

Analysis of the relationship between government's anti-corruption programs and bribe-giving behavior at the individual level in Indonesia

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Abstract: Research on corruption in Indonesia has primarily focused on institutional corruption, while individual-level bribery remains underexplored. This study analyzes data from the 2020–2021 Anti-Corruption Behavior Survey (SPAK) and other surveys by Statistics Indonesia (BPS) to examine the relationship between the government's anti-corruption programs and the possibility of individuals in Indonesia engaging in bribery to access public services. The study explores how the programs interact with community perceptions and individual characteristics such as education, gender, marital status, and living area characteristics like Information and Communication Technology (ICT) development and Gross Regional Domestic Product (GRDP). Findings indicate that the anti-corruption program implemented by the government is still limited to community groups with a high chance of committing bribery. Negative interactions are observed between government's program and perceptions of anti-corruption in family and public spheres, suggesting that incorporating community perceptions into anti-corruption programs can reduce bribery through rational choice and social norms. It was also found that people with lower education levels, male gender, married status, and living in areas with high ICT development and areas with high GRDP tend to bribe more. At a certain point, increasing age will reduce the chances of bribery. The government should design and implement anti-corruption programs that account for individual and regional characteristics, utilizing both direct and indirect media channels to enhance public perception of anti-corruption and reduce bribe-giving behavior.

Keywords: Bribing; Anti-Corruption Programs; Public Services, Perceptions, SPAK

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Introduction

The Corruption Perceptions Index (CPI) by Transparency International ranks corruption at the state or territory levels. Indonesia's CPI in 2021 showed a one-point increase from the previous year, reaching 38 points and ranking 96 out of 180 countries (Transparency International, 2022). This increase came from indicators of Indonesia's economic sector's deregulation efforts. However, most indicators showed stagnancy and even a decline because of the prevalent practice of paying public service officials through tuition, facilitation or grease money, as well as bribes by individuals and corporate business actors.

From 2004 to early 2022, bribery was the most significant corruption case type, with the highest number handled by the Corruption Eradication Commission (KPK). As shown in Figure 1, bribery accounted for 791 of the 1,231 cases. Based on profession, the highest contributor was the private sector at 26%, as shown in Figure 2 (KPK, 2022). The frequency of state administrators as recipients of private-sector bribes highlights the widespread use of bribery to expedite business dealings and public service procedures. These statistics reveal two pressing concerns: (1) a gap that allows petty corruption by government employees; and (2) a society that is still permissive to bribery when accessing public services in which bribery is perceived as normal.

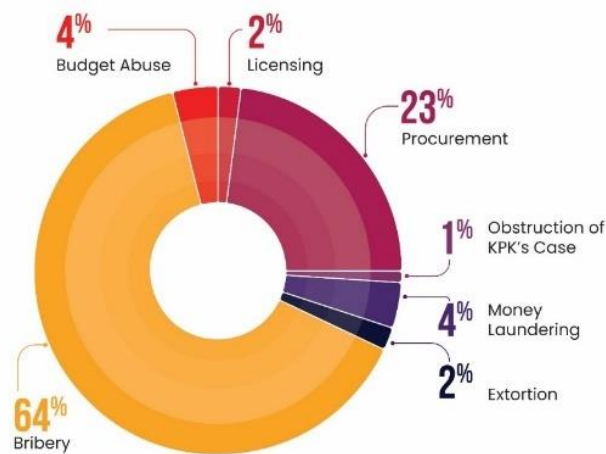


Figure 1. Corruption cases handled by the Corruption Eradication Commission (KPK) based on crime types per January 3rd, 2022

Bribery is the most significant type of corruption handled by the KPK. It is defined as offering, promising, giving, or receiving something to influence the actions of an individual holding public office. Bribery does not only include material forms such as money but can also include non-material benefits used to influence certain decisions or actions that benefit the bribe giver (McGee, 2023). Other terms for bribery include ‘grease money’, ‘red envelopes’, ‘kickbacks’, ‘gratuities’, ‘baksheesh’, ‘expediting fees’, and ‘facilitation payments’ (Asorwoe & Klutse, 2014). Bribery is often used as an illegal means to access public services when official mechanisms are deemed slow or ineffective, especially in South and Southeast Asian countries (Naher et al., 2020; Hoffmann & Patel, 2023)

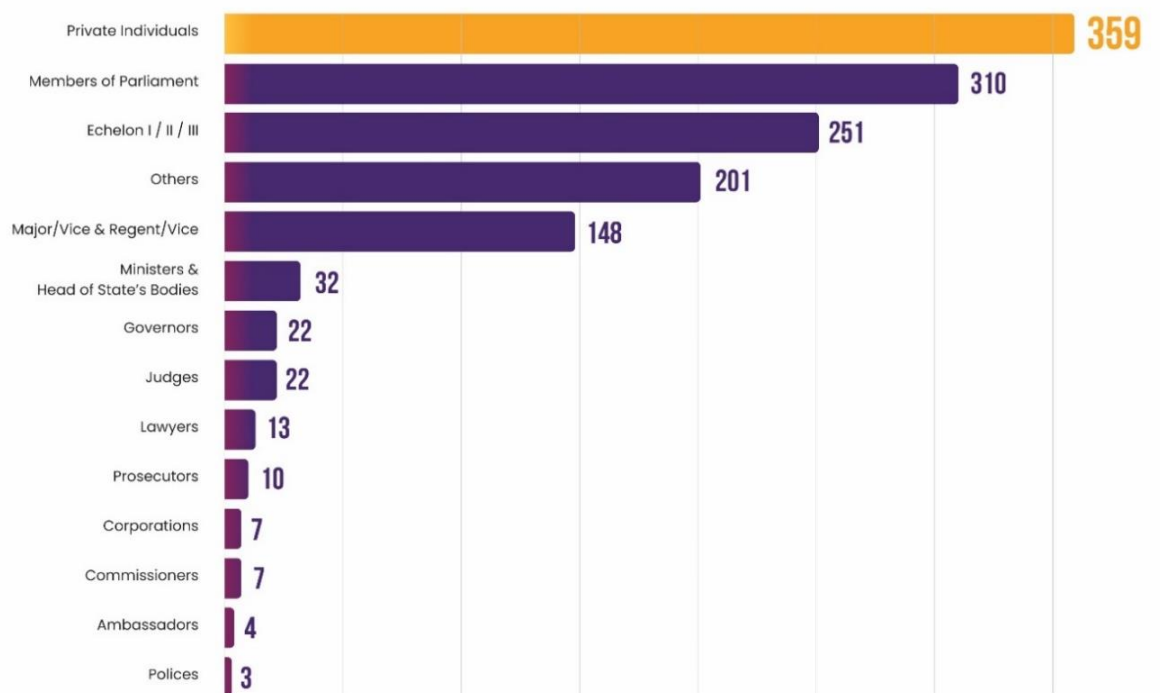


Figure 2. Corruption cases handled by the Corruption Eradication Commission (KPK) based on professions per January 3rd, 2022

Some studies explain varying motives for individuals engaging in bribery. Most use a cost-benefit analysis to explain why individuals bribe based on personal characteristics, economic risks, and the potential benefits of bribery (Dimant & Schulte, 2016; Gorsira et al., 2016). Individuals who offer bribes to avoid penalties often make a rational calculation based on the economic benefits of avoiding the penalties versus the cost of the bribe. An economic approach

based on the rational choice theory also explains the motivation behind individuals engaging in bribery (Carson, 2014; Juraev, 2018).

However, economic rationality only sometimes explains these findings. More systemic bribery takes root in society and becomes the norm (Persson et al., 2013). Beyond individual choices, societal factors such as culture, norms, and education also play a role in bribe-giving behavior (Banuri & Eckel, 2012; Lee & Guven, 2013). Studies have highlighted the importance of norms as a strong influence on bribery engagement (Gorsira et al., 2016; Köbis et al., 2015; Liu & Peng, 2015).

According to Silver & Abell (2016), individual moral values are among the many factors that prevent someone from participating in deviant behavior. For people with certain moral values, bribing is categorized as a delinquent behavior to avoid (Tanner et al., 2022). Thus, moral values and honesty can influence public education on anti-corruption. With this in mind, anti-corruption organizations such as the KPK make anti-corruption public education a strategy to eradicate corruption and instill moral values in society. In every campaign, the KPK sought to spread nine anti-corruption values: honesty, care, independence, discipline, responsibility, hard work, modesty, bravery, and justice (KPK, 2022). These anti-corruption values are expected to be internalized in Indonesian culture.

In comparison, through the Independent Commission Against Corruption (ICAC), Hong Kong became a model nation for eradicating the corruption that was once rampant in the sixties. Hong Kong has since become a country that maintains transparency and accountability, ranked 12th on the 2021 CPI with 76 points and second in Asia after Singapore (Transparency International, 2022). The ICAC has implemented three anti-corruption strategies: enforcement, prevention, and education. Anti-corruption public education is key to the success of eradicating corruption in Hong Kong.

The anti-corruption strategies of the KPK and ICAC are similar; they seek to educate and instill anti-corruption values in society as early as possible, not only for adults but also for youth. Both organizations believe that public education based on anti-corruption values must begin as early as possible to create a generation that is not corrupt. In addition, as highlighted by Munro and Kirya (2020), education plays an essential role in preventing corruption that is implemented early in schools and communities; involving well-educated teachers and leaders is a significant step in forming a strong and sustainable culture of integrity in society.

In eradicating corruption, the Indonesian government and the KPK focus on anti-corruption education by integrating the values of integrity into the national curriculum from Early Childhood Education (PAUD) to tertiary education. In addition, the KPK initiated the Anti-Corruption Village program to improve village governance and ran a massive mass media campaign that reached millions of people. Programs such as Strengthening Anti-Corruption for State Administrators with Integrity (PAKU Integritas) provide training to public officials, while Smart Politics with Integrity (PCB) targets political parties to break the chain of corruption in the political sector. Cooperation with non-governmental organizations (NGOs) and communities has also been implemented to strengthen anti-corruption awareness in various regions (KPK, 2022).

To date, there has been no research using microanalysis at the individual level to examine bribe-giving behavior after empirical government intervention, primarily through the KPK. Most studies discussing bribery use qualitative methods and are cross-country in nature. Using SPAK data and several other surveys from the BPS, the perceptions and experiences of public service users, especially during the COVID-19 pandemic, became more visible and could be analyzed. During the pandemic, public services have faced obstacles in delivering services face-to-face. In addition, research on the topic of bribery at the individual level is important because it not only has a broad impact on the community as users of public services but also on the government as providers of public services, especially as a case study in developing countries with large populations.

Methods

This study used secondary data from the 2020–2021 SPAK by BPS. The SPAK data, in the form of a cross-section, measures individuals' perceptions, knowledge, behaviors, and experiences related to anti-corruption practices in Indonesia for a specific point in time. This type of data provides a general overview of anti-corruption behavior within a given period, but it does not directly capture changes in behavior over time. Additionally, the SPAK captured society's permissiveness in anti-corruption behavior and three main types of corruption: bribery, extortion, and nepotism. This study uses SPAK's results because the data are specifically designed to measure public perceptions and experiences related to corruption, including bribery. It provides an accurate and representative picture of anti-corruption behavior at various levels of society. This survey was also conducted by BPS, which guarantees the credibility and validity of its data.

Few studies have discussed bribe-giving behavior at the individual level. Ivlevs and Hinks (2015) used survey data from "Life in Transition 2," collected in 30 post-socialist countries and five Western European countries by The European Bank for Reconstruction and Development (EBRD) and the World Bank in 2010, which applies the question "Have any of your household members made unauthorized payments or gifts when using this service in the past 12 months?" as the dependent variable. Research has found that older adults are less likely to bribe public officials, whereas people with higher incomes and lower trust in public institutions are more likely to bribe.

Hunady (2017) asked, "Has the respondent personally committed bribery?" to 27,752 respondents who participated in Eurobarometer 2013 conducted by the European Commission. The research revealed that gender, age, and education were important factors in respondents' decisions to bribe. Additionally, respondents who have a relationship with the authorities engage in more bribery than those who do not have a relationship. In addition to regulatory factors, government effectiveness and public accountability were negatively correlated with the decision to bribe respondents. Furthermore, Mangafić (2020) used data from 3,084 individuals in Bosnia and Herzegovina in the 2017 National Survey of Citizens' Perceptions to capture the possibility of being involved in bribery. The results indicate that highly educated people who live in urban areas and have higher incomes are more likely to engage in bribery in specific sectors.

The analysis method used in this study was logistic regression, which is used to predict the likelihood of an event with two possible outcomes, such as bribing or not bribing. Unlike ordinary regression, which predicts values, logistic regression predicts the probability of an event based on certain variables. In this study, logistic regression is applied because the variable being analyzed is binary (1 = bribing, 0 = not bribing), making this method suitable for testing the relationship between anti-corruption programs and the likelihood of individuals giving bribes. This analysis aims to reveal the relationship between the government's anti-corruption programs and the likelihood of a person participating in bribery in Indonesia.

Equation model:

$$Y_{it} = \beta_0 + \beta_1 \text{Anticorruptionprogram}_{it} + \Sigma \beta_2 \text{Anticorruptionprogram}_{it} * \text{Perception}_{it} + \Sigma \beta_3 \text{Individual}_{it} + \Sigma \beta_4 \text{Region}_{it} + \varepsilon_{it} \dots\dots\dots 1]$$

Where:

- Y is the dependent variable for bribe-giving behavior. Y = 1 if an individual has bribed someone when accessing public services such as ID cards, family identity cards, birth certificates, death certificates, or marriage certificates. Meanwhile, Y = 0, otherwise,
- The anti-corruption program is an independent variable that represents the government's anti-corruption programs, proxied by individual knowledge of and exposure to the programs.
- Perception is an independent variable that represents the public's perception as a manifestation of social norms proxied by the public perception of anti-corruption within the family and public scope and on corruption eradication efforts in Indonesia.
- Individuals are independent variables that represent individual characteristics proxied by educational level, employment status, gender, age, age squared, marital status, and income.

- Region is an independent variable that represents regional characteristics proxied by population density, the Information and Communication Technology Development Index (ICT-DI), Gross Regional Domestic Product (GRDP), and the rural-urban category.
- ϵ represents random errors that are independent and identically distributed.

Table 1 contains the list of variables used in this study. The main variable (dependent variable) is the engagement in bribery when accessing public services (BRIBERY).

Table 1. Variables definition

Variable	Variable Name	Description
BRIBERY	Spending money/good/facility more than required when accessing public services	0 = Yes 1 = No
ANTICORRUPTIONPROG	Receiving advocacy/campaign from the government about anti-corruption information	0 = Never have 1 = Have
FAMILYPROG	Interaction between anti-corruption program and public perception of corrupt behavior in the family	0 = Normal 1 = Not normal
PUBLICPROG	Interaction between anti-corruption program and public perception of corrupt behavior when accessing public services	0 = Normal 1 = Not normal
FREQPROG	Interaction between anti-corruption program and public perception of corruption eradication efforts in Indonesia compared to the previous year	0 = Pessimistic 1 = Optimistic
EDUC	Completed formal education level	1 = No to elementary education, 2 = Secondary education, 3 = Higher education
WORKING	Employment status	0 = Unemployed 1 = Employed
GENDER	Gender	0 = Female 1 = Male
AGE	Age	
AGESQ	Age-squared	
MARITAL	Marital status	0 = Unmarried 1 = Married
INCOME	Monthly household income	1 = < Rp 1 M; 2 = Rp 1 – 1.9 M; 3 = Rp 2 – 2.9 M; 4 = Rp 3 – 3.9 M; 5 = Rp 4 – 4.9 M; 6 = >Rp 5 M
DENSITY	Population density of a city/regency	
ICT	Information and Communication Technology Development Index	
GRDP	Regency/city’s Gross Regional Domestic Product (constant)	
URBAN	Rural/urban category	0 = Rural 1 = Urban

The SPAK respondents were members of 10,040 households aged 18–65. In addition to SPAK, this study also used BPS data on population density, Information and Communication Technology Development Index (ICT-DI), and GRDP from 2020–2021. These data present the relationship between regional characteristics and an individual’s bribe-giving behavior. Table 2 presents the sample and survey data used in this study.

The results of the frequency statistics in Table 2 show 12,891 SPAK respondents in the 2020–2021 period, which could be processed in this study. Most respondents stated that they had never given bribes for accessing public services, either directly or through intermediaries (82.50%). The remaining 17.50% of respondents had previously participated in bribery. The statement

regarding giving bribes was based on the experience of respondents dealing with public services (managed by the government or public administration officers) in the last 12 months by issuing money/goods/facilities over the provisions, including providing boxes/voluntary donations/bak-shesh/tips money/giving gifts, including if using an intermediary or third party. However, in general, there is a slight increase in the percentage of people who bribed in 2021, which shows an increase in the permissiveness of giving bribes to the community in accessing public services.

Table 2. Profile of Respondents

Respondent Characteristics	Category	Number of Respondents (n)	Percentage (%)
Bribery	Bribe	10,635	82.50
	No bribe	2,256	17.50
Anti-corruption program	Never received	3,502	27.17
	Have received	9,389	72.83
Interaction of anti-corruption program with corrupt behavior perception in the family	Normal	2,612	20.26
	Not normal	10,279	79.74
Interaction of anti-corruption program with corrupt behavior perception in public	Normal	1,357	10.53
	Not normal	11,534	89.47
Interaction of anti-corruption program with the perception of corruption case frequency	Persistent and increasing	9,451	73.31
	Decreasing	3,440	26.69
Education	No to elementary education	4,186	32.47
	Secondary education	7,076	54.89
	Higher education	1,629	12.64
Employment status	Unemployed	3,425	26.57
	Employed	9,466	73.43
Gender	Female	6,595	51.16
	Male	6,296	48.84
Age	<25 years old	1,553	12.05
	<35 years old	2,492	19.33
	<45 years old	3,670	28.47
	≥45 years old	5,176	40.15
Marital status	Unmarried	2,067	16.03
	Married	10,824	83.97
Income	< Rp 1 M	1,448	11.23
	Rp 1 - 1.9 M	3,051	23.67
	Rp 2 - 2.9 M	2,713	21.05
	Rp 3 - 3.9 M	2,194	17.02
	Rp 4 - 4.9 M	1,112	8.63
	Rp 5 - 5.9 M	2,373	18.41
Region category	Rural	4,011	33.11
	Urban	8,880	68.89

Results and Discussion

The main variable analyzed in this study is the government's anti-corruption programs and their relationship to an individual's bribe-giving behavior. This variable is presented by questions related to respondents' experiences within the past 12 months of receiving advocacy/campaigns on anti-corruption information, either directly or indirectly, via TV, radio, Internet news, social media, film, advertisements, exhibitions, seminars, and others.

The analysis in this study aims to determine whether the government's anti-corruption programs impact individual behavior in giving bribes when accessing public services in Indonesia. In addition to the anti-corruption programs, other variables analyzed are the public's perception of anti-corruption in the family and public spheres and public perceptions of efforts to eradicate corruption in Indonesia, individual characteristics such as education level, employment status, gender, age, marital status, and income level, as well as regional factors such as population density, ICT-DI, GRDP, and rural-urban categories, all of which are considered to be able to influence the

possibility of individuals giving bribes. Logistic regression is used to understand the relationship between these factors and bribe-giving behavior. The robust model is used to ensure more stable results, addressing potential outliers and data imbalances. The logistic model of bribe-giving behavior is presented in Table 3.

Table 3. Logistic model of bribe-giving behavior

	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5	(6) Model 6	(7) Model 7
Dependent Variable: BRIBERY (1 : Yes, 0: No)							
ANTICORRUPTIONPROG	0.2595** (0.0545)	0.9687** (0.0987)	0.9596** (0.0991)	0.9612** (0.0991)	0.9505** (0.0992)	0.9505** (0.0992)	0.9505** (0.0991)
PUBLICPROG		-0.5607** (0.0798)	-0.5398** (0.0803)	-0.5475** (0.0805)	-0.5365** (0.0807)	-0.5366** (0.0807)	-0.5366** (0.0808)
FAMILYPROG		-0.1800** (0.0650)	-0.1712** (0.0654)	-0.1719** (0.0654)	-0.1817** (0.0656)	-0.1821** (0.0656)	-0.1821** (0.0657)
FREQPROG		-0.2758** (0.0630)	-0.2858** (0.0632)	-0.2877** (0.0633)	-0.2799** (0.0633)	-0.2793** (0.0634)	-0.2793** (0.0633)
EDUC			-0.1343** (0.0391)	-0.1604** (0.0424)	-0.1586** (0.0427)	-0.1604** (0.0430)	-0.1604** (0.0428)
WORKING			0.0767 (0.0600)	0.0758 (0.0601)	0.0899 (0.0604)	0.0915 (0.0606)	0.0915 (0.0603)
GENDER			0.1663** (0.0512)	0.1644** (0.0513)	0.1556** (0.0514)	0.1555** (0.0514)	0.1555** (0.0504)
AGE			0.0212 (0.0145)	0.0206 (0.0145)	0.0181 (0.0145)	0.0180 (0.0145)	0.0180 (0.0148)
AGESQ			-0.0004* (0.0002)	-0.0003* (0.0002)	-0.0003* (0.0002)	-0.0003* (0.0002)	-0.0003* (0.0002)
MARITAL			0.1318 (0.0852)	0.1324 (0.0853)	0.1457* (0.0856)	0.1472* (0.0857)	0.1472* (0.0874)
INCOME				0.0252 (0.0159)	0.0155 (0.0162)	0.0148 (0.0164)	0.0148 (0.0164)
DENSITY					-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
ICT					0.1096* (0.0497)	0.1079* (0.0499)	0.1079* (0.0460)
GRDP					0.0000* (0.0000)	0.0000* (0.0000)	0.0000* (0.0000)
URBAN						0.0193 (0.0561)	0.0193 (0.0559)
_cons	-1.7465** (0.0475)	-1.7465** (0.0475)	-1.9894** (0.2677)	-2.0087** (0.2680)	-2.5874** (0.3768)	-2.5827** (0.3770)	-2.5827** (0.3609)
N	12891	12891	12891	12891	12891	12891	12891
ll	-5958.5535	-5918.1721	-5895.2129	-5893.9575	-5883.1039	-5883.0444	-5883.0444
bic	11936.0356	11883.6657	11894.5329	11901.4865	11898.7077	11908.0531	11908.0531
aic	11921.1071	11846.3442	11812.4258	11811.9151	11794.2077	11796.0889	11796.0889

The logistic regression results in Table 3 reveal that the anti-corruption programs have a positive relationship with individuals' choice to bribe when accessing public services. From the first to the seventh models, the main variable of the government's anti-corruption program consistently shows a positive relationship with the dependent variable of bribe-giving behavior probability. All seven models are robust, with insensitivity or rigidity on the small assumed changes within them. With the addition of a control variable from the second to sixth models, the main variable remained consistent with the dependent variable. In this study, the relationship between anti-corruption programs and the decision to bribe remains consistent across all models, making the results more robust and reliable.

The sixth model was used as the primary reference and included control variables in the form of community perceptions, community characteristics, and regional characteristics. A parameter significance test was conducted to determine whether the independent variables significantly affected the dependent variables. Significance testing was performed using simultaneous and partial methods. Simultaneous testing uses the likelihood ratio test, which produces 0.0000 at a 95% confidence level so that the independent variables simultaneously significantly affect the dependent variable. This test compares two models: a full model that includes all variables and a

simpler model that excludes some variables. If the LRT result shows a value of 0.0000, as in this study, it indicates that the independent variables as a whole have a significant influence on the decision to bribe and therefore are retained in the model. This test helps ensure that the chosen model better explains the data compared to the simpler model. This test showed that the independent variables were maintained in the model.

Next, a partial test is conducted to determine the significance of each independent variable on the dependent variable through the Wald Test. This test examines whether each independent variable in the model individually has a significant effect on the dependent variable. If the results of the Wald Test indicate that an independent variable has a significant effect, it means that the variable has a real influence on the decision to bribe. This test helps to see the importance of each variable in the model, allowing us to understand which specific variable contributes the most to explaining bribe-giving behavior.

This study reveals that the government’s anti-corruption programs target those with a high chance of bribery, resulting in a positive relationship between the programs and an individual’s choice to participate in bribery when accessing public services. The susceptibility to bribery in society is represented in the Ombudsman of the Republic of Indonesia report, which states that maladministration in the form of illegal fees in the public service sector is still rampant. In 2021, the Ombudsman recorded approximately 16,000 reports of public service malpractice, with 11% involving illegal fees (Ombudsman, 2022).

Bribery susceptibility is also worsened by how high society’s permissiveness regarding bribery is, based on the 2020 Global Corruption Barometer (GCB) survey, as shown in Figure 3. The results revealed that in the past year when accessing public services, 30% of the respondents admitted to having paid a bribe. This number was not significantly lower than that of the 207 GCB results (32%). Indonesia has the third-highest prevalence of bribe-giving behavior among 17 Asian countries (GCB, 2020).

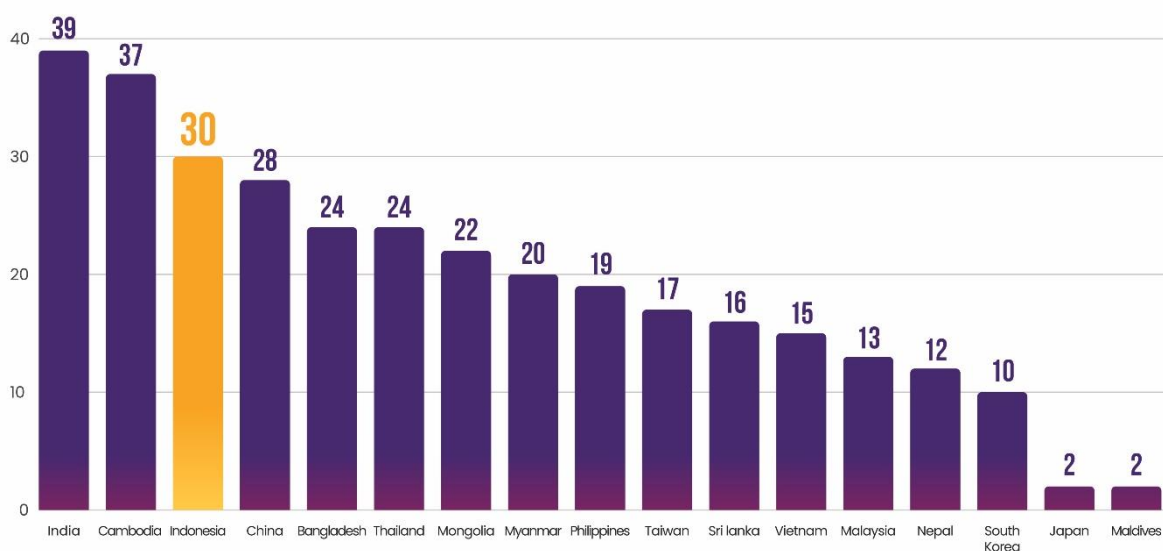


Figure 3. Public service bribery prevalence in Asia (in percentage) based on Global Corruption Barometer 2020 – Indonesia

The high permissiveness of the community in giving bribes and the continued rampant extortion in the public service sector encourage the bribe-giving behavior in accessing public services to grow. Based on several literatures, crimes such as bribery are more likely to be committed when the potential benefits obtained by individuals from the act are higher than the risks or punishments they may face. Economic incentives are essential in committing a crime, especially when the risk of being caught or punished is low (Miceli, 2019; Bun et al., 2020). Modern deterrence theory suggests that the effectiveness of solid law enforcement, such as increasing the chance of arrest and punishment, can reduce crime rates, including bribery. However, this only applies if individuals perceive a real risk of negative consequences that will be faced (Bun et al., 2020). If the economic benefits of bribery are more significant than the punishment or sanctions

that may be received, then the act is still considered profitable, even though there are deterrence policies in place (Ehrlich, 2018; Grigoryeva & Matsueda, 2014). This view highlights the importance of balancing the benefits derived from criminal activity and the power of law enforcement to prevent such activity, particularly in the context of bribery in the public service sector.

Furthermore, to impact behavior, the anti-corruption programs should be integrated with public perception. Table 3 shows negative results from the interaction between the variables of the government's anti-corruption program and the perception of anti-corruption in the family, and in the public sphere on the dependent variable of bribe-giving. However, the interaction with the perception of efforts to eradicate corruption in Indonesia provides positive results or increases the dependent variable of bribe-giving behavior.

In accordance with individuals' perceptions, the bribe ratio has been significantly reduced by 0.585 at the family level, while the ratio decreased by 0.834 at the public level. This is in line with the social norms of corruption theory, in which people in a community with good anti-corruption perceptions act accordingly and are less likely to bribe. People will view phenomena such as using office facilities for personal matters or paying extra when accessing public services as abnormal and thus will not be permissive of those things.

Next, there is an interaction between the government's anti-corruption program and the public's perception of corruption eradication efforts in Indonesia. This perception depicts the institutional trust that respondents have in the government and corruption eradication organizations to lower the crime rate of corruption in Indonesia. The result of this interaction is positive for individual bribe-giving behavior, with a 0.756 increase in the ratio. These results align with studies showing that individuals with high levels of institutional trust tend to be intolerant of corruption and illegal acts (Poertner & Zhang, 2024; Tu, 2023; Xiao et al., 2020).

The anti-corruption programs implemented by the government aim to change people's behavior and reduce permissiveness towards corruption by providing an understanding of the risks faced when bribing public officials, such as legal, operational, and economic risks. The programs target all levels of society, focusing on preventing petty corruption to grand corruption through campaigns, education, and training in public service ethics. The government's programs and the KPK emphasize the importance of transparency, accountability, and justice in public services without corruption. The anti-corruption programs run by the government also include integrating integrity values into the national education curriculum, from PAUD to universities, aiming to form the character of the younger generation who uphold integrity. At the local level, the Anti-Corruption Village initiative aims to improve village governance to be more transparent and accountable. A massive anti-corruption campaign through the mass media was held to raise public awareness of the dangers of corruption. In addition, the PAKU Integrity program provides special training for public officials to improve their integrity in carrying out their duties. At the same time, the PCB program focuses on political parties to reduce corruption in the political sector. Close collaboration with NGOs and communities is also carried out to expand the reach of anti-corruption messages to various regions throughout Indonesia, ensuring that awareness of the dangers of corruption reaches all levels of society (KPK, 2022).

People's decisions to bribe are often based on rational choice theory, where people consider the benefits and costs of bribery (Carson, 2014; Juraev, 2018). Through anti-corruption programs, governments aim to change this calculation by clarifying the significant consequences of bribery, including the threat of criminal law, fines, and loss of reputation and public trust. Thus, the short-term benefits of bribery are no longer expected to outweigh the more significant risks. In addition to legal risks, anti-corruption programs emphasize that corruption violates ethical and social norms. Law enforcement officers play an essential role in enforcing the rules, and the public is expected to understand that being arrested for a bribery act will cause widespread losses, not only to individuals but also to damage the larger social and moral values.

Bribery can also be viewed as a collective action issue. According to this approach, even if most people morally condemn corruption, they will still choose corruption if the cost they must pay is higher than without corruption (Persson et al., 2013). In this case, individuals tended to take bribes when accessing public services. The COVID-19 pandemic in 2020 and 2021 has increased this tendency. Public services have had to limit their services by moving their operations online

or halting them momentarily. With this limitation, individuals have more opportunities to bribe and access public services in person or through intermediaries.

This study also looks at the probability of bribing Indonesian people with the same variables through a fixed effect model that includes different intercepts for both years. The intercept for 2020 is represented by a constant representing the average probability of bribing people when the independent variables are equal to 0, which is -2.580. In this model, the intercept is the initial or baseline value of the tendency to bribe when other factors have no effect. The intercept for 2021 is 0.002 percentage points higher than in 2020, meaning there is a slight increase in the tendency to bribe. The coefficient for 2021 shows how much individuals differ on average from 2020, which is helpful as a reference category. Table 4 explains a slight increase in the tendency to bribe-giving behavior in 2021, although this change is insignificant.

Table 4. Logistic model of bribe-giving behavior in fixed effect year

	(1) One Way FE	(2) Two Way FE
Dependent Variable: BRIBERY (1: Yes, 0: No)		
ANTICORRUPTIONPROG	0.9505** (0.0991)	0.9501** (0.0996)
PUBLICPROG	-0.5366** (0.0808)	-0.5363** (0.0816)
FAMILYPROG	-0.1821** (0.0657)	-0.1822** (0.0658)
FREQPROG	-0.2793** (0.0633)	-0.2791** (0.0636)
EDUC	-0.1604** (0.0428)	-0.1606** (0.0429)
WORKING	0.0915 (0.0603)	0.0915 (0.0603)
GENDER	0.1555** (0.0504)	0.1555** (0.0504)
AGE	0.0180 (0.0148)	0.0180 (0.0148)
AGESQ	-0.0003* (0.0002)	-0.0003* (0.0002)
MARITAL	0.1472* (0.0874)	0.1472* (0.0875)
INCOME	0.0148 (0.0164)	0.0149 (0.0164)
DENSITY	-0.0000 (0.0000)	-0.0000 (0.0000)
ICT	0.1079* (0.0460)	0.1074* (0.0473)
GRDP	0.0000* (0.0000)	0.0000* (0.0000)
URBAN	0.0193 (0.0559)	0.0194 (0.0559)
2020.YEAR		0.0000 (.)
2021.YEAR		0.0022 (0.0493)
_cons	-2.5827** (0.3609)	-2.5806** (0.3634)
N	12891	12891
ll	-5883.0444	-5883.0434
bic	11908.0531	11917.5153
aic	11796.0889	11798.0868

In 2020 and 2021, the COVID-19 pandemic significantly impacted public services in Indonesia, which also affected the probability of people's bribes. Disruption of access to public services, such as health and licensing, as well as economic difficulties due to the pandemic, triggered an increase in opportunities for bribery as people looked for shortcuts to overcome obstacles. Social assistance programs run by the government were also impacted by reports of irregularities, which

increased the risk of bribery, especially among vulnerable communities. The World Bank (2021) also stated that the pandemic exacerbated inequality in access to public services and caused many obstacles in distributing social assistance. In addition, the transition to digital services showed inequality in access and technological literacy, which opened up opportunities for bribery practices, especially in areas with low levels of digitalization. Although the increase in the likelihood of bribery between years was slight, this situation emphasizes the importance of crisis-responsive anti-corruption policies.

An anti-corruption program could drive individuals to act according to existing anti-corruption norms or even build new ones that reject corrupt practices. However, it is important to note that changing social norms takes time and is a long-term effort (Lindner, 2014). This is shown through a model that depicts how the anti-corruption program is a significant factor in decreasing the probability of an individual's bribe-giving behavior. Anti-corruption campaigns that aim for behavioral changes to promote anti-corruption behavior can use behavioral change theories to succeed.

Besides helping individuals understand the full risks of bribery, the government's anti-corruption programs encourage them to participate in corruption-eradication efforts. Through the Directorate of Community Development and Participation, the KPK invites individuals to create positive anti-corruption perceptions and solve collective action issues. A consistent anti-corruption perception in all communities creates a healthy environment that is free from corruption, especially bribery. Thus, individuals would not face a social dilemma due to society's permissiveness of bribery.

Individual and Living Area Characteristics

This study also found that individual characteristics, such as education level, gender, marital status, ICT-DI, and GRDP rates of living areas, have an essential impact on an individual's bribe-giving behavior. People with a higher level of formal education have a lower tendency to take bribes than those with a lower level. Maeda and Ziegfeld (2015) showed a similar empirical result: people with higher education levels have a better status and conscience in decision-making. They possess the knowledge to be more critical and less tolerant of corruption. From a bargaining power perspective, individuals with high education levels are in a better position to negotiate with government officials because of their alternative skills and resources; therefore, they are less likely to bribe when accessing public services.

Men are more likely to bribe than women. Social capital theory predicts that women are likelier to have fewer social networks and connections than men (Hunady, 2017; Lan & Hong, 2017). For example, many managerial positions or jobs that require access to regulations or permits may be more commonly held by men in some sectors. It could mean that men are more often faced with situations where bribery is seen as a solution to speed up processes or obtain desired results. Based on data obtained from the United Nations Development Programme (UNDP), Indonesia's Gender Inequality Index (GII) has a lower to middle ranking among countries in the Association of Southeast Asian Nations (ASEAN) in 2021, namely 0.46 points. It shows that Indonesia has less than optimal gender development achievements than other ASEAN countries. Indonesia's high GII also reflects significant inequality between men and women in various aspects, such as economic access, education, and political participation. It is related to the fact that women are less likely to engage in bribery than men. Limited economic access, narrower social networks, and strict gender norms limit women's involvement in bribery practices.

Furthermore, married individuals have a higher risk of bribery than unmarried individuals. Recent research by McGee and Benk (2023) shows that marital status affects attitudes toward bribery, where married individuals are more likely to engage in bribery due to the need to complete administrative matters related to family and residence. In addition, other studies have also revealed that married individuals have a higher risk of engaging in regulatory crimes compared to those who are unmarried or single (Airaksinen et al., 2023)

The age-squared variable is used to capture the non-linear relationship pattern between age and the probability of bribery in accessing public services. In the statistical model, this fact is reflected as a curve pattern where the probability of bribery increases at the beginning but starts

to decline after reaching a certain age point, illustrating that the older a person is, the less likely they are to engage in bribery. It is due to increased legal awareness, a more conservative attitude toward taking risks, and a better understanding of accessing public services legally. Joshi and Dangal (2023) also discuss how the age-squared factor affects the probability of bribery. The age-squared variable shows a non-linear relationship, where younger and older individuals engage in bribery less often. Meanwhile, middle-aged people are more likely to commit the crime. This pattern reflects how age affects access to power, resources, and influence in interactions with public services.

Individuals living in areas with high ICT-DI, which reflects the level of ICT development, widespread internet access, and low digital gap, are more likely to engage in bribery than in areas with low ICT-DI. While many studies have shown that ICT increases government transparency and accountability and supports public oversight, these positive impacts are not always automatic. In areas with high ICT-DI, communities have more access and skills to utilize technology, which can not only facilitate the reporting of corruption but also open up new opportunities for corruption through technological innovations such as cryptocurrency, transactions on the dark web, or data manipulation in centralized databases.

Table 5. Logistic model of bribe-giving behavior in rural and urban areas

	(1) Full Sample	(2) Urban	(3) Rural
Dependent Variable: BRIBERY (1 : Yes, 0: No)			
ANTICORRUPTIONPROG	0.9505** (0.0991)	1.0019** (0.1218)	0.8626** (0.1741)
PUBLICPROG	-0.5366** (0.0808)	-0.5766** (0.0985)	-0.4375** (0.1445)
FAMILYPROG	-0.1821** (0.0657)	-0.2125** (0.0792)	-0.1426 (0.1187)
FREQPROG	-0.2793** (0.0633)	-0.1957** (0.0746)	-0.4866** (0.1204)
EDUC	-0.1604** (0.0428)	-0.1086* (0.0508)	-0.2725** (0.0810)
WORKING	0.0915 (0.0603)	0.1155 (0.0704)	0.0975 (0.1186)
GENDER	0.1555** (0.0504)	0.1107* (0.0605)	0.2442** (0.0915)
AGE	0.0180 (0.0148)	0.0062 (0.0181)	0.0401 (0.0261)
AGESQ	-0.0003* (0.0002)	-0.0002 (0.0002)	-0.0006* (0.0003)
MARITAL	0.1472* (0.0874)	0.2255* (0.1047)	-0.0317 (0.1637)
INCOME	0.0148 (0.0164)	0.0137 (0.0194)	-0.0074 (0.0312)
DENSITY	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0001)
ICT	0.1079* (0.0460)	0.0475 (0.0545)	0.2156* (0.0913)
GRDP	0.0000* (0.0000)	0.0000* (0.0000)	0.0000** (0.0000)
URBAN	0.0193 (0.0559)		
_cons	-2.5827** (0.3609)	-2.1745** (0.4408)	-3.3007** (0.6804)
N	12891	8880	4011
ll	-5883.0444	-4079.2282	-1786.7977
bic	11908.0531	8285.7382	3698.0474
aic	11796.0889	8186.4564	3603.5955

It is essential to consider the local context, including the government's and society's preparedness to handle the risks associated with technological advancements. When local governments fail to keep up with ICT advances through appropriate regulations and oversight, technology can be misused for personal gain or corruption. Research by Adam and Fazekas (2021) indicates that

implementing ICT should be tailored to local capacity and support to ensure that it contributes positively to preventing corruption. Moreover, even though areas with high ICT-DI may seem modern and digitally integrated at first glance, they can create opportunities for more sophisticated corrupt behavior without proper security measures.

Individuals living in areas with a high GRDP or high developmental rates tend to bribe more than those living in areas with a low GRDP. Many studies state that regional income has a negative relationship with corruption rates, while others have proven otherwise. Mangafić (2020) argues that regions with high GRDP or rapid economic growth are more likely to experience corruption, including bribery, than regions with low GRDP. Other studies (Chen et al., 2024; Yan & Qi, 2021) reinforce these findings, suggesting that the economic wealth of a region may encourage individuals or firms to engage in bribery to gain advantages, particularly in access to credit and regulatory leniency. This reflects the paradoxical relationship between wealth and corruption, where more prosperous regions create greater opportunities for bribery.

In order to compare the likelihood of bribery in rural and urban communities, a specific model focusing on the rural-urban category was analyzed. The results in Table 5 indicate that most independent variables in both rural and urban areas have a similar relationship to the previously analyzed logit model. In general, most factors have a similar influence on bribe-giving behavior in rural and urban areas. However, there are some exceptions. In rural areas, marital status and the interaction between the anti-corruption program and perceptions of corrupt behavior in the family do not impact an individual's likelihood to give bribes. It suggests that marital status and perceptions of corrupt behavior within the family are not correlated with bribery in rural areas. On the other hand, in urban areas, age is represented as age squared, measuring age at a specific point, and ICT-DI does not affect bribe-giving behavior. It implies that age and technological development are not related to corrupt behavior in urban areas.

Based on the findings presented in the control variables, it can be concluded that individual characteristics, including education level, occupation, gender, age, and marital status, impact bribe-giving behavior. Therefore, the government's anti-corruption programs should be tailored to the specific characteristics of each community. Additionally, regional factors such as technological development (ICT-DI) and regional prosperity should be considered to enhance the effectiveness of the anti-corruption programs in each region.

Conclusion

Using logistic regression analysis on the 2020–2021 SPAK data and several other surveys conducted by BPS, it was found that the anti-corruption programs run by the government are still limited to groups of people who have high opportunities to engage in bribery. For the anti-corruption programs to impact behavior, it is necessary to interact with the perceptions already held by the community. Thus, coupled with the anti-corruption programs implemented by the government, it tends to reduce bribery in line with the rational choice hypothesis and social norms.

The study results show that the government's anti-corruption programs have a negative effect on the tendency to bribe after interacting with public perceptions in the family and public spheres. However, perceptions about efforts to eradicate corruption positively affect the tendency to bribe. It confirms that an effective anti-corruption program is integrated with public perception to influence people's daily behavior more easily. The study also found that individuals with low levels of education, who are male, married, and live in areas with high levels of information and communication technology (ICT) and gross regional domestic product (GRDP), are more likely to bribe when accessing public services. This tendency decreases with age, especially in the aging stage. Comparison between rural and urban areas shows that almost all tested variables have the same pattern. However, the impact of anti-corruption programs is more significant for urban communities than rural communities, although both have significant impacts.

This study uses an individual's bribe-giving behavior to analyze corruption in Indonesia from a different angle. With fairly complete data from BPS, this study can capture the relationship

between the individual characteristics of the individuals and the characteristics of their living area with their decision to bribe to access public services.

The government should continue to design and implement anti-corruption programs that consider individual and regional characteristics and current societal phenomena. The government should also pay attention to the short- and long-term effects of the program on individual's bribe-giving behavior. Whether directly through campaigns, socialization, education or training, exhibitions, events, art shows, or films, or indirectly through media like radio, television, the internet, social media, newspapers, printed magazines, billboards, posters, banners, flyers, videotrons, television, emails, circulars, and Short Message Service (SMS), the government must constantly work to improve the public's perception of anti-corruption. It is anticipated that regular exposure to anti-corruption resources will reduce the likelihood of bribery among individuals.

The impact of these anti-corruption programs will take time to become evident. However, Indonesia should persist in implementing organized, stable, and sustained prevention, education, and enforcement efforts. It is essential to consider that Hong Kong, which has the ICAC, also follows the same "trident of corruption eradication" method to combat corruption.

This study can be extended in several ways. Adding respondents by extending the SPAK timeframe to, for example, five years would show a more exhaustive change in their perception and experience. Future SPAK questionnaires could hopefully include additional individual characteristic indicators, such as religion, ethnicity, languages of communication, and others, to capture a more detailed landscape of bribery in Indonesian society. Another recommended indicator is the quality of public services without bribery, which is proxied by the time from bribing an official to receiving the service.

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