

The Effect of E-Commerce Fraud Regulation Quality On Consumer Fraud Risk And Trust

Valenda Rahma Fitri¹, Surya Raharja², Daljono³

¹(Department of Accounting, Universitas Diponegoro, Indonesia)

²(Department of Accounting, Universitas Diponegoro, Indonesia)

³(Department of Accounting, Universitas Diponegoro, Indonesia)

ABSTRACT :The study aims to understand the influence of fraud regulation quality on fraud risk with trust as a mediator. Data were collected using a questionnaire, and 120 respondents had experienced fraud. SmartPLS were used to analyze the data. The results showed that the quality of e-commerce regulations in Indonesia could protect consumers from consumer fraud risk, the quality of regulations increases consumer trust in e-commerce and Consumer trust does not mediate the quality of fraud regulation on consumer fraud risk.

KEYWORDS -E-Commerce, Fraud, Trust, Consumers, Regulation

I. INTRODUCTION

The new era of globalization has begun with the increasing development and contribution of the digital aspect to the economy. The contribution of the digital aspect in the form of communication technology that continues to adapt to human needs makes it coexist with the community's social life. One of the communication technologies that cannot be separated from human life today is the internet (Anderson, 2019).

The internet is present in people's lives and has been considered a necessity (Turban et al., 2006). We can do many things easily through the internet, as electronic payment methods have become necessary in today's modern lifestyle (Dehghan & Haghighi, 2015). The rapid development of the internet from year to year has encouraged the progress of information exchange in this world and dramatically affects the increase in internet use for commercial business transactions, commonly referred to as electronic commerce (e-commerce).

In recent years, the rapid development of the internet has brought changes to aspects of life, including the pattern of human behavior (Prado, 2019). Crimes caused by the development and advancement of the digital aspect of using the internet are crimes related to internet applications, or in foreign terms, often called cybercrime (Lutfiyana, 2021). This action can be like an act of fraud in e-commerce. At first, e-commerce was a buying and selling activity through an electronic system. The buyer determines the payment system they want, and then the purchased item will be sent by the seller via an expedition (Rosidi et al., 2021)

The value of transactions in e-commerce in Indonesia reached IDR 30.8 trillion as of February 2022 internet users in the world according; to the 2021 Hootsuite Survey noted that internet users in the world had reached 4.66 billion people (We are Social, 2021). The value of transactions in e-commerce in Indonesia reached IDR 30.8 trillion as of February 2022 (Kompas, 2022). The Association of Indonesian Internet Service Providers in Indonesia has 196.7 million internet users, or 73.7 percent of the Indonesian population as internet users (APJJI, 2021). The 'We are Social' survey in April 2021 showed that as many as 88.1% of internet users in Indonesia use e-commerce services. Therefore, making Indonesia the first place as the country with the most significant percentage of users of e-commerce services in the world.

The increase in e-commerce and internet services has led to many fraudulent acts that occur by taking advantage of opportunities. Based on a report from The Federal Trade Commission (FTC) in 2019 that the internet became the media that received the most complaints related to acts of fraud, fraud that occurs in the form of fraud in purchasing goods where consumers do not receive goods and also related to the payment system (Anderson, 2019). Due to the impact of Covid-19, many consumers have switched to using e-commerce for shopping (Tran, 2021). In 2021 the Federal Trade Commission released the latest report, namely the Consumer Sentinel Network, that e-commerce is in the third position with the most fraud reports, which is 353,509 reports (Federal Trade Commission, 2021).

E-commerce is a site that utilizes the internet network to process commerce transactions. The rapid development of e-commerce also has a negative impact because there are many acts of fraud. Tran (2021) indicated that companies need to prevent fraud in e-commerce to increase consumer trust and avoid consumer fraud risk (Tran, 2021) as well as regulations from the government to protect the consumer from fraud risk can increase consumer trust (Belwal & Shibli, 2021).

Increasing sales revenue on e-commerce platforms needs to increase consumer confidence when using them (Lee et al., 2018). This e-commerce fraud occurs because sellers and buyers do not see each other and are thus vulnerable to various types of fraud (Hwang & Lai, 2015). In running e-commerce, it is necessary to have a detailed plan to avoid fraud acts; it requires fraud regulations (Amasiatu & Shah, 2018). For instance, the payment system in e-commerce also requires a regulatory framework that can avoid fraud or harm to users (Dehghan & Haghighi, 2015; Kovács & David, 2016).

A consumer fraud risk is an essential barrier for online consumers considering whether to make an online purchase, and consumer fraud risk has influenced decisions in online shopping (Kim et al., 2008). The consumer fraud risk can cause the company to suffer losses (Koh et al., 2011).

The regulations that apply in Indonesia related to all activities in e-commerce are Government Regulation Number 80 of 2019 and Minister of Trade Regulation Number 50 of 2020. Protection and supervision are helpful to avoid the risk of fraud that occurs, which can harm consumers caused by online business actors.

The losses suffered by consumers as a result of fraud in e-commerce have not received adequate legal protection (Amasiatu & Shah, 2018). Consumers should have legal protection as a result of e-commerce fraud. Consumer protection from fraud risk can be with regulations regulating businesses running (Dehghan & Haghighi, 2015). Transaction activities that occur in e-commerce must provide users with a sense of security and trust to avoid fraud (Hwang & Lai, 2015). Trust affects all business relationships (Koh et al., 2011). The risk of fraud a business faces also affects consumer confidence (Koh et al., 2011).

Regulations of payment systems must be able to overcome consumer fraud risk to avoid losses from fraud in e-commerce by preventing fraud from occurring. Activities in e-commerce have become a habit in the community, so it is necessary to see how public trust in these regulations is from the perspective of victims of the fraud that occurred.

Based on previous research (Hwang & Lai, 2015; Lee et al., 2018) more emphasis on the impact of e-commerce fraud on service providers and has not studied the perception from the consumer's point of view as a victim of fraud and the role of existing regulations. Therefore, this study aims to explain the effect of regulation quality on consumer risk for fraud prevention efforts in e-commerce and how consumer trust mediates regulation quality on consumer fraud.

II. FRAMEWORK THEORETICAL AND HYPOTHESES FORMULATION

2.1 Framework Theoretical

2.1.1 Theory Victimization

Victimology is a study that studies the causes and effects of victims of human problems as a social reality. Victimization theory faces socio-political conflict because of the assumption that several victims made a significant contribution to the occurrence of a crime, and thus they bear the same responsibility (Miers, 1989).

Victimization theory refers to the moral status of wrongdoing depending on the extent to which victims are helpless or vulnerable to fraud, and perpetrators take advantage of these vulnerabilities to carry out their actions (Kleinfeld, 2013). *Low self-control* is a general framework used to understand better victimization in e-commerce fraud (Reisig & Holtfreter, 2013). According to Miers (1989), three types of victimology are distinguished: positivist victimology, radical victimology and critical victimology.

Positivist victimology focuses on interpersonal violent crimes and identifies victims who may have contributed to their victimization. Radical victimology sees conventional justice as a victim-centered framework that recognizes the importance of the problematic relationship between law and the state or law and social class. While critical victimology seeks to understand invisible processes, critical victimology pays more attention to the background and workings of the law dealing with victims (Miers, 1989). Victimization theory is helpful in criminal law doctrine and practice, namely in the criminal system covering the overall vulnerability or innocence of victims who experience fraud (Kleinfeld, 2013). Victimization theory helps study the vulnerability and weak self-control of victims who experience fraud; This theory studies the causes and effects of why consumers experience fraud and explains it from a legal perspective.

2.1.2 Trust

Trust is a fundamental relationship concept but a requirement of classification because understanding discipline and trust is also essential to the success of a relationship and can be one of the factors that influence a risk perceived by individuals (Chang & Fang, 2013). The risks posed have an impact on consumer confidence, so the role of regulation is to increase consumer confidence to increase comfort when conducting activities in e-commerce.

Consumer trust increases when demand and consumer trust increases with quality standards (Setiawan et al., 2016). Quality standards can be in the form of regulations protecting consumers, thereby increasing consumer confidence.

According to D. J. Kim et al. (2003), several factors can foster consumer trust: reputation, security, and system reliability. Responsibility, namely that consumer confidence will grow if the other party concerned can take responsibility for everything that happens related to the activities carried out.

2.1.3 Regulation Quality

Regulation Quality is a measure of the perceived ability of the government to formulate and implement reasonable policies and regulations that enable and encourage private sector development (Han & Khan, 2014). Based on Law no. 12 of 2011 concerning the Establishment of Legislations regulates quality regulations, they must meet three foundations:

1. The philosophical basis is a reflection that describes the way of life based on the philosophy of the Indonesian people, namely Pancasila and the preamble of the Constitution of 19.
2. Sociological reasons are aspects that show that regulations help to satisfy the needs of the society from various perspectives.
3. The legal basis is the aspects that show that rules exist to solve problems.

Legislate or fill legal gaps by considering changing or repealing existing rules to ensure legal certainty and a sense of community justice.

2.1.4 E-commerce

E-commerce is an action taken to carry out transactions using internet access or through a specific media or platform. According to Turban et al. (2021), e-commerce is the buying, selling, transfer and exchange of goods, services and information through computer networks, including the Internet. *E-commerce* is routine business that uses Electronic Data Interchange (EDI) transmissions, e-mail, electronic bulletin boards, fax machines, and electronic money transfers associated with electronic purchase transactions.

E-commerce has changed the form, manner, place, and time of business entities managing their operational activities. Through the implementation of e-commerce, geographical boundaries are not a barrier; communication with millions of customers and many parties are involved and contributes directly to the development of e-commerce. Companies that implement e-commerce can manage their business unlimitedly for seven days, 24 hours non-stop, which can be done with various access channels, such as personal computers, cellular phones, and personal digital assistance (PDA), by parties who transact in e-commerce.

2.1.5 Fraud Risk

Fraud risk is a failure to prevent risk after the risk is identified (Zack, 2013). Consumer fraud risk caused by e-commerce is an illegal transaction designed to make a profit for online sellers, which harms consumers financially, creates fear among consumers and becomes a security threat to consumers who shop online. Consumer fraud risks include product risks, transaction risk, psychological risk and financial risk (Firdayanti, 2012).

2.2 Development Hypothesis

2.2.1 Quality E-Commerce Fraud Regulations against consumer fraud risk

The quality of regulation of e-commerce fraud is an effort made by the government to protect consumers from protecting themselves when using e-commerce. Protective measures are helpful to avoid the risk of fraud experienced by consumers. Victimization theory studies the causes and consequences of why the actions taken can cause fraud both from the victim's side and the law, which can explain it, namely radical victimology and critical victimology. .

According to (Fletcher, 2007) there is still a need to introduce appropriate regulations to prevent fraud from occurring to reduce fraud crimes that occur in cyberspace. The existence of reasonable regulations can regulate the risk of consumers experiencing fraud (Belwal & Shibli, 2021; Dehghan & Haghighi, 2015).

During the current pandemic, Effective mechanisms to protect consumers are necessary because many users use e-commerce platforms to transact trade. Research conducted by Tran (2021) shows that there is a need for proper protection for consumers to avoid fraud that can harm consumers, so a fast response is needed to prevent actions that can harm consumers.

The unresponsive response to the existence of fraudulent acts given by law enforcement shows that the level of consumer fraud crime still occurs and impacts consumers by suffering losses (Amasiatu & Shah, 2018). There are still weaknesses in detecting the existence of fraudulent acts that occur, so it requires reliable management to be able to detect fraudulent acts that occur. From this explanation, the researcher formulates the hypothesis as follows:

Hypothesis 1: The quality of fraud regulation has a negative and significant effect on the risk of e-commerce consumer fraud

2.2.2 Quality Fraud Regulations against Trust Consumer e-commerce

The quality of regulation has an influence where the better protection provided will give confidence to consumers as users of the given regulation to avoid the risk of fraud in e-commerce. If the regulations provided do not protect consumers, it will affect consumer confidence. Consumer trust is consumer knowledge related to

an object, attribute or benefit from being obtained. Consumer trust increases with the system's reputation, security, and reliability when consumers use it.

Based on the victimization theory, the existence of opportunity in consumers can be an opportunity for fraudsters to commit crimes (Reyns, 2015). Based on positivist victimization, it identified that victims also contributed to their victimization. Crimes committed will cause harm to consumers. Aggrieved consumers will report related actions they experienced (Reisig & Holtfreter, 2013). Consumers who experience fraud are the ones who feel the applicable regulations. The lack of existing regulations causes much behavior that rationalizes the fraudulent actions that occur; this needs to be studied further on how the perspective of these consumers is.

The factor that plays an essential role in determining the success of implementing an online business is consumer trust in e-commerce (Xiao et al., 2016). Trust significantly impacts user responses to the presence of quality regulation (Xiao et al., 2016). According to Bahtiar (2020), the challenge in developing e-commerce activities is to gain trust by providing consumer security and protection. Consumer confidence in e-commerce must also be in line with consumer confidence in existing regulations, which needs to be improved (Shareef et al., 2019). Initiatives to protect consumers from avoiding fraud in e-commerce are needed to build consumer trust (Belwal & Shibli, 2021).

Consumer trust is essential in increasing users' trust in e-commerce platforms during the pandemic by presenting a sense of security when using them. Increasing consumer confidence in e-commerce platforms requires improving existing regulations to avoid losses. Based on this explanation, the researchers formulated the following hypothesis:

Hypothesis 2: The quality of fraud regulation has a positive and significant effect on increasing consumer trust in e-commerce

2.2.3 Trust Consumer As Variable Mediation Relationship Between Quality Regulation To Consumer Fraud Risk

Consumers will give their trust if a risk they will face can be overcome by the existence of regulations protecting them from losses arising from the use of e-commerce based on victimization theory which explains that reducing opportunities can protect victims (consumers) from fraud that occurs.

The victimization theory states that the fraud perpetrators take advantage of the victims' opportunities. The quality of regulation is essential for victims (consumers) to increase their trust; there is an e-commerce platform to avoid the risks of transacting activities through an e-platform like e-commerce.

Consumer trust refers to citizens' assessment of their financial situation and the country's economy and is a precursor to economic behavior (Svensson et al., 2017). With low consumer confidence, customers tend to spend less to avoid risk (Ou et al., 2014). According to Fletcher (2007), good regulatory quality can overcome the risks of fraudulent acts in e-commerce, increasing consumer confidence in the quality of regulations. Consumer trust has a role in consumer decision making (Tam et al., 2020).

Regulation is essential in e-commerce because it will indirectly affect consumer confidence in using e-commerce platforms and provide protection to users (Dehghan & Haghighi, 2015). Thus, consumer confidence can act as a mediating variable in the relationship between regulatory quality and risk perception.

Hypothesis 3: Consumer trust can mediate quality of fraud regulation to influence consumer fraud risk.

III. RESEARCH METHODOLOGY

3.1 Population and Sample

This study uses primary data obtained from the distribution of questionnaires through self-selected sampling on Instagram. The population in this study are active users of e-commerce in 2019-2021. The data collection technique used was a self-administered questionnaire, in which respondents filled out the questionnaire themselves without an interviewer (Jenkins & Dillman, 1995). Respondents can fill out the research questionnaire themselves if they respondent has experienced fraud in e-commerce via the google form link via the researcher's Instagram social media.

1. Respondents who became the sample for research subjects based on categories had experienced e-commerce fraud. The e-commerce fraud in question has experienced fraudulent actions through e-commerce platforms, including social media marketplaces. The criteria for selecting the sample are: Respondents made transactions through e-commerce and marketplaces on social media in 2019-2021.
2. Respondents have experienced fraud when transacting on e-commerce and marketplaces on social media in the period 2019-2021.
3. Respondents have a minimum education in high school.

The sampling technique in this study uses a non-probability technique, namely the incidental sampling technique, which is based on chance; that is, anyone who incidentally sees an instant post on the researcher's Instagram can be used as a sample. The number of samples taken in this study using the gameshow formula is due to the unknown population. Based on the Lemeshow formula where the number of samples is at least 100 people.

3.2 Variable Measurement

The dependent variable is the quality of fraud regulation by looking at the respondents' perceptions of the government's ability to formulate and implement reasonable policies and regulations that enable and encourage the development of the private sector in preventing e-commerce fraud (Kaufmann et al., 2011). This capability is seen from the regulatory capabilities, the quality of the market place and e-commerce websites to protect consumers from fraud (Belwal & Shibli, 2021). The independent variable is consumer fraud risk; the indicators used to assess it from Firdayanti (2012); Prasetijo & Ihalauw (2005); Schiffman et al. (2019) covering product risk, transaction risk, psychological risk, and financial risk. The mediating variable is consumer trust; the indicators used to assess consumer trust are adopted from D. J. Kim et al. (2003): reputation, transaction security, system reliability, and responsibility of e-commerce websites.

3.3 Analysis Techniques

In research, test the research instrument using validity and reliability testing. Meanwhile, to perform data analysis, use Path Analysis.

3.3.1 Validity Test

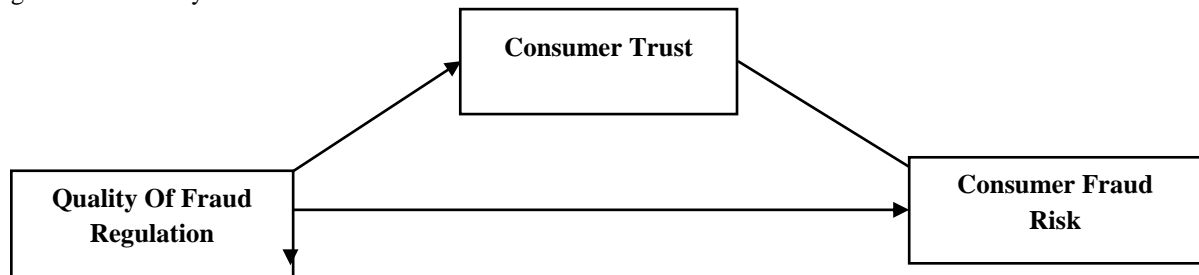
Validity testing can be done by looking at the Correlated item-total correlation value with the following criteria. If the calculated r-value is more significant than the r-table and the value is positive, then the item, question, or indicator is declared valid (Ghozali, 2021). However, on the other hand, if the calculated r-value is smaller than the r table, then the question can be said to be "invalid." Validity testing is done by doing a bivariate correlation between each indicator score and the total score of the variable or construct, and after measuring with SmartPLS and SPSS, all questions are significant.

3.3.2 Reliability Test

Reliability measurement using the Cronbach Alpha statistical test. A construct or variable can be considered reliable if it gives a Cronbach's alpha > 0.70(Ghozali, 2021).

3.3.3 Path Analysis

Figure 1 Path Analysis Model



Sobel analysis is the analysis used to test hypothesis 1 (H1), hypothesis 2 (H2), and hypothesis 3 (H3). The set significance level is 5% ($\alpha = 0.05$).

IV. RESULTS AND DISCUSSION

4.1 Research Result

The number of respondents who have filled out the research questionnaire is 278 respondents 60.8% are women and 39.2% are men. Respondents' profiles were classified based on demographic categories, with 70.9% aged 17-30 years old, then 30-45 years old 26.3%, and over 45 years old as much as 2.9%. The last education background is SMA 8.3%, Diploma/Bachelor is 79.5%, and S2/S3 is 12.2%. 98.9% of respondents have done online shopping, and 42.8% have experienced fraud when shopping in e-commerce—the average monthly expenditure issued by respondents for small e-commerce from Rp. 500,000 is 63.7% and large from Rp. 500,000 – Rp. 1,000,000 as much as 24.8%, and greater than Rp. 1,000,000 by 11.5% of respondents.

Table 1 Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Consumer Trust	0.856	0.856	0.893	0.583
Quality Of Fraud Regulation	0.893	0.895	0.919	0.655
Consumer Fraud Risk	0.868	0.912	0.902	0.649

Sources:(SmartPLS 3.2.9)

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Table 2 shows that each construct has an AVE value > 0.5 which means all constructs are valid; Cronbach's Alpha, rho_A, and Composite Reliability values are all > 0.70, which indicates the construct has good reliability.

Table 2 Discriminant Validity

	Consumer Trust	Regulatory Quality	Consumer Fraud Risk
Consumer Trust	0.763		
Quality Of Fraud Regulation	0.548	0.809	
Consumer Fraud Risk	0.152	0.167	0.805

Sources:(SmartPLS 3.2.9)

Table 3 shows that discriminant validity using Fornell-Larcker was achieved. That the data used shows that the root value of AVE > correlation between constructs has a good discriminant validity.

Table 3 R Square

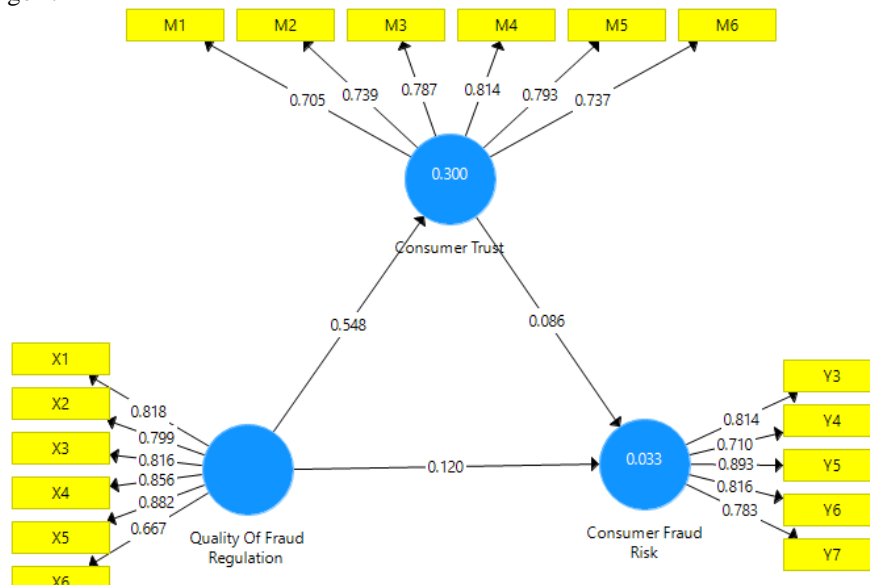
Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.557 ^a	.310	.286	3.918

a. Predictors: (Constant), Education, Age, Consumer Fraud Risk, Consumer Trust

Sources:(SPSS 21)

Based on table 3, the value of R Square is 0.310. This value indicates that the variables of consumer fraud risk and consumer confidence with the control variable of education and age affect the variable quality of regulation. While the rest is influenced by other variables outside the research variables studied.

Figure 2 PLS Algorithm



Source: (SmartPLS 3.2.9)

Based on the path analysis model (Figure 2 PLS Algorithm), it shows that the quality of regulation has a direct effect on the risk of consumer fraud with a coefficient of 0.120 and is significant at 0.05, the quality of regulation has a direct effect on consumer confidence with a coefficient of 0.548 and is significant 0.05. Consumer trust directly affects the risk of consumer fraud with a coefficient of 0.086 and a significant 0.05.

Table 4 Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Quality Of Fraud Regulation ->Consumer Trust	0.548	0.561	0.084	6.491	0.000
Quality Of Fraud Regulation ->Consumer Fraud Risk	0.120	0.110	0.156	0.771	0.441
Quality Of Fraud Regulation ->Consumer Trust ->Consumer Fraud Risk	0.047	0.063	0.084	0.563	0.574

Sources:(SmartPLS 3.2.9)

Based on table 4, that the quality of regulation has a direct effect on the consumer fraud risk with a value of 0.120, the hypothesis is rejected. The quality of regulation also directly affects consumer trust, with a value of 0.548, and the hypothesis is accepted. Furthermore, consumer trust cannot have a direct influence on mediating the quality of fraud regulation on consumer fraud risk with a value of 0.047, and the hypothesis is rejected.

4.2 Discussion

Based on the results of research that has been carried out that the quality of fraud regulations owned can affect the consumer fraud risk that occurs so that it can protect consumers from avoiding fraud from a legal perspective and also procedures when dealing with reports related to fraud, these results are in line with research conducted by Amasiatu & Shah (2018). The consumer fraud risk experienced in terms of product, transaction, psychological, and financial risks can be overcome by the presence of quality regulations. The results of the study indicate that respondents believe that good regulatory quality can prevent them from consumer fraud risk experienced by consumers. The result that in line with the results of research conducted by Dehghan & Haghghi (2015); the role of regulatory quality can positively influence the sustainability of the business being run because it provides protection and a sense of security when consumers make transactions on e-commerce. In Indonesia, the regulations that regulate the protection of e-commerce consumers are Article 28, paragraph (1) of the Electronic Information and Transactions Act which regulates things that cause harm to consumers in electronic transactions. Article 378 of the Civil Code regulates fraud. Based on the theory of victimization that fraudulent acts can occur due to weak control from the victim, therefore the findings of this study suggest that consumers as victims of fraud have been able to exercise control over themselves to avoid fraud in e-commerce and the quality of regulations that are enforced. It's also good to take part in protecting it.

The role of this quality regulation is to avoid consumers from risk; in Indonesia, there is Government Regulation Number 80 of 2019 concerning Trading Through Electronic Systems (e-commerce) and the regulation minister of trade number 50 of 2020, which regulates business actors. So that the quality of existing regulations can protect consumers from the risk of fraud, the results show that good regulatory quality can affect consumers' trust when using e-commerce. Increasing consumer confidence can help increase sales revenue in e-commerce (Lee et al., 2018), characterized by a good reputation in the eyes of consumers because it can provide security in transactions, there is a profound system that can protect consumers, and there is a fulfillment of responsibilities. Responsibilities carried out by e-commerce platforms to consumers when reporting and providing unbiased information to consumers. The results of this study are supported by Tran (2021), stating that the quality of regulation can increase the trust of users of e-commerce platforms; consumer trust can be obtained by providing a sense of security to consumers when transacting (Hwang & Lai, 2015), trust from consumers can affect the business relationship that is run (Koh et al., 2011). The results show that consumer trust cannot mediate regulatory quality with the risk of consumer fraud. Because good quality regulation can reduce the risk of consumer fraud, consumers need quality regulation to avoid the risk of consumer fraud rather than just trust.

V. CONCLUSION

Based on the results of the study shows that the quality of regulation has a positive and significant effect on consumer fraud risk in e-commerce, the quality of fraud regulations has a positive and significant effect on increasing consumer trust in e-commerce, and consumer trust cannot mediate between quality of fraud regulation and consumer fraud risk.

In this study, there are limitations to the scope of the research, only to social media users on Instagram who view the Google form, which can then be expanded further for the scope of the research and needs to add other variables to strengthen the research model and avoid bias between the dependent and independent variables in this study.

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*Corresponding Author: Valenda Rahma Fitri¹

¹(Department of Accounting, Universitas Diponegoro, Indonesia)