"The effect of morality and Machiavellianism on government fraud: The moderating role of education"

AUTHORS	Yesi Mutia Basri (D) Hariadi Yasni (D) Mariana (D) Poppy Nurmayanti (D) Novita Indrawati (D)		
ARTICLE INFO	Yesi Mutia Basri, Hariadi Yasni, Mariana, Poppy Nurmayanti and Novita Indrawati (2023). The effect of morality and Machiavellianism on government fraud: The moderating role of education. <i>Problems and Perspectives in Management</i> , 21(3), 100-112. doi:10.21511/ppm.21(3).2023.08		
DOI	http://dx.doi.org/10.21511/ppm.21(3).2023.08		
RELEASED ON	Tuesday, 18 July 2023		
RECEIVED ON	Tuesday, 21 February 2023		
ACCEPTED ON	Wednesday, 05 July 2023		
LICENSE	This work is licensed under a Creative Commons Attribution 4.0 International License		
JOURNAL	"Problems and Perspectives in Management"		
ISSN PRINT	1727-7051		
ISSN ONLINE	1810-5467		
PUBLISHER	LLC "Consulting Publishing Company "Business Perspectives"		
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"		
	G		

P	B	=
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
73	1	7

© The author(s) 2023. This publication is an open access article.





BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives" Hryhorii Skovoroda lane, 10, Sumy, 40022, Ukraine

www.businessperspectives.org

Received on: 21st of February, 2023 Accepted on: 5th of July, 2023 Published on: 18th of July, 2023

© Yesi Mutia Basri, Hariadi Yasni, Mariana, Poppy Nurmayanti, Novita Indrawati, 2023

Yesi Mutia Basri, Dr., Lecturer, Department of Accounting, Faculty of Economics and Business, Riau University, Indonesia. (Corresponding author)

Hariadi Yasni, MBA, Lecturer, Department of Accounting, Faculty of Economics and Business, Riau University, Indonesia.

Mariana, Undergraduate Student, Department of Accounting, Faculty of Economics and Business, Riau University, Indonesia.

Poppy Nurmayanti, Dr., Lecturer, Department of Accounting, Faculty of Economics and Business, Riau University, Indonesia.

Novita Indrawati, Dr., Lecturer, Department of Accounting, Faculty of Economics and Business, Riau University, Indonesia.



This is an Open Access article, distributed under the terms of the Creative Commons Attribution 4.0 International license, which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conflict of interest statement: Author(s) reported no conflict of interest

Yesi Mutia Basri (Indonesia), Hariadi Yasni (Indonesia), Mariana (Indonesia), Poppy Nurmayanti (Indonesia), Novita Indrawati (Indonesia)

THE EFFECT OF MORALITY AND MACHIAVELLIANISM ON GOVERNMENT FRAUD: THE MODERATING ROLE OF EDUCATION

Abstract

The high number of fraud cases in governments has increasingly become a concern among academics and practitioners. Many approaches can be used to minimize fraud cases. However, the role of education in the influence of personality on fraud in the Indonesian government has not been considered. Thus, this study aims to analyze the influence of morality and Machiavellianism as personality factors leading to fraud. Education was tested as a moderating variable. This quantitative study involved a sample of Pekanbaru City government officials. To collect data, questionnaires were sent directly to the respondents. Through the purposive sampling technique, 251 samples were collected. A structural equation with partial least squares was used to test the hypotheses. The test results show that all the proposed hypotheses are accepted. Morality affects fraud with a p-value < 0.001, less than 0.05. Machiavellianism affects fraud with a p-value < 0.001. Education moderates the relationship between morality and fraud with a p-value of 0.048, less than 0.05. Moreover, education moderates the relationship between Machiavellianism and fraud with a p-value < 0.001, less than 0.05. In conclusion, this study contributes to shaping government officials' behavior to prevent fraud. Character building and high education standards for officials must be integrated to reduce the risk of abuse in Indonesian government.

Keywords fraud, government, morality, education,

Machiavellianism

JEL Classification M40, M41, M42, M48

INTRODUCTION

The Indonesia Corruption Watch (ICW) shows that in 2021, the Attorney General's Office had to deal with 371 corruption cases involving 814 suspects. These are the highest numbers of cases and defendants in the past five years (Rizaty, 2022). According to the Corruption Eradication Commission, Riau Province is one of Indonesia's ten most corrupt areas (Kamis, 2020). Twenty-eight civil servants in Riau have been caught in corruption cases. Several regional heads, ranging from governors and regents to low-level government officials, have yet to be spared from corruption cases (Merdeka, 2019).

Fraud is an unlawful activity carried out intentionally to obtain something using deception. Meanwhile, corruption is one type of fraud that occurs frequently in Indonesia. There is no longer a stigma associated with corruption; people of all ages can engage in it. Corruption is a form of public sector fraud that is pervasive. Typical actions include manipulating records and removing documents as well as markups that harm the nation's economy.

The significant prevalence of corruption cases in Riau Province suggests that government operations continue to suffer from inadequate oversight. Therefore, it is imperative to investigate these fraudulent acts in order to determine the underlying causes.

Personality can play a role in determining whether someone commits fraud. A lack of morality and a tendency toward Machiavellianism can motivate someone to cheat. However, the level of education can control a person's behavior. A person's education provides knowledge for individuals and, more than that, provides an understanding of ethical behavior (Raharjo, 2015).

1. LITERATURE REVIEW AND HYPOTHESES

Every business faces the risk of fraud, as the practice itself has a long history. Companies such as Enron, WorldCom, and Satyam, among others, have all fallen victim to this detrimental phenomenon. Deceptive behaviors are exhibited when individuals aim to deceive or mislead others. Misrepresentation can be classified into two primary categories: intentional and unintentional, as identified by Ramamoorti (2008).

Fraud is a purposeful misapplication or abuse of an organization's assets to obtain a personal benefit (ACFE, 2014). The Association of Certified Theft Examiners states that work theft has some characteristics: (1) covertness; (2) theft from the company by an employee who has a fiduciary duty to the company; (3) promises of substantial financial benefits to the employee; and (4) relatedness to the resources, earnings, or holdings of the company that employs the person (ACFE, 2014). It distinguishes among three significant types of fraudulent activities: theft of assets, fraudulent financial statement preparation, and corrupt government officials.

Government fraud has attracted the attention of researchers in numerous countries (Zahari et al., 2022; Othman et al., 2020; Rustiarini et al., 2019). The community responsible to the taxpayers is communicating how their money is used. If funds set aside for government spending were susceptible to fraud, it would be a waste of money. Therefore, it is crucial to uphold the integrity of government officials to stop fraud.

Research on government fraud in Indonesia has been growing in the last decade (Rustiarini et al., 2019; Rusdianti et al., 2022; Ariyanto & Bone,

2020; Zahra et al., 2021). Abuse of power and corruption are two of the most common areas of fraud (Naher et al., 2020; Siddiquee & Zafarullah, 2022; De Graaf et al., 2018; Basri et al., 2021). When someone uses his/her position in a group for his/her good or the good of a third party, it can be categorized as one type of abuse of power (Zahari et al., 2022). Fraud on financial statements is also a form of abuse (Sanad & Al-Sartawi, 2021; Nindito, 2018; Haqq & Budiwitjaksono, 2019).

Many factors encourage government fraud, including personality (Triantoro et al., 2020; Norris et al., 2019). Etymologically, personality refers to character, nature, and person. Meanwhile, according to psychological terms, personality includes all thoughts, feelings, and behaviors (Doris, 2002). Several studies have shown that personality is related to fraud (Norris & Brookes, 2021; Jaffar et al., 2011; Triantoro et al., 2020).

Individual morality is one of the personality elements that encourage fraud committed by individuals. Morality is the conspicuous actual dimension of every human group (Walker, 2007). Morality is the concept of what constitutes "right" and "wrong" behavior, such as what is judged fair and unfair to others (Haidt & Kesebir, 2010). Morality is how the morals, principles, and values applicable in society regulate the appropriateness of actions taken (Ikhwan & Fauzi, 2019).

Previous research on morality and cheating was primarily done in the context of academic cheating (Setiawan, 2018; Fernandhytia & Muslichah, 2020; Putri & Irwandi, 2016). Accordingly, dishonesty is more common among people with lower moral standards, whereas those with higher standards are less likely to engage in dishonest behavior. It has been discovered by Basri (2022), Kurniawan and Azmi (2019), and Saputra et al. (2020) that

101

an individual's morality has been determined to have a detrimental impact on fraud. According to these findings, dishonesty is inversely proportional to an organization's morality. However, it differs from Suprapta and Padnyawati (2021), who explained that individual morality does not influence fraud.

Kohlberg (1971) and Sosler (2019) propose that when individuals reach a higher level of morality, they are more likely to prioritize the community's interests over their own personal or organizational concerns. Thus, they try to avoid committing unethical actions that harm many people. Morality significantly contributes to fraud (Setiawan et al., 2020). Fraud can also be avoided by always being open to each other within agency secrecy. If morality is well maintained, then cheating can be avoided. In government, individual morality becomes an important thing to prevent fraud. Therefore, this study also suspects that individual morality will also affect fraud that occurs in the government.

The next element of personality is Machiavellian traits. Machiavellianism is a form of manipulative character. When someone with this personality has a goal, he/she will think of and do various ways to achieve it. Someone with Machiavellianism does not think about the feelings of the other people involved (Sutton & Keogh, 2000; Kessler et al., 2010).

The gone theory by Bologna (1993) reveals that greed is one of the driving factors for fraud (Talib & Kusumawati, 2020). It relates to Machiavellian nature because it will use any means to achieve its goals. People that have a high Machiavellian trait prevalence tend to lie more frequently (Triantoro et al., 2020). They have a personality that lacks concern for human relationships because they disregard conventional morality and have poor ideological commitment (Dammak et al., 2022). It can be shown by the fact that they ignore traditional morality. Theoretically, individuals with high Machiavellian tendencies are not concerned with judging morally ambiguous behaviors. They are more inclined to engage in ethical or unethical ways to attain their aims (Zirman & Basri, 2014). Fihandoko (2014) and Mauboy and Pesudo (2019) showed that Machiavellian traits positively affect academic cheating. Carré et al. (2020) also revealed that individuals with Machiavellian characteristics were more likely to commit fraud. It seems to imply that the more Machiavellian a person is, the greater the likelihood he/she will engage in fraudulent activity. Nevertheless, Farhan et al. (2019), Helmayunita et al. (2022), and Noviyanti et al. (2021) found that Machiavellianism does not affect fraud. Based on this discussion, this study suspects that Machiavellian traits influence government fraud.

Research findings show that educational attainment has a role in the contradictory findings on the impact of morality and Machiavellian tendencies. Intellectual worth can be affected by one's level of education, and higher education tends to improve the quality of human resources (Atmadja et al., 2021). Cohen et al. (2001) also argue that the level of formal education is a critical factor in supporting a person to adequately carry out his duties. Individuals with a high level of education will have better moral knowledge in ethics (Lau, 2010).

A person's level of education provides more than just knowledge for individuals. Someone highly educated provides an understanding of behaving more ethically (Head, 2020). Individuals with higher education are also considered to have high ethics and moral sense (Rottweiler & Gill, 2022). Thus, education and morality can prevent someone from committing immoral acts such as fraud. Triantoro et al. (2020) found that those who score highly on the Machiavellian trait of government officials are also more likely to lie. The correlation between Machiavellian characteristics and deceit can be attenuated or amplified by the degree of formal education. When a person has high Machiavellian traits and a high level of education, he will be controlled by his knowledge and understanding, preventing the individual from committing unethical actions (Kurniawan & Anjarwati, 2020). Thus, the interaction between Machiavellian traits can reduce the level of fraud. Based on previous discussions, this study suspects that the level of education can influence the effect of morality and Machiavellianism on cheating among government personnel in Indonesia.

Based on the literature review, this study aims to analyze how morality and Machiavellianism affect fraud in the local government of Pekanbaru City, Indonesia. This study also investigates how educational level moderates the relationship between morality and Machiavellianism. Therefore, the following hypotheses are developed:

H1: Morality has a negative effect on fraud.

H2: Machiavellianism has a positive effect on fraud.

H3: The level of education moderates the effect of morality on fraud.

H4: The level of education moderates the effect of Machiavellianism on fraud.

2. METHODOLOGY

All government officials working for the Pekanbaru City Government were included in this study. In this analysis, purposive sampling was employed to choose the research samples. The selected sample criteria are government officials with positions as head, secretary, and deputy head of the division.

Table 1. Definition and measurement of variables

Questionnaires were sent to government officials in all municipal governments to collect the research data. A total of 300 questionnaires were sent, and 251 questionnaires were collected and then processed.

This study used the dependent variable – fraud. Morality and Machiavellian characteristics are the independent variables. The education level is the moderating variable. Variable measurements are presented in Table 1.

The paper employed a structural equation model in Warp-PLS to analyze the collected data. Descriptive and inferential statistical methods are combined in PLS, which is a component-based or variance-based (SEM) structural equation model (Ghozali & Latan, 2015). SEM testing with PLS comprises a two-stage process. The outer model testing phase involves checking the validity and reliability of the model. Convergent and discriminant validity are the two main types of validity tests. When a questionnaire predicts some other variable or construction, it can be subjected to a reliability test to see how well it predicts (Ghozali, 2014). The questionnaire is considered reliable if one's responses to a statement are constant or steady throughout time. An indicator

No	Variable	Definition	Measurement	Scale
1.	Fraud (Y)	Fraud is defined as providing false statements in the shape of significant facts, and the truth cannot be believed. As a result, it influences or induces others to act or to act in a negative manner (ACFE, 2014).	Asset misuse False inclusion or misrepresentation Corruption	Likert
2.	Education Level (Z)	The standard of education is consistent across the board and is passed on without interruption from one generation to the next in every region of the world. The acquisition of knowledge is one of the most vitally essential tools for the evolution of the human species, and these endeavors are carried out in a manner that considers each community's worldview and historical context (Tirtarahardja, 2005).	Senior High School equivalent Diploma Bachelor's Master's Doctor	Nominal
3.	Morality (X1)	Individual morality is an attitude or action owned by an individual or individuals. Where in the act, there is a good or bad attitude. Each individual has views and versions related to the right thing according to their level of Kohlberg's reasoning (Duska & Whelan, 1975).	Obedience to individualism Interpersonal norms The morality of the social system Social contact orientation Ethical principles	Ordinal
4.	Machiavellianism (X2)	Machiavellianism is a process whereby manipulators get more in return when they manipulate, while others get less without manipulating, at least in an immediate context (Richmond, 2001).	1. Judgment of a person for the actions taken 2. Perception of others 3. Honesty in behavior 4. Motivation 5. Good judgment of someone 6. Bad judgment of others	Ordinal

group known as "consistent internal reliability" evaluates the degree to which a variable has a high level of composite reliability by using an alpha coefficient value (Hair et al., 2010). All variables need a composite reliability of at least 0.70 and a Cronbach's alpha of at least 0.60. Next, the study evaluates the internal models of the relationship between the dependent (endogenous) and the independent variables (exogenous). Testing hypotheses forms the basis for Warp-PLS's structural model of the link between latent variables.

3. RESULTS

The study collected 380 questionnaires, of which 251 were deemed valid and analyzed. The return rate is 66.05%. The questionnaire uses a 5-point Likert scale. The government officials were grouped based on criteria including length of service, gender, status, age, religion, and education. Table 2 presents the demographics of the sample.

Table 2. Demographics

Characteristics	Frequency	Percentage			
Length of service					
1-3	89	35.5%			
4-6 years	110	43.8%			
> 6 years	52	20.7%			
Total	251	100%			
	Gender				
Male	93	37.1%			
Female	158	62.9%			
Total	251	100%			
	Marital status				
Married	229	91.2%			
Not married	22	8.8%			
Total	251	100%			
	Age				
21-30 years	56	22.3%			
31-40 years	69	27.5%			
41-50 years	93	37.1%			
≥ 50 years	33	13.1%			
Total	251	100%			
	Religion				
Moslem	244	97.2%			
Christian	7	2.8%			
Total	251	100%			
Educational level					
High school	7	2.8%			
D3 (Diploma)	45	17.9%			
S1 (Bachelor's)	84	33.5%			
S2 (Master's)	78	31.1%			
S3 (Doctorate)	37	14.7%			
Total	251	100%			

The descriptive statistics are illustrated through the minimum, maximum, average value (mean), and standard deviation (Table 3).

Table 3. Descriptive statistics

Variable	N	Min	Max	Mean	Std. Deviation
Morality	251	14	40	34,159	4,687
Machiavellianism	251	8	37	15,900	6,356
Fraud	251	9	40	14,466	4,571
Valid N (listwise)	251				

The first step in PLS is testing the outer (measurement model). Model validity and reliability are determined by using the measurement model. Two different kinds of validity can be identified in a study: convergent and discriminant. Factor loading is used to prove convergent validity. If there is a correlation of 0.70 or higher between the individual reflection measure and the indicators being measured, it is deemed high (Hair et al., 2010). Convergent validity measurements are seen from the outer loading values presented in Table 4. A loading value of 0.50 to 0.60 is regarded as sufficient for research in the early phases of constructing a measurement government officially (Ghozali & Latan, 2015). The outer loading values shown in Table 4 indicate convergence in validity measures.

In this case, a loading factor value of > 0.5 was obtained after deleting multiple false positives. This study confirms that the indicator of convergent validity has been attained. Convergent validity can be tested in various ways besides factor loading, for as by inspecting the mean-variance of the extracted data (AVE). Convergent validity is satisfied when the AVE is more significant than 0.50 (Hair et al., 2010). Based on Table 4, the AVE is consistently more than 0.5.

Furthermore, the reliability test measures the consistency of measuring instruments. It is a measure that indicates the extent to which a questionnaire can consistently measure a variable. Cronbach's alpha and the composite reliability should be more than 0.70 for the reliability to be considered adequate (Hair Jr et al., 2021).

Table 4 shows that the overall reliability and Cronbach's alpha value are greater than 0.70, indicating that the derived model's indicators

Table 4. Factor loading, AVE, reliability, and R square

Variables	Factor Loading	Average Variance Extract (AVE)	Composite Reliability	Cronbach Alpha	R Square
Fraud			•		
Fr1	0.715				***************************************
Fr2	0.668				
Fr3	0.765				
Fr4	0.709	0.504	0.001	0.076	
Fr5	0.797	0.504	0.901	0.876	
Fr6	0.716				
Fr7	0.641				
Fr8	0.695				
Fr9	0.667				
Morality					
IM1	L 0.641				
IM2	0.728		0.906	0.880	0.625
IM3	0837				
IM4	0.813	0.549			
IM5	0.629				
IM6	0.820				
IM7	0.773				
IM8	0.648				
Machiavellianism					
M1	0.755				
M2	0.875				
M3	0.824			0.874	
M4	0.847	0.542	0.902		
M5	0.653				
M6	0.742				
M7	0.584				
M8	0.531				

all meet the discriminant reliability criteria (Ghozali & Latan, 2015).

The second step in testing with PLS is testing the inner model. R-square, model fit, quality indices, and hypothesis testing are parts of inner model testing. Based on Table 4, the R-Square value corresponding to the fraud variable is 0.625. Individual morality and Machiavellianism control 62.5% of the fraud variable, moderated by education level. The remaining 37.5%, on the other hand, is almost certainly affected by additional factors that were not investigated in this study. The relative change in R-squared shows that an independent hidden variable influences the dependent variable under study (Ghozali & Latan, 2015). When the R-square number is higher, it indicates that the prediction model of the suggested research method is more accurate.

The next step is a test of discriminant validity. Discriminant validity is considered high when there is a substantial distinction between the traits

the measurement instruments and the theoretical frameworks for those variables should not measure. Knowing the cross-loading value of each latent variable is necessary for testing the reflective measurement model for discriminant validity. For example, the indicator's structure-measurement item connection may be more robust than any other structure. It suggests that the fundamental structure can forecast the indication more accurately than the other structures (Fornell & Larcker, 1981). Table 5 shows discriminant validity testing the correlation of the latent variables.

Table 5 shows that the value of the square root of AVE, represented by the diagonal line, is greater than that of the other variables. The cheating variable has a high correlation value indicated by the AVE root value of 0.710, while the other variables have lower correlation values, namely -0.472, 0.581, and 0.341. The individual morality variable has a high correlation value indicated by the AVE root value of 0.741, while other variables have low-

Table 5. AVE root results and correlation coefficients

Variables	Fraud	Individual Morality	Machiavellianism	Status
Fraud	0.710	-0.472	0.581	Valid
Individual Morality	-0.472	0.741	-0.413	Valid
Machiavellianism	0.581	-0.413	0.736	Valid

Table 6. Model fit and quality indices

Model	Index	P-Value	Criteria
Average path coefficient (APC)	0.285	<0.001	P<0.05**
Average R-Square (ARS)	0.625	<0.001	P<0.05**
Average block variance inflation factor (AVIF)	1.490	Good if <3.3	< 5**

Note: ** criteria is good.

Table 7. Hypothesis testing results

Hypothesis	Hypothesis testing	Path coefficient	p-values	Effect size	Decision
H1	Morality–Fraud	-0.368	<0.001***	0.182	Accepted
H2	Machiavellianism–Fraud	0.432	<0.001***	0.297	Accepted
Н3	Morality*Education–Fraud	0.104	0.048**	0.028	Accepted
H4	Machiavellianism*Education—Fraud	0.238	<0.001***	0.118	Accepted

Note: * p < .05;** p < .01; *** p < .001.

er correlation values, namely -0.472, -0.413, and -0.72. The Machiavellian trait variable has a high correlation value indicated by the AVE root value of 0.736, while the other variables have low correlation values from 0.581 and -0.413 (Fornell & Larcker, 1981).

Table 6 presents the results of validating the model fit, demonstrating that all metrics meet the expectations of testing quality indexes like APC, ARS, and AVIF. APC and ARS are acceptable with p-value < 0.05 and AVIF < 5 (Sholihin & Ratmono, 2013).

Analysis of the path coefficient and testing of hypotheses are the next steps. Figure 1 depicts the

interdependencies between the variables, and Table 7 lists the path coefficients and significance levels.

The path coefficient of the relationship between morality and fraud is -0.368, and the p-value is <0.000, less than the significance level (0.05). These results indicate that morality has a negative impact on fraud (H1 is accepted). The path coefficient value of the relationship between Machiavellianism and fraud is 0.432, with a p-value of 0.001, less than the significance level (0.05). These results prove that Machiavellianism has a beneficial influence on fraud (H2 is accepted). The path coefficient value of the relationship between education and

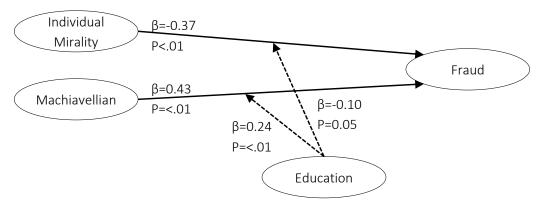


Figure 1. Structural equation model

morality is 0.104 with a p-value of 0.048, less than the significance level (0.05). It means H3 is accepted: education level can moderate the relationship between morality and fraud. The path coefficient value of the relationship between education, Machiavellianism, and fraud is 0.238, and the p-value is 0.001, less than the significance level (0.05). This result accepts H4: education can moderate the relationship between Machiavellianism and fraud.

4. DISCUSSION

The analysis indicates that morality has a negative impact on individuals' propensity to engage in fraudulent activities. This study reveals that fraud tends to decrease as the moral character of government officials in Pekanbaru City increases. Conversely, fraud is more likely to occur when the moral character of government officials in Pekanbaru City is lower. The data show that the morality of government officials in the Pekanbaru city government is quite good. This result confirms Kohlberg's theory of moral growth, which describes each person's moral development. A person with weak moral reasoning will likely act in ways that a person with solid moral sense would not. Higher-order moral reason makes people less likely to behave dishonestly (Wilopo, 2006).

On the other hand, someone who has low morale will commit fraud. Individuals with insufficient moral reasoning tend to do something that will cause legal sanctions (Septiningsih, 2021). Conversely, suppose someone with a high moral sense does some actions. In that case, he always pays attention to the interests of the environment around him because he adheres to his ethical principles in carrying out any action.

Consistent with Basri (2022), Hayati and Amalia (2021), and Kesumawati and Pramuki (2021), these findings suggest that morality can considerably cut down on fraud. This result demonstrates the counteracting effect of personal morality on dishonesty. Therefore, dishonest practices will diminish as moral standards in the Pekanbaru City Government's Government officials rise.

Evidence from testing the second hypothesis suggests that Machiavellianism increases fraud. If the government official shows Machiavellian traits, more fraud will occur. According to the findings, respondents' Machiavellian tendencies were, on average, relatively mild. A lack of Machiavellian qualities correlates with fraudulent actions. This study supports the gone theory by Bologna (1993) that greed is one of the motivations for committing fraud, and Triantoro et al. (2020) and Dammak et al. (2022) that individuals with high Machiavellian traits will use any means to achieve their goals. Further, the findings from this study align with those from Fihandoko (2014) and Mauboy and Pesudo (2019), which state a correlation between Machiavellian characteristics and fraudulent behavior. So, the higher the Machiavellian nature of the Pekanbaru City Government's officials, the higher the fraudulent acts. A Machiavellian character trait is an outlook that motivates most actions for selfish benefit without considering the consequences.

The third hypothesis test results indicate that one's educational background can influence the correlation between morality and fraud. The average level of education of respondents is in higher education. However, the path coefficient value shows a positive direction. This study indicates that fraud tends to occur for someone with a high intellectual understanding. This supports the findings of ACFE (2014) that officials with higher education commit fraud in government.

In line with Kabuye et al. (2018), the success or failure of fraud is determined by the capability or ability of the perpetrator to commit fraud. The perpetrator must own two powers to succeed in his fraudulent actions, including position and intelligence. The high status of a person in an organization will make it easier for him/her to commit fraud, and the risk of being detected will also be smaller. A high position is synonymous with a high level of education. For instance, government officials adept at analyzing internal control systems can benefit from this since it simplifies identifying vulnerable points in the system. The results of the fourth hypothesis testing demonstrate that education

level can attenuate the association between Machiavellianism and fraud.

The study shows that education has a positive moderating effect on Machiavellianism. The results indicate that the respondents, on average, have a higher education degree. It suggests that a person's education level is not necessarily correlated with any reduction in his Machiavellian tendencies. This result is in line with Sabău (2013), that, in general, someone who is socially educated tends to be honest, but at the same time, individuals have different needs. Therefore, they will be motivated to lie, steal, and commit fraud. If it is supported by high greed, then high education will increase the incidence of fraud. According to the gone theory, the factors that cause corruption are greed, opportunity, need,

and disclosure (Restya & Amalia, 2019). In line with Desiana et al. (2018), competent individuals are likely to commit fraud.

This study has contributed to the literature emphasizing the importance of character-building to reduce the occurrence of fraud. The findings have implications for the government that morality and Machiavellianism can lead to fraud. Education also plays a role in encouraging cheating. However, the results of this study can only be generalized in a limited area. The research findings show that there are still many opportunities for future researchers to investigate the causes of government fraud, e.g., from the point of view of hexagon theory. Further research can also develop a broader scope of government or analyze other areas of the public sector.

CONCLUSION

This investigation aims to examine the effect of morality and Machiavellianism on fraud among government personnel in Indonesia. This study also analyzes how educational level influences the link between morality and Machiavellianism. According to the findings, high morality in individuals will reduce fraud. Machiavellianism is beneficial to corrupt government officials in that it helps them avoid being exposed to fraud. The higher the nature of Machiavellianism, the higher the level of fraud that will occur. This finding proves that the level of education can moderate the relationship between morality and Machiavellian traits. According to the study results, high education makes people more likely to commit fraud.

This study has certain limitations, primarily from its focus on the government officials in Pekanbaru City. To enhance the generalizability of the findings, further research should encompass a broader range of contexts and geographic areas. Additionally, this study solely explores the impact of morality and Machiavellianism on fraud occurrence, neglecting other aspects of the fraud hexagon theory. Future studies can delve into a more comprehensive examination of the various characteristics associated with the fraud theory.

This study suggests that individual morality should be strengthened, and it is essential to emphasize how important it is to maintain ethical behavior following the ethics code. Governments can provide ethics-related training, improve oversight and regulation, and enhance individual morale.

AUTHOR CONTRIBUTIONS

Conceptualization: Yesi Mutia Basri, Novita Indrawati.

Data curation: Yesi Mutia Basri.

Formal analysis: Yesi Mutia Basri, Mariana. Funding acquisition: Yesi Mutia Basri.

Investigation: Yesi Mutia Basri, Mariana, Poppy Nurmayanti. Methodology: Yesi Mutia Basri, Hariadi Yasni, Mariana. Project administration: Yesi Mutia Basri, Hariadi Yasni, Mariana, Poppy Nurmayanti.

Resources: Mariana, Novita Indrawati.

Software: Hariadi Yasni, Poppy Nurmayanti, Novita Indrawati. Supervision: Hariadi Yasni, Poppy Nurmayanti, Novita Indrawati.

Validation: Hariadi Yasni.

Visualization: Poppy Nurmayanti.

Writing – original draft: Yesi Mutia Basri.

Writing – review & editing: Hariadi Yasni, Mariana, Poppy Nurmayanti.

REFERENCES

- 1. Ariyanto, R., & Bone, H. (2020). Fraud awareness in Indonesian governmental sector: Multiagency responses. *Review of Integrative Business and Economics Research*, 9(s2), 209-222. Retrieved from http://buscompress.com/uploads/3/4/9/8/34980536/riber_9-s2_37_s19-165_209-222.pdf
- 2. Association of Certified Fraud Examiners (ACFE). (2014). Report to The Nation on Occupational Fraud And Abuse (80 p.). Retrieved from https://www.acfe. com/-/media/files/acfe/pdfs/2014report-to-nations.ashx
- 3. Atmadja, A. T., Saputra, K. A. K., Tama, G. M., & Paranoan, S. (2021). Influence of human resources, financial attitudes, and coordination on cooperative financial management. *The Journal of Asian Finance, Economics and Business*, 8(2), 563-570. http://dx.doi.org/10.13106/jafeb.2021. vol8.no2.0563
- 4. Basri, Y. M. (2022). Determinants of fraud in the public sector: A study on village government in Indonesia. *Mudra: Journal of Finance and Accounting*, 9(1), 93-113. http://dx.doi.org/10.17492/jpi.mudra.v9i1.912206
- Basri, Y. M., Fadilla, O., & Al Azhar, A. A. (2021). Determinants of fraud in the village government: The pentagon's fraud perspective. *Journal of Accounting Research*, *Organization and Economics*, 4(2), 173-187. https://doi.org/10.24815/ jaroe.v4i2.21037
- 6. Bologna, J. (1993). The accountant's handbook of fraud and commercial crime. Wiley.

- Carré, J. R., Jones, D. N., & Mueller, S. M. (2020). Perceiving opportunities for legal and illegal profit: Machiavellianism and the dark triad. Personality and Individual Differences, 162, 109942. https://doi.org/10.1016/j. paid.2020.109942
- 8. Cohen, J. R., Pant, L. W., & Sharp, D. (2001). An examination of differences in ethical decision-making between Canadian business students and accounting professionals. *Journal of Business Ethics*, 30(4), 319-336. https://doi.org/10.1023/A:1010745425675
- Dammak, S., Mbarek, S., & Jmal, M. (2022). The Machiavellianism of Tunisian accountants and whistleblowing of fraudulent acts. *Journal of Financial Reporting* and Accounting. https://doi. org/10.1108/JFRA-09-2021-0296
- De Graaf, G., Huberts, L., & Strüwer, T. (2018). Integrity violations and corruption in western public governance:
 Empirical evidence and reflection from the Netherlands. *Public Integrity*, 20(2), 131-149. https://doi.org/10.1080/10999922.2017.1 350796
- 11. Desiana, D., Susilowati, D., & Putri, N. K. (2018). Faktor-faktor yang mempengaruhi keputusan nasabah untuk menggunakan jasa perbankan Syariah di kota Tasikmalaya [Factors influencing customer decisions to use Sharia banking services in Tasikmalaya City]. Akuntabilitas, 11(1), 23-34. (In Indonesian). https://doi.org/10.15408/akt.v11i1.8135
- 12. Doris, J. M. (2002). Lack of character: Personality and moral behavior. Cambridge University Press.

- Duska, R., & Whelan, M. (1975).
 Moral development: A guide to
 Piaget and Kohlberg. New York:
 Paulist Press.
- 14. Farhan, M., Helmy, H., & Afriyenti, M. (2019). Pengaruh Machiavellian dan love of money terhadap persepsi etika penggelapan pajak dengan religiusitas sebagai variabel moderasi (Studi empiris pada wajib pajak di kota padang). Jurnal Eksplorasi Akuntansi (JEA), 1(1), 470-486. (In Indonesian). https://doi.org/10.24036/jea. v1i1.88
- Fernandhytia, F., & Muslichah, M. (2020). The effect of internal control, individual morality and ethical value on accounting fraud tendency. *Media Ekonomi Dan Manajemen*, 35(1), 112-127. Retrieved from http://jurnal.untagsmg.ac.id/index.php/fe/article/ view/1343
- 16. Fihandoko, S. (2014). Pengaruh sifat sinisme, lingkungan dan sifat Machiavellian terhadap tindakan kecurangan akademik. *Jurnal Ilmiah Mahasiswa FEB Universitas Brawijaya Malang, 3*(1). (In Indonesian). Retrieved from https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/1423
- 17. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. http://dx.doi.org/10.2307/3151312
- 18. Ghozali, I. (2014). Partial least square: Concepts, techniques and applications of SmartPLS. Universitas Diponegoro.

- Ghozali, I., & Latan, H. (2015). Partial least squares: Concepts, techniques and applications using Smarts Pls 3 (2nd ed.). Universitas Diponegoro.
- 20. Haidt, J., & Kesebir, S. (2010). Morality. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social* psychology (pp. 797-832). John Wiley & Sons, Inc. https://doi. org/10.1002/9780470561119. socpsy002022
- 21. Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
- 22. Hair, J. F., Black, W. C., Babin, J. B., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson.
- Haqq, A., & Budiwitjaksono, G. S. (2019). Fraud pentagon for detecting financial statement fraud. *Journal of Economics, Business, and Accountancy Ventura*, 22(3), 319-332. http://dx.doi.org/10.14414/jebav.v22i3.1788
- 24. Hayati, N., & Amalia, I. (2021). The effect of religiosity and moderation of morality on fraud prevention in the management of village funds. *The Indonesian Accounting Review, 11*(1), 105-114. https://doi.org/10.14414/tiar. v11i1.2297
- Head, G. (2020). Ethics in educational research: Review boards, ethical issues and researcher development.
 European Educational Research Journal, 19(1), 72-83. https://doi.org/10.1177/1474904118796315
- 26. Helmayunita, N., Handayani, D. F., Serly, V., & Betavia, A. E. (2022). The tendency to commit fraud from the aspect of individual factors. Proceedings of the Eighth Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA-8 2021) (pp. 2-6). Retrieved from https://www.atlantispress.com/proceedings/piceeba-8-21/125976307

- 27. Ikhwan, A., & Fauzi, F. T. (2019). Islam and civilization: Islam as source of value for human life. Proceedings of 1st Workshop on Environmental Science, Society, and Technology, WESTECH 2018. Medan, Indonesia. http:// dx.doi.org/10.4108/eai.8-12-2018.2283958
- Jaffar, N., Haron, H., Iskandar, T. M., & Salleh, A. (2011). Fraud risk assessment and detection of fraud: The moderating effect of personality. *International Journal* of Business and Management, 6(7), 40-50. http://dx.doi.org/10.5539/ ijbm.v6n7p40
- Kabuye, F., Nkundabanyanga, S. K., Opiso, J., & Nakabuye, Z. (2018). Internal audit organisational status, competencies, activities and fraud management in the financial services sector. *Managerial Auditing Journal*, 32(9), 924-944. https://doi.org/10.1108/MAJ-09-2016-1452
- 30. Kamis, K. (2020, June 25). KPK
 Ungkap 10 Provinsi Paling Korup
 di Indonesia, Riau Sepuluh Besar!
 Halloriau. (In Indonesian).
 Retrieved from https://www.
 halloriau.com/read-hukrim131769-2020-06-25-kpkungkap-10-provinsi-paling-korup-di-indonesia-riausepuluh-besar-.html
- 31. Kessler, S. R., Bandelli, A. C., Spector, P. E., Borman, W. C., Nelson, C. E., & Penney, L. M. (2010). Re-examining Machiavelli: A three-dimensional model of Machiavellianism in the workplace. *Journal of Applied Social Psychology, 40*(8), 1868-1896. https://doi.org/10.1111/j.1559-1816.2010.00643.x
- 32. Kesumawati, L. E., & Pramuki, N. M. W. A. (2021). Pengaruh pengendalian internal dan moralitas individu terhadap kecurangan (fraud). *Hita Akuntansi Dan Keuangan*, 2(2), 524-543. https://doi.org/10.32795/hak.v2i2.1570
- 33. Kohlberg, L. (1971). From is to ought: How to commit the naturalistic fallacy and get away with it in the study of moral development. Academic Press.

- 34. Kurniawan, A., & Anjarwati, A. (2020). Does love of money, Machiavellian, religiosity, socioeconomic status, and understanding of the accountant's code of ethics affect the ethical perception of accounting students? Proceedings of the 1st International Conference on Accounting, Management and Entrepreneurship (ICAMER 2019) (pp. 33-37). https://doi.org/10.2991/aebmr.k.200305.009
- 35. Kurniawan, P. C., & Azmi, F. (2019). The effect of management morality on accounting fraud with internal control as a moderating variable (Study in Pemalang Regency). *Riset Akuntansi Dan Keuangan Indonesia*, 4(2), 177-185. https://doi.org/10.23917/reaksi. v4i2.8552
- Lau, C. L. L. (2010). A step forward: Ethics education matters!
 Journal of Business Ethics, 92(4),
 565-584. https://doi.org/10.1007/s10551-009-0173-2
- Mauboy, B. E., & Pesudo, D. A.
 A. (2019). Machiavellian traits, student professional commitment to cheating intentions with gender as a moderate variable. Accounting and Financial Review, 2(2), 119-125.
- 38. Merdeka. (2019, December 10). Sepanjang 2019, 28 ASN di Riau Tersandung Kasus Korupsi. (In Indonesian). Retrieved from https://www.merdeka.com/peristiwa/sepanjang-2019-28-asn-di-riau-tersandung-kasus-korupsi.html
- 39. Naher, N., Hoque, R., Hassan, M. S., Balabanova, D., Adams, A. M., & Ahmed, S. M. (2020). The influence of corruption and governance in the delivery of frontline health care services in the public sector: A scoping review of current and future prospects in low and middle-income countries of south and south-east Asia. *BMC Public Health*, 20, 1082. https://doi.org/10.1186%2Fs12889-020-09197-0
- 40. Nindito, M. (2018). Financial statement fraud: Perspective of the pentagon fraud model in Indonesia. Academy of Accounting and Financial Studies Journal,

- 22(3), 1-9. Retrieved from https://www.abacademies.org/articles/financial-statement-fraud-perspective-of-the-pentagon-fraud-model-in-indonesia-7319.html
- 41. Norris, G., & Brookes, A. (2021). Personality, emotion and individual differences in response to online fraud. *Personality and Individual Differences*, 169, 109847. https://doi.org/10.1016/j.paid.2020.109847
- 42. Norris, G., Brookes, A., & Dowell, D. (2019). The psychology of internet fraud victimisation: A systematic review. *Journal of Police and Criminal Psychology*, 34, 231-245. https://doi.org/10.1007/s11896-019-09334-5
- 43. Noviyanti, N. L. P., Rustiarini, N. W., & Dewi, N. P. S. (2021). Do individual characteristics and bystander effect increase the accounting fraud? *Jurnal Riset Akuntansi (JUARA)*, 11(2), 321-334. https://doi.org/10.36733/juara.v11i2.2926
- 44. Othman, Z., Nordin, M. F. F., & Sadiq, M. (2020). GST fraud prevention to ensure business sustainability: A Malaysian case study. *Journal of Asian Business and Economic Studies*, 27(3), 245-265. https://doi.org/10.1108/JABES-11-2019-0113
- 45. Putri, P. A. A., & Irwandi, S. A. (2016). The determinants of accounting fraud tendency. *The Indonesian Accounting Review*, 6(1), 99-108. http://dx.doi. org/10.14414/tiar.v6i1.857
- 46. Raharjo, F. D. (2015). Factors influencing internal whistleblowing reporting with education levels as moderating variables of employee perceptions at Pt. Krakatau Steel (Persero) Tbk. Media Riset Akuntansi, Auditing Dan Informasi, 15(2), 103-116. https://doi.org/10.25105/mraai. v15i2.2003
- 47. Ramamoorti, S. (2008). The psychology and sociology of fraud: Integrating the behavioral sciences component into fraud and forensic accounting curricula. *Issues in Accounting Education*, 23(4), 521-533. https://doi. org/10.2308/iace.2008.23.4.521

- 48. Restya, W. P. D., & Amalia, H. (2019). Corrupt behavior in a psychological perspective. *Asia Pacific Fraud Journal*, 4(2), 177-182. https://doi.org/10.21532/apfjournal.v4i2.113
- 49. Richmond, K. A. (2001). Ethical reasoning, Machiavellian behavior, and gender: The impact on accounting students' ethical decision making. Virginia Polytechnic Institute and State University. Retrieved from https://www.proquest.com/openview/086 500557d96e4ba76413acc00f561cf /1?pq-origsite=gscholar&cbl=187 50&diss=y
- 50. Rizaty, M. A. (2022, July 22). Kejaksaan Agung Tangani 371 kasus korupsi sepanjang 2021 [The Attorney General's Office handles 371 corruption cases throughout 2021]. Dataindonesia. Id. (In Indonesian). Retrieved from https://dataindonesia.id/ragam/detail/kejaksaan-agungtangani-371-kasus-korupsi-sepanjang-2021
- Rottweiler, B., & Gill, P. (2022).
 Conspiracy beliefs and violent extremist intentions: The contingent effects of self-efficacy, self-control and law-related morality. *Terrorism and Political Violence*, 34(7), 1485-1504. https://doi.org/10.1080/09546553.2020.1803288
- 52. Rusdianti, I. S., Irmadariyani, R., & Kustono, A. S. (2022). E-finance: Mitigation of fraud tendency in Indonesia. *IJEBD (International Journal of Entrepreneurship and Business Development)*, 5(3), 574-582. https://doi.org/10.29138/ijebd.v5i3.1857
- Rustiarini, N. W., Sutrisno, S., Nurkholis, N., & Andayani, W. (2019). Fraud triangle in public procurement: Evidence from Indonesia. *Journal of Financial Crime*, 26(4), 951-968. https://doi. org/10.1108/JFC-11-2018-0121
- 54. Sabău, E. M. (2013). Fraud risk management Human rationalization assessment. *Business Excellence and Management*, 3(1), 41-56. Retrieved from https://www.ceeol.com/search/articledetail?id=840753

- 55. Sanad, Z., & Al-Sartawi, A. (2021). Financial statements fraud and data mining: A review. In A. M. Musleh Al-Sartawi, A. Razzaque, & M. M. Kamal (Eds.), Artificial Intelligence Systems and the Internet of Things in the Digital Era: Proceedings of EAMMIS 2021 (pp. 407-414). Springer. https://doi.org/10.1007/978-3-030-77246-8_38
- 56. Saputra, K. A. K., Subroto, B., Rahman, A. F., & Saraswati, E. (2020). Issues of morality and whistleblowing in short prevention accounting.

 International Journal of Innovation, Creativity and Change, 12(3), 77-88. Retrieved from https://www.ijicc.net/index.php/volume-12-2020/169-vol-12-iss-3
- 57. Septiningsih, D. (2021). Pengaruh keefektifan pengendalian internal, kesesuaian kompensasi, asimetri informasi dan moralitas individu terhadap fraud dengan perilaku tidak etis sebagai variabel intervening pada pemerintah daerah Boyolali [The influence of internal control effectiveness, appropriateness of compensation, information asymmetry and individual morality against fraud with unethical behavior as intervening variables in Boyolali regional government]. Institut Agama Islam Negeri Salatiga. Retrieved from http://e-repository. perpus.uinsalatiga.ac.id/11035/
- 58. Setiawan, S. (2018). The effect of internal control and individual morality on the tendency of accounting fraud. *Asia Pacific Fraud Journal*, 3(1), 33-41. https://doi.org/10.21532/apfj.001.18.03.01.04
- Setiawan, S., Carolina, Y., & Kristiani, A. (2020). The effect of auditor's competence and independence on information system audit quality. Asia Pacific Fraud Journal, 5(2), 183-190. https://doi.org/10.21532/apfjournal.y5i2.155
- 60. Sholihin, M., & Ratmono, D. (2013). *Analisis SEM-PLS dengan Warp PLS 3.0*. Andi Offset Yogyakarta. (In Indonesian).
- 61. Siddiquee, N. A., & Zafarullah, H.

- (2022). Absolute power, absolute venality: The politics of corruption and anti-corruption in Malaysia. *Public Integrity*, *24*(1), 1-17. https://doi.org/10.1080/10999922. 2020.1830541
- 62. Sosler, A. (2019). Reason, love, and morality: The limits of reason in Kohlberg and the importance of love in Augustine and Smith. *Religious Education*, 114(1), 69-81. https://doi.org/10.1080/00344087. 2018.1492290
- 63. Sugiyono. (2016). Qualitative quantitative research methods and R&D. Alfabeta.
- 64. Suprapta, E. L., & Padnyawati, K. D. (2021). Pengaruh pengendalian intern kas, financial pressure, kesesuaian kompensasi, dan moralitas individu terhadap kecurangan (fraud) pada lpd di kecamatan tampaksiring gianyar. Hita Akuntansi Dan Keuangan Universitas Hindu Indonesia, 2(1), 144-166. (In Indonesian). https://doi.org/10.32795/hak.v2i1.1495
- 65. Sutton, J., & Keogh, E. (2000).
 Social competition in school:
 Relationships with bullying,
 Machiavellianism and personality.
 British Journal of Educational

- Psychology, 70(3), 443-456. https://doi.org/10.1348/000709900158227
- 66. Talib, D. C., & Kusumawati, A. (2020). The influence of fraud diamond theory and gone theory of fraud at hospital of Dr. Tadjuddin Chalid Makassar. IOSR Journal of Economics and Finance (IOSR-JEF), 11(6), 47-52. Retrieved from https://www.iosrjournals.org/iosr-jef/papers/Vol11-Issue6/Series-4/F1106044752.pdf
- 67. Tirtarahardja, U. (2005). Pengantar Pendidikan. Jakarta: Rineka Cipta.
- Triantoro, H. D., Utami, I., & Joseph, C. (2020). Whistleblowing system, Machiavellian personality, fraud intention: An experimental study. *Journal of Financial Crime*, 27(1), 202-216. https://doi. org/10.1108/JFC-01-2019-0003
- 69. Walker, M. U. (2007). Moral understandings: A feminist study in ethics. Oxford University Press.
- Wilopo, W. (2006). Analisis faktorfaktor yang berpengaruh terhadap kecenderungan kecurangan akuntansi: Studi pada perusahaan publik dan badan usaha milik negara di Indonesia [Analysis of

- factors influencing the tendency of accounting fraud: Studies on public companies and state owned enterprises in Indonesia]. *The Indonesian Journal of Accounting Research*, 9(3). (In Indonesian). http://doi.org/10.33312/ijar.163
- Zahari, A. I., Said, J., & Muhamad, N. (2022). Public sector fraud: The Malaysian perspective. *Journal of Financial Crime*, 29(1), 309-324. https://doi.org/10.1108/JFC-01-2021-0013
- Zahra, F., Abdullah, M. I., Kahar, A., Din, M., & Nurfalah, N. (2021). Preventing procurement fraud in e-purchasing for Indonesian local governments. *Journal of Asian Finance, Economics and Business*, 8(2), 505-511. https://doi.org/10.13106/jafeb.2021.vol8. no2.0505
- 73. Zirman, Z., & Basri, Y. M. (2014). Machiavellianisme, etika dan tanggung jawab sosial: Keputusan etis dalam penghindaran pajak [Machiavellianism, ethics and social responsibility: Ethical decisions in tax avoidance]. *Jurnal Sains Akuntansi Indonesia*, 1(1), 73-84. (In Indonesian). Retrieved from https://ppjp.ulm.ac.id/journal/index.php/jsai/article/view/3657