

## Investigating Gender Preferences on The Choice of Motives and Modus of Corruption in Kementrian X: A Multinomial Logistic Regression Approach

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### ABSTRACT

*This study aims to analyze gender preferences in the choice of motives and modes of corruption. This study also uses age, years of service, level of position, and type of institution as control variables which may have a correlation with the motives and modes of corruption. By using the Multinomial Logistic Regression test, the results show that gender has no correlation with the choice of the motives for corruption, type of institution has a significant correlation with the choice of the motives for corruption, while the level of position, age and years of service are partially correlated with the choice of the motives for corruption. Other results indicate that age, years of service, and type of institution greatly influence the choice of the modes of corruption, while gender and level of position have no correlation with the choice of the modes of corruption. The results of this study are expected to assist organizations in designing fraud prevention and internal control systems in accordance with organizational needs. In addition, the results of this study are expected to provide insight to Gender Mainstreaming Unit (PUG) on how to optimize the role of female employees in organizations in preventing and detecting corruption. Finally, this study suggests that the existence of a robust control system at each level of the organization and the optimized role of internal compliance unit is imperative to the success of the organization's efforts to prevent and combat corruption.*

**Keyword:** Corruption, Fraudsters, Motives, Modus, Gender, Age, Positions Level, Years of Service

### 1. INTRODUCTION

The correlation between gender and fraud has been the focus of various studies in the recent decades. According to the results of ACFE's survey 2020, the number of male fraudsters exceeds the number of female fraudsters, where 72% of fraudsters are male and the remaining are female. The result is in line with the results of prior studies (Simpson, 2002; Torgler & Valev, 2010). On the contrary, the results of several studies show that the number of female

fraudsters is increasing and surpass the number of male fraudsters (Heimer, 2000; Holtfreter, 2008; Steffensmeier & Allan, 1996). Also, in the banking sector, Bonny, Goode, & Lacey (2015), revealed that fraud was mostly committed by women with a percentage of 51% compared to 49% committed by men. The results of previous studies imply that there is a contradiction concerning the number of fraudsters based on gender that needs further investigation.

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Steffensmeier & Allan (1996), in the theory of gender in crime, states that gender is a factor that mediates the type, frequency, and context of crimes committed by men and women. Several previous studies used gender as a factor that could be used to predict the type and motives of crime. In the context of white-collar crime, women are perceived to have different motives from men when committing fraud (Zietz, 1981; Daly, 1989; Klenowski, Copes, & Mullins, 2011; Steffensmeier, Schwartz, & Roche, 2013; Benson & Simpson, 2009). Concerning the relation between gender and modus operandi of crime, Steffensmeier et al. (2013), stated that men and women can commit crimes in different ways. Based on the results of previous studies, this study aims to predict how variations in motives and modes of corruption could be explained by the variation of gender. This study uses official investigative audit reports that has been released by Ministry X during the period of 2015 until 2019.

In this study, the term corruption is used instead of fraud, with the consideration that according to Law Number 31 of 1999 in conjunction with Law Number 20 of 2001, the definition of corruption is broader than the definition of fraud. In this Law, fraud is defined to be one of the 7 types of corruption.

Based on the aforementioned literature, the research questions are formulated as follows: 1) How is the demographic of corruptors in the Ministry X based on gender? 2) Is there a significant correlation between gender and the choice of motives for corruption in the Ministry X? 3) Is there a significant correlation between gender and the choice of modes of corruption in the Ministry X?

The purpose of this study is to analyze the demographics of corruptors based on gender and gender preferences in the choice of motives and modes of corruption. The results of the research are expected to be considered in designing a fraud prevention system and an internal control system that better suited the characteristics

and preferences of each gender. In addition, the results of this study can be used by The Gender Mainstreaming Unit (PUG) in the Ministry X in formulating efforts that should be taken to optimize the role of women in preventing and detecting corruption in the Ministry.

## 2. LITERATURE REVIEW AND HYPOTHESIS

### Gender and Corruption

Steffensmeier and Allan (1996), in the theory of gender in crime, states that gender is a factor that mediates the type, frequency, and context of crimes committed by men and women. In further research, Steffensmeier et al. (2013), states that women commit different types of crime compared to men, regardless of their position in the organization. In the context of white-collar crime, ACFE (2020), states that in general, fraudsters around the world are dominated by men at all levels of authority, either staff / employee, manager, or company owner. A theory that can be used to explain this condition is the gender socialization theory, which discusses gender sensitivity to ethics (Cumming et al., 2015). This theory states that men and women have different perspectives on ethics as a result of the teaching they have received since childhood (Gilligan, 1982). Women are considered to be more likely to react ethically Arun (2015), even though they are in a dilemma (Mason & Mudrack, 1996), more likely to accept a code of conduct Ibrahim et al. (2009), and less likely to be harmful to others Radtke (2000), so women are considered to be less involved in acts of fraud. In line with the gender socialization theory, the differential crime hypothesis states that biological, psychological, and social factors are the potential causes for the higher frequency of men committing offenses (Gottfredson & Hirschi, 1990).

Several previous studies have explored how gender influenced a person's intention to commit fraud. Based on statistical data, men are more often became the object of arrest by officers because of their

involvement in fraud. Research conducted by Torgler & Valev (2010), also reveals that women are less likely to commit fraud. However, previous research conducted by Heimer (2000), states that there has been a narrowing of the gender gap in the characteristics of fraudsters over the past few decades. Research conducted by Bonny et al. (2015), reveals that fraud, especially in the banking industry, is mostly committed by women.

### **Correlation between Gender and Motives for Corruption**

According to Murphy and Dacin (2011), the motive for fraud is defined as pressure that provides a reason for someone to commit fraud. More broadly, the fraud diamond theory states that there are four factors that encourage a person to commit fraud: pressure, opportunity, rationalization, and capability (Wolfe & Hermanson, 2004).

Several previous studies have used gender as a factor that can predict the modes and motives for crime. Zietz (1981), and Daly (1989), developed Cressey's idea of the relation between white-collar crime motives and gender by analyzing cases of embezzlement committed by women. These two studies conclude that women have different motives from men when they commit embezzlement. Zietz's (1981), research concludes that women are motivated to embezzle money for the benefit of others; they are willing to sacrifice themselves to meet the needs of their families. In this case there is pressure to fulfill their needs. Accordingly Daly (1989), concluded that embezzlement by women is dominated by pressure for family needs. Meanwhile, for male perpetrators, the motive is more varied, where the motive for pressure to fulfill needs is only 18%. The other motives are influence from other people, getting financial benefits (without any pressure), and personal reasons that are non-financial. According to Klenowski et al. (2011), most male perpetrators rationalize the fraud they have committed. They tend to feel that this is a normal thing to do in business practice, as long as they

can achieve their career goals and are perceived as successful people. In line with this study, Steffensmeier et al. (2013), also states that women feel more guilty and find it more difficult to rationalize their involvement in business-related fraud than their male colleagues.

Regarding the capability motive, several studies suggest that women tend to have less involvement in fraud (Steffensmeier et al., 2013) due to a lower position in the organization (ACFE, 2020; Daly, 1989), so that they have insufficient authority to cover up their actions compared to male perpetrators. In line with the gender socialization theory which states that there are differences in the moral orientation of men and women, Benson and Simpson (2009), suggest that men and women may also differ in how they see opportunities to commit fraud in the workplace. Women in top management positions feel that they are closely supervised so they act more cautiously and are less likely to take advantage of opportunities to commit fraud than men in those positions.

Based on the literature and the results of empirical research, it is predicted that there is a significant relation between gender and the choice of motives for corruption in the Ministry X, so that the first hypothesis of the study is stated as follows.

H1: There is a relation between gender and the choice of motives for corruption in the Ministry X.

### **Correlation between Gender and Modes of Corruption**

Alfitra (2014), states that in the world of crimes, there is a term *modus operandi*, which is defined as operations methods or techniques that are specifically characterized by a criminal in committing his evil deed. Law Number 31 of 1999 in conjunction with Law Number 20 of 2001 concerning Corruption Eradication divides corruption into seven types: corruption related to state finances/state economy, bribery, embezzlement, extortion, fra-

udulent acts, conflict of interest in procurement, and gratuities.

According to Steffensmeier et al. (2013), men and women can commit crimes in different ways. Steffensmeier et al. (2013), indicates that women tend to play smaller role in fraud. Meanwhile, men tend to play a bigger role which are as conspirators in the fraudulent acts. Daly (1989), states that most women embezzle funds by taking cash or negotiable instruments, or by manipulating bank accounts. Meanwhile, male perpetrators are more likely to commit fraud related to positions. Apart from taking cash and manipulating bank accounts, the male perpetrators also manipulate documents. The results of the study also show that men have a greater tendency to use organizational resources to commit fraudulent acts than women. In committing fraud, women tend to do it individually, while men tend to do it in groups and in a coordinated manner (Daly, 1989; Steffensmeier et al., 2013). These studies infer that women use a simpler mode than men.

Based on the literature and the results of the empirical research, it is predicted that there is a significant relation between gender and the choice of the modes of corruption in the Ministry X. Hence, the formulation of the second hypothesis is:

H2: There is a relation between gender and the choice of modes of corruption in the Ministry X.

### **Other Factors that Might Related to Motive(s) and Mode(s) of Corruption**

Based on previous research, there are several things besides gender that can be used to predict the preferences for motives and modes of corruption, such as age (Holtfreter, 2005; Wheeler et al., 1988), years of service (ACFE, 2020; Hilliard & Neidermeyer, 2018), level of position (ACFE, 2020; Friedrichs, 2004; Holtfreter, 2005), and type of organization (ACFE, 2020).

Holtfreter (2005), states that white-collar criminals are, on average, older than other common criminals. However, the

results of other studies indicate that people perceive that older people will be wiser (Heckhausen, 1989; Hira & Faulkender, 1997; Knight & Parr, 1999; Stange, 2005). This means that at the stage of life "before old age", the wisdom possessed is considered low or non-existent, until later it appears "in old age" (Ardelt & Nutter-Pridgen, 2018). Thus, when a person reaches a certain age it is expected that his motivation to commit fraud will decrease.

Regarding years of service or work experience, ACFE (2020), states that the increased risk of a person committing fraud with a greater number of losses is in line with the length of service. This is because they are more experienced in identifying gaps or weaknesses in internal control, are more trusted by colleagues and supervisors, or because they learn how others have committed fraud successfully.

For positions in the workplace, Cressey (1953), states that differences in job positions can affect different types of fraud committed. Perpetrators in managerial or executive positions may have access to greater opportunities, and are perceived as more trustworthy, whereas perpetrators in lower positions are perceived to have limited opportunity to commit serious frauds (Friedrichs, 2004).

Regarding the size of the organization, ACFE (2020), reports that a larger organization will implement stringent internal control and anti-corruption system than a smaller organization. Thus, a larger organization narrows one's chances of committing fraud. On the contrary Sutherland (1949), found that a larger organization is associated with a greater number of white collar crimes. Hill et al. (1992), found that factors such as decentralization, span of control, and reward/incentives mechanisms led to a non-linear relation between the size of organization and the number of white collar crimes.

### **3. METHODS**

This research is conducted by combining qualitative and quantitative methods. Qualitative analysis is carried out to: 1)

code the motives and modes of corruption; and 2) analyze the demographics of the perpetrators of corruption based on gender, age and length of service at the time the corruption is committed. Quantitative analysis is performed to answer H1 and H2 by performing the Multinomial Logistic Regression test using the SPSS application. The variable operations is as follows (Table 1).

#### 4. RESULTS AND DISCUSSION

##### Demographic Analysis of Corruptors in The Ministry X

The demographics of corruptors based on gender by position level and age (Table 2).

The demographics of corruption perpetrators based on gender in the Ministry X

are similar with the results of the Report to the Nations ACFE (2020), which also show that the perpetrators of fraud are dominated by male employees. The theory that can explain this phenomenon is the Differential Crime Hypothesis (Gottfredson & Hirschi, 1990), and the Gender Socialization Theory (Cumming, Leung, dan Rui, 2015), which state that women are less expected to commit white-collar crimes or corruption than men. Although the number of corruption perpetrators is dominated by men, organizations need to pay attention to the decreasing phenomenon of the “glass ceiling” and the implementation of Gender Mainstreaming policies which provide greater opportunity for women

Table 1. **Variable Operations**

Hypothesis 1	
Response Variable: <i>Motives based on Fraud Diamond dimensions</i> (Cressey, 1953; Wolfe & Hermanson, 2004), categorical	
MOTIF <sub>1</sub>	<i>Pressure</i>
MOTIF <sub>2</sub>	<i>Opportunity</i>
MOTIF <sub>3</sub>	<i>Rationalization</i>
MOTIF <sub>4</sub>	<i>Capability</i>
Hypothesis 2	
Response Variable: Mode based on categories in Law Number 31 of 1999 concerning the Eradication of Corruption Crimes which is simplified into 4 categories, categorical	
MODE <sub>1</sub>	Fraudulent Deeds
MODE <sub>2</sub>	Gratuity
MODE <sub>3</sub>	Bribery
MODE <sub>4</sub>	Embezzlement in Position
Predictor Variable	
GENDER	The gender of the perpetrators (Steffensmeier et al., (2013), categorical 0= male 1=female
AGE	Age of the perpetrator of corruption at the time of the occurrence of corruption, measured by an interval scale (Holtfreter, 2005; Wheeler et al., 1988)
LEVEL	The position of the perpetrators of corruption in the organization (ACFE, 2020; Friedrichs, 2004; Holtfreter, 2005), measured by an ordinal scale. 1= executor 2= special implementers, functional officers, structural officials one level below the head of the unit 3= head of the unit
EXPERIENCE	The length of work of the perpetrators since the appointment as a Civil Servant or ASN until the time when first act of corruption occurred, measured by an interval scale (ACFE, 2020; Hilliard & Neidermeyer, 2018).
INSTITUTION	The type of organization of the perpetrator, (ACFE, 2020), categorical 0= vertical agency/providing services to the public at large 1= non-vertical agency/does not provide services to the public at large

Source: Processed data, 2019

Table 2. Demographics by Gender

Age (Year)	21-30		31-40		41-50		51-58		Total		Gap	
Modus	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	N	%
Gratuities	3	0	11	0	18	3	4	0	36	3	33	91.67%
Level 1	3		2			1	1		6	1	5	83.33%
Level 2			9		14	2	1		24	2	22	91.67%
Level 3					4		2		6	0	6	100.00%
Embezzlement	2	0	2	0	10	1	6	0	20	1	19	95.00%
Level 1	1		1			1	2		4	1	3	75.00%
Level 2	1		1		6		2		10	0	10	100.00%
Level 3					4		2		6	0	6	100.00%
Fraudulent Deeds	12	0	11	0	17	3	10	0	50	3	47	94.00%
Level 1	9		1		4		1		15	0	15	100.00%
Level 2	3		10		12	3	5		30	3	27	90.00%
Level 3					1		4		5	0	5	100.00%
Bribery	5	2	10	0	15	0	2	0	32	2	30	93.75%
Level 1	4	2	5		3		1		13	2	11	84.62%
Level 2	1		5		10		1		17	0	17	100.00%
Level 3					2				2	0	2	100.00%
Total	22	2	34	0	60	7	22	0	138	9	129	93.48%

Description: Level 1: executors; Level 2: special executors, functional officers, structural officers one level below the head of the work unit; Level 3: head of the work unit. The gap is calculated based on the difference between male and female perpetrators compared to the number of male perpetrators.

Source: Processed data, 2019

to have strategic positions and higher authority in the near future.

Furthermore, the table shows that no female corruptor serves as the head of a unit. This result indicates that even though women are given the capability as a unit leader, they do not use their capabilities to commit corruption. This is in line with the results of research conducted by (Benson & Simpson, 2009). However, a more comprehensive analysis is needed to conclude that women will act more ethically even though they are in a position that allows them to commit corruption.

The following table show the results of the analysis based on the type of organization/agency, level of position, age and years of service (Table 3).

Corruption perpetrators in the Ministry X were dominated by employees in vertical agencies (89.79%). Vertical agencies are agencies that have a larger organizational size than non-vertical agencies because they provide services directly to the public. This result is interesting because

it is different from the results of ACFE's research (2020), which state that larger organizations tend to have better internal control systems and corruption prevention systems so that they are expected to minimize opportunities to commit corruption. The diversity of the quality of the implementation of internal control, inconsistency in the implementation of SOPs / regulations across the units and the proximity of the unit to the Government Internal Supervisory Apparatus (APIP) may be factors that cause demographic differences between the results of this study and the results of previous studies. Therefore, the quality of monitoring/supervision by the internal compliance unit that serves as an intermediary between the unit and the Government Internal Supervisory Apparatus (APIP), must be improved.

More specifically, when coding the motives and modes, it was found that most cases occurred in offices that provide services to the public or to other government

agencies. This is in line with the formulation of corruption used by Klitgaard (2000), that is, the existence of exclusive authority (monopoly), in this case as the only public institution entitled to provide the service; and the opportunities for discretion due to ambiguous or incomplete regulations; are factors that encourage corruption. The results imply that a robust fraud risk management should be implemented in offices that carry out services to the public.

In Table 3, related to the perpetrators of corruption in vertical agencies, it can be seen that most of them committed corruption at the age of 41 - 50 year with the length of service of 17 - 24 years. Meanwhile, related to the perpetrators of corruption in non-vertical agencies, most of them committed corruption at the age of 21 - 30 year with the years of service of 0 - 8 years. Most of the corruption perpetrators in vertical agencies held positions as specialized staff, functional officers, and structural officers one level below the head of the unit, while the perpetrators

of corruption in non-vertical agencies were mostly ordinary staff. The results of demographics of corruption perpetrators, which show that most of the perpetrators of corruption are those who have positions/authorities to make decisions/ultimate decisions, are in line with the results of previous research conducted by Wolfe & Hermanson (2004), in the framework of the fraud diamond theory which states that a person's position or function in an organization makes the person has capability to create or take advantage of existing opportunities or weaknesses to commit fraud.

It is interesting that, related to the perpetrators of corruption in vertical agencies, corruption cases began to occur relatively higher at the age of 31 - 40 year with the length of services of 9 - 24 years, and reaching the highest number at the age of 41 - 50 year with length of services of 17 - 24 years, but then decreased sharply at the age of 51 - 58 year. This demographic is different with the results of research

**Table 3. Demographics Based on Type of Organization/Agency, Level of Position, Age, and Years of Service**

Age (year)	21-30		31-40		41-50		51-58		Total		Gap	
Organization / Agency	V	NV	V	NV	V	NV	V	NV	V	NV	Number	%
Level 1	12	7	8	1	9	0	5	0	34	8	26	76.47%
Years of service 0-8	8	7							8	7	1	12.50%
Years of service 17-24			2		4		1		7	0	7	100.00%
Years of service 25-32					4		4		8	0	8	100.00%
Years of service 9-16	4		6	1	1				11	1	10	90.91%
Level 2	5	0	23	2	44	3	9	0	81	5	76	93.83%
Years of service 0-8	3		1						4	0	4	100.00%
Years of service 17-24			10	2	36	1			46	3	43	93.48%
Years of service 25-32					6	1	7		13	1	12	92.31%
Years of service 32-40						1	2		2	1	1	50.00%
Years of service 9-16	2		12		2				16	0	16	100.00%
Level 3	0	0	0	0	9	2	8	0	17	2	15	88.24%
Years of service 17-24					7		1		8	0	8	100.00%
Years of service 25-32					2	2	5		7	2	5	71.43%
Years of service 32-40							2		2	0	2	100.00%
<b>Total</b>	<b>17</b>	<b>7</b>	<b>31</b>	<b>3</b>	<b>62</b>	<b>5</b>	<b>22</b>	<b>0</b>	<b>132</b>	<b>15</b>	<b>117</b>	<b>88.64%</b>

Description: Level 1 staff/ordinary staff; Level 2: specialized staff, functional officers, structural officers one level below the head of the unit; Level 3: head of the unit; V: vertical agencies/providing services to the public at large; NV: non-vertical agencies/ do not provide services to the public at large. Gap is calculated based on the difference of perpetrators in vertical agencies minus perpetrators in non-vertical agencies compared to the number of perpetrators in vertical agencies.

Source: Processed data, 2019

conducted by Hilliard & Neidermeyer (2018), which states that access to organizational resources that can be targeted for fraud will increase over time, along with the increasing years of service and age. However, the sharp decline in the number of corruption perpetrators at the age of 51 until 58 year is in line with the results of previous studies conducted by Heckhausen (1989), Hira & Faulkender (1997), Knight & Parr (1999), Stange (2005), and Statler & Oppegaard (2005), which state that in general a person's wisdom will increase with age. The wisdom influences ethical standards and a tendency to think about common interests so that an elder person are expected to act more ethically.

The number of corruption perpetrators at the age of 21 - 30 year in vertical and non-vertical agencies is 24 employees (16.32%). It should be come into consideration that in a relatively young age, these employees have the courage to commit corruption. If efforts are not made as early as possible to instill integrity values in this age group, it is feared that in the future they will cause greater losses to the organization.

The motives is divided into 4 categories based on the theory of Wolfe & Hermanson (2004), namely Capability, Opportunity, Pressure, and Rationalization. Variations in motives between genders are presented in the following table 4.

There is a difference in the number of motives data and the number of perpetrators data. The motives data consists of 198 data units and the number of perpetrators data consists of 147 data units. The difference happens because

a perpetrators could have two or more motives for doing corruption.

Regarding the Rationalization and Opportunity motives, there is a relatively large proportion difference between male and female perpetrators. In this study, female perpetrators tend to be less likely to take advantage of system weaknesses or lack of supervision to commit corruption. Research by Benson & Simpson (2009), states that men and women have differences in seeing opportunities to cheat at work, where women feel more closely supervised so they act more cautiously and are less likely to take advantage of opportunities to cheat than men in the same position.

However, in this study, the motive that has the largest proportion used by women is rationalization (42.86%). When coding motives, it is found that if there are conditions where many other employees including their superiors, commit corruption, women tend to commit corruption. The ethical dilemma that occurs in female corruptors is interesting to be investigated further because the gender socialization theory states that women tend to react ethically even though in dilemma (Arun, 2015; Mason & Mudrack, 1996). In addition, the demographics of motives based on gender in this study are different with the results of research conducted by Klenowski et al. (2011), and Steffensmeier et al. (2013), which state that women feel more guilty and more difficult to rationalize their fraudulent acts than men. In this case, it is imperative for the Gender Mainstreaming (PUG) unit to formulate

**Tabel 4. Variations in Motives between Male and Female Corruptors**

Motives	Number (N)	Male		Female		Difference in Proportions (%)
		N	%	N	%	
Capability	40	38	20,65	2	14,29	6,37
Opportunity	92	87	47,28	5	35,71	11,57
Pressure	25	24	13,04	1	7,14	5,9
Rationalization	41	35	19,02	6	42,86	-23,84
Total	198	184	100	14	100	

Source: Processed data, 2019

strategies so that women do not rationalize and do not participate in corruption.

Overall, the opportunity motive is more preferred than the pressure motive. This implies that internal control and corruption prevention systems have not functioned optimally so that there are still opportunities for employees to commit corruption even though the employees have been given adequate compensation by the organization. Based on descriptive statistical analysis, the motives chosen in this study are different from the results of research conducted by Bonny et al. (2015), who reported that the dominant motive underlying fraud was pressure, both financial pressure due to a lavish lifestyle or immediate financial needs, for example for medical expenses, or non-financial pressure, such as pressure from superiors or colleagues to commit fraud.

The modes is divided into 4 categories, namely Gratification, Embezzlement in Position, Cheating, and Bribery based on the literature in Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption. Mode variations between genders are as follow.

A relatively large difference in the proportion of the mode between genders occurs in the gratuity mode, or 7.24%, The results are in line with the results of the demographic analysis based on gender in the study by Daly (1989), and Steffensmeier et al. (2013), which state that women tend to commit fraud individually, while men are more likely to use scenarios that involve multiple parties. In the codification process of the modes, Embezzlement, Cheating, and Bribery are modes that involve the role of other parties. Accumulatively,

men chose the three modes more than the Gratuities mode. In all types of modes, the most perpetrators age 41 to 50 year, with positions as specialized staff, functional officers, and structural officersone level under the unit's leaders.

### Analysis of the Relation between Gender and the Choice of Motives for Corruption in The Ministry X

The results of testing using the Multinomial Logistic Regression are as follow (Table 6).

The simultaneous test results of the Fitting Information Model on panel A show significant results with p-value < 0.05. It means that, simultaneously, the predictor variables consisting of the main variable of gender and control variables of level of position (level), age (age), years of services (experience), and type of organization or agency (institution), are related to preference for corruption motives. The result of the coefficient of determination test in Panel B shows that the predictor variable is able to explain the response variable, i.e. the corruption motive by 19.7%, while the rest is explained by other variables.

The results of the partial significance test through the Wald Test are as follow (Table 7).

Table of parameter estimation test using the motive of pressure as a reference/ comparison.

The results of the Wald Test can be inferred as follow.

- Logit 1 (*Opportunity*)

The variable of institution with vertical type compared to non-vertical type has a significant correlation ( $p < 0.05$ ) with the preferences of the perpetrators

**Tabel 5. Variations in Modes between Male and Female Corruptors**

Mode	Number (N)	Male		Female		Difference in Proportions (%)
		N	%	N	%	
Gratuities	39	36	26,09	3	33,33	-7,24
Embezzlement in Position	21	20	14,49	1	11,11	3,38
Fraudulent act	53	50	36,23	3	33,33	2,9
Bribely	34	32	23,19	2	22,22	0,97
Total	147	138	100	9	100	

Source: Processed data, 2019

choosing the opportunity motive over the pressure motive. Meanwhile, the other predictor variables are not related to the choice of this motive. Based on the Odd Ratio value, the perpetrators who work in vertical agencies, when compared to the perpetrators who work in non-vertical agencies, have a tendency to choose the motive of opportunity, which is 42.017 times greater than the Pressure motive.

- Logit 2 (*Rationalization*)

The variable of level has a significant correlation ( $p < 0.05$ ) with the preferences of the perpetrators choosing the rationalization motive compared to the pressure motive. It can be interpreted that at a higher level of position in the organization, the perpetrators tend to prefer the rationalization motive 3,785 times greater than the pressure motive. Moreover, the variable of institution with vertical type versus non-vertical type also has a significant correlation ( $p < 0.05$ ) with the preference of the perpetrators choosing the motive of rationalization compared to the motive of pressure. The perpetrators working in vertical agencies, compared to the perpetrators working in non-vertical agencies, tend to prefer the rationalization motive 7,867 times larger than the pressure motive.

- Logit 3 (*Capability*)

The variable of level has a significant correlation ( $p < 0.05$ ) with the pre-

ferences of perpetrators choosing the capability motive compared to the pressure motive. At a higher level of position in an organization, perpetrators tend to choose the capability motive 4.219 times greater than the pressure motive. Variable of Age has a marginal correlation ( $p < 0.1$ ) with the preference of perpetrators choosing capability motive compared to pressure motive, where at the increasing age level, the perpetrators tend to choose capability motive 1.222 times greater than pressure motive.

Interestingly, the test results show that the variable of experience has a significant correlation ( $p < 0.05$ ) with the preferences of the perpetrators choosing the pressure motive compared to the capability motive, where the perpetrators with a longer working period is less likely to choose the capability motive than the pressure motive (coefficient Odd Ratio 0.782). It should be noted that an increase in the years of service does not necessarily mean an increase in position or level of authority. Consequently, people with a longer years of service but do not have strategic positions will not have adequate authority to take advantage of their positions to commit corruption. Finally, the variable of institution with vertical type versus non-vertical type has a significant correlation ( $p < 0.05$ ) with the preference of the perpetrator

Table 6. The Results of the Simultaneous Analysis Test on the Relation between Gender and the Choice of the Motives for Corruption in The Ministry X

$\text{MOTIVE}_{(1,2,3,4)} = \beta_0 + \beta_1 \text{GENDER} + \beta_2 \text{LEVEL} + \beta_3 \text{AGE} + \beta_4 \text{EXPERIENCE} + \beta_5 \text{INSTITUTION} + \varepsilon$				
PANEL A	Model Fitting Criteria		Likelihood Ratio Test	
	-2 Log Likelihood	Chi-Square	df	p-value
Final	355,887	52,571	15	0,000***
PANEL B	Coefficient of Determination Test (Pseudo R-square)			
Cox and Snell	0,233			
Nagelkerke	0,253			
McFadden	0,105			

\*\*\* Significance  $\alpha=1\%$ ; \*\* Significance  $\alpha=5\%$ ; \* Significance  $\alpha=10\%$

Source: Processed data, 2019

choosing the capability motive compared to the pressure motive. It shows that the perpetrators working in vertical agencies, compared to perpetrators working in non-vertical agencies, have a tendency to choose capability motive 4.503 times greater than pressure motive.

In conclusion, based on the test results, the main variable of gender is not significantly correlated to the preference in choosing the type of motives of corruption. This result is not consistent with the results of research conducted by Hilliard & Neidermeyer (2018), Zietz (1981), and Daly (1989), which assert that men and women have different motives to commit

corruption. Furthermore, the Ministry should pay attention to the variables, both simultaneously and partially, at significant level and marginal level, with preference for choosing motives. Those variables are the type of agency, age, years of service, level of position and age. This study shows that vertical agencies provide greater opportunities to commit corruption. This result is inconsistent with the ACFE (2020), research results which state that larger organizations will implement stringent internal controls and anti-corruption systems than smaller organizations so that a larger organization will reduce a person's chances of committing fraud. However, the results of this study are

**Table 7. Test Results for Estimation Parameter Analysis of the Relationship between Gender and the Choice of Motives for Corruption in The Ministry X**

Motive *)	Description	B	Wald	p-value	Odd Ratio
Opportunity	Constant	-1,951	0,456	0,499	
	LEVEL	0,666	2,203	0,138	1,947
	AGE	0,041	0,126	0,723	1,041
	EXPERIENCE	-0,133	1,353	0,245	0,876
	GENDER=Male	-0,219	0,034	0,853	0,803
	GENDER=Female	0 <sup>b</sup>	.	.	.
	INSTITUTION=Vertical	3,738	17,28	0,000***	42,017
	INSTITUTION=Non Vertical	0 <sup>b</sup>	.	.	.
Rationalization	Constant	-2,414	0,628	0,428	
	LEVEL	1,331	6,868	0,009***	3,785
	AGE	0,087	0,501	0,479	1,090
	EXPERIENCE	-0,165	1,856	0,173	0,848
	GENDER=Male	-1,644	1,917	0,166	0,193
	GENDER=Female	0 <sup>b</sup>	.	.	.
	INSTITUTION=Vertical	2,063	6,571	0,010***	7,867
	INSTITUTION=Non Vertical	0 <sup>b</sup>	.	.	.
Capability	Konstanta	-6,411	4,287	0,038	
	LEVEL	1,440	8,065	0,005***	4,219
	AGE	0,200	2,812	0,094*	1,222
	EXPERIENCE	-0,246	4,345	0,037**	0,782
	GENDER=Male	-0,576	0,189	0,663	0,562
	GENDER=Female	0 <sup>b</sup>	.	.	.
	INSTITUTION=Vertical	1,505	3,876	0,049**	4,503
	INSTITUTION=Non Vertical	0 <sup>b</sup>	.	.	.

\*) Pressure is a reference for motives.

\*\*\* Significance  $\alpha=1\%$ ; \*\* Significance  $\alpha=5\%$ ; \* Significance  $\alpha=10\%$

Source: Processed data, 2019

consistent with the results of research conducted by Sutherland (1949), that larger organizations are associated with a higher number of white collar crimes. Thus, efforts to prevent corruption in this type of agency, both through strengthening internal control and promoting efforts to prevent corruption, including fraud risk management, are crucial.

### Analysis of the Relationship between Gender and the Choice of Modes of Corruption in The Ministry X

The test results using the Multinomial Logistic Regression are as follow (Table 8).

The simultaneous test results of the Fitting Information Model on panel A show significant results with a p-value <0.05 which means that the predictor variables, consisting of the main variable of gender and control variables of level of position (level), age (age), length of work (experience), and type of organization/ type of institution, are correlated with the choice of mode of corruption. The results of the coefficient of determination test in Panel B show that the predictor variable is able to explain the response variable which is preferred mode of corruption by 16.93%, while the rest is explained by other variables.

The results of the partial significance test through the Wald Test are as follows. Table 9.

Table of parameter estimation test using the mode of fraudulent deeds as a

reference/comparison. The results of the Wald Test can be explained as follow.

- Logit 1 (Gratuity)

The variable of age is marginally related ( $p < 0.1$ ) with the preference of the perpetrators choosing gratuity mode compared to the fraudulent act mode, where the higher age is related to the tendency of the perpetrator to choose the gratuity mode 1.179 times greater than the fraudulent act mode. This is in line with the results of the study conducted by Hilliard & Neidermeyer (2018), that increasing age will further increase access to company resources to commit occupational fraud.

Captivatingly, the test results show that the variable of experience is marginally related ( $p < 0.1$ ) with the perpetrator's preference for choosing fraudulent acts compared to gratuity mode. Longer experience is related marginally with the decrease in the preference for gratuity mode selection which is 0.854 times smaller than the fraudulent act mode.

- Logit 2 (Bribery)

The variable of age is marginally related ( $p < 0.1$ ) with the perpetrator's preference for bribery mode compared to the fraudulent act mode. At the higher age level, the perpetrator prefer bribery mode 1.162 times to fraudulent act mode. The test results also show that the variable of experience has a

Table 8. **Simultaneous Test Results for the Analysis of the Relationship between Gender and the Choice of Modes of Corruption in the Ministry X**

$\text{MODUS}_{(1,2,3,4)} = \beta_0 + \beta_1 \text{GENDER} + \beta_2 \text{LEVEL} + \beta_3 \text{AGE} + \beta_4 \text{EXPERIENCE} + \beta_5 \text{INSTITUTION} + \varepsilon$				
PANEL A	Model Fitting Criteria	Likelihood Ratio Test		
	-2 Log Likelihood	Chi-Square	df	p-value
Final	340,296	33,552	15	0,004***
PANEL B	Uji Koefisien Determinasi (Pseudo R-square)			
Cox and Snell		0,204		
Nagelkerke		0,219		
McFadden		0,085		

\*\*\* Significance  $\alpha=1\%$ ; \*\* Significance  $\alpha=5\%$ ; \* Significance  $\alpha=10\%$

Source: Processed data, 2019

significant correlation ( $p < 0.05$ ) with the preference of the perpetrator in choosing the fraudulent act mode compared to the bribery mode. On the variable of years of service, perpetrator with longer experience has a decrease in the tendency to choose the bribery mode 0.824 times less than the fraudulent act mode.

- Logit 3 (Embezzlement)

In the selection of embezzlement mode, the variable of Institution with a vertical type compared to non-vertical type has a significant correlation ( $p < 0.05$ ) with the preference of the perpetrator in

choosing the gratuity mode compared to fraudulent act mode. The other predictor variables are not significantly related. Accordingly, it can be inferred that perpetrators work in vertical agencies compared to perpetrators work in non-vertical agencies, have a tendency to choose embezzlement 3.9 x 106 times greater than the fraudulent act mode.

Based on the analysis of the estimation parameters above, the variables of age and years of service are marginally related to the preference for selecting the

Tabel 9. **Parameter Estimation Test Results for Analysis of the Relationship between Gender and the Choice of Modes of Corruption in The Ministry X**

Modes *)	Description	B	Wald	p-value	Odd Ratio
Gratuity	Konstanta	-4,112	3,502	0,061	
	LEVEL	0,388	0,995	0,319	1,474
	AGE	0,165	3,740	0,053*	1,179
	EXPERIENCE	-0,158	3,417	0,065*	0,854
	GENDER=Pria	-0,451	0,263	0,608	0,637
	GENDER=Wanita	0 <sup>b</sup>	.	.	.
	INSTITUTION=Vertikal	-0,354	0,314	0,575	0,702
	INSTITUTION=Non Vertikal	0 <sup>b</sup>	.	.	.
Bribery	Konstanta	-4,626	3,552	0,059	
	LEVEL	-0,346	0,678	0,410	0,707
	AGE	0,150	2,973	0,085*	1,162
	EXPERIENCE	-0,194	4,612	0,032**	0,824
	GENDER=Pria	0,234	0,056	0,814	1,263
	GENDER=Wanita	0 <sup>b</sup>	.	.	.
	INSTITUTION=Vertikal	2,142	3,552	0,059*	8,513
	INSTITUTION=Non Vertikal	0 <sup>b</sup>	.	.	.
Embezzlement in Position	Konstanta	-18,44	30,187	0	
	LEVEL	0,56	1,434	0,231	1,750
	AGE	-0,103	0,538	0,463	0,902
	EXPERIENCE	0,152	1,160	0,281	1,164
	GENDER=Pria	0,266	0,047	0,828	1,305
	GENDER=Wanita	0 <sup>b</sup>	.	.	.
	INSTITUTION=Vertikal	17,481	.	0,000***	3,9x10 <sup>6</sup>
	INSTITUTION=Non Vertikal	0 <sup>b</sup>	.	.	.

\*) Fraudulent action is a mode reference

\*\*\* Significance  $\alpha=1\%$ ; \*\* Significance  $\alpha=5\%$ ; \* Significance  $\alpha=10\%$

Source: Processed data, 2019

gratuity mode compared to the fraudulent act mode. In the choice of bribery mode versus fraudulent act mode, the variable of age is related marginally while the variable of length of service is significantly related. For the selection of embezzlement versus the fraudulent act mode, the type of vertical agency is significantly related. For each mode selection preference logit, it appears that the main variable of gender is not related. These results do not confirm the results of previous studies conducted by Hilliard & Neidermeyer (2018), Daly (1989), and Steffensmeier et al. (2013), that male and female corruptors would use different pathways of corruption.

The domination of modes which involve money compared to those which do not involve money is in line with the expected utility formula in the prospect theory proposed by (Kahneman and Tversky, 1979). The theory explains that in a situation which has high uncertainty, if humans are faced with choices, humans tend to make a decision that avoids risk (Suharnan, 2005). It can be interpreted that at the same level of sanction/risk of punishment for corruption, employees tend to avoid the risk of losing the opportunity to earn money, so employees prefer the mode(s) of receiving money to the mode(s) of not receiving money. Additionally, in this study, the type of agency is also significantly related with the choice of the mode of corruption. Therefore, the Ministry should pay greater attention towards strengthening controls and anti-corruption endeavors in vertical agencies. Furthermore, age and years of service also need to be addressed properly in the corruption prevention efforts.

## 5. CONCLUSION

The demographics of corruption perpetrators in the Ministry X during the observation period can be summarized as follow: 1) dominated by men (93.88%);

2) most of them (89.79%) work in vertical agencies, especially at agencies that provide services to public; 3) 16.32% of them are at a relatively young age (21 – 30 year) so that it is imperative for the Ministry to promote the value of integrity and anti-corruption culture at this age range to avoid greater losses to the organization in the future. The results of this study show that gender is not related to the perpetrators' preference for motive(s) or mode(s) of corruption in the Ministry X. However, the control variables of the type of agency, age, and length of work are related to the perpetrators' preference for choosing the motive(s) and mode(s) of corruption, both significantly and marginally. For motive(s) selection, another control variable that is also related is level of position. The control variable that has a significant relationship with perpetrators' preference for selecting all motives and modes is the type of agency. Employees at vertical-type institutions have greater opportunity to commit corruption. Therefore, it is crucial to the Ministry to take necessary actions, such as implementing a stringent internal control and fraud risk management systems, in vertical-type institutions. Also, the Ministry should empower its Internal Control Units and APIP to promote compliance and anti-corruption culture, primarily integrity, in vertical-type institutions. Given the significant and marginal relationship between the predictor variables and the choice of motive(s) and mode(s) of corruption, it is expected that any endeavors to prevent corruption in the Ministry will consider those variables. Some limitations in this study are the unavailability of sufficient details in the data so that some interesting analyses, for example, variations in the amount of money received or the amount of organizational losses/state losses between male and female perpetrators, cannot be carried out.

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