# The Power of The Effect Implementation of Information Technology and Organizational Culture in Detecting Fraud

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**Abstract.** This study aims to test whether the implementation of information technology and organizational culture can detect fraud in the management of School Operational Assistance funds. This research is very important for the success of government programs in improving the quality of human resources through quality education from primary to secondary levels. This study uses purposive sampling with a total sample of 200 schools from elementary, junior high, and high school levels. Primary data is used to ensure that information is obtained from sources directly related to the management and supervision of BOS funds. The unit of analysis in this study was the schools that were late in collecting BOS fund reports in Lampung Province. The data is processed by Partial Least Square (PLS). The results of the study show that information technology can reduce indications of fraudulent practices while the ability of organizational culture which is reflected through the commitment and integrity of the leadership plays a strong role in reducing indications of fraudulent practices.

**Keywords**: Fraud, information system, organizational culture

## 1. Introduction

The 1945 Constitution mandates the allocation of education funds to be 20% of the APBN. This provision has been implemented by the government by allocating a budget of 208.1 trillion in the 2020 State Budget. Based on this allocation, the Ministry of Education and Culture describes it into various expenditures, one of which is School Operational Assistance (BOS).[1] stated that the largest expenditure on the ministry of education for BOS was 4.66% in 2019 and in 2020 it increased to 10.69%, or around Rp. 54.32 Trillion.

The high allocation of BOS triggers fraud in the management process. Indonesia Corruption Watch (ICW) revealed that during 2005-2016 there were 425 corruption cases related to the education budget with state losses reaching Rp1.3 trillion and the bribe reaching Rp 55 billion [2]. The same condition also occurred in Lampung Province, namely the corruption of BOS funds of Rp. 1.76 billion, [3] and the deduction of BOS funds for SPM students totaling Rp. 78.5 million, [4].

Based on the phenomena in the field, this research is very important because research related to fraud in the management of BOS funds is still rare, especially in Lampung Province, besides that this research also aims to help the success of government programs in improving the quality of education.

Research Question
Is the implementation of information technology and organizational culture able to encourage the Fraud Diamond Model to detect fraud in the management of BOS funds?

## 2. Literature Review

Agency Theory
[5] explain the relationship between agent and principal. The principal as the agent responsible for managing BOS funds is often late in sending an accountability report to the ministry of education and culture as the principal. This delay may indicate fraud in its management.

Fraud (fraud)
fraud *(fraud)* is dishonesty in the form of deliberate fraud or misstatement of material fact intentionally. Lying, deliberately telling untruths, and deceiving, obtaining unfair or unfair advantages from others [6]. Activities that fall within the definition of corporate fraud typically include theft, corruption, conspiracy, embezzlement, money laundering, bribery, and extortion [7]. Financial statement fraud is intentional or reckless behavior, with acts or omissions that results in materially misleading financial statements [8]**.** Related to fraud, Cressey (1950) introduced the fraud triangle, which is refined into a fraud diamond by [9] that fraud generally occurs because of pressure, opportunity, rationalization, and capability.

Information Technology
Information Technology is a system consisting of a collection of two or more physical or non-physical subsystems or components that interact and work together in harmony to process data to produce useful information for decision-makers [8]. In managing BOS funds, an integrated system is needed starting from planning, implementation, and reporting. The information system is also a suggestion that can suppress the occurrence of fraud in an organization, [10]. In this research, information technology is measured by indicators,[8] people who use the system; procedures and instructions used to collect, process, and store data; software used to process data; information technology infrastructure includes computers, peripheral devices, and communication network devices; internal controls and security measures that store AIS data.

Organizational Culture
Organizational culture is a habit that exists in organizations that have existed for a long time and are hereditary until now [11]. Organizational culture is the norms, values, assumptions, beliefs, habits that are made in an organization and approved by all members of the organization as a guide or reference in the organization in carrying out its activities both for employees and for the benefit of others [12]. Organizational culture consists of values and assumptions that are shared within an organization [13]. Organizational culture is one factor in the design of accounting information systems [8]. In this research organisation culture by indicator:

innovation and risk taking, results orientation, people orientation, team orientation, aggressiveness and stability.

Conceptual Framework
Based on the premise of the theory and previous research, the framework of this research is as follows:
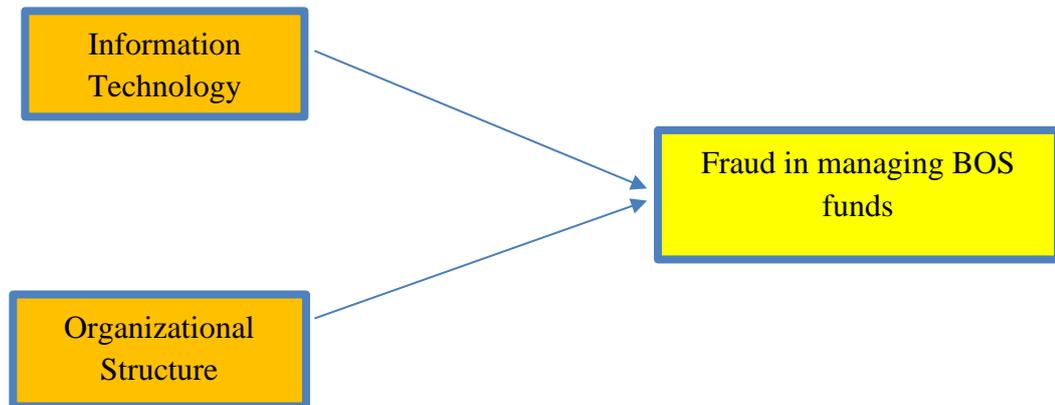


**Fig. 1**. Research Framework

Hypothesis Development
Effect of Information Technology Implementation on Fraud
Information technology is a system that collects, records, stores, and processes data to produce information for decision-makers [8]. The use of accounting information systems will produce quality, fast, precise, accurate, transparent, and accountable information. The implementation of information technology is believed to be able to reduce fraudulent practices [14]. Based on this description, the hypothesis,
$H_1$: Implementation of Information technology can detect a decrease in fraud in the Diamond Model.

The Influence of Organizational Culture on Fraud
[15], [12], and [16] found that good organizational culture practices can reduce the level of fraud, positive effect on fraud prevention. A good organizational culture in an agency can minimize the possibility of fraud. The better the organizational culture, the lower the level of fraud [12]. From the description above, a hypothesis can be formulated,
$H_2$: Organizational Culture can detect a decrease in fraud in the Diamond Model.

## 3. Research Methodology

This study uses the dependent variable of information technology implementation and organizational culture to test the accuracy of the Diamond model in detecting fraud. The test is done by regression test using Partial Least Square.

The population in this study is schools from elementary to high school levels in Lampung Province, while the sample is schools that are late in sending BOS fund accountability reports. The sampling technique is *stratified random sampling*. To obtain information that reflects the actual conditions, the questionnaire in this study was addressed to the competent parties as observation units, i.e. treasurers, school committees, and teacher representatives.

## 4. Research Result and Discussion

Data processing in this study uses PLS so it does not require a normal data distribution. The test results have also met the criteria of validity and reliability so that they can be continued to test the hypothesis. Figure 2 shows the results of hypothesis testing:
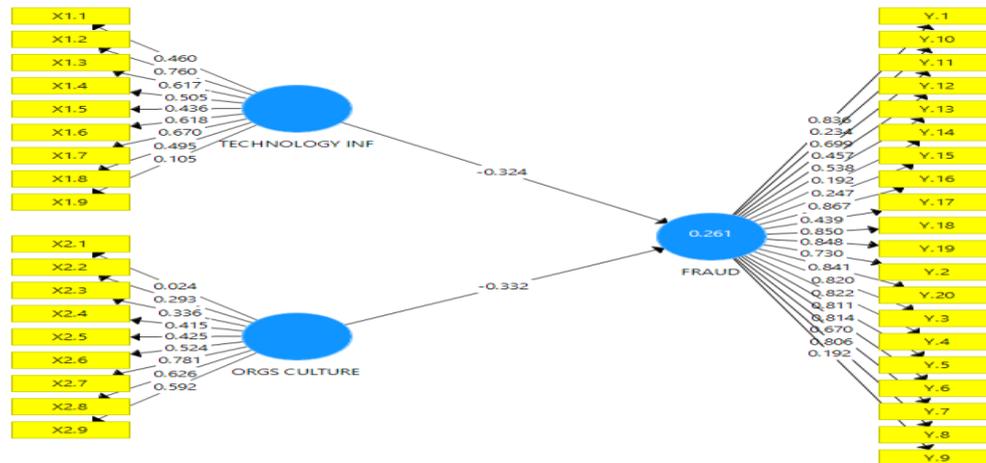


**Fig. 2.** Results of Hypothesis Testing

The data in the figure shows that the results of the H1 test show a value of -0.324, this value is greater than the level of significant 0.05 so it can be concluded that H1 is not supported. although it is not significant however the direction of the negative coefficient indicates the implementation of information technology can reduce the possibility of fraud. The BOS fund information system has been designed to pay attention to the needs and conditions of the users of the system so that the system can be useful and able to provide accurate data and information. The level of accuracy of information is indicated by information that can be presented in real-time so that stakeholders can monitor the utilization and management of BOS funds for making decisions regarding the effectiveness of BOS funds.

The Indications of fraud in the management of BOS funds still occur with delays in sending accountability reports from the school. This condition shows that information technology as a tool cannot fully guarantee the success of a program because there is still a link between

elements of the technology user. When users have certain goals such as personal interests that indicate fraud, no matter how well the technology has been developed, it can produce less accurate information because the input data is not valid. This condition is caused by the absence of internal control in the form of verification of activities and financial evidence. Verification is very important to ensure that the correct activities have been carried out and the proof of transactions is by the expenses. The verification process must be carried out by a higher party i.e. the principal. Based on the data collected, it illustrates that there are still schools that only fulfill administration as a form of accountability without any validation and verification of activities. This condition resulted in the implementation of BOS funds being less optimal.

Test results $H_2$ showed a value of -332, which also indicates that a good organizational culture can reduce fraud, especially relating to the management of BOS funds. The positive values of organizational culture as norms that are believed to be true by all members of the organization in the school environment can suppress the tendency of fraudulent practices. The information obtained shows that there is still a pattern of managing BOS funds that is centered on the principal so that the decision-making process and accountability are not in accordance with the provisions set by the ministry of education and culture.

School committees as representatives of students' parents and as part of the BOS fund management structure in some schools were not formed, or they were formed but were not effective. This condition results when an indication of fraud cannot be detected from the start and the use of boss funds cannot be in accordance with the allocation.

## 5. Implication and Suggestion for Future Research

The management of BOS funds must be carried out from upstream to downstream. Agency theory in this study has been implemented. The school manager as the party who is given the mandate (agency) has carried out government programs as the principal so that the goal of improving the quality of education can be realized, although there are still some schools that are less optimal. Implementation of information technology is a strong factor that can reduce indications of fraud in the management of BOS funds while organizational culture will be able to find indications of fraud when the leadership has high commitment and integrity. The next research can add internal control and management commitment variables.

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