technology systems (ITSs) that are now considered as a mega trend and strategic direction in the world of accounting and business (Abou-El-Sood et al., 2015). In relation to this, enterprise risk management (ERM) is one of the most important ITSs. ERM system represents a comprehensive approach that operates on enterprise-level for assessing the risk to the business (Bromiley et al., 2015). For the implementation of ERM in the business, organizations commit a radical shift in operational practices, which install for categorizing, managing,

and decreasing risks. Through this business can realize more efficient capital allocation and take better capital structure decisions. Scholars pointed out that business optimizes the selection of better hedging instruments and risk response precautions, for improving the strategic decisions making practices as a response to the variety of changing circumstances that affect the business world (Eckles et al., 2010; Rose, 2015).

As another side of the same dice, it has developed the need for having an internal auditing function to monitor and take care of circumstances. In this aspect, Sarens et al., (2012); Mohammadi and Shirzad (2016) identified that the internal auditing function contributes majorly to mastering the responsibility of the departments that are concerned with the internal control and hazards capturing. It, also, offers consultation to senior management for analyzing business activities (Sarens et al., 2012; Mohammadi and Shirzad (2016). The association of corporate governance and ERM is justified by evaluation of the achievement of these benefits that primarily depends on the inputs of ERM. Furthermore, the quality of the corporate governance in turns depends on internal auditing functions.

RESEARCH METHODOLOGY

Problem Statement

The problem of this study rose from the signs presented that corporate governance in Iraq was diagnosed with symptoms of financial health hazards in areas of laws comparing to global standards. One of the most recent evaluations was presented by the European Bank, which reflected negative indicators in terms of gender diversity in different organizations and independent directors (European bank, 2016). Other gaps that are found in the previous studies include the occasional handling of complaints from shareholders with the lack of formal mechanisms for that, also, in most cases, annual reports of the business only are audited by external auditors. And practically, there are no differences between the management and the board in some cases (Shanikat and Abbadi, 2011).

Significance of the Study

The significance of this research is to analyze the association of corporate governance practices with enterprises risk management. The positive pieces of evidence indicated the worthy influences of implementing the enterprise systems in Iraqi organizations. For instance, enterprise resource planning (ERP) systems have countless benefits to organizations, in areas that include operational improvements and getting quality of information (Abu-Shanab and Saleh, 2014). This study is contributing to developing the link between these two forces. Additionally, the main focus of the study is to analyze the role of auditing for medicating the link for managing the business risk.

The implications of this research are presented from being a guideline for organizations to follow and refer to, as a proper evidence of the values of adopting enterprise systems as solutions to enhance corporate governance quality, by advancing the performance of internal auditing. The expected explorations will assist the Iraqi firms in the process of decision-making on whether they should allocate resources and efforts for owning enterprise systems, or to eliminate any future projects if the assumption will not be evidenced. The need of inexistence of these assumptions is related to the fact that these projects cost plenty of time, training, effort, and money.

Research Questions

The nature of the curious researching requires critical analysis of different factors that are linked with corporate governance, enterprise risk management, and internal audit. For attaining the appropriate solution to the research problem this study based on answering the following questions;

- What are the benefits for organizations from being engaged in projects to adopt or upgrade ERM systems that may lead to consuming time, efforts, and money?
- What is the association between ERM and enhancements in the quality of corporate governance?

Aim and Objectives

This research aims to provide guidelines for organizations to follow during adaptation or upgrading of ERM system in the business. For attaining this purpose, this research provides proper pieces of evidence for adopting ERM as solutions to enhance corporate governance quality, by advancing the performance of internal auditing. Therefore, the objectives of the study include the following:

- To determine the role of ERM in the business.
- To identify the importance of developing the quality of corporate governance practices.
- To explore the mediating role of audit performance in business.

THEORETICAL BACKGROUND

Enterprise Risk Management

According to COSO framework, ERM system could be defined as a business strategy, which identifies the process that is implemented in the organization and develop different approaches for protecting the business by altering organizational objectives and operations (COSO, 2004). In other words, Viscelli et al., (2017) specified that ERM contains the tactics and procedures applied by businesses for managing risks. The values of ERM arisen by considering this as an approach for

identifying, analyzing, monitoring and responding to risks (Viscelli et al., 2017).

COSO was established in 1985 by five independent private associations of United States. COSO ERM Framework has eight components, including; the internal environment, in this aspect, the main role of the internal environment is to establish the organization`s risk culture and tone by the impact it has on the risk appetite and maintaining the accord of ethical values (Moeller, 2014). Another component of risk management framework is the objective setting; which needs to be fit with the organization's mission, strategies, structure, business model and, code of conduct. The third component is the risk identification; by identifying any possible internal or external events to prevent its hazardous effects on business. The risk assessment; based on the likelihood and impact. The risk response; the management need to choose appropriate actions to respond to risks, based on the level of tolerance and appetite of the business. In addition to this, the sixth component is an oversight; this is followed by policies and procedures that control actions. The communication is risks related information requires to be completely sorted out in clear and objective way, throughout a pre-established timeframe by allowing the management and staff to carry out their responsibilities. Moreover, the last component includes monitoring; in which the system of management is required to be administered and customized base upon demands of the business. With the implementation of ERM, the control is needed to be examined thoroughly by audit committee/internal auditing by means of quality assurance (Moeller, 2014).

ERM adds value by affecting the organizations holistically. As Nocco and Stulz, (2006) found that this system assists by helping senior management to do a tradeoff between risks and returns. Similarly, employees at several levels, specifically from auditing field used to the specific style of work in which the ERM is implemented in the business. Through this, all material risks are controlled, monitored, and carefully evaluated from enterprise risk management system (Nocco, and Stulz, 2006).

Internal Audit Performance and Corporate Governance Quality

The internal audit profession developed in the world of business in the nineteen century. Since that time, this profession has become the interest of a vast number of researchers. The profession of audit receives lots of benefits from ITSs. Some of these benefits include; verifying transactions, accuracy, reducing human errors, enhancing the business process, and most importantly applying full synchronizing of risk information in overall organizational units,

which contribute for achieving the standardized auditing administrative responsibilities (Ravjee and Marx, 2015). The internal audit profession, indeed, proved itself worthy by its several abilities to preserve effective controls, mitigate frauds and implement effective strategies for corporate governance practices in the organizations (Tsai, et al., 2015).

During the last decade, it has been observed that higher attention paid to the development of corporate governance practice from the developed organization of the world including, world bank and Economic Cooperation and Development (OECD). In this relation to this, the report of OECD, (2004) defined the corporate governance as "the system of rules, procedures, and activities through which a company is directed and operated for attaining its strategic objectives of the business.

In relation to this, organizations with better corporate governance quality preserve an environment of equality, transparency, and accountability within the workplace. As agreed in this regard, it has been found that there is an indirect relationship between the costs of equity upon the improvement of corporate governance, which results in increasing the value of firms. However, the corporate governance helps in reducing risks in the decision-making process and it reflects in decreasing violations of rules, standards, and market codes. As a result, these organizations will signal investors with positive signs of success, including increases in the market share value, maximizing the shareholders' wealth, preserving sustainability and economic growth over the long-term (Loukil and Yousfi, 2012; Azeem and Afza, 2016).

THE LITERATURE REVIEW

Previous ERM Research

Prior ERM research has primarily been focused on the implications of ERM and on its role in reducing the overall risks. For instance, the other studies analyze different factors of implementing ERM in business such as; COSO, (2004); Rose, (2015); Viscelli et al., (2017).

According, to the study of Gates, et al. (2012) which thoroughly evaluated the impact of ERM and critically analyzed the ERM for identifying the effect of this on business performance. This study was conducted to recognize the role of ERM in attaining business goals and managing different risk factors based on components of COSO integrated framework for managing risk. This study conducted the survey from 1000 auditors by approaching them through email in the United States. The research has applied structural equation model (SEM) for the analysis of collected data. The control variable of the study includes the size of the firm. The finding of this study indicated that ERM leads to improve organizational performance. Furthermore, that effect of ERM varied according to the size of the organization. Contrarily, the authors stated limitation on ERM

study especially that the risk management process is not mandatory to be disclosed by the organization (Gates, et al., 2012).
Additionally, the study conducted by Mohammadi and Shirzad (2016) constructed a sample of 50 firms listed on Tehran Stock Exchange using Friedman test that aimed to make sure that the internal auditors are truly engaged in ERM tasks. According to the results, it has been suggested that ERM assists the internal auditors in carrying out their duties. Especially this support for evaluating the issues efficiently, reporting the risk assessment, forcing accountability on risk management practices, and contributes to risk-response decisions (Mohammadi and Shirzad, 2016), According to this study, it has been identified the business need to engage in the ERM process at the initial phase of implemented these practices. On the other hand, Cohen et al. (2017) examined the impact of ERM on financial reporting of audit associates, chief financial officers, and audit committee members, by conducting semi-structured interviews with skilled organizational members from (11) public companies in the Northeastern city (United States), depending on COSO framework. The study revealed that there is an inverse relationship between using ERM and different elements of risks that have been observed in the financial reports when ERM systems are not used. It has been found that the financial reports will lose their accuracy and precision. This will affect the overall assessment and planning of the business. In turn, that will result in the inaccuracy of accounting valuations and appraisals (e.g. asset impairments) (Cohen et al, 2017).

Internal Audit Performance and Corporate Governance Quality
The financial crisis and collapses that occurred in major companies such as Enron, WorldCom, and Nortel that in turn the century which raised many questions about the independence of internal auditors, the reporting lines, the relationship between different senior management and productivity of auditing committee (El-Sayed Ebaid, 2013). In relation to this, Regoliosi and d'Eri, (2014) identified that a normal response results in the development of many regulations have been issued to prevent such breakdowns, like the Sarbanes-Oxley Act of 2002 (Regoliosi and d'Eri, 2014). Furthermore, it has been recognized that this increased the interest of best practices and methodologies; because it has been found that higher corporate governance quality results in lower cost of capital for the business. Moreover, this increases the confidence of investors and facilitates them for obtaining the fund and financial leverage (Omet and Yassen, 2015).
In contrast to this, El-Kassar, et al., (2014) suggested a quantitative evaluation assess the association between internal audit and corporate governance quality in multinational firms operates in Lebanon. This research used a questionnaire

hat was distributed to a convenient sample of 80 participants who were head of internal audit departments, CEOs, internal auditors and chairpersons to measure the level of quality of corporate governance. The findings revealed that to enrich the level of quality of corporate governance, there is a need to sustain dual straight independent and confidential reporting lines. One of them is directed to the audit committee`s chairman and the other is to be to the CEO. Furthermore, the internal audit committee needs to set its plan and budget without any kind of interfering with senior management. As well as, they must preserve the high level of reliability in terms of having formal strategy and obedience with regulating moral. All of this is to protect the owner's interest and to prevent agency problems.

In addition, there is a significant association between the variables. Moreover, they found that the level of experience and independence influence the level of quality (El-Kassar, et al., 2014).

On another side, Al Azzam et al., (2015) indicated that the majority of organizations in Iraq are owned by families (approximately 90%). As a result, sustaining these organizations and their high performance is considered extremely critical to the economic growth in Iraq. This study was inspired by a case study of Nuqul group as a family-owned business was established in 1952. It became a conglomerate of over 30 companies and hires around 6000 employees. The experience in corporate governance of Nuqul Group could be presented by the successful formation of a solid board that consists owner of the business including family and non-family member. Additionally, this contains board members who work for different business activities including corporation and specialization in the core business and manufacturing. In this regard, Nuqul preferred to add two external independent directors because they assumed that they would carry a fresh starting point and results in challenging the business approach in which other business directors work and operate different business activities.

Nuqul has confidence that the development of diverse board structure results in serving the interests of the family. Two committees operate under the board's supervision, which includes an audit and compensation committee. The audit committee also includes corporate affairs director, chief financial officer, human resources director and independent director. Independent directors are compensated according to the board charter. Additionally, yearly renewal letter is extended to present a director, which unlocks the doors for a change. Moreover, the board adheres by-laws that were established in the organization, which developed prototypical governance. In this regard, the researchers suggest generalizing the experience to other family business for encouraging the concept (Al Azzam et al., 2015).

RESEARCH DESIGN AND VARIABLES MEASUREMENT

Study Sample

The population of this research entails all firms listed in Amman Stock Exchange (ASE), containing service, industry, banking, and insurance sectors. The sample organized in this research is a purposive sample, which consists of 168 internal auditors and risk management specialists. The firm to be nominated should satisfy the following conditions:

1) The firm is listed in ASE.
2) ERM must have been adopted and passed the implementation stage.

Moreover, the developed questionnaire has been distributed in both Arabic and English languages to enhance the level of understandability. Additionally, in order to preserve a higher level of accuracy for increasing the response rate. Both paper-based and online tool has been employed in the distribution of questionnaire with planned follow-up procedure. From each selected firm, three respondents were contacted to ensure that researcher is getting the correct response based on the area of specialization. After that, the collected answers merged as one representative input. According to the findings, the response rate of the returned questioners was 32.2%.

The Variables Measurements

Independent Variable: Extent of ERM

The extent of ERM was measured by the status of COSO framework`s eight components that including objective setting, event identification, internal environment, risk assessment, risk response, monitoring, control activities and information/communication which were covered in (24) questionnaire items (Gordon et al., 2009; Tsai et al., 2017). These items were inquired in the first part of the questionnaire using a Likert scale; in this scale, the range representing strongly disagree to totally agree from point 1 to 5 with the item. This research design is exploratory, in which the variable has been estimated, and expressed using factor analysis results after pushing raw observations to the software.

The Mediating Variable: Internal Audit Performance

The internal audit performance is measured by four customized balance scorecard (BSC) elements that contain financial, customer, internal business process, and learning and growth perspectives. These aspects of the business have been analyzed in the study by inquiring14 questions in the second part of the questionnaire that is based on the five-point Likert scale. Additionally, the customized BSC approach has been applied to internal audit function to measure the internal audit performance since it is a leading and comprehensive

measurement. The customizations of the questionnaire include elements of internal audit customers (audit committee, management, and audited report), audit process, capabilities, and innovations. In this context, BSC extends the vision of an organization that makes the management to act as a pirate who will oversee the horizon for making the future planning of the business. In other words, management of the business would not consider financial outcomes for the fiscal year only but also look for future opportunities and enhancements since BSC embodies both quantitative and qualitative measures of the business.

The Dependent Variable: Corporate Governance Quality

The quality of corporate governance in this research measured on the basis of (10) questions. These questions discussed key issues of governance quality that were mentioned previously depending on the study of El-Kassar, et al., (2014). It has been found that this measurement is comprehensive and applied to an environment that is close to the nature of firms that are operating in Iraq (El-Kassar, et al., 2014).

The Study Model

Based on the above-mentioned explanations regarding the study variables the following model for identifying the variables has been developed. This model contains the extent of ERM as an independent variable and the quality of corporate governance is the dependent variable. Moreover, the mediating role of the internal audit performance presents in the following figure.

Figure 1: The Study Model.

The first variable identified the impact of ERM on business practice, which identified how efficiently business manages risk and employ network practices. Additionally, this variable includes an adaptation of different practices for managing and mitigating business risk. The dependent variable is the corporate governance quality, which evaluates the impact of corporate governance on analyzing business practices. Additionally, the internal audit performance variable is analyzed through the quality of report that has been produced from the auditor reports.

FINDINGS AND DISCUSSION

Descriptive Statistics

Based on the presented results in the table (1), it has been found that the majority of the respondents are well experienced. The underlying reasons for this the participant positions that are related to the decision-making process of the business. Moreover, respondents' professional profile indicates highly appreciation and awareness of ERM value. About (96.4%) of the sample firms have internal audit department as an independent unit. Moreover, (42.3%) of firms hire more than (12) internal auditors, and finally (85.7%) have been contracted with at least one of the big-4 audit firms, which stress on the high attention of the auditing.

Table (1): General Descriptive Statistics for the Respondents

			Frequency	Percent
The years of experience	(1).	0-3 years.	15	08.9 %
	(2).	4-7 years.	40	23.8 %
	(3).	8-12 years.	49	29.2 %
	(4).	Above 12 years.	64	38.1 %
The position level	(1).	Employee.	24	14.3 %
	(2).	First level management.	36	21.4 %
	(3).	Mid-level management.	41	24.4 %
	(4).	Senior level management.	58	34.5 %
	(5).	Board member.	8	04.8 %
	(6).	Other.	1	00.6 %
Having internal audit department	(1).	No.	6	03.6 %
	(2).	Yes.	162	96.4 %
The number of internal auditors in the firms	(1).	0-3 internal auditors.	37	22.0 %
	(2).	4-7 internal auditors.	34	20.2 %
	(3).	8-12 internal auditors.	26	15.5 %
	(4).	> 12 internal auditors.	71	42.3 %
Holding international certificate	(1).	No.	66	39.3 %
	(2).	Yes.	102	60.7 %
Category of certificate	(1).	N/A.	66	39.3%
	(2).	Audit.	7	04.2 %
	(3).	Risk management.	32	19.0 %
	(4).	Accounting.	23	13.7 %
	(5).	Finance.	18	10.7 %
	(6).	Others.	22	13.1 %
Contracting with external audit firms	(1).	No.	8	04.8 %
	(2).	Yes.	160	95.2 %
The external	(1).	No.	24	14.3 %

Furthermore, based on the measure that is presented in the table: 2 which reflected that variables of the research are highly valuable. Additionally, the standard deviations are low and below the mean value, which designates the respondents to have an initial decent attitude towards the scope of the study and agreed on the variables associated to their duties and job tasks perfections.

Table (2): Summary of Descriptive Statistics of the Key Variables of Interest

Variable	Mean	Std. Deviation	Level of Importance	Rank
ERM	4.04	0.666	High	2
Internal Audit Performance	3.818	0.669	High	3
Corporate Governance Quality	4.199	0.706	High	1

Normality

It is important to confirm the normality as SEM's assumption (Kline, 2012). The finding of the study showing the adequate results as its ranges in the acceptable area of measure or skewness that range from (-2 to +2) (Field, 2009; Gravetter and Wallnau, 2014). In relation to this, all the items of the results are normally distributed with the outcome for the measure of Skewness 1.69 that is within the selection criteria. Based on this measure of the result it has been specified that data of the research showing normal distribution.

Reliability Test

For identifying the reliability of developed questionnaire, the measure of Cronbach alpha has been applied as presented in the table: 3. the rule for considering the data as reliable indicating that values above 0.07 for measuring internal consistency consider as reliable. However, the measure of all three elements is greater than acceptable criteria that are considered as reliable. In this aspect, all three section of the study is reliable such as Enterprise risk management, quality of corporate governance and internal audit performance section of the questionnaire with the result of 0.962, 0.927 and 0.828 which showing the higher reliability of data.

Table (3) : Cronbach's Alpha Coefficients			
(1).	Extent of ERM	23 Questions	0.962
(2).	Internal Audit Performance	13 Questions	0.927
(3).	Corporate Governance Quality	8 Questions	0.828

Structural Equation Model (SEM)

The SEM is "path analysis with latent variables". It is a pattern of multiple regression analysis used to appraise the causal models, by examining the association between the endogenous variables and one or more exogenous variables. This approach is applied to estimate the significance of causal connections between variables.

The SEM is enormously recommended to be deployed in the research, which investigates behavioral observation and complex constructs and relationships. This applied in the case, which could not be directly measured and used to have a certain estimated error. This measure is appropriate for most socioeconomic concepts that are used to express thoughts, people, events, and organizations (e.g. service quality and corporate governance). In this regard, SEM is deployed in cases of the mediated effect of the variable (Anderson and Gerbing, 1988; Hoyle, 1995).

Factor Analysis

The correlation between the latent variable and its factors are determined and calculated by different factor loading. The factor loading is responsible for reflecting the relationship of each variable to the original factor. The outcomes will reflect how much does each factor is capable to clarify of the total variance of the latent variable. The factor demonstrates the most variance is labeled with eigenvalue, and the least values will be discarded (Schumacker and Lomax, 2004),

There are several preconditions and assumptions need to be certified in order to conduct the factor analysis including multivariate normality, linear relationship between variables, and low multicollinearity (Jolliffe, 1986; Fan and Wang, 1999).

The estimation of unknown parameters in SEM will be handled using maximum likelihood estimation (MLE). MLE uses an iterative method and procedure to minimize the variances between the tested sample variance/covariance matrixes in order to guess the population variance matrix from the sample.

MLE relies on a known probability distribution (like the normal distribution) and compares data sets to the distributions; aiming to find an appropriate match for the data to estimate θ. How well the data matches the model is known as "Goodness of Fit".

The EFA could be considered as the arrangement of interrelated measures. Conventionally, this model has been used to explore the primary factors that observed different variable without limiting fixed element of the measure (Jolliffe, 1986). Table (4) shows EFA common cut of points:

	The Item	The Condition/ Cutoff Point.		Reference
(1).	Factor loading	All items must be loaded into one factor, the factor loading value > (0.40). Yet, some researchers agreed that factor loadings > (0.30) cut-off point is generally adequate.		Laher, (2010).
(2).	Eigenvalue	The Eigenvalue must be >1.		Child, (2006).
(3).	Bartlett's test of Sphericity	Used to check the homogeneity of variances by comparing the correlation matrix to an identity matrix. It seems if there are any redundancies between the variables, which will summarize some factors. It must be statistically significant.		Snedecor et al., (1989).
(4).	Kaiser-Meyer-Olkin (KMO)	The purpose of KMO test is to evaluate the appropriateness of the collected data for factor analysis. It performs by measuring the sampling adequacy for each variable and then for the whole model. This aims to measure the amount of variance between variables.		Hair et al., 2011).
		KMO values are close to zero	There are wide correlations and large problematic matters for the factor analysis.	
		KMO values (<0.6 some researchers accepted the value at 0.5)	Sampling is not adequate.	
		KMO values (0.8 -1)	Sampling is adequate	

The CFA confirms the factor structure of a group of observed variables and confirms the factor loading. In CFA, it is essential to confirm that the model is identified with positive degrees of freedom in order to evaluate the goodness of fit for the model (Hox and Bechger, 2007). Table: 5 present the CFA cutoff points.

Table (5) : CFA Fitting Indices and Cutoff Points

	Index	Cutoff Points		Reference
(1) .	Bentler-Bonett Index or Normed Fit Index (NFI)	< 0.90	Poor fitting model.	❑ Bollen and Long, (1992).
		(0.90 - 0.95)	Marginal fitting model.	
		> 0.95	Good fitting model.	
(2) .	Comparative Fit Index (CFI)	> 0.80	Sometimes permissible.	❑ Hu and Bentler (1999). ❑ Sharma, et. al (2005).
		> 0.90	Traditional.	
		> 0.95	Excellent.	
(3) .	Root Mean Square Error of Approximation (RMSEA)	> 0.10	Bad fit	❑ MacCallum, et al. (1996).
		0.05-0.10	Moderate fit.	
		< 0.05	Excellent fit.	
		Some scholars suggested 0.10 as cutoff of the poor fitting model.		
(4) .	Goodness of Fit Index "GFI" (which represent the harmonization of quality).	0.90 is the suggested value for GFI, but various studies showed that it differs based on sample size (if factor loadings and sample sizes are low a higher cut-off of 0.95 is more appropriate). Given the sensitivity of this index, it becomes less popular and less recommended to be used.		❑ Shevlin and Miles, (1998) ❑ Sharma, et. al (2005).
(6) .	Chi-square/df	❑ <3 good. ❑ <5 sometimes possible.		❑ Hu and Bentler (1999).

The Exploratory Factor Analysis results

The EFA will be conducted for each variable. All factors under 0.4 will be discarded as per the table (6). Table (7) presents the key results for cut off points. It is evident that all conditions have been satisfied. As a clarification, Bartlett's tests of statistics are substantial with the value of $\alpha < 5\%$. In this context, the factor loadings need to be greater than 0.40 for remaining items. Additionally, the Eigenvalues (accountable for the most variance) are high and > 1. Chi-Square (decides if a sample data matches a population) as a fitting test is also significant Finally, KMO statistic values are very high and this indicates the appropriateness of factor analysis. However, all items with factor loading below 0.4 will be eliminated. The commonalities are all fit to the rule.

Table (6): The Factor Matrix for the variables (Initial before CFA).

Extent of ERM				Internal Audit Performance			Corporate Governance Quality		
	Factor				Factor			Factor	
	1	2*	3*		1	2*		1	2*
							CGQ1	.618	.606
RM2	.695	-.119	-.090	IP2	.544	-.182	CGQ 2	.510	.202
RM3	.677	-.192	-.198	IP3	.667	-.228	CGQ 3	.545	.077
RM4	.779	-.366	-.118	IP 4	.720	-.256	CGQ 4	.780	.142
RM5	.793	-.205	-.055	IP 5	.731	-.338	CGQ 5	.762	.017
RM6	.813	.102	-.043	IP 6	.814	-.228	CGQ 6	.867	-.272
RM7	.666	-.247	-.035	IP 7	.647	.306	CGQ 7	.825	-.238
RM8	.695	.027	-.237	IP 8	.811	.109	CGQ 8	.435	.377
RM9	.769	.065	-.211	IP 9	.611	.334	CGQ 9	.637	-.115
RM10	.726	.075	-.041	IP 10	.633	.535	CGQ 10	.489	-.092
RM11	.789	-.065	-.074	IP 11	.732	.468			
RM12	.614	.274	-.179	IP 12	.828	-.290			
RM13	.791	.096	-.257	IP 13	.814	-.027			
RM14	.612	.096	-.006	IP 14	.655	-.153			
RM15	.647	.350	-.050						
RM16	.800	.248	-.094						
RM17	.720	.281	.020						
RM18	.718	.196	.056						
RM19	.787	.056	.247						
RM20	.686	.048	.329						
RM21	.789	-.129	.257						
RM22	.729	.082	.291						
RM23	.617	.121	.358						
RM24	.732	.017	.202						
3 factors extracted, 4 iterations required, Extraction method ML				2 factors extracted. 4 iterations required, Extraction method ML			2 factors extracted. 8 iterations required, Extraction method ML		

* Based on the factor analysis results, the first question "the overall risk appetite of the organization is:" will be eliminated, since that the factor loading is below 0.4. * Factors 2 and 3 will be eliminated.	* Based on the factor ana results, the first question cost of performing the in audit function exceeds t benefits" will be eliminat the factor loading is belo * Factor 2 will be elimin	* Factor 2 will be eliminated.

	ERM	Internal Audit Performance	Corporate governance quality
KMO Test	0.947 (Adequate)	0.915 (Adequate)	0.832(Adequate)
Bartlett's Test of Sphericity			
Approx. Chi-Square	2837.904	1426.834	830.795
Degrees of freedom	276	91	45
Sig.	.000 (Sig. Pass)	.000 (Sig. Pass)	.000 (Sig. Pass)
Initial Eigenvalues	Factor 1 [12.565] >1	Factor 1[7.0150] >1	Factor 1 [4.858] >1
% of Variance	Factor 1 [52.356]	Factor 1 [50.109]	Factor 1 [48.581]

The Confirmatory factor analysis results

Table: 8 presents the CFA then based on the results, some items may be deleted. The values of Chi2 are significant at ($\alpha \leq 0.05$). The values of (Ch2 / DF) are (2.56, 4.77 and 4.065) which indicate a good harmonization level since they fall in the range falls off (1 – 5). The GFI values (which mirrors the harmonization of quality) are (0.752, 0.728 and 0.882) are very close to the 0.90 (optimal value) and to 1 (full compatibility). The CFI values are (0.867, 0.821, and 0.850), they are close to the optimal value. The NFI value mirrors good enhancement level in the model fit. The results of RMSEA are (0.097, 0.15, and 0.135), which still reflect problems, the justification behind this is the small sample size and the small degrees of freedom, the optimal RMSEA values requires around 1000 observation as a sample size (Kenny and McCoach, 2003; Kenny et al, 2014; Taasoobshirazi and Wang, 2016).

Table (7): CFA cutoff points Results

	ERM value	evel	Internal audit Performance value	evel	Corporate governance quality value	evel
Chi Square (CMIN)	588.83	-------	310.106	-------	81.301	-------
Probability level (P)	0.000	-------	0.000	-------	0.000	-------
Degrees of freedom (df)	230	-------	65	-------	20	-------
Chi Square / DF	2.56013	Fit	4.771	Fit	4.065	Fit
GFI	0.752	Fit	0.728	Fit	0.882	Fit
CFI	0.867	Fit	0.821	Fit	0.850	Fit
RMSEA						
NFI	0.801	Fit	0.785	Fit	0.814	Fit

Inferential Statistics

To evaluate the mediating effect on the relationship between one variable with another variable commonly, the path analysis is used. Consequently, according to Baron and Kenny, (1986), two steps shall be followed: The first one is testing the direct effect of the independent variable such ERM on the dependent variable of corporate governance quality by checking the signature and the impact values. The second step is to test the indirect impact of the ERM on the dependent variable of corporate governance in the attendance of the mediator variable. If the results showed that the direct impact is reduced but still significant; this means a partial mediation Instead, if the direct impact is reduced and not significant; this means complete meditating (Baron and Kenny, 1986). The relations are presented as per figure (2) and (table 9).

For the AMOS results, the sign-value is (0.000) at ($\alpha \leq 0.05$). This infers that the independent variable has a significant effect on the dependent variables. Also, the (Ch2/DF) for all relations are falling in the acceptable intervals which indicate good harmonization. Likewise, the results show that the values of NFI and the Hoelter Index are not acceptable due to sample size (Hair et al., 2010).

In order to confirm the indirect relationship between the ERM and the corporate governance quality with the existence of internal audit performance, the following conditions must be meeting:

1) The significant value between ERM and corporate governance quality should become insignificant with the presence of internal audit performance

(full Mediation), if still significant and decreased (partial Mediation) like the case of this paper.

2) The impact value of ERM on internal audit performance must be significant. Alternatively, it could be insignificant in the case of full mediation

3) The impact value of internal audit performance on corporate governance quality should be significant.

4) The average variance extracted should be increased [41]

The effect of ERM on internal audit performance is significant at (0.05). In addition, it is obvious that internal audit performance has a significant effect on the corporate governance quality at (0.05). Furthermore, the results reveal that effect of the ERM on corporate governance quality is significant at (0.05) and the effective value is (0.31). Nevertheless, it is noticed that the effective value of the ERM on corporate governance quality in the attendance of internal audit performance has been shrunk rather than in the absence of internal audit performance. This indicates that the internal audit performance plays the role of partial mediation.

Table (8): AMOS Relationships Results

	ERM on IAP	Level	ERM on CGQ	Level	IAP on CGQ	Level
Chi Square (CMIN)	1356.86	—	987.530	—	580.921	—
Probability level (P)	0.000	—	.000	—	.000	—
Degrees of freedom (df)	593	—	433	—	188	—
Chi Square / DF	2.288	it	2.281	Fit	3.090	Fit
GFI	0.666	id	0.708	Fit	0.706	Fit
CFI	0.823	it	0.833	Fit	0.800	Fit
RMSEA	0.088	it	0.088	Fit	0.112	Fit
NFI	0.726		0.739		0.733	
Hoelter Index (0.05)	81	Fit	82	Fit	64	Not fit

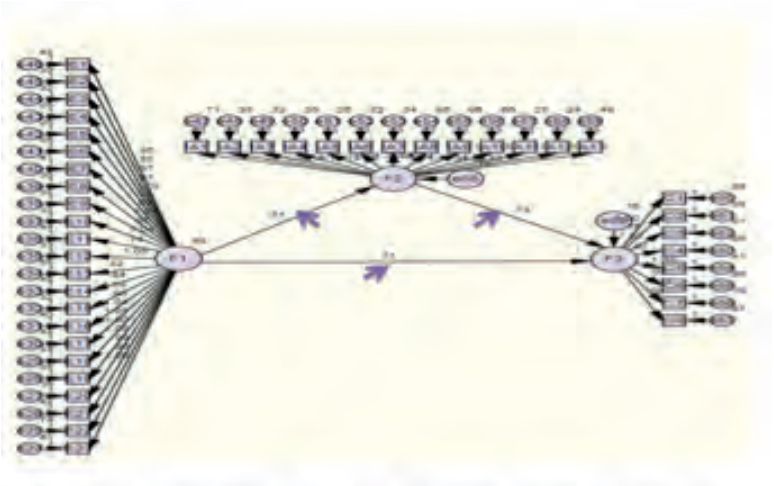

Figure 2: The mediating effect for the ERM to corporate governance quality

CONCLUSIONS AND RECOMMENDATIONS

Base on the analysis of the study, which attempted to investigate whether the adoption of vital enterprise systems like ERM by Iraqi firms from all sectors will boost the quality of corporate governance indirectly by having positive reflections to the internal audit performance.

It has been found that outcomes of the study are consistent with the previous pieces of literature which examined some common variables and sub-relations such Cohen et al. (2017); El-Kassar, et al., (2014); Tsai, et al., (2017) that is prove to be capable which provide evident for the primary contribution about the ERM, corporate governance quality and the mediating effect internal audit performance. As a result, the worth of spending money and efforts on adoption and upgrading the systems of ERM is evident. Furthermore, the significant meditating role of auditing functions in case of having much rich governance. Consequently, the top management in the organizations is encouraged to adopt of ERM based on the nature of the industry and the needs of the firm under cost, technologies, experts and resources limitations.

Finally, it could be concluded that the ERM system adds value and enhance the corporate governance quality in a better way in the cases of internal audit existence and cooperation in a better way rather than in its absence. It has been found that implementation of ERM will help to minimize the risks in the Iraqi firms which operate in a hazardous environment like the MENA.

Based on the study conclusion, this study recommended focusing more on the

and Probability (Statistics and Prpbability.
4. Determining the number of test paragraphs: The test paragraphs were prepared in the light of the above levels, and after reading the previous literature close to the current research, such as the study (Al-Aqbi, 2002, Shara, 2006 and Abu Ara, 2014), and after listening to the views of the supervisor The number of appropriate subjects to test comprehension levels was determined in light of the number of main and sub-concepts identified under study, taking into account the capacities of the students at this age and the time allocated for teaching and the content of the modules of the book covered. Measured by eight levels Thus, the number of basic concepts (18) was a total of 144 (1) (144) (1). The first five question levels were objective, multi-choice type, and the last three classification levels, Supplement (A-13).
5. The wording of the test paragraphs: The test paragraphs were formulated in a clear and comprehensible language for all students. Each paragraph expresses a problem related to a particular level. Each test paragraph expresses a problem that includes the necessary information that enables the students to answer at the current level to help them move to the second level Successfully.
7. Certification of the test:
• Authentic honesty: To verify this honesty, the test paragraphs were presented with the instructions of the answer and a corrective key on a group of specialists to judge the apparent honesty of the test and was modified according to their views.
• Content validation: The validity of the content was verified by analyzing the scientific material of the research and extracting the main concepts and subsections (8). It was presented to a group of specialists in the teaching methods of mathematics and some teachers. Therefore, the validity of the content has been fully realized.
7. The first test application: To ensure the clarity of the test instructions, the diagnosis of obscure or unclear passages in the print or the double understanding of any of the test paragraphs, and the time required to answer the test, the test was carried out on the first survey sample consisting of (50) The first, on Monday, February 20, 2017, was randomly selected from the Badr secondary school under the Directorate of Education of Baghdad / Rusafa II. After applying the test, it was found that the time taken to answer each part of the test was 61 minutes, The average time it took To answer the paragraphs of each part of the test.
8. The second survey application: The test was applied to the second survey sample (to verify the cytometric characteristics of the test). The sample consists of (120) female students from the middle school of education of Baghdad / Wednesday, 22 February 2017 Part II.

REFERENCES

Abou-El-Sood, H., Kotb, A., & Allam, A. Exploring Auditors' Perceptions of the Usage and Importance of Audit Information Technology. International Journal of Auditing, (2015) 19(3), 252-266.

Abu-Shanab, E. A., & Saleh, Z. Contributions of ERP systems in Iraq. International Journal of Business Information Systems, (2014)15(2), 244-260.

Al_Sufy, F. J., Almbaideen, D. H. I. M., Al_abbadi, H. M., & Makhlouf, M. H. Corporate Governance and Its Impact on the Quality of Accounting Information in the Industrial Community Shareholding Companies Listed in Amman Financial Market-Iraq. International Journal of Humanities and Social Science, (2013) 3(5), 184-189.

Al-Azzam, Z. F., Al-Mohameed, H., & Al-Qura'an, A. B. How The Corporate Governance Affects Organizational Strategy: Lessons From Iraq Environment, (2015).

Anderson, J. C., & Gerbing, D. W. Structural equation modeling in practice: A review and recommended two-step approach. Psychological bulletin, (1988) 103(3), 411.

Azeem, M., & Afza, T. Dividend Policy and Corporate Governance Quality: An Empirical Investigation. European Online Journal of Natural and Social Sciences, (2016) 5(4), 996.

Baron, R. M., & Kenny, D. A. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, (1986) 51(6), 1173.

Bollen, K. A., & Long, J. S. (1992). Tests for structural equation models introduction. Sociological Methods & Research, 21(2), 123-131.

Brack, D. International trade, and the Montreal Protocol. Routledge. (2017).

Bromiley, P., McShane, M., Nair, A., & Rustambekov, E. Enterprise risk management: Review, critique, and research directions. Long range planning, (2015) 48(4), 265-276.

Child, D. The essentials of factor analysis. A&C Black (2006).

Cohen, J., Krishnamoorthy, G., & Wright, A. Enterprise risk management and the financial reporting process: The experiences of audit committee members, CFOs, and external auditors. Contemporary Accounting Research, (2017) 34(2), 1178-1209.

Committee of Sponsoring Organizations of the Treadway Commission (COSO).. Enterprise risk management—Integrated framework. COSO. (2004)

Eckles, D. L., Hoyt, R. E., & Miller, S. M. The Impact of Enterprise Risk Management on the Marginal Cost of Reducing Risk. St. Joseph's University,

Haub School of Business Working Paper Series, (2015) No.11-15.
El-Kassar, A. N., Elgammal, W., & Bayoud, M. M. Effect of internal audit function on corporate governance quality: evidence from Lebanon. International Journal of Corporate Governance, (2014) 5(1/2), 103-117.
El-Sayed Ebaid, I. Corporate governance and investors' perceptions of earnings quality: Egyptian perspective. Corporate Governance: The international journal of business in society, (2013) 13(3), 261-273.
European bank for reconstruction and development, Corporate Governance in Transition Economies Iraq Country Report. London. (2016)
Fan, X., Thompson, B., & Wang, L. Effects of sample size, estimation methods, and model specification on structural equation modeling fit indexes. Structural Equation Modeling: A Multidisciplinary Journal, (1999) 6(1), 56-83.
Field, A. (2009). Discovering statistics using SPSS. London: SAGE.
Gates, S., Nicolas, J. L., & Walker, P. L. Enterprise risk management: A process for enhanced management and improved performance. Management accounting quarterly, (2012) 13(3), 28-38.
Gordon, L. A., Loeb, M. P., & Tseng, C. Y. Enterprise risk management and firm performance: A contingency perspective. Journal of Accounting and Public Policy, (2009) 28(4),301-327.
Gravetter, F., & Wallnau, L. Essentials of statistics for the behavioral sciences (8th ed.). Belmont, CA: Wadsworth, (2014).
Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. Journal of Marketing theory and Practice, 19(2), 139-152.
Hox, J. J., & Bechger, T. M. An introduction to structural equation modeling, (2007).
Hoyle, R. H. Structural equation modeling: Concepts, issues, and applications. Sage, (1995).
Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural equation modeling: a multidisciplinary journal, 6(1), 1-55.
Jolliffe, I. T. Principal Component Analysis and Factor Analysis. In Principal component analysis, (1986) (pp. 115-128). Springer New York.
Kenny, D. A. Measuring model fit, (2014).
Kenny, D. A., & McCoach, D. B. Effect of the number of variables on measures of fit in structural equation modeling. Structural equation modeling, (2003) 10(3), 333-351.
Kline, R. B. Assumptions in structural equation modeling, (2012).
Laher, S. Using exploratory factor analysis in personality research: Best-practice recommendations. SA Journal of Industrial Psychology, (2010) 36(1),

1-7.
Loukil, N., & Yousfi, O. Does corporate governance affect stock liquidity in the Tunisian Stock Market (2012).
McCahery, J. A., Sautner, Z., & Starks, L. T. Behind the scenes: The corporate governance preferences of institutional investors. The Journal of Finance, (2016) 71(6), 2905-2932.
Moeller, R. R. COSO Internal Control Components: Risk Assessment. Executive's Guide to COSO Internal Controls: Understanding and Implementing the New Framework, (2014) 59-71.
Mohammadi, S., & Shirzad, A. RISK MANAGEMENT: EVIDENCE FROM THE ROLE OF AUDITORS. Journal of Multidisciplinary Scientific Research, (2016) 4(1), 18-21.
Nocco, B. W., & Stulz, R. M. Enterprise risk management: Theory and practice. Journal of Applied Corporate Finance, (2006) 18(4), 8-20.
OECD. The OECD principles of corporate governance. Contaduría y Administración, (216) (2004).
Omet, G., & Yaseen, H. The Determinant of firm investment: the case of listed Iraqi Industrial Companies (2015).
Ravjee, H., & Marx, B. An analysis of the evolving role of information technology with respect to selected standard and its impact on internal audit. (2015).
Regoliosi, C., & d'Eri, A. "Good" corporate governance and the quality of internal auditing departments in Italian listed firms. An exploratory investigation in Italian listed firms. Journal of Management & Governance, (2015)18(3), 891-920.
Rose, R. V. Approaching internal audits from an enterprise risk management perspective. EDPACS, (2015) 51(1), 1-5.
Sarens, G., Abdolmohammadi, M. J., & Lenz, R. Factors associated with the internal audit function's role in corporate governance. Journal of Applied Accounting Research, (2012) 13(2), 191-204.
Schumacker, R. E., & Lomax, R. G. A beginner's guide to structural equation modeling. Psychology Press, (2004).
Shanikat, M., & Abbadi, S. S. Assessment of corporate governance in Iraq: An empirical study. Australasian Accounting Business & Finance Journal, (2011) 5(3), 93.
Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. Journal of Business Research, 58(7), 935-943.
Shevlin, M., & Miles, J. N. (1998). Effects of sample size, model specification and factor loadings on the GFI in confirmatory factor analysis. Personality and Individual Differences, 25(1), 85-90.
Sinchuen, C., & Ussahawanitchakit, P. Effects of strategic audit planning on

audit performance: Mediator role of audit judgment and quality and public auditors in Thailand. Journal of Academy of Business and Economics, (2009) 9(2), 1-15.

Snedecor, George W. and Cochran, William G. (1989), Statistical Methods, Eighth Edition, Iowa State University Press.

Taasoobshirazi, G., & Wang, S. The performance of the SRMR, RMSEA, CFI, and TLI: An examination of sample size, path size, and degrees of freedom. Journal of Applied Quantitative Methods, (2016).11(3).

Tsai, W. H., Chen, H. C., Chang, J. C., & Lee, H. L. The Internal Audit Performance: The Effectiveness of ERM and IT Environments. In Proceedings of the 50th Hawaii International Conference on System Sciences (2017).

Tsai, W. H., Chen, H. C., Chang, J. C., Leu, J. D., Chen, D. C., & Purbokusumo, Y. Performance of the internal audit department under ERP systems: empirical evidence from Taiwanese firms. Enterprise Information Systems, (2015) 9(7), 725-742

Tucker, L. R., & MacCallum, R. C. (1997). Exploratory factor analysis. Unpublished manuscript, Ohio State University, Columbus.

Viscelli, T. R., Hermanson, D. R., & Beasley, M. S. The Integration of ERM and Strategy: Implications for Corporate Governance. Accounting Horizons, (2017).

UNIVERSIDAD
DEL ZULIA

opción
Revista de Ciencias Humanas y Sociales

Año 35, N° 89, (2019)

Esta revista fue editada en formato digital por el personal de la Oficina de Publicaciones Científicas de la Facultad Experimental de Ciencias, Universidad del Zulia.
Maracaibo - Venezuela

www.luz.edu.ve www.serbi.luz.edu.ve

produccioncientifica.luz.edu.ve