The Moderating Role of Internal Control on the Relationship Between Accounting Information System and Detection of Fraud: The Case of the Jordanian Banks

Dr. Audeh Ahmad Bani Ahmad

Alalbyt University, Jordan
Email: Audehahmad@yahoo.com

Abstract
This study chiefly makes an attempt to look at the result of accounting information system (AIS) on detection of fraud, with the use of control as a moderator. the information gathered from 225 staff of Jordanian banks were analyzed with PLS 3, and therefore the results show the necessary role of control on the linkage between AIS and detection of fraud among the examined banks. AIS and detection of fraud are absolutely and considerably correlate. The outcomes obtained are a valuable addition to the literature concerning factors impacting detection of fraud in countries in geographical region as well as Jordan. This study conjointly brings further justification for the scrutiny of AIS and internal controls potency.
Keywords: Accounting Information System (AIS), Internal Control, Fraud Detecting, Jordan.

Introduction
Fraud is common all over within the world that no single organization or country is spared from its incidence (Abdullahi & Mansor, 2015). In different words, no organization or nation will claim to be fraud-free. However, despite its commonness, of the incidence of fraud differs supported country and organization. Alleyne et al (2010) mentioned that the procedures of fraud detection outside developed nations are still underexposed. Meanwhile, there's a major increase within the documented fraud cases involving finance, and among these cases embrace WorldCom and Enron. Such increase has sparked issues among the people notably with regard to monetary news integrity. equally among regulators, auditors, and therefore the public, fraud has been a good concern as a result of it's been joined to the rise in company collapses. In general, organizations would function in police investigation frauds, and fraud detection seems to be compact by many factors. Such factors have so been explored by many past studies (e.g., Alleyne et al., 2010; Aghghaleh et al., 2014).
In their study, Uyar et al. (2017) explicit that it's doubtless that well-functioning and trustworthy Accounting system (AIS) can enhance the performance of organization, produce higher world business, whereas to boot increasing the knowledge of speculator and serving to the effectiveness of capital markets. other than that, as showed in Simkin et al. (2014), the

affiliation among accounting and computer crimes and fraud is large and clear. In dominant honored assets, underwriting exchanges of accounting, and selecting speculation; administrators, accountants, and speculators use processed cash connected data. By a method or another, these undertakings will not be as viable if the information used is mistaken, short, or unbelievably listed off. Consequently, it's very important to ensure the protection of processed information since it's an important resource. In like manner, administrators and accountants have to expand their insight with relevance pc crimes and fraud since it will build their capability in assessing dangers and death penalty management in securing structure assets.

According to Agung (2015); Rae and Subramaniam (2008), an efficient control system can improve the processes of organizational and financial reporting and assures compliance with the laws and regulations, will probably stop not simply errors, however fraud similarly.

In developed countries, a lot of studies e.g., Bhasin (2015); Sikka, (2017) ; Nakpodia and Adegbite, (2018) have ebulliently investigated the problem of fraud. In any case, with regards to banks operating in Jordan, the topic has not been specifically inspected. Moreover, developed countries vary in varied views (e.g., economy, culture, legitimate and institutional settings, society so forth.) and so, discoveries on fraud with regards to developed countries might not generalizable to making partners. Thus, this study aim to appear at the impact of AIS and also the guiding job of control in detection of fraud among banks in Jordan.

Hypothesis Development
The Relationship Between Accounting Information Systems and Fraud Detecting
Accounting System information (AIS) includes a system for planning assets containing information, materials, equipment, providers, individuals and funds, therefore on modification the contribution of financial info into yield as money related information that is employed within the execution of exercises of a given organization, and in giving information to gatherings of premium (Wilkinson, 1991). As elaborated in Smith (2016), the execution of AIS is traditional to the majority business organizations therefore on enhance the effectiveness and therefore the advancement of organization assets. the utilization of AIS additionally leads to execution that's objective and reliable (Al-Dmour and Al-Dmour, 2018). As incontestable in Uyar et al (2017), the utilization of well-working fraud free AIS prompts the improvement of organization's company governance. It likewise makes better condition of business whereas additionally increasing the knowledge of investors and enhancing the proficiency of capital markets.

In a study by Smith (2016), "AIS and its controls for fraud and misconduct curb within the process of finance and accounting were examined". during this regard, the way during which AIS governs fraud and misdirection was known in Adenike (2017), and its capability was Affirmed. In another study, Ilić (2017) examined the role of computerized AIS in accounting error and fraud detection and located the numerous role of AIS in such tasks. Hence, it's evident that AIS affects the detection of fraud, and thus, the subsequent hypothesis are tested.

H1: Thers Is An Effect of Accounting Information System on The Detection of Fraud In the Jordanian Banking Sector.

Moderating Effect of Internal Control on The Relationship Between Accounting Information System and Fraud Detecting

The recent years have seen the increasing interest among scholars towards control being a primary mechanism of company governance (Kravet et al., 2018). during this regard, Sengur (2012) indicated that an honest system of controls permits the express examination of all frauds also as why these frauds happened. The system will give the necessitated activities in order that the identical frauds won't occur once more in future. As reported in Zakaria et al (2016), flaws in control presents a gap for the occurrence of deceitful activities.

In Rae and Subramaniam (2008), two separate models related to worker fraud and also the quality of control procedures (ICP) were established based on the literature on organizational justice, internal control and fraud, and from the obtained outcomes, the primary model shows the alleviative impact of the standard of ICP on the association between perceptions of structure justice and employee fraud. the opposite model demonstrates the many and positive linkage of ICP to a few key organizational factors as follows: the company moral surroundings, the degree of risk management coaching of workers, and therefore the activity level of internal audit (IA). In Zakaria et al (2016), the kind of flaws of control and their impact resulting in fraud activities were examined, and therefore the authors found that flaws in control will significantly contribute to the act of fraud. consequently, poor management and incorrect method of documentation open the possibility for misappropriation of assets, and therefore the problem will deteriorate if it involves a group of individuals participating within the misconducts. Meanwhile, within the context of Nigeria, Ozigbo (2015) the author finished that internal control is considerably connected to fraud interference.

In the context of Alleyne et al (2010), fraud is viewed as all intentional deceits meant for eliminating the property or right of a private. during this study, the authors mentioned two categories of fraud as follows: fraudulent financial reporting and misappropriation of assets. during a related study, Kolapo and Olaniyan (2018) Affirmed the impact of fraud on the performance of organization. in the meantime in Kummer et al (2015), the effectiveness of the instrument of fraud detection among not-for-profit (NFP) organizations was examined, and as found, most measures of fraud detection might not increase fraud detection. As noted by the authors, there are 3 instruments that are deemed terribly effective as follows: policies of fraud control, policies of whistle-blower and registers of fraud risk. The authors additionally indicated that instruments that are expansively utilized to observe fraud aren't essentially the foremost effective.

The effectiveness of Cressey's (1953) framework of fraud risk issue utilized in SAS No. 99 within the detection of financial statement fraud was scrutinized within the work of Aghghaleh et al (2014) and also the authors pointed 2|to 2} pressure proxies and two chance proxies with substantial link to financial statement fraud. They additionally found a positive link between leverage and sale to account due and fraud inclination. Also, size of audit committee which of board of directors are associated with the reduction of the extent of financial statement fraud. Meanwhile, the opinions of internal and external auditor per their accountabilities joined to the interference, detection, and reporting fraud were examined in Halbouni (2015), and as shown by the outcomes obtained, internal auditors are chiefly responsible within the identification fraud occurrences. in addition, the author found that the procedures that external auditors use are a small amount more rigorous as against those who internal auditors employ.

H2: *Internal Control Moderates The Relationship Between Ais and Fraud Detection in The Jordanian Banking Sector.*

Method

Research Design

As highlighted in Zikmund et al (2013), set up in|the look} of research is that the principal plan of a study. It contains details concerning the ways and procedures that the study employs within the gathering and analysis of the desired info. consequently, the quantitative approach has been chosen during this study in determinant the linkage between AIS and detection of fraud, additionally because the role of internal control during this linkage. For information gathering, the instrument used is questionnaire survey, and for analysis, PLS3 is used.

Sample

The sample chosen in this study includes employees in banks operating in Jordan. Meanwhile, the selection of banks during this study is factored by the actual fact that within the Amman financial Market, the sector of bank is the biggest sector. moreover, employees in the same banks seem to own full information of what's happening in their work. Relevantly, there are sixteen Jordanian banks listed within the Amman stock market.

A total of 240 respodants were selected with the survey questionnaire, and 235 of them returned the questionnaires to the researcher. From the returned questionnaires, 225 questionnaires is analyzed with rate of 93.7% (225/240). From the obtained data, the variables analyzed are as follows: AIS, internal control and fraud detecting. The majority of the participants were males (90.0%). Age-wise, the participants were between 30 and 45 years old, and they had 5 to 20 years of working experience. In addition, the non-response bias results were tested with late responses. As explained by Shbail (2018), this is to proxy the non-responses. Chi-squared test was performed and no significant differences were found between the early and the late respondents.

Measurements

As evidenced in past studies, the measures used in this study are both valid and reliable. The original items in English were translated into Arabic. Their details are as below.

Accounting Information System: This construct is represented by 7 items designed based on the items used in Grande et al (2011) and Soudani (2012). For response options to each item, a 5point Likert scale is provided.

Internal control: This construct is represented by 5 items designed based on the items used in Grace and Adebayo (2013) and Rae and Subramaniam (2008). For response options to each item, a 5-point Likert scale is provided.

Fraud detecting: This construct is represented by 6 items designed based on the items used in Rae and Subramaniam (2008) and Alleyne et al (2010). For response options to each item, a 5point Likert scale is provided.

Common Method Bias

In this study, the endogenous and exogenous variables data are gathered using similar tool. However, as warned in Shbail (2018), using similar instrument can lead to the occurrence of common method bias (CMB). CMB occurs when the variance is completely associated with the procedure used for measuring, not with the variables themselves. As a solution, the use of full collinearity test was proposed in Rasoolimanesh et al (2015). Also, CMB may occur if the values of variance inflation factor (VIF) for each latent variable are noticeably greater as opposed to the value of 1 (Henseler et al., 2016). Meanwhile, this study achieved VIF values

that are smaller than the value of 5, which is the threshold value. Based on Hair et al. (2016), no multicollinearity exists.

Result

For the structural equation modelling (SEM), this study employed the method of partial least squares (PLS) or PLS-SEM, executed using the statistical package SmartPLS 3 (Ringle et al., 2015). The use of PLS-SEM in this study was factored by several reasons Barroso et al (2010), Hair et al (2017) Al Shbail et al (2018) with the first one being the nature of this study that is exploratory. Notably, the linkage between AIS and detection of fraud is yet to be proven. As such, a new interconnection can possibly be discovered with this study. Another reason for using PLS is its nature that is non-parametric and thus, the data employed do not need to be normally distributed. PLS-SEM can also improve the explanatory capability of key target variables alongside their associations (Hair et al., 2014). The measurement model results and the structural model analysis based on Chin (1998) and Hair et al (2017) are discussed in the ensuing section.

Evaluation of Global Model Fit

In the assessment of PLS model, the initial step is to evaluate the global model fit (Henseler, Hubona, & Ray, 2016). For the purpose, this study employed the standardized root mean square residual (SRMR) to test the model fit. As explained in Hu and Bentler (1998), SRMR encompasses the difference of root mean square between the model-implied correlations and the correlations observed. In this regard, an obtained value that is smaller than 0.10 or of 0.08 is deemed a good fit. For this study, the obtained SRMR value was .067 (smaller than .08).

Test of normed fit index (NFI) was also carried out in this study for the purpose of testing the model fit of the research (Henseler et al., 2014). For NFI, the values produced range from 0 to 1, and as explained in Ringle et al (2017), the closer the value to 1, the better fit it is. In this study, the achieved NFI value was 0.848, which denotes a good fit. Table 2 presents the details.

Table 2
Model Fit

	Saturated Model	**Estimated Model**
SRMR	0.067	0.067
NFI	0.848	0.850

Measurement Model

It is crucial that the employed items really measured the latent variables. Hence, the items were put to several tests as follows: reliability, discriminant validity, and convergent validity. As revealed by the obtained results, the models of measurements all fulfill the minimum requirements (see Table 3). In particular, all items achieved loadings greater than 0.741. As proposed in Hair et al (2016), loading factors of higher level for outer loading factors denotes indicator reliability of higher level. Moreover, Cronbach's alpha and Composite Reliability, rhoA generate more precise estimation of data consistency, and in this study, the obtained values show the reliability of the items loaded on each of the constructs (Ringle et al., 2017). Also, the obtained values of average variance extracted (AVE) all were greater than the

threshold of 0.50, and based on Henseler et al. (2016), the values were in support to the convergent validity of the construct measures. The measurement model is displayed Table 3 in summarized form.

Table 3
Measurement Model

Construct	Item	Loading	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
	AIS2	0.744				
	AIS3	0.778				
	AIS4	0.789				
	AIS5	0.796				
	AIS6	0.754				
	AIS1	0.836				
AIS		0.891		0.893	0.914	0.605
	AIS7	0.741 FD1	0.880			
	FD10	0.815				
	FD11	0.785				
	FD2	0.825				
	FD5	0.826				
Detecting						
	FD6	**0.794**				
	IC1	**0.796**				
	IC2	**0.860**				
Internal Control	**IC3**	**0.796**	**0.878**	**0.891**	**0.910**	**0.671**
	IC4	**0.778**				
	IC5	**0.861**				
Fraud			0.903	0.907	0.926	0.675

Structural Model

In this study, its results and analysis on the structural model follow Hair et al. (2014). From the analysis, the values of variance inflation factor (VIF) were all significantly smaller than the threshold value of 5. Hence, there is minimum collinearity in each series of predictors within the structural model. Obtaining the values of VIF less than the value of 5 means that; there is no multicollinearity problem (Hair et al., 2011). Additionally, the value of R^2 value for fraud detecting is 0.47, which according to Sarstedt et al (2014) is in support to the in-sample predictive power of the model.

Equally, the blindfolding results with an omission distance of 7 produced figures of Q^2 which were significantly beyond zero and positive values that Tenenhaus (1999) had previously proposed. Hence, the predictive relevance of the study's proposed model is supported particularly in regards to out-of-sample prediction (Hair et al., 2012). Predictably, the obtained outcomes fully validate the projection of the study on the effect of AIS on the detection of fraud. As proof, the standardized path coefficients, as shown in Table 4, are an affirmation of a significant positive connection that appears to be present between AIS and detection of fraud (β = 0.471, p-value < 0.000) and a t-value of 5.913. This outcome affirms Hypothesis 1.

Furthermore, the obtained outcomes fully verify the study's expectations regarding to the moderating role of internal control on the connection between AIS and detection of fraud. Here, as can be observed in Table 4, the standardized path coefficients verify the significant moderating impact of internal control on the connection between AIS and detection of fraud (β = 0.227, pvalue < 0.000) and a t-value of 3.543. This outcome is an affirmation of Hypothesis 2.

Table 4
Significant Testing Results of the Structural Model Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
AIS -> FD	0.471	0.473	0.080	5.913	0.000	***Supported***
Moderating Effect IC -> AIS and FD	0.227	0.223	0.064	3.543	0.000	***Supported***

Conclusion
The present study looked into the effect of AIS on detection of fraud among banks operating in Jordan and the moderating effect of internal control in the connection between both. This study expands the outcomes of past AIS related works. From the outcomes, the present study find a positive effect of AIS on the detection of fraud. Also, internal control appears to considerably moderate the relationship between AIS and detection of fraud. Accordingly, banks in Jordan can benefit from this study's outcomes in their efforts of preventing and detecting the occurrence of fraud.

Banks in Jordan could make the effort to improve and develop AIS and control systems. As proposed by this study, banks should focus more on improving fraud detection using their AIS and internal control. As banking environment is very competitive and attractive, competitive advantage must be achieved. Furthermore, due to the dynamic technological environment, it is important that both AIS and internal control is treated as a moving target. In this regard, there should be consistent improvement in order that banks could continuously adapt to the shifting nature of such systems. The readiness as well as awareness of management is crucial. Their unrelenting support is also necessary, in order that the investment figures in AIS and internal control can be enhanced.

As a final note, the limitations of this study are worth the highlight as well. To begin with, being based on cross-sectional data, the long term impacts of the association between AIS and detection of fraud cannot be affirmed. Another point worth noting is that fraud is a sensitive subject, and given that the analysis is based on self-reported data, obtaining direct

empirical data on fraud reasons would be challenging. Additionally, the use of survey method may lead to the issue of common method variance. In this regard, tests of full collinearity can indeed by carried out and researcher can concluded no impact of common method variance on the data. Still, it is not possible to fully dismiss it.

The study aims to test the role of internal control on the relationship between accounting information system and detection of fraud, and according to results I hope this study help management in banks and enhance them to give more attention to the role of internal control which will reflect positively on the banks work.

References

Abdullahi, R., & Mansor, N. (2015). Forensic accounting and fraud risk factors: The Influence of fraud diamond theory. *The American Journal of Innovative Research and Applied Sciences, 1*(5), 186-192.

Adenike, A. T. (2017). Accounting information system and management decision making: a case study of manufacturing company in Nigeria. *European Journal of Accounting, Auditing and Finance Research, 5*(11), 66-74.

Aghghaleh, S. F., Iskandar, T., & Mohamed, Z. M. (2014). Fraud risk factors of fraud triangle and the likelihood of fraud occurrence: Evidence from Malaysia. *Information Management and Business Review, 6*(1), 1-7.

Agung, M. (2015). Internal Control Part of Fraud Prevention in Accounting Information System. *The Mulia Pratama, 1*(1), 21-30.

Al-Dmour, A. H., & Al-Dmour, R. H. (2018). Applying Multiple Linear Regression and Neural Network to Predict Business Performance Using the Reliability of Accounting Information System. *International Journal of Corporate Finance and Accounting (IJCFA), 5*(2), 12-26.

Al Shbail, M. Salleh, Z. & Mohd Nor, M. (2018). Antecedents of Burnout and its Relationship to Internal Audit Quality. *Business and economic horizons, 14*(4), 789. 817.

Alleyne, P., Persaud, N., Alleyne, P., Greenidge, D., & Sealy, P. (2010). Perceived effectiveness of fraud detection audit procedures in a stock and warehousing cycle: Additional evidence from Barbados. *Managerial Auditing Journal, 25*(6), 553-568.

Barroso, C., Carrión, G. C., & Roldán, J. L. (2010). Applying maximum likelihood and PLS on different sample sizes: studies on SERVQUAL model and employee behavior model. In *Handbook of partial least squares* (pp. 427-447). Springer, Berlin, Heidelberg.

Bhasin, M. L. (2015). Corporate accounting fraud: A case study of Satyam Computers Limited. *Social Science Electronic Publishing, 2*(2), 26-38.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A.

Marcoulides (Ed.), *Modern methods for business research* (pp. 295–358). Mahwah: Erlbaum.

Grande, E., Estébanez, R., & Colomina, C. (2011). The impact of Accounting Information Systems (AIS) on performance measures: empirical evidence in Spanish SMEs. *The International Journal of Digital Accounting Research, 11*, 25-46.

Hair, R. M. & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice, 19*(2), 139-152.

Hair, J. F., Hult, G., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling* (PLS-SEM): Sage Publications.

Hair, J., F, Hult, G., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling* (PLS-SEM) (2nd ed.): Thousand Oaks, CA: Sage.

Hair, J., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review, 26*(2), 106-121.

Halbouni, S. S. (2015). The Role of Auditors in Preventing, Detecting, and Reporting Fraud: The Case of the U nited A rab E mirates (UAE). *International Journal of Auditing, 19*(2), 117130.

Halbouni, S. S., Obeid, N., & Garbou, A. (2016). Corporate governance and information technology in fraud prevention and detection: Evidence from the UAE. *Managerial Auditing Journal, 31*(6/7), 589-628.

Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational research methods, 17*(2), 182-209.

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. Industrial management & data systems, 116(1), 2-20.

Hu, L.T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological methods, 3*(4), 424-453.

Ilić, M. (2017). The role of computerized accounting information system in detecting accounting errors and accounting fraud. *Journal of Economics, Management and Informatics, 8*(1), 17-30.

Kolapo, F. T., & Olaniyan, T. O. (2018). The Impact of Fraud on the Performance of Deposit Money Banks in Nigeria. *International Journal of Innovative Finance and Economics Research, 1*(6), 40-49.

Kravet, Todd D. and McVay, Sarah E. and Weber, David P.(2018). Costs and Benefits of Internal Control Audits: Evidence from M&A Transactions. Review of Accounting Studies, Forthcoming. Available at SSRN: https://ssrn.com/abstract=2958318 or http://dx.doi.org/10.2139/ssrn.2958318.

Kummer, T.-F., Singh, K., & Best, P. (2015). The effectiveness of fraud detection instruments in not-for-profit organizations. *Managerial Auditing Journal, 30*(4/5), 435-455.

Nakpodia, F., & Adegbite, E. A. (2017). Corporate governance and elites. In *Academy of Management Proceedings* (Vol. 2017, No. 1, p. 11495). Briarcliff Manor, NY 10510: Academy of Management.

Ozigbo, S. (2015). Internal control and fraud prevention in Nigerian business organizations: A survey of some selected companies in warri metropolis. *Journal of Policy Development Studies, 9*(3), 185-188.

Rae, K., & Subramaniam, N. (2008). Quality of internal control procedures: Antecedents and moderating effect on organisational justice and employee fraud. *Managerial Auditing Journal, 23*(2), 104-124.

Rasoolimanesh, S. M., Jaafar, M., Kock, N., & Ramayah, T. (2015). A revised framework of social exchange theory to investigate the factors influencing residents' perceptions. *Tourism Management Perspectives, 16*, 335-345.

Ringle, Wende, S., & Becker, J. (2015). "SmartPLS 3." Boenningstedt: SmartPLS GmbH. Retrieved from (http://www.smartpls.com).

Ringle, C., Wende, S., & Becker, J. (2017). *SmartPLS-Statistical Software For Structural Equation Modeling*. Handbook of Market Research; Springer: Berlin, Germany, 2017; pp. 1–40.

Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy, 5*(1), 105-115.

Sengur, E. D. (2012). Auditors'perception of fraud prevention measures: evidence from Turkey.

Annales Universitatis Apulensis: Series Oeconomica, 14(1), 128-138.

Shbail, M. O. A. (2018). The Effect of Role Ambiguity and Role Conflict on Dysfunctional Audit Behaviour: Evidence from Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 8*(3), 17-25.

Sikka, P. (2017). Using freedom of information laws to frustrate accountability: Two case studies of UK banking frauds. Accounting Forum.
http://dx.doi.org/10.1016/j.accfor.2017.08.001.

Simkin, M. G., Norman, C. S., & Rose, J. M. (2014). *Core concepts of accounting information systems*. John Wiley & Sons.

Smith, J. S. (2016). *Accounting Information Systems: Ethics, Fraudulent Behavior, and Preventative Measures.* Thesis, Georgia Southern University.

Soudani, S. N. (2012). The usefulness of an accounting information system for effective organizational performance. *International Journal of Economics and Finance, 4*(5), 136145.

Tenenhaus, M. (1999). L'approche PLS. *Revue de statistique appliquée, 47*(2), 5-40.

Uyar, A., Gungormus, A. H., & Kuzey, C. (2017). Impact of the Accounting Information System on Corporate Governance: Evidence from Turkish Non-Listed Companies. *Australasian Accounting, Business and Finance Journal, 11*(1), 9-27.

Wilkinson, J. W. (1991). *Accounting and information systems.* John Wiley & Sons, Inc.

Zakaria, K. M., Nawawi, A., & Salin, A. S. A. P. (2016). Internal controls and fraud-empirical evidence from oil and gas company. *Journal of Financial crime, 23*(4), 1154-1168.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.