

The Effect of Information Intensity and Characteristics of IT Functions on Fraud Moderated by IT Governance

AGUNG BUDIWIWOWO, ENDANG SITI ASTUTI, MUHAMMAD SAIFI,
MOHAMMAD IQBAL
Department of Business Administration
Brawijaya University
Malang
INDONESIA

Abstract: - This study aims to determine the relationship of each information intensity variable and the characteristics of the IT function on fraud moderated by IT governance. The method used in this study is inferential analysis, namely Structural Equation Modelling (SEM) with the WarpPLS approach to analyze sample data and the result are applied to the population each is expected to provide information regarding the relationship between the influence of information intensity and IT function characteristics on fraud moderated by IT governance. From this study, it was found that each Information Intensity and IT Function Characteristics variable had a significant effect on fraud. In addition, it was found that IT Governance is a moderating variable that has a significant effect on the relationship between Information Intensity and IT Function Characteristics on Fraud. There is no research that investigates the influence of IT Governance as a moderating variable in the relationship between the influence of Information Intensity and IT Function Characteristics on Fraud because the theory of the influence of IT Governance in the relationship between these variables is the latest theory which is the development of previous research on the relationship between Information Intensity and IT Function Characteristics of Fraud.

Key-Words: - Information Intensity, IT Function Characteristics, Fraud, IT Governance, WarpPLS

Received: April 22, 2022. Revised: April 23, 2023. Accepted: May 11, 2023. Published: June 1, 2023.

1 Introduction

As technology develops, more and more areas exist and need to be developed. One of them is information technology which is closely related to technological developments. Without information technology, development will not be very advanced. Understanding information technology in general is the study of computerized information systems, especially the design, implementation, development, support, or management of hardware and software. According to ITTA, the term information technology is the research, design, implementation, development, support, or management of computerized information systems, especially in computer hardware and software applications.

The main function of information technology in a company is to function as a cost center. Needless to say, when developing enterprise information technology, we aim to replace manual processes with automation for efficiency and effectiveness. At the same time, the use of information technology in companies is aimed at reducing production costs in a way that has an impact on reducing the total costs incurred and directly improving the company. The

use of technology directly or indirectly affects the pricing strategy of a product or service.

The next development of the theory is the Diamond Fraud created by Wolfe and Hermason in 2004. Diamond fraud is an evolution of the fraud triangle theory by adding a component, or skill, to fraud detection. The Pentagon Scam is a further development of the Triangle Scam theory and the Diamond Scam with additional component capabilities and arrogance. This theory was refined by Vousinas in 2017 as the S.C.O.R.E model with elements such as stimulus, ability, opportunity, rationalization, and ego. The theories of triangle scam, diamond scam, and pentagon scam were further developed by Vousinas in 2017 into a hexagon scam called the S.C.C.O.R.E model.

The pressure, or hexagonal stimulus to commit the offence, is triggered by perceived impulses and can be defined as the behavioral motivation of the cheater. All practitioners are faced with pressure to commit fraud. Perceived pressure is defined as the motivation for the perpetrator to engage in unethical behavior. This type of pressure can affect people at all levels of the organization and can occur for a

variety of reasons, including financial pressure, pressure from bad habits, and work-related pressure.

The fourth factor is opportunity. The elements of opportunity associated with fraud are defined as conditions that allow a person to engage in unfair behavior such as fraud. Opportunities can arise because of weak internal controls, uncontrolled supervision, or because of a strategic position. By using certain conditions and positions, we are free to regulate the interests of many people.

Next is rationalization. The concept of rationalization suggests that criminals must be able to formulate some form of morally acceptable rationalization before engaging in unethical behavior. With rationalization, fraudsters can be considered tolerant of illegal activities. Reasons such as co-workers feel they are doing the same thing and want to commit fraud because they are not penalized for fraud can justify the fraud being committed. In the end, this rationalization action will only result in an announcement of the fraud that has occurred, especially if the fraud is carried out continuously.

Finally, ego or pentagonal deception is called arrogance. Arrogance is a characteristic that indicates a sense of superiority and a lack of awareness that results from greed and the idea that existing rules don't apply to those with personal power. According to Crowe, a study by the Committee of Sponsoring Organizations of the Treadway Committee concluded that 70% of fraudsters have an arrogant and greedy profile. On average, 89% of fraud cases involve the CEO. In Indonesia, several cases of fraud in the company's financial statements have been uncovered to cover up deficiencies made to improve financial statements. Several fraud cases in Indonesia, including cases of financial reporting fraud, were carried out by PT Timah Tbk. The case stems from the demands of the Timah Employees Association against the directors of PT Timah Practicing Corruption by the board of directors, especially the president director, through instructions to Jiwasraya's investment division to invest customer funds in high-risk portfolios for personal gain and to open up space for parties outside the company to intervene in policy. Jiwasraya investment.

Research on the factors that influence financial statement fraud has been carried out by several previous researchers, namely by Akbar *et al.* (2021), Istifadah & Senjani (2020), Suhartini *et al.* (2019), Azzahroh *et al.* (2020), Sari *et al.* (2018), Melati *et al.* (2018), Rahmatika *et al.* (2019) and showed different results. Not all research that examines fraud is empirical, but there are several studies that

use a qualitative approach to explain fraud practices in corporate management (Aladejebi and Oladimeji, 2019) and try to link them with corporate governance (Eferakeya, Enaibre, and Offor, 2016). The majority of theoretical and empirical studies on factors that contribute to fraud are still limited in the US, where dispersed ownership of corporate governance leads to agency conflicts, for example, Chidambaran *et al.*, 2011; Khanna *et al.*, 2015; Wang *et al.*, 2010.

From theoretical and empirical studies that have been carried out by previous authors, there has been no research that has focused on the effectiveness of using IT-based governance to reduce fraudulent practices by companies. In addition, this study applies the fraud hexagon as a basis for examining its effect on financial statement fraud because this theory is the latest theory which is the development of the fraud pentagon, fraud diamond and fraud triangle. The fraud hexagon is expected to be able to detect fraudulent financial statements more deeply with the addition of a collusion component that was not previously found in research using the fraud pentagon, fraud diamond and fraud triangle.

For this reason, the author intends to conduct research on the Determinants of the Effectiveness of Information Technology Governance and Its Impact on Fraud. This study will examine the variables in 85 companies indicated by fraud from 284 companies using a questionnaire. It is hoped that this research can contribute to the importance of using IT-based governance in order to anticipate fraudulent practices in companies.

2 Literature Review

2.1 Information Intensity

Information intensity (McFarlan 1984; Porter and Millar 1985), regarding products and organizational value chains, is suggested as a paradigm that can be used to understand an organization's marketing activities on the world wide web. The information intensity of an organization's product offering and value chain can determine the design of their website. Website design characteristics, such as media richness, promotional activities and online sales may be more effective when matched with the information intensity aspect of the company.

Kearns and Lederer (2004) use attributes such as accuracy, update timeliness, pervasiveness, and frequency of use of information in production and service operations to determine information intensity. Conducted in the US, this study reports a positive relationship between information intensity and effective SIS. This finding is in line with

Teubner (2007) who recognizes that an extensive SISP requires a high intensity of information. In contrast, Stoel (2006) reported a negative relationship between information intensity and shared understanding between business and information systems.

2.2 IT Function Characteristics

The characteristics of the IT function represent factors such as the size of the IT budget, the size of the IT department, and the maturity of the IT function. IT budget refers to IT expenditure or investment (Ray *et al.*, 2007); with low investment, organizations do not expect major advances in IT governance (Spremic *et al.*, 2008). The size of the IT function is indicated by the number of IT employees. As indicated in the IT innovation literature, IT department size predicts IT adoption (Lee and Xia, 2006). With regard to IT maturity, important factors include IT managers' knowledge of business objectives and top management's involvement in the planning and integration of IT and strategy functions (King and Sabherwal, 1992). Lee and Pai (2003) found that IT function maturity contributes positively to process effectiveness and SISP alignment. Likewise in the literature on customer relationship management (CRM) adoption, Ko *et al.* (2008) found that IT maturity predicts the perceived benefits of CRM.

2.3 Information Technology Governance

IT governance (ITG) is the planning and monitoring mechanism that governs the translation of IT investments into business value. ITG is defined as: "leadership and organizational structure and processes" that ensure that the IT organization sustains and extends the organization's strategies and objectives" (IT Governance Institute, 2003). This is a shared responsibility of the executive management team (eg, CIO or CEO) and the board of directors (IT Governing Agency, 2003; De Haes and Van Grembergen, 2009). While most ITG studies focus on the executive level of ITG (ITG is implemented by an executive team) (e.g., Ali *et al.*, 2012; Bowen *et al.*, 2007; Prasad *et al.*, 2012), the literature at the board level.

The characteristics of the IT function represent factors such as the size of the IT budget, the size of the IT department, and the maturity of the IT function. IT budget refers to IT expenditure or investment (Ray *et al.*, 2007; Seddon *et al.*, 2002); with low investment, organizations do not expect major advances in IT governance (Spremic *et al.*, 2008). The size of the IT function is characterized by the number of IT employees (Sabherwal and

Chan, 2001). As indicated in the IT innovation literature, IT department size predicts IT adoption (Lee and Xia, 2006). With regard to IT maturity, important factors include IT managers' knowledge of business objectives and top management's involvement in the planning and integration of IT and strategy functions (King and Sabherwal, 1992). Lee and Pai (2003) found that IT function maturity contributes positively to process effectiveness and SISP alignment. In ERP adoption, Lee and Joo (2001) found that IT maturity predicts perceived benefits of ERP. Likewise in the literature on customer relationship management (CRM) adoption, Ko *et al.* (2008) found that IT maturity predicts the perceived benefits of CRM.

Fraud Theory

There are many definitions and understandings that explain fraud. According to The Institute of Internal Auditors (IIA), fraud is defined as "an array of irregularities and illegal acts characterized by intentional deception" which can be interpreted as a collection of actions that are not permitted and violate the law characterized by the presence of an element of intentional fraud. The more specific definition of fraud expressed by The Association of Certified Fraud Examiners (ACFE) states that fraud is any attempt to find out or deceive other parties in order to obtain benefits.

Corporate fraud is a very troubling and recurring phenomenon. This problem continues to surround every country, industry and company of all sizes (Mohamed 2015; Clinard and Yeager 2011; Dyck *et al.* 2010). Fraud problems can include financial and non-financial which have been confirmed by various researchers such as Anginer *et al.* (2011); Chen *et al.* (2010); Dyck *et al.* (2010); Goldman *et al.* (2013); Graham *et al.* (2008); and Kuvvet (2015), there are even 6 well-known organizations that have lost 5% of their revenue annually due to fraud with an estimated global loss of USD 3.7 trillion in terms of Gross World Product (GWP). Similarly, one in three organizations reported fraud at 22% of the firm's value (PWC, 2014).

Based on the theories supporting the research variables that have been described previously, several research hypotheses were formed as follows.

H1: Effect of Information Intensity on Fraud

Tseng (2019) conducted a study entitled "Customer insurance frauds: the influence of fraud type, moral intensity and fairness perception". The purpose of this study was to examine ethical attitude's customers and intentions towards two types of insurance fraud. This study proposes that factors, such as type of fraud (ie opportunistic and

premeditated insurance fraud), moral intensity and perception of justice, can influence customer acceptance of insurance fraud. To test the research hypotheses of this study, Taiwanese insurance customers were invited in an empirical investigation, and a scenario-based questionnaire was used to collect data. The research hypothesis was tested using partial least squares regression. There is no research that examines the relationship between type of fraud, moral intensity, perception of justice, demographic and ethical variables of customers and intention to insurance fraud. Understanding the relationship between these variables can have implications for those involved in anti-fraud program practices.

H2: The Effect of IT Function Characteristics on Fraud

Halbouni (2016) conducted a research entitled "Corporate governance and Information Technology in Fraud Prevention and Detection: Evidence from the United Arab Emirates". This study aims to investigate the role of corporate leaders and information technology in fraud prevention and detection within the United Arab Emirates. Researchers used 130 questionnaires which were then obtained by 83 respondents. A questionnaire was sent to financial accountants and practitioners in April 2014. The results show that corporate leaders only play a moderate role in preventing and detecting fraud in the United Arab Emirates and information technology has the same role as traditional fraud prevention and detection techniques. The results also show that there is no significant difference between internal and external auditors in the use of technology and traditional techniques during the audit.

Da Cunha (2003) conducted a research entitled "Frauds and Information Technology: Analysis of the Influence on Accounting and Company Systems". The aim of the study is to critique, show, and discuss some of the considerations about fraud in organizations and more specifically accounting information and corporate environmental systems. The results of the study reveal that the development of information technology provides speed and smoothness that no previous companies had before to detect crime.

H3: The Effect of IT Governance on Fraud

Juhandi *et al.* (2020) in his research entitled "Information Technology and Corporate Governance in Fraud Prevention" aims to determine the effect of IT Governance and Corporate Governance in fraud prevention. In the research

Juhandi *et al.* (2020) used the case study method (qualitative). Case studies are often described as a flexible, challenging and most commonly used methodology in social science research. However, the support and attention to case studies is minimal because there are no well-defined protocols, no standardization or formula for how to conduct case study research. This research produces information that IT Governance can be a managerial decision to prevent fraud in the company. It is evident that developed companies, especially in developed countries, use supervision not only as a leader but also technology that can automatically detect fraud and is useful as a fraud prevention measure in companies. Corporate governance is still lacking in Indonesia and other developing countries, making the level of supervision in companies not running optimally so that the potential for fraud is still quite large.

H4: The Effect of IT Governance as a Moderating Variable in the Relationship of Information Intensity to Fraud

Research on the effect of Information intensity on Fraud which is moderated by the IT Governance variable has not been found in previous research, so that in this research it becomes a new thing from research.

H5: The Effect of IT Governance as a Moderating Variable in the Relationship of IT Function Characteristics to Fraud

Research on the effect of IT Function Characteristics on Fraud which is moderated by the IT Governance variable has not been found in previous research, so that in this research it becomes a new thing from research.

Based on the theories supporting the research variables and hypotheses that have been described previously, a conceptual model of this research can be formed which can be seen in Figure 1 below.

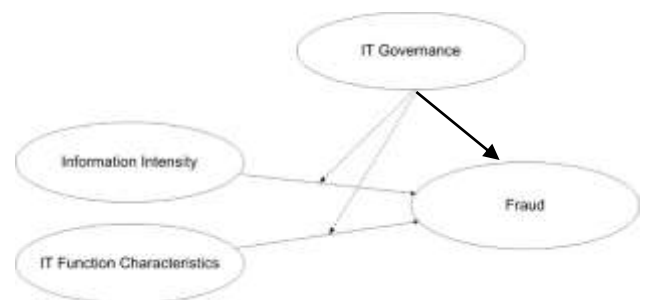


Figure 1. Research conceptual model

3 Methodology

The population of this research are companies that go public (offering business ownership to the general public) which are listed on the Indonesia Stock Exchange until 2020 and commit fraud in the company's financial statements or within a certain period of time do not submit financial statements, as many as 216 companies. The sampling technique in this study was purposive proportional sampling which was carried out randomly. Research is part of the population that is used as research subjects as "representatives" of the members of the population (Supardi, 1993). Purposive sampling is a sampling technique using certain considerations (Sugiyono, 2012). From the 216 companies, samples will be taken which can be calculated using the following Slovin formula (Sekaran, 2006).

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

n = sample size

N = population size

e = tolerable error rate (5-10%)

The population (N) in this study were 216 companies that had committed fraud. By setting an error rate of 5%, the sample can be calculated as follows.

$$n = \frac{216}{1 + 216(0.05)^2} = 140.25974 \approx 141$$

Based on these calculations, the minimum sample used for this study is 141 companies that have committed fraud. However, the researcher decided to add an additional 5% sample in order to avoid damaged or incomplete questionnaires. Therefore, the sample size used in this study is 149 companies that have committed fraud.

Before distributing the questionnaires, validity and reliability were checked to determine the quality of the question items from the list of questions to be used in a study. In this case, the researcher tested a questionnaire or a list of questions by distributing questionnaires to 30 or more people to get 30 data as samples. The measurement of validity is done by doing a bivariate correlation between each indicator score and the total construct score, using the Pearson Correlation Coefficient. If the correlation value (r) from the correlation result is greater than 0.3 then it is declared valid and vice versa is declared invalid (Solimun *et al.*, 2017). Meanwhile, reliability shows the consistency and stability of a measurement scale or score. The measuring instrument is said to be consistent when the existing list of questions is used to measure something that repeatedly has the same result, provided that the

conditions during measurement do not change. The consistency value of the answers is represented by looking at the high Cronbach Alpha coefficient. The instrument can be said to be reliable if it has an Alpha coefficient of 0.6 or more.

The data analysis method used in this study is inferential analysis in the form of Structural Equation Modeling (SEM) with the WarpPLS approach to analyze sample data and the results are applied to the population which is expected to provide information regarding the relationship between the influence of information intensity and IT function characteristics on fraud moderated by IT governance.

4 Results and Discussion

4.1 Results

4.1.1 Descriptive analysis

In this research, one descriptive analysis used is Importance Performance Analysis (IPA). The Importance Performance Analysis (IPA) method was first introduced by Martilla and James (1977) with the aim of measuring the relationship between consumer perceptions and priorities for improving product/service quality, which is also known as quadrant analysis. Importance Performance Analysis is used to map the relationship between the importance with performance of each offered attribute and the gap between performance with expectations of these attributes.

IPA has the main function to display information about service factors which according to consumers greatly affect their satisfaction and loyalty, and service factors which according to consumers need to be improved because at this time they are not satisfactory. The results of IPA analysis in this study are presented in table 1 as follows.

Table 1. IPA Analysis Results

Variable	Indicator	Performance	Importance (From loading factor measurement model, score 0-1)	
X1	X11	0,656	0,761	Q2
	X12	0,703	0,831	Q2
	X13	0,959	0,988	Q1
	X14	0,805	0,606	Q4
X2	X21	0,715	0,828	Q2
	X22	0,902	0,897	Q1
	X23	0,795	0,724	Q4
X3	X31	0,664	0,756	Q2
	X32	0,926	0,866	Q1
	X33	0,623	0,846	Q2
	X34	0,639	0,725	Q3
	X35	0,885	0,918	Q1
Y1	Y11	0,866	0,845	Q1
	Y12	0,888	0,804	Q1
	Y13	0,940	0,682	Q4
	Y14	0,935	0,956	Q1
	Y15	0,814	0,704	Q4
	Y16	0,912	0,663	Q4
	X33	0,886	0,800	Q1
	X34	0,743	0,994	Q2
	X35	0,603	0,972	Q2

From table 1 above, it can be obtained information that:

- 1) Quadrant I (Top Priority)
Based on the results obtained, there are 9 indicators that are included in quadrant 1. This quadrant contains attributes/statements that are considered important by visitors but in fact these attributes/statements are not in accordance with customer expectations. The level of performance of these attributes/statements is lower than the level of customer expectations for these attributes/statements. The attributes/statements contained in this quadrant must be further improved in order to satisfy customers.
- 2) Quadrant II (Keep Performance)
Based on the results obtained, there are 9 indicators that are included in quadrant 2. These attributes/statements have a high level of expectation and performance. This shows that the attribute/statement is important and has high performance. And it must be maintained for the next time because it is considered very

important/expected and the results are very satisfying.

- 3) Quadrant III (Low Priority)
Based on the results obtained, there are 2 indicators that are included in quadrant 3. Attributes/statements contained in this quadrant are considered less important by customers and in fact their performance is not too special/ordinary. This means that the attributes/statements contained in this quadrant have a low level of importance/expectations and their performance is also judged to be unfavorable by customers. Improvements to the attributes/statements that fall into this quadrant need to be reconsidered by looking at the attributes/statements that have a large or small influence on the benefits felt by the customer and also to prevent these attributes/statements from shifting to quadrant I.
- 4) Quadrant IV (Excessive)
Based on the results obtained, there are 7 indicators that are included in quadrant 4. This quadrant these attributes/statements have a low level of expectation according to customers but have good performance, so they are considered excessive by customers. This shows that the attributes/statements that affect customer satisfaction are considered excessive in their implementation, this is because customers consider it not too important/less expected for the existence of these attributes/statements, but the implementation is done very well.

4.1.2 Validity and Reliability Check

Validity and reliability checks were carried out to determine the quality of the questionnaire items used. The results of the validity and reliability checks are presented in the following table.

Table 2. Validity and Reliability Check Results

Variable	Indicator	Item	Item correlation	Cronbach-Alpha
Information Intensity (X1)	X11	X111	0,459	0,738
		X112	0,453	
	X12	X121	0,370	
		X122	0,415	
	X13	X131	0,621	
		X132	0,358	
X14	X141	0,637		
	X142	0,365		
IT Function Characteristics (X2)	X21	X211	0,406	0,759
		X212	0,362	
	X22	X221	0,489	
		X222	0,601	

Variable	Indicator	Item	Item correlation	Cronbach-Alpha	
	X23	X231	0,529		
		X232	0,414		
		X233	0,372		
IT Governance (X3)	X31	X311	0,388	0,781	
		X312	0,381		
		X313	0,563		
		X314	0,363		
		X315	0,523		
	X32	X321	0,500		
		X322	0,481		
		X323	0,532		
		X324	0,374		
	X33	X331	0,625		
		X332	0,355		
	X34	X341	0,437		
		X342	0,503		
		X343	0,522		
		X344	0,537		
	X35	X351	0,403		
		X352	0,468		
	Fraud (Y1)	Y11	Y111	0,580	0,690
			Y112	0,456	
			Y113	0,362	
Y114			0,427		
Y115			0,631		
Y116			0,639		
Y117			0,621		
Y118			0,567		
Y119			0,454		
Y12		Y121	0,589		
		Y122	0,581		
		Y123	0,564		
Y13		Y131	0,388		
		Y132	0,421		
Y14		Y141	0,396		
		Y142	0,565		
		Y143	0,603		
		Y144	0,485		
		Y145	0,398		
Y15		Y151	0,644		
	Y152	0,426			
	Y153	0,577			
	Y154	0,497			
	Y155	0,591			
	Y156	0,588			
	Y157	0,450			

Variable	Indicator	Item	Item correlation	Cronbach-Alpha
	Y16	Y158	0,414	
		Y161	0,649	
		Y162	0,476	

4.1.3 SEM Analysis with WarpPLS Approach

Based on the analysis that has been carried out using the WarPLS software, the following results include the coefficient value, SE, CR, and p-value of each relationship variable.

Table 3. SEM Analysis with WarpPLS Results

Relation		Coef	SE	CR	P-value
X1	Y1	-0,4173	0,0710	5,8775	0,0000
X2	Y1	-0,2096	0,0690	3,0383	0,0024
X3	Y1	-0,3245	0,0810	4,0067	0,0001
X1*X3	Y1	0,1052	0,0850	1,2378	0,2158
X2*X3	Y1	0,4028	0,0730	5,5172	0,0000

The results of the above analysis can be presented in a path diagram as follows.

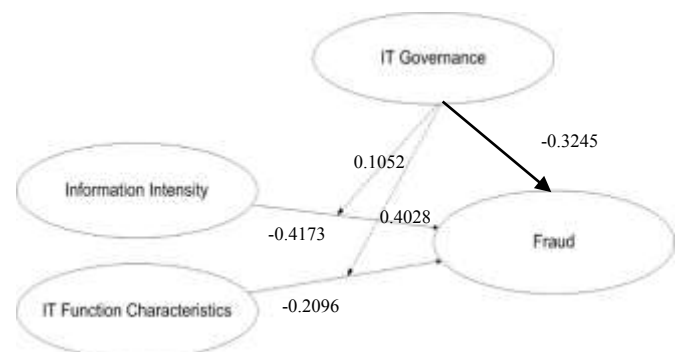


Figure 2. Diagram with Path Coefficient

4.2 Discussion

4.2.1 Validity and Reliability Check

There are criteria for checking validity and reliability, namely:

- The correlation result is greater than 0.3 then it is declared valid and vice versa is declared invalid (Solimun *et al.*, 2017).
- Instruments can be said to be reliable if they have a cronbarch Alpha coefficient of 0.6 or more.

Based on table 2, it can be seen that all items have a correlation value greater than 0.3 and have a cronbarch alpha value greater than 0.6 so it can be concluded that all items used in the questionnaire are valid and reliable.

4.2.2 SEM Analysis with WarpPLS Approach

H1: The Effect of Information intensity on Fraud

Based on table 3, it can be seen that the p-value for the relationship between X₁ and Y₁ is 0.0000, where

this value is smaller than 0.05, so with a significant level of 5%, it can be concluded that the relationship between the influence of information intensity on fraud is significant and the hypothesis regarding the effect of information intensity on fraud is accepted. The path coefficient is negative, which is -0.4173 indicating that the higher the information intensity, the lower the fraud. The results of this analysis support the results of research conducted by Tseng (2019) which states that there is a significant influence between information intensity on fraud.

H2: The Effect of IT Function Characteristics on Fraud

Based on table 3, it can be seen that the p-value for the relationship X_2 to Y_1 is 0.0024 where this value is smaller than 0.05 so that with a 5% significance level it can be concluded that the relationship between the influence of IT Function on fraud is significant and the hypothesis regarding the influence of IT Function Characteristics on Fraud is accepted. The path coefficient is negative, which is -0.2096, indicating that the higher the IT Function, the lower the fraud. The results of this analysis support the results of research conducted by Halbouni (2016) which states that there is a significant influence between the IT Function on fraud.

H3: The Effect of IT Governance on Fraud

Based on table 3, it can be seen that the p-value for the relationship X_3 to Y_1 is 0.0001 where this value is smaller than 0.05 so that with a significant level of 5% it can be concluded that the relationship between the influence of IT Governance on fraud is significant and the hypothesis regarding the influence of IT Governance on fraud is accepted. The path coefficient is negative, which is -0.3245 indicating that the higher the IT Governance, the lower the fraud. The results of this analysis support the results of research conducted by Halbouni (2016) which states that there is a significant influence between the IT Function on fraud.

H4: The Effect of IT Governance as a Moderating Variable in the Relationship of Information Intensity to Fraud

Based on table 3, it can be seen that the p-value for the relationship X_1 to Y_1 which is moderated by X_3 is 0.2158 where this value is less than 0.05, it can be said to be significant so that it can be concluded that IT Governance is not a significant moderating variable in the relationship between the influence of Information intensity on fraud and the hypothesis regarding the influence of IT Governance as a

moderating variable in the relationship between Information intensity on fraud is rejected.

H5: The Effect of IT Governance as a Moderating Variable in the Relationship of IT Function Characteristics to Fraud

Based on table 3, it can be seen that the p-value for the relationship X_2 to Y_1 which is moderated by X_3 is 0.0000 where this value is less than 0.05 it can be said to be significant so that it can be concluded that IT Governance is a significant moderating variable in the relationship between the influence of IT Function on fraud and the hypothesis regarding the influence of IT Governance as a moderating variable in the relationship between IT Function Characteristics on Fraud are accepted.

5 Conclusion

Based on the analysis that has been done, the results show that all of the test hypotheses are significant and support previous research. In addition, there is a negative relationship between Information Intensity and IT Function Characteristics on Fraud moderated by IT Governance. The moderating variable of IT Governance has a significant effect on the model and can strengthen the influence of the relationship between Information Intensity and IT Function Characteristics on Fraud.

References:

- [1] Akbar, D.A., Africano, F & Isrodirata, R.. (2021). Can *Fraud* Diamond Affect *Fraud* Financial Statement In Sharia Commercial Banks?. *Jurnal Reviu Akuntansi dan Keuangan*, 11(1), 40-57.
- [2] Azzahroh, F., & Fajri, R. N. (2020). The Effect of Self Efficacy and *Fraud* Diamond on *Fraudulent* Behavior Academic Accounting Students. *Journal of Business, Management, & Accounting*, 2(1).
- [3] Chen, C. J., Ding, Y., & Kim, C. F. (2010b). High-level politically connected firms, corruption, and analyst forecast accuracy around the world. *Journal of International Business Studies*, 41(9), 1505-1524.
- [4] Chidambaran, N., Kedia, S., & Prabhala, N. R. (2011). CEO Director Connections and Corporate *Fraud*. *Fordham University Schools of Business Research Paper (1787500)*.
- [5] Clinard, M., & Yeager, P. (2011). *Corporate Crime*. Transaction Publishers.
- [6] Goldman, E., Rocholl, J., & So, J. (2013). Politically connected boards of directors and the allocation of procurement contracts. *Review of Finance*, 17(5), 1617-1648.
- [7] Graham, J. R., Li, S., & Qiu, J. (2008). Corporate misreporting and bank loan contracting. *Journal of Financial Economics*, 89(1), 44-61.
- [8] Istifadah, R. U., & Senjani, Y. P. (2020). Religiosity as the moderating effect of diamond *fraud* and

- personal ethics on *fraud* tendencies. *Journal of Islamic Accounting and Finance Research*, 2 (1), 91, 116.
- [9] Juhandi, N., Zuhri, S., Fahlevi, M., & Noviantoro, R. (2020). Information Technology and Corporate Governance in Fraud Prevention. In E3S Web of Conferences (Vol. 202, p. 16003). EDP Sciences.
- [10] Kearns, S, Grover., & Lederer, L Alberth. (2004). The Impact of Industry Contextual Factors on IT Focus and the Use of IT for Competitive Advantage. *Information & Management* 41(7):899-919
- [11] Khanna, V., Kim, E., & Lu, Y. (2015). CEO Connectedness and Corporate *Fraud*: A Cautionary Tale for Managers. *Management Research Review*, 33(3), 224 – 239.
- [12] King, W.R and Sabherwal, R. (1992). The Factor Affecting Strategic Information System Applications: An Empirical Assessment, *Information and Management*,23(4),Oct., pp. 217-235
- [13] Ko, Eunju, Sook Hyun Kim, Myungsoo Kim, & Ji Young Woo. (2008). Organizational Characteristics and the CRM Adoption Process. *Journal of Business Research*. Vol. 61, Issue 1, January 2008, pg. 65-74.
- [14] Kuvvet, E. (2015). Corporate *Fraud* and Liquidity. *The Journal of Trading*,10(3), 65-71.
- [15] Lee, Guang-Gwo & Pai., Jung-Chi (2003). How information system capability affects e-business information technology strategy implementation: An empirical study in Taiwan. *Business Process Management Journal* 18(2):197-218
- [16] Lee, Gwanhoo., & Xia, Weidong. (2006). Organizational size and IT innovation adoption: A meta-analysis. *Information & Management* 43(8):975-985
- [17] McFarlan, F.W.(1984). Information Technology Changes The Way You Compete. *Harvard Business Review*, 62 (3): 98-103
- [18] Melati, I. N., Wilopo, R., & Hapsari, I. (2018). Analysis of the effect of *fraud* triangle dimensions, selfefficacy, and religiosity on academic *fraud* in accounting students. *The Indonesian Accounting Review*, 8(2), 187-202.
- [19] Mohamed, N., & Handley-Schachler, M. (2015). Roots of Responsibilities to Financial Statement *Fraud* Control. *Procedia Economics and Finance*, 28, 46–52.
- [20] Porter, Michael E., & Millar, Victor E.(1985). How Information Gives You Competitive Advantage. *Harvard Business Review Jul – August*: 149-159
- [21] Rahmatika, D. N., Kartikasari, M. D., Indriasih, D., Sari, I. A., & Mulia, A. (2019). Detection of *Fraudulent* Financial Statement; Can Perspective of *Fraud* Diamond Theory be applied to Property, Real Estate, and Building Construction Companies in Indonesia?. *European Journal of Business and Management Research*, 4(6).
- [22] Ray.G., Muhanna W.A., Barney.J.B (2005). Information technology and the performance of the customer service process: A resource-based analysis. *MIS Quarterly*, 29 (4) pp. 625-652
- [23] Sari, Nia Susnita., Arifin Sofyan, Nada Fastaqlaili. (2018). Analysis Of *Fraud* Diamond Dimension In Detecting Financial Statement *Fraud*. *Jurnal Akuntansi Trisakti*, Vol. 5, No. 2.
- [24] Spremic, Mario., Zmirak, Zlatan., & Kraljevic, Krunoslav. (2008). IT and business process performance management: Case study of ITIL implementation in finance service industry. *Information Technology Interfaces*, 2008. ITI 2008. 30th International Conference on.
- [25] Suhartini, D., Priono, H., Widoretno, A. A., & Tiaramurti, G. (2018). A Systematic Literature Review of Factors Caused Academic *Fraud* Behavior. *Nusantara Science and Technology Proceedings*, 10-17.
- [26] Wang, T. Y., Winton, A., & Yu, X. (2010). Corporate *fraud* and business conditions: Evidence from IPOs. *The Journal of Finance*, 65(6), 2255–2292.
- [27] Wolfe, David T., & Dana R. Hermanson (2004). The *Fraud* Diamond: Considering The Four Elements of *Fraud*. *CPA Journal*. 74(12), 38-42. The New York State Society’s of CPAs

Contribution of individual authors to the creation of a scientific article (ghostwriting policy)

Agung Budiwibowo, Endang Siti Astuti, Muhammad Saifi, Mohammad Iqbal carried out the simulation and the optimization, and responsible for the Statistics.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

No funding was received for conducting this study.

Conflicts of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0

https://creativecommons.org/licenses/by/4.0/deed.en_US