# The Effects of Internal Control and Information Systems of Insurance Services Fraud At Stella Maris Hospital, Makassar

Ingeline Chaterine<sup>1</sup>, Syarifuddin<sup>2</sup>, Kartini<sup>3</sup>

<sup>1</sup> Master of Accounting, Faculty of Economics and Business, Hasanuddin University <sup>2, 3</sup> Department of Accounting, Faculty of Economics and Business, Hasanuddin University

Abstract:- This study aims to determine the effect of regulation compliance control and information technology on insurance services fraud. This research is explanatory research with data collection techniques using questionnaires and research samples used as many as 104 respondents. The data analysis technique used is Multiple Linear Regression Analysis using SPSS version 21 software. The results of the study indicate that regulation compliance and information technology simultaneously affect insurance services fraud. Partially, each of the two variables, namely regulation compliance and information technology has a significant negative effect on insurance services fraud.

*Keywords:- Rule Obedience, Information Technology, Insurance Services Fraud.* 

# I. INTRODUCTION

The hospital is one of the health care providers for the community, which also plays the roles, burdens, problems and hopes given to them. The main activity of a hospital is to provide maximum health services to patients. Providing good service and having an organizational instrument that is reliable makes the hospital survive as a public service, a demand that must be fulfilled. This is an important issue because the hospital is the center of accountability that is responsible for public health services, so that the health services received by the community can be affordable and of high quality.

Providing health benefits is one form of organizational care for employees. Provision of health benefits for employees certainly helps to reduce the cost of living of employees, both in meeting the needs and life needs of employees. Provision of health benefits has various criteria to obtain the appropriate limit for employees who have certain positions. The same thing applies to organizations that provide health benefits to employees. But in practice, the good intentions of organizations providing health benefits through insurance services to employees tend to trigger fraud by irresponsible parties. This is done through the rationalization of fraud committed, so that the misuse of the provision of health benefits proves that the tendency of fraud can occur in every line of human life. This requires identification, so as not to cause harm to the organization where employees work, insurance organizations, and hospitals, both materially and non-materially. Even though health system development in a country is basically to achieve good health conditions (WHO, 2000).

The occurrence of fraud can be driven by internal factors and external factors. Internal factors are more closely related to the subjectivity of employees, while external factors are factors beyond the subjectivity of employees who contribute to influencing a person's actions of fraud. In this study, the external factors that influence the tendency of insurance fraud are regulation compliance and information technology.

The existence of accounting rules in the realization of organizational activities is needed to help improve employee performance, so that it also influences organizational performance for the better. The application of appropriate rules is expected to be able to support the availability of reliable, relevant, accurate, and accurate information, so as to minimize the tendency of fraud in organizations because fraud tends to occur due to pressure, opportunity and rationalization. The results of Vani's research (2013) show that the existing regulations in an organization have an effect on fraud. On the other hand, technological advances are one of the methods used by organizations to prevent fraud (Zanaria, 2017). The application of information technology that fits the goals and activities of the organization will minimize the occurrence of fraud in these organizations both private sector organizations and public sector organizations.

#### **II. LITERATURE REVIEW**

#### A. Fraud Triangle Theory

The Fraud triangle theory introduces three factors can affect the tendency of fraud, namely pressure, opportunity, and rationalization. The Fraud triangle theory was introduced by Cressey (1953). This theory is used to detect fraudulent tendencies in an organization. In this theory Cressey said that fraud is triggered by the following three factors: pressure, opportunity and rationalization.

#### B. Regulation Compliance

The pressure factor experienced by a person does not affect a person's tendency to commit fraud when someone is faced with implementing regulations in an organization so that activities can run as desired and to achieve the organization's vision and mission. This is confirmed by Maroney (2008) who says that in an organization can have various regulations that can be used as a tool to minimize

#### ISSN No:-2456-2165

fraud, so as to minimize the possibility of someone acting in accordance with the regulations.

Opportunities that a person has to commit fraud can be reduced through the implementation of appropriate rules in the organization. Rules in an organization are needed so that planned activities can be carried out properly, so that the goals of the organization can be achieved. If a violation occurs, the offender will usually be given a penalty or sanction so that in the future the violation does not occur again. If the organization of regulatory enforcement for violations is considered good, deviant behaviour such as fraud that might occur in the organization can be minimized. This is in line with the research conducted by Najahningrum (2013).

Rules are all provisions or accounting rules needed in the implementation of management of the organization's vision and mission and to avoid deviant actions that harm the organization. Rahmawati (2012) says that rules are actions or actions that must be carried out (Dewi, 2017). Thus the rationalization of someone against the tendency of fraud is influenced by the rules contained in an organization.

# C. Information Technology

Today the implementation of information technology occurs in private organizations and government organizations, so that information technology resources become a consideration for both managers and consultants, in determining the success of the organization in the future (Devaraj and Kholi, 2003). Martin et al. (2002) said that information technology is computer technology used to process and store information and communication technology used to transmit information (Ardi, 2013).

Information technology is one of the assets of an organization that supports organizational performance. When the implementation of information technology is misused by irresponsible parties, it can influence organizational performance. Mutiana et al., (2017) said that the presence of information technology provides many benefits for organizations, such as being able to alleviate complex activities and produce information that is reliable, relevant, timely, complete, understood, and tested in the context of planning, control and retrieval Management decision. Presentation of reliable, relevant, timely and complete information enhances organizational integrity for users of information including employees who receive health benefits from the organization. The availability of available information (in the form of the remaining and usable insurance limits) is presented to information users. This situation presents an opportunity for someone to commit fraud. The information obtained is misused with the aim of obtaining a small portion of the remaining funds to be used for the personal interests of the fraudster. This action is detrimental to the organization that has an impact on organizational performance.

#### D. Insurance Services Fraud

Insurance services fraud is a criminal act that occurs through abuse of trust carried out in the presence of intentional elements by using the level of intelligence possessed for personal interests which harms the Insurer by damaging the Insured's reputation, namely the organization where the employee works. Insurance services fraud is fraud committed by employees, both employees working in the private sector and employees working in the government sector. Health benefits provided by organizations to employees tend to be misused. This happens because of various factors including: internal control, compensation, morals, rules and information technology. These factors contribute to fraud (fraud), so Hartati (2016) says that insurance services fraud is a form of effort that is intentionally done by creating an advantage that should not be enjoyed by individuals or institutions and can harm others.

# III. RESEARCH METHODS

This research is a quantitative research with explanatory techniques to analyze the causality relationship between the independent variables and the dependent variable. The research data was collected through questionnaires using simple random sampling techniques to as many as 107 respondents selected. The questionnaire was distributed to employees who worked at Stella Maris Hospital in Makassar which included doctors, nurses, and staff in the finance department.

The analysis model used in this study is multiple linear regression analysis using SPSS version 21 software. The data analysis technique in this study consists of testing data validity and reliability, testing classical assumptions, and testing hypotheses.

The hypothesis formed in this study is:

- First hypothesis: Regulation Compliance have a significant effect on Insurance Service Fraud.
- The second hypothesis: Information Technology has a significant effect on Insurance Service Fraud.

#### IV. RESULT

#### A. Testing Validity and reliability

Validity tests are used to measure the validity or validity of a questionnaire. A questionnaire is declared valid if the question or statement on the questionnaire is able to reveal something that will be measured on the questionnaire. Requirements for a questionnaire are said to be valid if r count is greater than r table (Ghozali, 2013). The validity test in this study uses the Pearson correlation. The results of testing the validity of the research data are shown in the following table.

Testing the validity of this study shows that the calculated r value is greater than the r table value (0.191) so that all statement indicators are said to be valid.

Reliability test is used to determine the extent to which the measurement results remain consistent if done twice or more against the same symptoms using the same measuring instrument. A variable is said to be reliable if it has a Cronbach Alpha value > 0.60 (Sekaran, 2016).

Reliability testing in this study shows that the cronbach's alpha value is greater than the standard cronbach's alpha value (0.60) so the instrument used is reliable.

#### B. Testing Classical Assumptions

#### Multicollinearity Test

The multicollinearity test aims to test whether the regression model is found to have a correlation between independent variables. A good regression model should not have a correlation between the independent variables. Test the assumption of multicollinearity can be done by calculating the tolerance value and the value of VIF (Variance Inflating Factor). If the tolerance value is > 0.10 and VIF < 10, it can be concluded that there is no multicollinearity, and vice versa if the tolerance value is < 0.10 and VIF > 10, it can be concluded that there is multicollinearity. The results of a good study showed that there was no multicollinearity in the results of the study. The test results of multicollinearity assumptions in this study can be seen in the following table.

| Variable                    | <b>Tole-rance</b> | VIF   | Information           |
|-----------------------------|-------------------|-------|-----------------------|
| Regulation Compliance (X1)  | 0,540             | 1,851 | Non multicollinearity |
| Information Technology (X2) | 0,540             | 1,851 | Non multicollinearity |

Table 1:- Test Results for Assumption of Multicollinearity Source: Data processed (2019)

Table 1 shows that the tested variables do not contain multicollinearity, because all tolerance values are > 0.10 and VIF values are < 10.

#### Heteroscedasticity Test

To detect the presence or absence of heteroscedasticity by looking at the pattern of dots on the Scatterplot regression. If the points spread with an unclear pattern above and below the number 0 in Y growth, then there will be no problem with heteroscedasticity. Scatterplots can be seen in the regression output and are presented in the form of Figure 1.

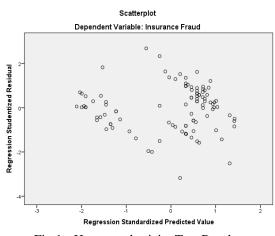


Fig 1:- Heteroscedasticity Test Results Source: Data processed (2019)

To strengthen the analysis of the presence or absence of heteroscedasticity, Glesjer test can be used. The Glesjer test results as shown in the following table:

| Variable                    | Sig.  | Information            |
|-----------------------------|-------|------------------------|
| Regulation Compliance (X1)  | 0,096 | Non heteroscedasticity |
| Information Technology (X2) | 0,251 | Non heteroscedasticity |

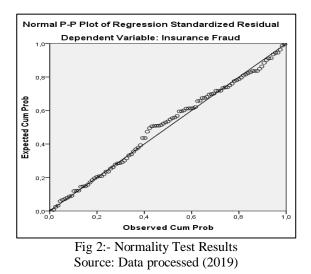
 Table 2:- Testing Results Assumption of Heteroscedasticity

 Source: Data processed (2019)

Table 2 shows that the tested variables did not contain heteroscedasticity, because all the sig values were > 0.05. This means that there is no correlation between the size of the data and the residuals, so that if the data is enlarged it does not cause greater residuals.

#### > Normality Test

To test data normally distributed or not seen from the Normal P-P chart Plot of regression standardized residuals. If the data spreads around the diagonal line and follows the diagonal direction, the regression model meets the assumption of normality. Whereas, if the data spread far from the diagonal line or did not follow the diagonal direction, then the regression model did not meet the assumption of normality. The results of the normality test can be seen in the following picture:



In this study, normality testing was statistically carried out using the Kolmogorov-Smirnov test obtained by the Sig Kolmogorov-Smirnov Asymp Sig. (2-tailed) of 0.124. This value has fulfilled the normality test requirement, that is if the test results are obtained Sig > 0.05, then the assumption of normality is fulfilled.

#### C. Hypothesis Testing

#### Coefficient of Determination (*R*-square)

This test aims to determine the proportion or percentage of total variation in the dependent variable explained by the independent variable. If the analysis used is multiple regression, then the one used is Adjust R Square.

| Model Summary                                      |          |  |  |  |  |  |
|--|----------|--|--|--|--|--|
|  |          | Adjusted R   | Std. Error of  |  |  |  |
| R  | R Square | Square   | the Estimate   |  |  |  |
| ,804 <sup>a</sup>                                  | ,646     | ,639   | ,75960   |  |  |  |
| a. Predictors: (Constant), Information Technologi, |          |  |  |  |  |  |
| Regulation   |          |  |  |  |  |  |
|  | ,804ª    | R R Square<br>,804 <sup>a</sup> ,646<br>edictors: (Constant), Ir | RR SquareAdjusted RRR SquareSquare,804a,646,639edictors: (Constant), Information Teacher |  |  |  |

Table 3:- Determination Coefficient Test Results Source: Data processed (2019)

Based on Table 3 the coefficient of determination (R-square) has a value of 0.646. This means that for 64.6% insurance services fraud can be explained by the regulation compliance and information technology variables. While the rest, which is equal to 35.4%, is explained by other variables not included in this research model.

### ➤ Simultaneous Test

To find out whether all the independent variables included in the model have a simultaneous influence on the dependent variable, a Simultaneous Test or F Test is performed (Ghozali, 2005).

| ANOVA <sup>a</sup>                                 |         |     |        |        |                   |
|--|---------|-----|--------|--------|-------------------|
|  | Sum of  |     | Mean   | -      | ~                 |
| Model  | Squares | df  | Square | F      | Sig.              |
| 1 Regression                                       | 105,222 | 2   | 52,611 | 91,182 | ,000 <sup>b</sup> |
| Residual   | 57,699  | 100 | ,577   |        |                   |
| Total  | 162,921 | 102 |        |        |                   |
| a. Dependent Variable: Insurance Fraud             |         |     |        |        |                   |
| b. Predictors: (Constant), Information Technology, |         |     |        |        |                   |
| Regulation   |         |     |        |        |                   |
| Table 4:- Simultaneous Test Results                |         |     |        |        |                   |
| Source: Data processed (2019)                      |         |     |        |        |                   |

Based on the results of data processing based on Table 4, the simultaneous test shows that the calculated F value is 91.182 > F table value 3.09 ( $\alpha = 5$  percent, dfl = 2 and df2 = 102), with a significance number of 0,000 < 0.05, so it is concluded that the variable regulation compliance and information technology together affect insurance services fraud.

# > Partial Test

After model selection and testing of classic assumption violations, the results of panel data regression analysis are shown in the following table:

| Variable<br>Direct<br>Relations                     | Coef.  | t-Statistic | Prob. | Information |
|---|--------|-------------|-------|-------------|
| $X_1 \rightarrow Y$                                 | -4,451 | -5,153      | 0,000 | Significant |
| $X_1 \rightarrow Y$                                 | -0,513 | -5,680      | 0,000 | Significant |
| T-11.5. Descher (Makinta Linear Descention Analysis |        |             |       |             |

Table 5:- Results of Multiple Linear Regression Analysis Source: Data processed (2019)

Based on the results of data analysis, the estimation of the research equation is as follows:  $Y = 2,665 - 4,451 X_1 - 0,513 X_2$ 

The above equation can be explained as follows:

# • Effect of Regulation Compliance (X1) on Insurance Services Fraud (Y)

The regulation compliance variable (X1) has a probability value of 0,000. Because the probability value is less than 5% (0.000 <0.050), then partially the regulation compliance variable (X1) has a significant effect on insurance services fraud variable (Y). Based on the coefficient value (-4,451) marked negative, identifying negative effects. This means that the higher the regulation compliance (X1), the lower the insurance services fraud (Y).

• Effect of Information Technology (X2) on Insurance Services Fraud (Y)

The information technology variable (X2) has a probability value of 0,000. Because the probability value is less than 5% (0.000 <0.050), then partially information technology variable (X2) has a significant effect on insurance services fraud variable (Y). Based on the coefficient value (-4,451) marked negative, identifying

ISSN No:-2456-2165

negative effects. This means that the higher information technology (X2), the lower the insurance services fraud (Y).

## V. DISCUSSION

#### Effect of Regulatory Compliance (X1) on Insurance Services Fraud (Y)

The test results show that the proposed hypothesis is accepted. Thus the hypothesis that states the rules negatively affects insurance services is empirically proven fraud. This finding shows that rules have a significant negative effect on insurance services fraud. These results prove that through the application of the right rules, the level of insurance services fraud trend will be lower.

The results of this study are in accordance with the fraud triangle theory which explains that pressure as one of the factors in fraud triangle theory can make someone increase attention in carrying out various actions including the tendency towards insurance services fraud, so that rules are needed to minimize fraudulent tendencies. Rules in an organization are needed so that planned activities can be carried out properly, so that the goals of the organization can be achieved. If a violation occurs, the offender will usually be given a penalty or sanction so that in the future the violation does not occur again. If the organization of regulatory enforcement for violations is considered good, deviant behaviour such as fraud that might occur in the organization can be minimized, this is in line with the research conducted by Najahningrum (2013). This study supports the research conducted by Wilopo (2006) and Adelin (2013) who found that regulation compliance has a negative and significant effect on fraudulent tendencies.

#### Effect Information Technology (X2) on Insurance Services Fraud (Y)

The test results show that the proposed hypothesis is accepted. Thus the hypothesis that states the rules negatively affects insurance services is empirically proven fraud. This study explains that information technology used correctly tends to pressure someone to do insurance services fraud.

The results of this study are in accordance with the fraud triangle theory. According to fraud triangle theory, there are three factors that cause fraud to occur, namely opportunity, rationalization, and encouragement / pressure, so that through good internal control also reduces the occurrence of insurance services fraud in the company. Insurance services fraud occurs when a person experiences pressure which then rationalizes the mind about the actions he will take. Finally to realize this when knowing the existence of an opportunity, so that raises insurance services fraud. Information technology that is used well in companies is able to minimize the trend of insurance services fraud. Sadikin and Adisasmito (2016) stated that pressure causes someone to commit fraud. Pressure most often comes from the pressure of financial needs. This need is often considered a need that cannot be shared with others to jointly solve it so it must be resolved in secret and ultimately lead to fraud.

Wilkinson and Cerullo (1997) stated that the implementation of information technology can meet the information needs of the business world very quickly, timely, relevant, and accurately. Generally companies use information technology to be able to obtain the information needed quickly, precisely, accurately, and reliably (Zanaria, 2017).

This research was also supported by Mutiana, et. al. (2017) which states that the presence of information technology provides many benefits for organizations, such as being able to alleviate complex activities and produce information that is reliable, relevant, timely, complete, understood, and tested in the context of planning, control and management decision making.

# VI. CONCLUSION

Through the results of data analysis and discussion, it can be concluded that the regulation compliance and information technology both of them simultaneously affect insurance services fraud. While partially, regulation compliance has a significant negative effect on insurance services fraud, which shows that with the application of strict rules will reduce the occurrence of insurance services fraud. Furthermore, information technology has a significant negative effect on insurance services fraud, which also shows that through the application of information technology in an organization in this case Stella Maris Hospital will suppress the actions of its employees to carry out insurance services fraud.

#### REFERENCES

- Ardi, Bagus Kusuma. 2013. Pengaruh Kemajuan Teknologi Informasi Terhadap Perkembangan Sistem Informasi Akuntansi. STIE Dharmaputra Semarang. *Dharma Ekonomi*. No. 38/ TH. XX/ Oktober.
- [2]. Bakri. 2007. Pengaruh Teknologi Informasi, Saling Ketergantungan, Keselarasan Tujuan dan Komunikasi Terhadap Individual. *Jurnal Ekonomi Bisnis*. STIE YKPN Yogyakarta.
- [3]. Charles, P. 2015. Sepuluh Skema Fraud Dalam Asuransi Kesehatan.
- [4]. Coram, P., C, Ferguson, and R. Moroney, 2008. Internal Audit, Alternative Internal Audit Structures and The Level of Misappropriation of Assets Fraud. *Accounting and Finance*, 48 (4), 543-559.
- [5]. Dewi, Chindy Kurnia Rahma. 2017. Pengaruh Pengendalian Internal, Kesesuaian Kompensasi, Ketaatan Aturan Akuntansi, dan Perilaku Tidak Etis Terhadap Kecenderungan Kecurangan Akuntansi (Studi Empiris Pada SKPD Kabupaten Bengkalis). JOM Fekon, Vol. 4, No. 1, Februari.
- [6]. Fitria, G. D., Amillin. 2014. Peran Integritas Personal Sebagai Pemediasi Pada Lingkungan Etika Organisasi Terhadap terjadinya *Fraud. Jurnal Riset Akuntansi*

ISSN No:-2456-2165

dan Perpajakan (JRAP), Vol. 1, No. 1, ISSN 2329-1545.

- [7]. Ghozali, Imam. 2013. *Aplikasi Analisis Multivariate dengan Program IBM SPSS 21.* Semarang: Universitas Diponegoro.
- [8]. Hartati, Tatik Sri. 2016. Prevention of Fraudulent in the Implementation of Health Insurance Program on National Social Security System (SJSN) in Menggala Hospital. *Fiat Justisia Journal of Law*, Vol. 10 Issue 4, Oktober-Desember
- [9]. Kassem, Rasha dan Andrew Higson. 2012. The New Fraud Triangle Model. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 3(3), 191-195.
- [10]. Maroney, J. J, R. E. McDevitt. 2008. The Effects of Moral Reasoning on Financial Reporting Decisions in a Post Sarbanes-Oxley Environment. *Behavioral Research of Accounting*, 20 (2), 89-110.
- [11]. Mutiana et al. 2017. Pengaruh Sistem Pengendalian Intern, Teknologi Informasi, Kualitas Sumber Daya Manusia dan Komitmen Organisasi terhadap Kualitas Laporan Keuangan (Studi pada Satker di Lingkungan Kementerian Agama Kabupaten Aceh Utara). Jurnal Perspektif Ekonomi Darussalam, Vol. 3 Nomor 2, September, ISSN: 2502-6976.@
- [12]. Mustika, D. Hastuti. S dan Heriningsih. 2016. Analisis Faktor-Faktor yang Mempergaruhi Kecenderungan Kecurangan (*Fraud*). Simposium Nasional kuntansi XIX, Lampung.
- [13]. Najahningrum, Anik Fatun. 2013. Faktor-Faktor Yang Mempengaruhi Kecenderungan Kecurangan (Fraud): Persepsi Pegawai Dinas Provinsi DIY. *Accounting Analysis Journal (AAJ)*, 2 (3).
- [14]. Natasya, Toisuta Novenia., Herman Karamoy., dan Robert Lambey. (2017). Pengaruh Komitmen Organisasi dan Pengendalian Internal terhadap Risiko Terjadinya Kecurangan (*Fraud*) Dalam Pelaksanaan Jaminan Kesehatan di Rumah Sakit Bhayangkara Tk. IV Polda Sulut. Jurnal Riset Akuntansi Going Concern, 12(2), 847-856.
- [15]. Nurfarida, Ika. 2014. The Effect of Fraud in the National Health Insurance System Toward the Quality of Health Services in Dr. Radjiman Wediodiningrat Mental Hospital, Lawang, Malang. *Jurnal Kebijakan Kesehatan Indonesia*, Vol. 03, No. 4, Desember.
- [16]. Ramamoorti, S. 2008. The Psychology and Sociology of Fraud: Integrating the Behavioral Sciences Component Into Fraud and Forensic Accounting Curricula. *Issues in Accounting Education*, Vol. 23, No. 4, November, 521-533.
- [17]. Sadikin, Hasan dan Adisasmito Wiku, 2016. Analisis Pengaruh Dimensi Fraud Triangle Dalam Kebijakan Pencegahan Fraud Terhadap Program Jaminan Kesehatan Nasional di RSUP Nasional Cipto Mangunkusumo. Jurnal Ekonomi Kesehatan Indonesia, Vol. 1, No. 2.
- [18]. Sampurna, Budi. 2008. Peran Ilmu Forensik Dalam Kasus-Kasus Asuransi. *Indonesian Journal of Legal and Forensic Sciences*, 1(1):17-20.

- [19]. Sekaran, Uma and Bougie, R. 2013. *Research Methods for Business* sixth edition. United Kingdom: John Wiley & Sons Ltd.
- [20]. Welton, R. E., J. R Davis dan M. LaGroune. 1994. Promoting The Moral Development Of Accounting Graduate Students. Accounting Education. Accounting Education, 3 (1), 35-50.
- [21]. WHO 2000. *The Word Health Refort 2000. Health System: Improving Performance*, Geneva, Word Health Organization.
- [22]. Wilopo. 2006. Analisis Faktor-Faktor yang Berpengaruh Terhadap Kecenderungan Kecurangan Akuntansi : Studi pada Perusahaan Publik dan Badan Usaha Milik Negara di Indonesia. Simposium Nasional Akuntansi (SNA) 9. Padang, 23 – 26 Agustus.
- [23]. Wiyono, M. 2014. Mengenal Potensi Fraud pada Program Jaminan kesehatan Nasional (JKN). Kompasiana Manajemen.
- [24]. Zanaria, Yulita. 2017. Pengaruh Aplikasi Teknologi, Accounting Reporting Terhadap Pencegahan Fraud Serta Implikasinya Terhadap Reaksi Investor. AKUISISI, Vol 13, No. 1, April.