

Analysis of the Effect of Implementing Seller's Integrity and Buyer's Prudence on Fraudulent Acts in E-Commerce in Indonesia

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ABSTRACT

The aim of this research is to analyze the effect of implementing seller's integrity and buyer's prudence on the fraudulent acts in e-commerce in Indonesia. This research needs to be discussed because of the increase of e-commerce usage as a platform to do transactions between sellers and buyers. The used design in this research is quantitative descriptive research with the secondary data type. The sampling technique used is the purposive sampling technique with e-commerce in Indonesia as the population and total of 200 stores as qualified samples. The data analysis method used is the parametric statistic method with multiple linear regression as the hypothesis testing method. This research used SPSS Version 25 software to process the data. The result shows that the seller's integrity has a negative significance effect on fraudulent act, while the buyer's prudence has a positive significant effect on fraudulent act.

Keyword: Fraud, Seller's Integrity, Buyer's Prudence, E-commerce

1. INTRODUCTION

During the COVID-19 pandemic, there have been many restrictions on trade activities in Indonesia which cause the business sector, ranging from MSMEs to large companies, to experience a decline in sales. However, this can be overcome with e-commerce. According to Laudon and Laudon (1998), e-commerce is a computerized medium that is used for the buying and selling process from company to company, company to consumer, and consumer to consumer. In Indonesia, e-commerce continues to experience significant development so that many business owners are interested in joining.

This is also supported by the continued increase in the number of e-commerce transactions in Indonesia. Based on data from Bank Indonesia in 2021, the number of e-commerce transactions in 2019 reached IDR 205.5 trillion and IDR 266.3 trillion in 2020, which means that the number of e-commerce transactions increased by 29.59%.

Each e-commerce has its own features and regulations that are continuously developed to improve services and public interest in using e-commerce, such as the existence of a shopee affiliate. E-commerce is a platform that provides various types of products that are in demand by the

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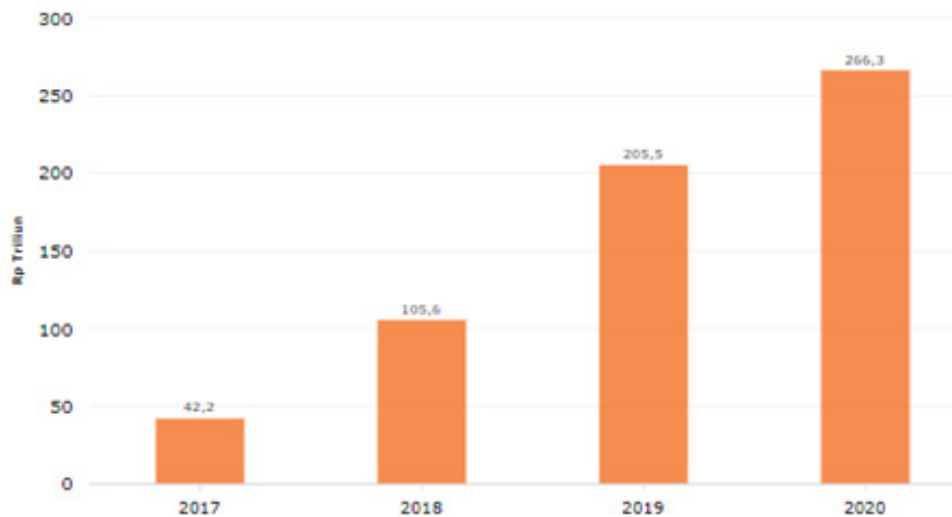
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Indonesian people. Based on a survey conducted by Katadata Insight Center (KIC) and Kredivo, fashion products are in great demand and have the highest number of transactions in e-commerce in Indonesia. This is due to the high public interest in fashion and the growing trend of fashion every season.

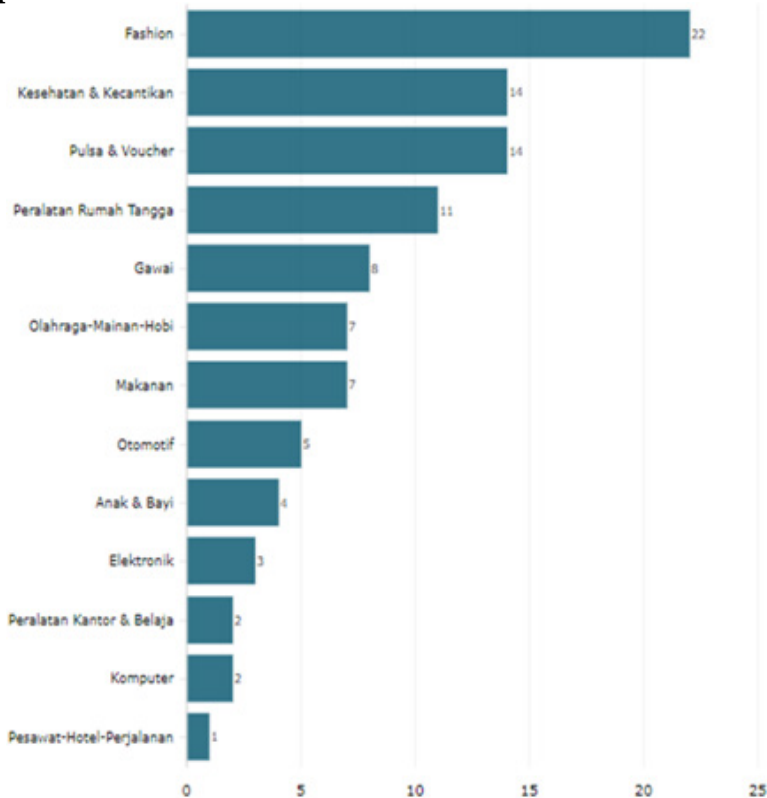
The increase in the number of transactions in e-commerce has a positive impact on the business income of the Indonesian people. On the other hand, it also has negative impacts, such as an increase in e-commerce fraud in Indonesia. According to Bank Indonesia (2011), fraud is an act of deviation that is carried out intentionally to

Figure 1. Nominal E-commerce Transactions (2017-2020)



Source: Bank Indonesia, 2021

Figure 2. Proportion of Number of Product Transactions in E-commerce (2020)



Source: Survey by Katadata Insight Center (KIC) and Kredivo, 2021

trick, deceive or manipulate other parties to obtain financial benefits, either directly or indirectly. Meanwhile, e-commerce fraud is an act of fraud that occurs on e-commerce platforms, both in the form of false information about products and the use of fake identities. E-commerce fraud can be seen directly through consumers' poor assessment of the stores and goods sold and the decrease in the number of sales at these stores.

Honesty is a very important element in the buying and selling process. To be able to overcome the problem of e-commerce fraud requires high integrity from the seller and high prudence from consumers. Some sellers have a lack of integrity with the products they offer, and this can lead to fraud. In addition, fraud can also occur when consumers reduce their prudence with the assumption that many other consumers buy products at the same store. Lack of prudence can make the person easily influenced and deceived by other parties. Integrity and prudence are indispensable in preventing fraud. In some cases, however, fraud can still occur even though the seller already has integrity and the consumer also has high prudence. Therefore, it is necessary to conduct research to examine the effect of seller's integrity and consumer's prudence on fraudulent acts in e-commerce in Indonesia. This research is expected to contribute indirectly to reducing fraud in e-commerce.

This study focuses on the factors that can prevent fraud in e-commerce in Indonesia. This study presents factors that can prevent fraud by increasing seller's integrity and consumer's prudence. The results of previous research conducted by Sabau et al. (2013), Ramadhaniyati and Nur (2014), Dewi et al. (2017) and Wulandari and Muhammad (2018) show that integrity has a significant positive effect on fraud prevention. However, the objects of previous research were limited to institutions and companies, while fraud that occurred in e-commerce has never been studied. Therefore, this study is conducted

to analyze the factors that influence fraud in e-commerce. The difference between this study and previous research lies in the variables and research objects used which have never been studied in previous research.

2. LITERATURE REVIEW AND HYPOTHESIS

Agency Theory

Agency theory is a theory about a relationship between principals and agents (Jensen and Meckling, 1976). The principal is the investor or shareholder, while the agent is the management. This relationship occurs when the agent is authorized by the principal to make business decisions that can generate profits for a company. The business decisions taken by the agent will later be used as a source of information for the principal to make the best decision. This theory has the aim of creating a system that can ensure the harmony of the relationship between the principal and the agent. But on the other hand, agency theory can cause agency problems between principals and agents due to information asymmetry, where the agent knows more information about the company's situation than the principal. Agency problems can lead to fraud.

Fraud

Fraud is any unlawful act carried out intentionally by internal or external people of the organization by stealing assets owned by the organization or abusing authority or position for personal or group gain (ACFE, 2016). Fraud also shows a false representation of material facts made by one party to another with the intention of committing fraud and encouraging the other party to rely on justifiable facts that actually harm the other party (Hall, 2011).

E-commerce Fraud

E-commerce is a platform for conducting buying and selling processes or business transactions of various products electronically using a computer (Laudon and Laudon, 1998). E-commerce has many advantages, such as the ease of buying

and selling transactions and cost savings for the seller. Therefore, many companies and manufacturers are taking advantage of e-commerce platforms to offer their products. But on the other hand, e-commerce also has some drawbacks, where many criminals look for loopholes by using the platform to gain profits by committing fraud. Fraud in e-commerce can take the form of abuse of various e-commerce features, such as the flash sale feature. Fraud on products sold include providing unreasonable discounts, products that have been paid for but not shipped, products sent that do not match the picture, giving false reviews, and theft of customer personal data such as theft of credit card information..

Fraud Pentagon

There are various basic theories used to describe fraud, one of which is the fraud pentagon theory. The fraud pentagon theory is a development of the fraud triangle theory proposed by Cressey (1953) and the fraud diamond theory proposed by Wolf & Hermanson (2004). This development can be seen in changes in the risk factor in the form of competence which was previously capability and the addition of a risk factor in the form of arrogance. Marks (2012) in Siddiq et al. (2015) explained the risk factors in the theory of fraud pentagon as follows:

- a. Pressure; the motivation that arises to commit and hide fraud.
- b. Opportunity; the belief of the fraud perpetrator that his actions will not be detected by an organization or company.
- c. Rationalization; the attitude of justifying the fraudulent actions that have been carried out.
- d. Competence; the expertise of fraud perpetrators in managing and developing strategies and controlling social situations to penetrate existing internal controls in an organization or company.

- e. Arrogance; a person's arrogant and superior attitude by assuming he himself is capable of committing fraud.

Integrity

Integrity is a reputation and honesty that a person has to define the term "trust" in an organizational environment (Butler and Cantrell, 1984 in Hosmer, 1995). Integrity is the quality, nature, and condition that shows a unified whole. The characteristics of people with high integrity are hardworking, honest, and have adequate competence (BPK, 2017). Integrity emphasizes consistency in one's morals, honesty, and personal integrity (Jacobs, 2004). The following are ways to achieve an integrated system to prevent fraud in an organization or company:

- a. Develop an ethical culture and work environment with high integrity within an organization or company.
- b. Develop a system of perception and prevention of potential fraud.
- c. Develop operational systems on internal control.
- d. Conduct fraud prevention education and training.

Prudence

Prudence is a method of distinguishing between one's own feeling and that of others in order to increase the ability to appreciate the feeling of others (Pratisti and Prihartanti, 2012). Prudence, according to Indonesian Dictionary (KBBI), is correcting oneself honestly. Prudence is an attitude of being vigilant so as not to fall into a mistake. Prudence is very important so as not to be easily deceived when carrying out an activity.

Research Hypotheses and Framework

The Effect of Seller's Integrity on Fraud

The results of research conducted by Sabau et al. (2013), Ramadhaniyati and Nur (2014), Dewi et al. (2017) and Wulandari and Muhammad (2018) show that integrity has a significant positive effect on fraud prevention in institutions and companies.

This indicates that the higher the integrity possessed by an institution, the better the prevention of fraud that is carried out so that it can reduce the occurrence of fraud in the institution.

Integrity is an important thing that must be owned by a seller because integrity relates to the honesty and responsibility of the seller for the products being sold. This is useful for convincing consumers to buy and subscribe to the store, not only in physical stores but also in e-commerce stores. The lower the integrity of the seller, the fewer consumers trust in the seller. In addition, low integrity can also lead to fraudulent actions both on product information and on store identity so that the seller's low integrity will have an impact on increasing fraud in the store. This happens because the integrity of the seller is one way to prevent fraud. Based on the description above, the hypothesis can be formulated as follows:

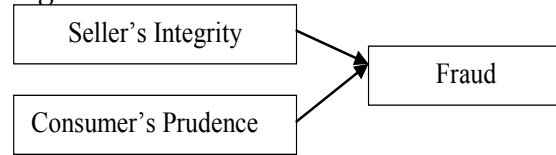
H₁: Seller's integrity has an effect on fraud.

The Effect of Consumer's Prudence on Fraud

In carrying out a transaction, consumers are expected to have prudence in determining the quality of the goods to be purchased. When making direct transactions, consumers need to see clearly and touch the items they want to buy so that fraud can be minimized. However, when a consumer wants to buy an item online using an e-commerce platform, the consumer cannot identify the details of the item to be purchased, such as the materials used in the product. Consumers can only find out through product descriptions and other consumer ratings. When many other consumers buy the product, the consumer will think that the product is good, without reading the entire product rating. This can lead to acts of fraud because consumers do not carry out detailed inspections and reduce the nature of prudence. Based on the description above, the hypothesis can be formulated as follows:

H₂: Consumer's prudence has an effect on fraud.

Figure 3. Framework



3. METHODS

This research is a quantitative descriptive research with the aim of finding out the effect of each independent variable on the dependent variable. The population in this study is e-commerce in Indonesia. Sampling is done by using purposive sampling technique, a technique of determining the sample through certain considerations. These considerations include:

- E-commerce which is included in the top 5 general B2C and C2C e-commerce in Indonesia in the first quarter of 2021
- E-commerce that has a store assessment feature for all product sales
- E-commerce engaged in the fashion or clothing industry
- Stores that have a minimum total sales amount of 10,000

The data used in this study is secondary data in the form of store reports on e-commerce. The report consists of a report on the number of store sales and a rating report or store assessment by consumers. Data analysis is carried out using parametric statistical methods, while hypothesis testing is carried out using multiple linear regression methods assisted by the Statistical Package for the Social Sciences (SPSS) software version 25.

Measurement and Operational Definition of Variables

Dependent Variable (Y)

The dependent variable in this study is fraud which is measured using consumer ratings with 1, 2, and 3 stars found in each store in e-commerce. The number of stars 1, 2, and 3 is used because the rater wants to know the total number of fraudulent acts caused by the seller integrity and the consumer prudence.

Independent Variable (X)

The independent variables in this study are the seller's integrity and the consumer's prudence.

Seller's Integrity

According to the Ministry of Finance (2014), integrity is an act of thinking, speaking, and behaving properly and correctly in accordance with moral principles, such as being honest and responsible. The integrity of the seller can be assessed using the rate of each store.

Consumer's Prudence

According to Indonesian Dictionary (KBBI), prudence is checking or correcting oneself honestly, or it can also be interpreted as being alert to something so that mistakes and problems do not occur. If the percentage of consumer prudence is low, it can be concluded that consumers have high caution in buying products. On the other hand, if the percentage of consumer prudence is high, it can be concluded that consumers have low caution in choosing products. Consumer prudence can be assessed using the following formula:

4. RESULTS AND DISCUSSION

In this study, the researchers conducted several tests to analyze the data, such as the classical assumption test (consisting of normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test) and hypothesis test (consisting of the coefficient of determination R2 test, simultaneous F test, and partial t). The following are the results and discussion in this research.

Classical Assumption Test

Normality Test

The results of the normality test using the Kolmogrov-Smirnov test parametric method can be seen in Figure 4 above. Based on the test results, the value of asymp Sig. (2-tailed) is 0.069 > 0.05. This means that the standardized residual data is declared to be normally distributed.

Figure 4. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		200
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.76018998
Most Extreme Differences	Absolute	.061
	Positive	.051
	Negative	-.061
Test Statistic		.061
Asymp. Sig. (2-tailed)		.069 ^c

a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.

Source: Data Processed

Multicollinearity Test

The test results in figure 5 above show that the tolerance values for the seller's integrity and consumer prudence variables are 1.000 and 1.000, respectively. The VIF values for the seller's integrity and consumer's prudence variables are 1.000 and 1.000 respectively. Based on the test results of the two variables, there is no VIF value greater than 10, and the resulting tolerance value is more than 0.10. So it can be concluded that no multicollinearity symptoms were detected in the tested data.

Figure 5. Multicollinearity Test Results

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	Integritas	1.000	1.000
	Kehati-hatian	1.000	1.000

a. Dependent Variable: Ln_Fraud

Source: Data Processed

Heteroscedasticity Test

In this study, the heteroscedasticity test was carried out using the Glejser method. Based on this test, the significant value of the seller's integrity variable on the absolute residual value is 0.086 > 0.05, while the consumer's prudence variable on the absolute residual value is 0.686 > 0.05. This shows that there is no systematic relationship between the variables that

explain each other and the absolute value of the residuals. So it can be concluded that the data obtained does not contain heteroscedasticity.

Autocorrelation Test

Based on the results of the autocorrelation test, the Durbin-Watson (dw) value is 2.194, which means that the dw value is between the upper bound (dU) and 4 - upper bound (4-dU), which is $1.7887 \leq 2.194 \leq 2.2113$. So it can be concluded that there is no positive or negative autocorrelation, which means that there is no relationship between one data and another.

Hypothesis Test

Coefficient of Determination (R²) Test

Based on the results of the coefficient of determination (R²) test, the value of R or multiple R is 0.743, which means that the multiple correlation between seller's integrity and consumer's prudence is 0.743. The value of the coefficient of determination (R²) is 0.552, which means that the variables of seller's integrity and consumer's prudence affect fraud by 55.2%, while the remaining 44.8% is influenced by other factors that have not been studied by researchers. The adjusted R² value is 0.548, which means that variations in seller's integrity and consumer's prudence affect fraud by 54.8%. In addition, the results above also show that the value of std. error of the estimate is 0.76404, which means that the deviation between the regression equation and the real dependent value is 0.76404 per unit of the dependent variable.

Simultaneous Significance Test (F Test)

Based on the results of the simultaneous F test, the significance value of F is 0.000

< 0.05, so it can be concluded that seller's integrity and consumer's prudence simultaneously affect fraud.

Partial Significance Test (t test)

The partial t-test in this study uses a level of significance of 0.05. The first hypothesis states that the seller's integrity has an effect on fraud in e-commerce. The results of the regression analysis show that the seller's integrity variable has a significance value of 0.000, or less than 0.05. So, it can be concluded that the seller's integrity has a significant negative effect. Therefore, the first hypothesis is accepted. The seller's integrity has an effect on increasing or decreasing fraud in e-commerce, where the lower the store rate, the worse the seller's integrity. This has an effect on increasing fraud in e-commerce.

The second hypothesis states that consumer's prudence has an effect on fraud in e-commerce. The results of the regression analysis show that the consumer's prudence variable has a significance value of 0.000, or less than 0.05. So, it can be concluded that consumer's prudence has a significant positive effect. Therefore, the second hypothesis is accepted, the lower the consumer's prudence, the higher the occurrence of fraud in e-commerce. Consumer's prudence is needed in preventing fraud because with prudence, consumers can be more selective in choosing the products they want to buy and product quality can be in accordance with their wishes so as not to cause fraud in e-commerce.

Managerial Implications

The results of the partial t-test analysis in this study indicate that the seller's

Figure 6. Coefficient of Determination (R²) Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743 ^a	.552	.548	.76404

a. Predictors: (Constant), Kehati-hatian, Integritas

Source: Data Processed

integrity has a significant negative effect on the occurrence of fraud in e-commerce and consumer's prudence has a significant positive effect on the occurrence of fraud in e-commerce. Research on the factors that influence fraud in e-commerce has never been done before, so this research does not strengthen previous research. However, there is one variable that has previously been studied by Sabau et al (2013), Ramadhaniyati and Nur (2014), Dewi et al. (2017) and Wulandari and Muhammad (2018), where the integrity variable has a significant effect on the occurrence of fraud in institutions and companies as objects of research.

The implication of this research is that the stability of the seller's integrity and the consumer's prudence in e-commerce must be maintained because the stability of seller's integrity and consumer's prudence can minimize the occurrence of fraud in e-commerce related to store identity, product descriptions, and product assessments. The increased integrity of the seller can have a positive impact on the sustainability of the use of e-commerce and can attract the public to conduct transactions online because the quality is guaranteed by the seller. This can also reduce the occurrence of fraud in e-commerce. Prevention of fraud in e-commerce requires not only high seller integrity but also high consumer prudence because by being more thorough and careful in selecting and evaluating products, consumers can avoid fraud in e-commerce. Thus, it is hoped that every e-commerce will improve systems and regulations so that each e-commerce can have a good impact on the Indonesian economy and can prevent the acts of fraud by applying integrity and prudence to every transaction.

Based on the results of research analysis, it is necessary to understand the importance of seller's integrity and consumer's prudence including improving systems and regulations in

every e-commerce. Understanding of integrity and prudence can be improved through training on literacy related to integrity, prudence, and the impact of fraud on e-commerce. This training can be in the form of seminars given to staff of e-commerce companies, sellers and consumers so that everyone related to buying and selling transactions can understand the importance of preventing fraud.

5. CONCLUSIONS

This study aims to analyze the effect of seller's integrity and consumer's prudence on fraud in e-commerce in Indonesia. The integrity of the seller and the prudence of consumers need to be increased to prevent fraud in buying and selling transactions through e-commerce. The results of this study indicate that integrity and prudence simultaneously have an effect on fraud. The results of the partial t test show that seller's integrity has a significant negative effect on fraud in e-commerce, and consumer's prudence has a significant positive effect on fraud in e-commerce. This means that the first and second hypotheses in this study are accepted. So, it is hoped that sellers can improve their integrity and consumers can increase their caution to prevent fraud that can harm both parties.

The limitations of the research lie in the lack of references with a similar focus and the lack of a number of e-commerce in Indonesia that can be researched due to non-compliance with the required criteria. Besides, there are also differences in systems, regulations, and features in each e-commerce which make it difficult to know the number of store sales and the overall store assessment by consumers. This causes fraud detection to be not optimal.

Future research is expected to be able to develop this research by adding variables or reducing criteria in sampling so that maximum results can be obtained, especially in preventing fraud.

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