

Socioeconomic and Demographic Causes of Crime Reporting in Indonesia

Wilson Rajagukguk

Faculty of Economics and Business, Universitas Kristen Indonesia, Indonesia
E-mail: wilson.rajagukguk@uki.ac.id

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Abstract

Studies on the nexus between socioeconomic and demographic factors and crime reporting still need to be completed in Indonesia. Therefore, this study aimed to investigate the socioeconomic and demographic causes of crime reporting in Indonesia using data from the 2021 National Socioeconomic Survey results. The data were analyzed using a binary logistic regression model. The unit of analysis was the population aged 15 years and older. The dependent variable was whether or not someone who experienced a crime reported it to the police. The independent variables were socioeconomic and demographic factors. The results of the study showed that a lower probability of reporting crime to the police was associated with being female, being younger, having higher educational attainment, living in urban areas, living in Java island, and working, implying the need to improve information, education, and communication on crime reporting among these groups.

Keywords:

socioeconomic; demographic; crime reporting

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INTRODUCTION

Crime is an act or negligence act that violates the law. It can harm other people or damage the property of others, including public property. Crime includes threats, abuse, domestic violence, theft, possession of guns or illegal drugs, cybercrime, violence such as sexual assault and murder, and human trafficking. Crime has a negative impact on development, economic growth, and human welfare. Crime often hinders and reduces investment, triggers migration, increases transaction costs, and increases inequality (Jeke, 2021). It damages various factors in a country, including the welfare system, governance, and economic growth (Ghauri et al., 2022). Crime is an illegal act or any behavior that can harm the community (Haskell & Yablonsky, 1983; Mkutu et al., 2017) and can also refer to behavior, both act or negligence, defined by both the constitution and the law, which deserves punishment. Frequently, crime indicates violence (Mkutu et al., 2017). The World Health Organization (2010) defines *violence* as the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community, which either results in, or has a high likelihood of resulting in, injury, death, psychological harm, maldevelopment, or deprivation.

Many studies have explained the negative impact of crime on a nation's economic growth and welfare. Crime was the major constraint to economic growth and development in Nigeria (Adekoya & Razak, 2017) and had a negative impact on long-term economic growth in Pakistan (Ahmad et al., 2014). Crime, particularly murder and robbery, had a negative impact on regional economic growth in all states in Mexico (Torres-Preciado et al., 2017). It resulted in an economic burden on society, with the socioeconomic costs of crime borne by society and the economy being relatively substantial (Czabański, 2008).

Official statistics recorded a significant increase in crime during the Gorbachev-Yeltsin era in Russia (Alexeev et al., 1995). Between 1985 and 1993, the number of crimes in general doubled, while the incidence of theft of private and government property tripled. Organized crime also increased. In 1993, a Minister of Internal Affairs report stated that there were as many as 3,000 to 4,000 structured criminal organizations operating throughout Russia. The general effects were economic collapse (Alexeev et al., 1995), loss of social norms, loosening of social norms, and the development of new methods of economic crime.

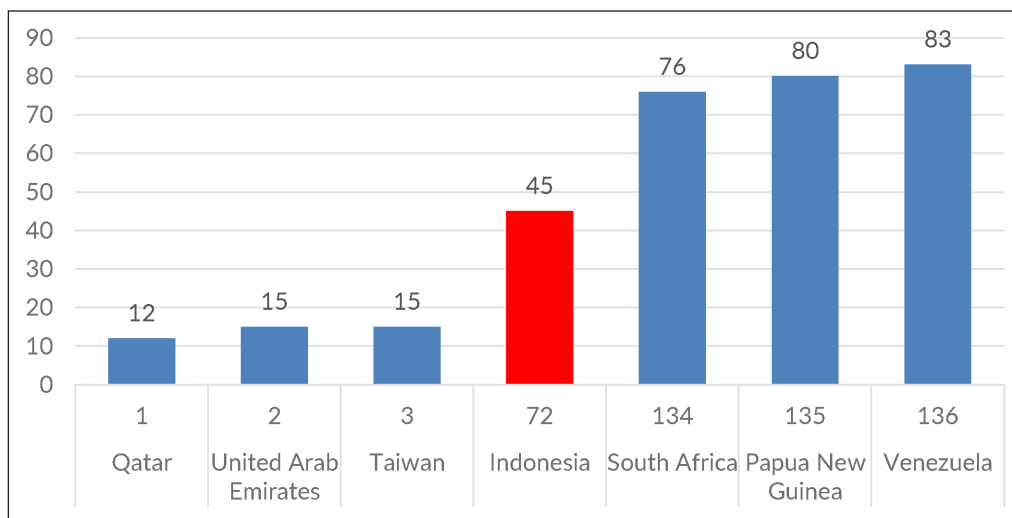
Using panel data from 26 countries from 1995-2009, Goulas and Zervoyianni (2015) found that crimes worsened welfare during bad economic periods and were not harmful when socioeconomic conditions were sufficiently satisfactory. Meanwhile, a study by Bullock et al. (2014) showed that crime had a worse impact on marginalized groups in society, as well as on women and the poor.

Yıldız et al. (2023) studied the causal relationship between crime and economic growth in many countries. They found that the crime rate had a significant and reciprocal relationship with economic growth, democratic governance, unemployment, and urbanization. Crime substantially increases costs to the individual, society, and country (McCollister et al., 2010). The economic benefit is obtained from crime reduction during

worsening economic conditions, pessimistic market sentiment, low return on savings, and low job opportunities. Meanwhile, increasing crime affects large resource allocation, public sector budget, and security expenses (Goulas & Zervovianni, 2015). In addition, crimes, including economic crimes, damage the economic and social stability of not only one country but other countries and reach the whole world. Crime also undermines the rule of law and democracy (Duri, 2021).

Figure 1 shows the countries with the highest and lowest crime rates worldwide. Indonesia ranked 72 out of 136 countries (World Population Review, 2023). The country with the lowest crime rate was Qatar (12 crimes per 100,000 inhabitants), followed by the United Arab Emirates (15) and Taiwan (15). The country with the highest crime rate was Venezuela (83), followed by Papua New Guinea (80) and South Africa (76). The crime rate in Indonesia was 45.

Figure 1. Global Crime Rate in Selected Countries in 2023



Source: World Population Review 2023 (author's compilation)

Victims' decision to report crime incidents to the police was a significant determinant of crime control (Asiama & Zhing, 2022). To understand the rational decision of victims, a binary logistic regression was employed to predict the likelihood of reporting a crime incident to the police, using the assumptions of rational theory and data from the National Crime Panel Victimization in 2018 in the United States. The assumption is that if a crime is reported to the police, there will be a reduction in the number of crimes committed.

The Federal Bureau of Investigation (2021) reported the background of victims who reported crimes in the United States in 2020. Of the 9,362,709 victims who reported, the most significant percentages were between the ages of 26 and 35 (23.8%), female (50.6%), and white (66%). Few studies have been conducted on the demographic and socioeconomic determinants of crime reporting (e.g., Tarling & Morris, 2010; Ranapurwala et al., 2016; Boateng, 2018; Zaykowski et al., 2019; Holliday et al., 2020; Mahasse, 2020). Tarling and Morris (2010) conducted a study using data from the British Crime

Survey. The study results show that those who were more likely to report experiencing crime were those who had higher incomes, worked, lived in underdeveloped areas, and had higher levels of education.

Ranapurwala et al. (2016) conducted a study using the 2008-2012 National Crime Victimization Survey in the United States on the background of victims reporting to the police. The study results show that the victims who tended to report to the police were aged between 20.8 and 52.7 years old, female, Caucasian, non-Hispanic, with a primary education, and with an income of less than \$25,000. Meanwhile, a study in Ghana found that age, marital status, and employment were determinants of whether victims reported crimes they experienced to the police (Boateng, 2018). Older, married, and working victims were more likely to report crimes they experienced to the police.

Zaykowski et al. (2019) conducted a study using data from the National Crime Victimization Survey from 1994 to 2016 in the United States. They found that respondents who were more likely to report the crimes they experienced were less than high school-educated and black females. Meanwhile, Holliday et al. (2020) carried out a study on reporting experienced intimate partner violence (IPV) to the police using the National Crime Victimization Survey from 2011-2015. They found that the respondents who were more likely to report were black women than white women and those between 18 and 35 years old. Further, Mahasse (2020) found that in European Union countries, the number of crime victims who reported to the police after the COVID-19 pandemic was 60% higher among women.

The general purpose of this study was to investigate the socioeconomic and demographic causes of crime reporting in Indonesia. The specific objectives were (i) to study the differences in crime reporting by socioeconomic and demographic factors and (ii) to examine the association between socioeconomic and demographic determinants and crime reporting in Indonesia. Several studies have been conducted on the determinants of crime in Indonesia. However, the number of studies on the determinants of crime reporting in Indonesia needs to be increased. Therefore, it is hoped that the findings from this study will contribute to understanding the nexus of socioeconomic and demographic factors with crime reporting and the policy formulation to improve security through crime reporting

METHODS

This study employed data from the results of the National Socioeconomic Survey (Survei Sosial Ekonomi Nasional/SUSENAS) in 2021. Central Bureau of Statistics conducted the 2021 National Socioeconomic Survey in March 2021. It covered all provinces in Indonesia and was conducted to meet the need for social and economic development data at district, provincial, and national levels, including data on sustainable development goals. The data in this study were taken from individual data from the 2021 National Socioeconomic Survey with the unweighted number of respondents of 1,277,497.

The unit of analysis for this study was the population aged 15 years and over who had ever experienced a crime. The weighted number of the respondents in the study was

2,055,232. The dependent variable was whether the crime experienced was reported to the police ($Y = 1$) or not ($Y = 0$). This variable was formed from the question of whether a respondent had ever experienced at least one crime (R904), the frequency of experiencing theft (R905), the frequency of experiencing abuse (R907), the frequency of experiencing violent theft (R909), and the frequency of experiencing sexual harassment (R911). A value of 0 was assigned if the respondent had never experienced a crime and a value of 1 if the respondent had ever experienced at least one crime. Respondents who ever experienced at least one crime were also asked whether they reported the crime experienced to the police (R914). A value of 0 was assigned if the answer was no ($Y = 0$) and a value of 1 if the answer was yes ($Y \geq 1$), according to the number of crimes experienced and reported.

The independent variables were gender, age, marital status, education, place of residence, island of residence, and work status. Gender was categorized as male (GENDER = 1) and female (GENDER = 0), age was categorized as 15-29 years (AGE = 0), 30-54 years (AGE = 1), and 55+ years (AGE = 2), marital status was categorized as not yet married (MARITAL = 0) and married (MARITAL = 1), education was categorized into no education/not completed primary school/completed primary school (EDUCATION = 0), completed junior secondary school (EDUCATION = 1), completed senior secondary school (EDUCATION = 2), and completed university (EDUCATION = 3), place of residence was divided into urban area (URBAN = 1) and rural area (URBAN = 0), island of residence was grouped into Sumatera (ISLAND = 0), Java (ISLAND = 1), Bali and Nusa Tenggara (ISLAND = 2), Kalimantan (ISLAND = 3), Sulawesi (ISLAND = 4), and Maluku and Papua (ISLAND = 5), and work status was classified as working (WORK = 1) and not working (WORK = 0).

Data in this study were analyzed using univariate, bivariate, and multivariate analyses to assess sample characteristics, the percentage distribution of those who reported crime by demographic and socioeconomic factors, and the demographic and socioeconomic causes of crime reporting. A binary logistic regression model was used to investigate demographic and socioeconomic factors of crime reporting. This model has also been employed in a number of studies of crime reporting to the police (Kwak et al. 2019; Pulenyane & Montshiwa 2020; Asiama & Zhong 2022; McCann & Boateng 2022; Yigzaw et al. 2023; Shahbazov et al. 2023). The model was as follows:

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 GENDER + \beta_{21} AGE1 + \beta_{22} AGE2 + \beta_3 MARITAL + \beta_{41} EDUCATION1 + \beta_{42} EDUCATION2 + \beta_{43} EDUCATION3 + \beta_5 URBAN + \beta_{61} ISLAND1 + \beta_{62} ISLAND2 + \beta_{63} ISLAND3 + \beta_{64} ISLAND4 + \beta_{65} ISLAND5 + \beta_7 WORK + \varepsilon$$

In the model, p is the probability of reporting a crime to the police. Meanwhile, β_0 is the model intercept, β_{kj} is the regression coefficient of the j th category of the k -th independent variable k , with $k = 1, 2, \dots, 7$, and ε is the error term.

The diagnostic test of multicollinearity was performed using the correlation coefficient. In addition, to measure the overall goodness of fit, Hosmer-Lemeshow test and Chi-square (χ^2) test were also performed. Furthermore, a scalar measure of the goodness of fit test of the was done by employing the Nagelkerke coefficient of determination (R^2).

RESULTS AND DISCUSSION

The results of the univariate, bivariate, and multivariate analyses are presented in Tables 1, 2, and 3, respectively. Table 1 shows that 90.4% of the respondents reported the crime they experienced to the police. In addition, the majority of the respondents were male (64,9%), were aged 30 to 54 years (44.6%), married (82.4%), had completed senior secondary school (34.2%, lived in urban areas (67.7%), lived on the island of Java (52,3%), and worked (74.0%). The results of the bivariate analysis are presented in Table 2. It can be seen that the percentage of those aged 15 years and older who experienced crime and reported to the police was higher among those who were male, aged 55 years and older, married, had no education, or had not completed primary school or had completed primary school, lived in rural areas, lived on the islands of Bali and Nusa Tenggara, and did not work.

Table 1. Percentage Distribution of Victims of Crime by Background Characteristics

Background Characteristics	Number of Observation	Percentage
Reported Crime to the Police		
Yes	1,857,525	90.4
No	197,707	9.6
Gender		
Male	1.333.615	64.9
Female	721,617	35.1
Age (years)		
15-29	210,799	10.0
30-54	943,463	44.6
55+	757,832	35.9
Marital Status		
Not yet married	362,331	17.6
Married	1,692,901	82.4
Education		
No education/not completing primary school/ completing primary school	701,219	34.1
Completing junior secondary school	410,197	20.0
Completing senior secondary school	702,198	34.2
Completing university	241,618	11.8
Place of Residence		
Urban	1,390,536	67.7
Rural	664,696	32.3
Island of Residence		
Sumatra	532,031	25.9
Java	1,074,364	52.3
Bali and Nusa Tenggara	125,482	6.1
Kalimantan	105,260	5.1
Sulawesi	152,743	7.4
Maluku and Papua	65,352	3.2
Work Status		
Working	1,520,948	74.0
Not working	534,284	26.0
Total	2,055,232	100.0

Source: 2021 National Socioeconomic Survey (author's compilation)

The results of the multivariate analysis are presented in Table 3. It can be seen that statistically significant demographic and socioeconomic causes of crime reporting in Indonesia were gender, age, education, place of residence, island of residence, and work status. The results of the diagnostic test of the multicollinearity showed that no correlation coefficient was more significant than 0.70, and therefore, there was no multicollinearity between independent variables in the model. In addition, the overall goodness-of-fit test results showed that the model fit at the significance level of < 0.001 . Further, the Nagelkerke coefficient of determination (R^2) was 0.049, which means that the model can explain 4.9% of the variation in the probability.

Table 2. Percentage Distribution of People Who Experienced and Reported Crime by Background Characteristics

Background Characteristics	Experienced and Reported Crime to the Police		Total (%)
	No (%)	Yes (%)	
Gender			
Male	8.4	91.6	100.0
Female	11.9	88.1	100.0
Age (years)			
15-29	10.4	89.6	100.0
30-54	9.7	90.3	100.0
55+	8.4	91.6	100.0
Marital Status			
Not yet married	9.8	90.2	100.0
Married	9.6	90.4	100.0
Education			
No education/not having completed primary school/having complete primary school	7.2	92.8	100.0
Having completed junior secondary school	9.6	90.4	100.0
Having completed senior secondary school	11.0	89.0	100.0
Having completed university	12.6	87.4	100.0
Place of Residence			
Urban	10.5	89.5	100.0
Rural	7.8	92.2	100.0
Island of Residence			
Sumatra	5.7	94.3	100.0
Java	12.6	87.4	100.0
Bali and Nusa Tenggara	6.0	94.4	100.0
Kalimantan	10.7	89.3	100.0
Sulawesi	6.0	94.0	100.0
Maluku and Papua	5.9	94.1	100.0
Work Status			
Working	9.9	90.1	100.0
Not working	8.7	91.3	100.0
Total	9.6	90.4	100.0

Source: 2021 National Socioeconomic Survey (Author's compilation)

The results of the multivariate analysis showed that a higher probability of reporting crime to the police was associated with being male, being aged 30-54 years, having no education or not having completed primary school or having completed primary school, living in rural areas, living on Sumatra Island, and not working. The result shows that males were 1.7 times more likely to report the crime to the police than females. Second, those who were aged 30-54 years were 1.06 times more likely to report the crime to the police than those who were aged 15-29 years. Third, those who completed university education were 0.6 times less likely to report the crime to the police than those who had no education, had not completed primary school, or had completed primary school. Fourth, those who lived in urban areas were 0.98 times less likely to report the crime to the police than those who lived in rural areas. Fifth, those who lived on Java Island were 0.41 times less likely to report the crime to the police than those who lived on Sumatra Island, and (vi) those who were working were 0.7 times less likely to report the crime to the police than those who were not working.

Table 3. Odds Ratio from the Binary Logistic Regression of the Determinants of Crime Reporting

Covariates	Odds Ratio [95% CI]	p-value
Gender (ref: Female)		
Male	1.659 [1.642-1.676]	< 0.001
Age (years) (ref: 15-29)		
30-54	1.059 [1.045-1.074]	< 0.001
55+	1.032 [1.014-1.050]	<0.001
Marital Status (ref: Not yet Married)		
Married	1.002 [0.986-1.018]	0.802
Education (ref: No Education/Not Having Completed Primary School/Having Completed Primary School)		
Having completed junior secondary school	0.718 [0.708-0.729]	< 0.001
Having completed senior secondary school	0.599 [0.591-0.607]	< 0.001
Having completed university	0.537 [0.528-0.545]	< 0.001
Place of Residence (ref: Rural Area)		
Urban	0.976 [0.965-0.987]	< 0.001
Island of Residence (ref: Sumatra Island)		
Java	0.411 [0.406-0.417]	< 0.001
Bali and Nusa Tenggara	0.922 [0.898-0.946]	< 0.001
Kalimantan	0.487 [0.476-0.498]	< 0.001
Sulawesi	0.952 [0.929-0.975]	< 0.001
Maluku and Papua	0.978 [0.944-1.013]	0.208
Work Status (ref: Not working)		
Working	0.701 [0.692-0.709]	< 0.001
Constant	21.984	< 0.001

Source: 2021 National Socioeconomic Survey (author's compilation)

The results of this study support the results of previous studies on the importance of demographic and socioeconomic factors on the likelihood of reporting crime to the police (e.g., Tarling & Morris, 2010; Ranapurwala et al., 2016; Boateng, 2018; Zaykowski

et al., 2019; Holliday et al., 2020; Mahasse, 2020). The higher likelihood of reporting crime to the police for male victims may be because male victims were more brave than female victims. Meanwhile, female victims were less likely to report crimes because it felt inconvenient to report crimes experienced.

The greater likelihood of reporting crime among older victims may have been because older victims had more experience and maturity in handling problems they experienced, including crime, than younger victims. In addition, older victims might think that all crimes should be reported or that it is the right thing to do. Meanwhile, a lower probability of crime reporting among younger victims might be caused by fear of reprisal.

In addition, a lower likelihood of reporting crime among higher-educated victims may be because they could cope with and justify the crime more than lower-educated victims. In addition, higher-educated victims might think that police could do nothing or would not be interested. Meanwhile, a lower probability of reporting crime among lower-educated victims might cause them to hope that the offenders would be caught or punished.

Further, the greater likelihood of reporting crime experienced in rural areas and on Sumatra Island might be because rural residents and Sumatrans had higher courage than their rural counterparts and those who lived on other islands, respectively. In addition, rural and Sumatran victims might think the crimes were serious, significant, or upsetting. Meanwhile, a lower probability of reporting crime among victims in urban areas and Java might be because they think the crime was too trivial or a common occurrence and also because they have no loss.

Furthermore, there is a higher likelihood of reporting crimes experienced by those not working because they needed more financial security and more time to report than their working counterparts. In addition, non-working victims might hope to prevent the recurrence of the crime or hope that the property would be recovered. Meanwhile, a lower probability of crime reporting among working victims could be caused by the fact that they reported the crime to other authorities.

CONCLUSION

The results of this study show that 90.4% of the population aged 15 years and above who experienced crime reported the crime to the police. The percentage of those who reported the crime to the police was higher among those who were male, aged 55 years and above, married, had no education, had not completed primary school, or had completed primary school, lived in rural areas, lived on the islands of Bali and Nusa Tenggara, and did not work. After controlling for other factors, the likelihood of reporting the crime was higher among those who were male, aged 30-54 years, had no education, had not completed primary school and had completed primary school, lived in rural areas, lived on Sumatra Island, and did not work.

This study found that the probability of crime reporting was lower among females and younger adults who have higher education, live in urban areas, live on Java Island,

and work. These findings imply the need to improve the information, education, and communication about crime reporting, particularly among these groups, in the policy formulation to improve the security of the people of Indonesia. A limitation of this study is that the analysis of the socioeconomic and demographic causes of crime reporting did not include crime-related factors, such as the type of crime and offender characteristics. However, this limitation should not profoundly influence the results, and this study still contributes to the study of crime reporting.

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