

**ECONOMIC FACTORS INFLUENCING THE INCREASE IN CRIME IN
NORTH SUMATRA PROVINCE IN 2017-2022****Qodaflaha Fika Alriefna****Universitas Muhammadiyah Surakarta, Surakarta, Indonesia**b300200018@student.ums.ac.id

Abstract

Human behavior shaped by society is evil. Criminals usually break the law because they believe that the level of satisfaction they predict will be much higher than the satisfaction they will definitely receive from obeying the law or taking legal action. This research examines how GRDP, open unemployment rate, Gini ratio and number of poor people have an impact on crime in districts/cities of North Sumatra Province from 2017 to 2022. This analysis uses panel data regression. Chow and Hausman tests were used to process this research data. The research results show empirical evidence that the best estimation model is the Fixed Effect Model (FEM). The research results found that the open unemployment rate and Gini ratio had an effect on crime, while GRDP and the number of poor people had no effect on crime. Apart from that, the F test results of the four independent variables influence crime simultaneously. The results of calculating the coefficient of determination (R²), which shows an R² value of 0.873983. This shows that GRDP, open unemployment rate, Gini ratio and number of poor people influence crime by 87.4%. Additional factors not discussed in this study had an impact of 12.6%.

Keywords: Crime, GRDP, Unemployment, Poverty



INTRODUCTION

The dynamics of cultural expansion and the rapid advancement of science and technology during the era of globalization have given rise to competition in various fields of human endeavor, including ideology, social issues, economics, art, ethics, and morals. Many shifts in these values have occurred, including materialism, hedonism, and other issues. Furthermore, this has led to changes in societal ideals and behavior. Unrest in society can arise from negative changes, such as crime (Putra et al., 2021).

Based on 2021 regional/provincial police crime statistics, the North Sumatra Regional Police had the highest number of incidents, with 36,534 cases, followed by the East Java Regional Police (19,257 incidents), and the Jakarta Metropolitan Police (Jakarta and surrounding districts), with 29,103 incidents. With 971 incidents, 1,008 incidents, and 1,500 crimes, respectively, North Kalimantan, North Maluku, and West Sulawesi were the three regions with the lowest crime rates (BPS, 2023).

Crime is any unlawful act. Activities that endanger the lives or property of others are considered criminal. Narcotics and illegal drugs, as well as crimes involving murder, violence, harassment, and slavery, all result in bodily injury. Crimes that threaten the property of others, such as fraud, embezzlement, corruption, or theft of property, are also considered criminal offenses (Riyardi & Guritno, 2022).

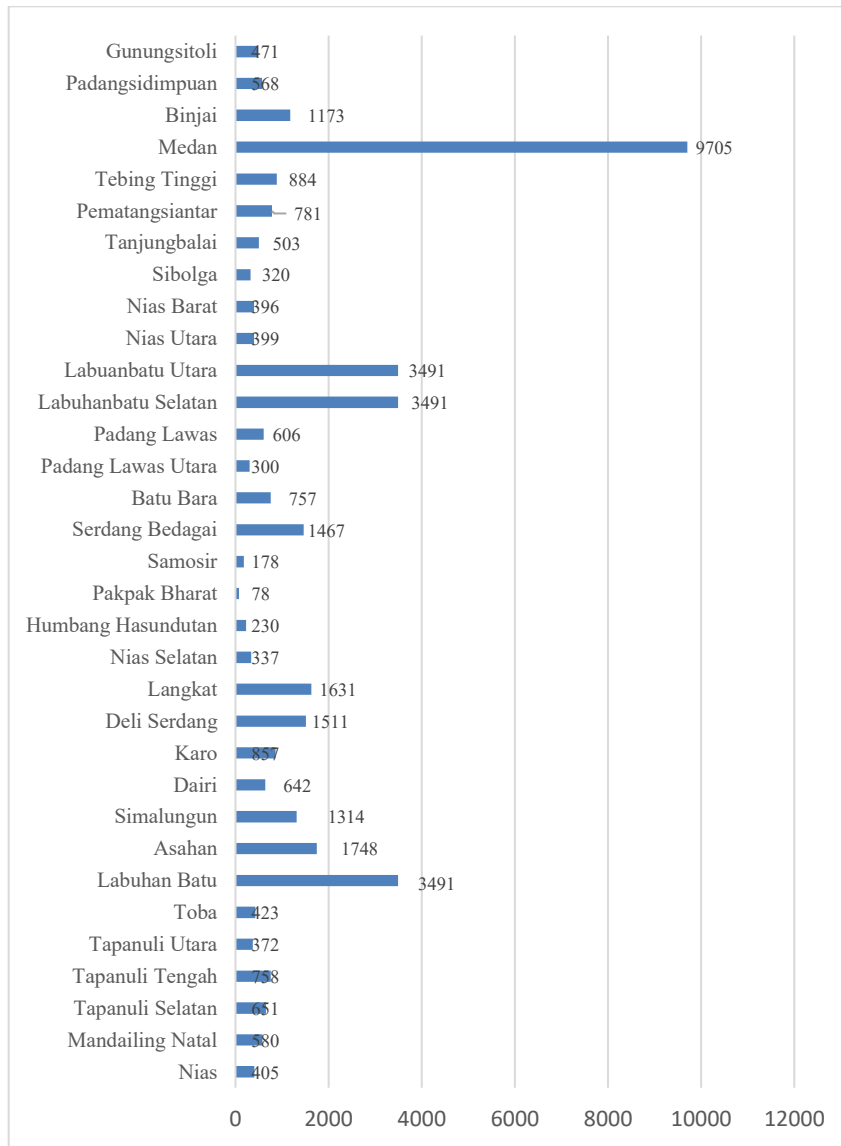
Gary S. Becker first proposed the theory of rational choice, and concluded that there would be an increased incentive for criminal activity if there was a gap between the income from illegal activities and the opportunity costs, including income from legal activities. Therefore, the economic impact is manifested in the form of direct costs associated with property, physical losses, and losses suffered by victims of crime, as well as efforts to reduce them. Costs associated with maintaining the legal system, prisons, and criminal training facilities will also increase along with the increase in crime (Hendri, 2014).

High crime rates are influenced by many factors, such as high unemployment, poverty, income levels, and social inequality. The belief that people's inability to meet their basic needs, which leads to illegal activity, is another contributing factor to crime. Large disparities or wealth inequality within a society serve as a stronger incentive to commit crime because they increase feelings of frustration, which ultimately increases the likelihood of crime. Therefore, increasing income inequality will increase local crime rates, which in turn will increase the overall crime rate (Edwart & Azhar, 2019).



Todaro & Smith (2015) state that the more impoverished a community is, the greater the likelihood of a poor life. Low levels of education and a lack of legal awareness increase the likelihood of crime. This often leads to an inability to provide proper instruction, as communities must continue to meet their basic needs to survive despite limited resources.

Table 1.
Average Crime Rate Development in Regencies/Cities in North Sumatra, 2017-2022



Source: North Sumatra Central Statistics Agency



Based on Table 1, the District/City Police throughout North Sumatra shows that large cities have the highest crime rates, with Medan City experiencing the highest rate of 9705 crimes from 2017 to 2022. Pakpak Bhartha Regency has the lowest crime rate of 78, and Samosir Regency has the highest crime rate of 178.

LITERATURE REVIEW

Unemployment or loss of income creates criminal problems due to the inability to support themselves, leading to criminal activity. Crime and unemployment are closely linked. Therefore, initiatives to combat unemployment also serve to reduce crime (Audey & Ariusni, 2019).

Previous research analyzing the effect of unemployment on crime rates was conducted by (Kosmaryati et al., 2019; Rahmalia et al., 2019; Rahmi & Adry, 2018). Publications discussing the effect of GRDP on crime were conducted by (Ulfa & Farlian, 2018; Isnanto et al., 2022; Isnanto et al., 2022). Research examining the influence of poverty and the Gini ratio on crime rates was conducted by (Mardinsyah & Sukartini, 2020; Septaria & Zulfaridatulyaqin, 2021; Kuciswara et al., 2021).

Various publications have analyzed how the economy influences crime. However, few researchers have used the Gini ratio as an independent variable influencing crime. The use of this variable is expected to more accurately estimate crime factors in North Sumatra.

The purpose of this study is to collect empirical data on the influence of GRDP, unemployment, poverty, and the Gini ratio on crime. The intended benefit, theoretical in nature and based on the stated objectives, is that this study should produce empirical data on crime in North Sumatra. This research is expected to have practical applications, including assisting local governments in reducing crime rates.

Researchers are asked to conduct further testing if the results of previous studies are inconsistent. The same variables were used in the previous study for the retesting. The main factors are GRDP, unemployment, poverty, and the Gini ratio, which are the four categories of variables. It is hoped that retesting the components influencing crime will be more relevant and can correct errors identified by previous researchers.



RESEARCH METHOD

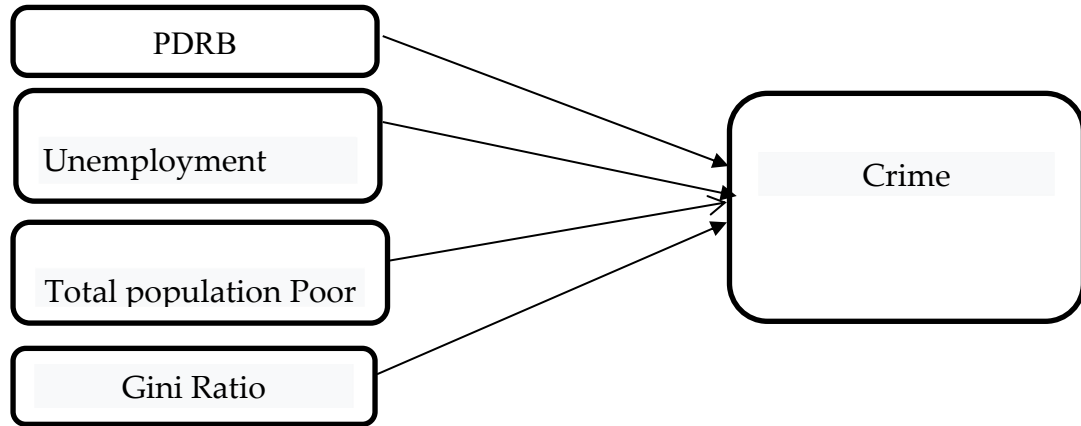


Figure 1.

Framework of Thought

Processed by: Researcher 2024

This quantitative research used secondary data from previous publications, including journals, books, and official government websites. This research was validated by testing the hypotheses using panel data regression analysis using Eviews. The Common Effect Model, Fixed Effect Model, and Random Effect Model techniques were used to select the best model. This study used data from 33 districts/cities in North Sumatra Province during the 2017-2022 period.

RESULTS AND DISCUSSION

Estimation Results

The best estimation model, whether the Random Effects Model (REM), Fixed Effects Model (FEM), or Pooled Least Squares (PLS), will be determined using the Chow and Hausman tests. If the Random Effects Model (REM) is selected in the Hausman test and the Pooled Least Squares (PLS) is selected in the Chow test, a second test, the Lagrange Multiplier (LM) test, must be performed to determine which of the two best estimation models is selected: the Random Effects Model (REM) or the Pooled Least Squares (PLS).



Table 1. Results of the Panel Data Regression Econometric Model Estimation - Cross Section

Table with 4 columns: Variable, PLS, FEM, REM. Rows include C, Log (PDRB), GR, TPT, Log (JPM), R^2, Adjusted. R^2, Statistic F, Prob. Statistic F, and Model Selection Test details.

Source: Appendix

Table 2. Fixed Effect Model (FEM) Estimation Model

CRIME_it = 26,94586 - 1,124032 log(PDRB)_it + 2,566392 GR_it - 0,060297 TPT_it - 0,461951 log (JPM)_it

Source: Appendix 1. Note: *Significant at alpha = 0.01; **Significant at alpha = 0.05; ***Significant at alpha = 0.10; The numbers in parentheses are the probability of the t-statistic value.

Table 2 shows that the empirical significance value of the F statistic is 0.0000 (<0.01), indicating the rejection of H0. In short, the FEM calculation model is real. The predictive ability of the calculated model is indicated by the coefficient of determination (R2). Table 2 shows that the Fixed Effect Model



(FEM) has an R2 value of 0.873983, indicating that the variables of gross regional product, open unemployment rate, number of poor people, and the Gini ratio are able to contribute 87.4% to the variation in crime. Other variables or factors not included in the model have an impact on the remaining 12.6%. It appears that only the Gini ratio and the proportion of poor people have an impact on crime, based on the validity test of the influence in Table 2. Meanwhile, from 2017 to 2022, crime rates in districts and cities in North Sumatra Province were not affected by GRDP or open unemployment.

The Influence of GRDP on Crime.

According to variable testing, GRDP does not significantly affect crime. A person's propensity to commit crime decreases with increasing income. This finding aligns with a number of previous research projects. According to Ulfa & Farlian (2018) and Mardinsyah & Sukartini (2020), a region's crime risk increases when per capita income decreases. Low per capita income is often not caused by high unemployment in a region. Rather, low worker productivity and a lack of mastery of certain skills (unskills) contribute to low wages.

If income decreases, people will feel pressured to commit crime to cover their living expenses. Conversely, if income increases, people will be more vigilant against crime because they can access better security systems and independence.

The Effect of the Gini Ratio on Crime

As shown by testing the Gini Ratio, the variable has a positive effect on crime. This aligns with Becker's hypothesis: the gap between the incomes of the low-income and the wealthy creates a clear boundary within a community. This increases the impact of crime, which in turn increases the frequency of crime in areas with high income inequality.

The wealthy have a strong vested interest in reducing crime. The negligible correlation between crime and GDP supports this. High GDP per capita and a rising Gini Ratio indicate that the wealthy hold more of the nation's wealth. The lower the likelihood of being robbed, the wealthier they are. This is not unexpected. To reduce the likelihood of becoming victims of this common crime, the middle class has invested in security and built security gates in their neighborhoods. This private investment takes the form of community contributions paid by each household or family. Similar research by Hendri (2014) found that the Gini Ratio influences crime.



The Effect of the Open Unemployment Rate on Crime

Based on research findings, there is a negative correlation between unemployment and crime in North Sumatra. This means that there is a decrease in the crime rate for every increase in unemployment. In North Sumatra, where unemployment is decreasing and crime is increasing, unemployment has little effect on crime. This is intended to prevent those without jobs from directly engaging in illegal activities because they are aware of them. There may be more causes for the increase in crime that are not addressed in this study.

For two reasons, there will be fewer people targeted by crime when the unemployment rate rises. First, there will be more people staying at home due to layoffs. Staying at home reduces the chances of becoming a victim. Second, high unemployment can indicate an economic downturn. As a result, for both employed and unemployed individuals, producer and consumer activity also tends to slow down. Therefore, if wealth accumulation decreases, the opportunity for crime will decrease. Increasing unemployment will reduce the likelihood that criminals will be motivated and deterred, thus reducing the crime rate.

According to research by Rahmalia et al. (2019), unemployment influences crime. Research by Rahmi & Adry (2018) also found that unemployed individuals still have the option of trying out jobs at various companies without having to engage directly in illegal activities.

The Effect of the Number of Poor Residents on Crime.

The results of the variable test indicate that the number of poor residents does not significantly influence crime. This is because good security capabilities and case resolution can reduce the number of criminal incidents in a location. Poverty does not directly contribute to crime rates. Even if their wages are low, poor people can still receive the assistance they need from the government or through their jobs to meet their basic needs. Therefore, poverty alone cannot motivate someone to commit crime without additional considerations.

Improving human quality through higher employment rates and providing internal skills and specialized knowledge in various sectors to increase productivity and build a society that meets workplace standards will benefit the economy and society. People who were previously unemployed are better able to spend their time and avoid committing crimes. According to research by Purwanti & Widyaningsih (2019), the number of poor residents has little effect on crime.



CONCLUSION

Regarding the increase in crime in the districts/cities of North Sumatra Province from 2017 to 2022, the analysis of GRDP, open unemployment rate, Gini ratio, and the number of poor people shows that the Gini ratio and open unemployment rate have an effect; conversely, GRDP and the number of poor people have no effect on crime. Limitations that remain in this study can hinder the process, such as: Limited number of years. The study used only lasted six years, so it cannot provide generalizable results. It is possible that each researcher's method of assessing crime differs due to the subjective element involved in determining whether or not crime occurs in an area. Considering these limitations, the following recommendations can be considered in further research: The number of samples should be increased for subsequent research to improve the results and be more generalizable. To determine the sustainability of the business (trend) and its existence in the long term and provide more benefits for all parties involved, further research should extend the observation period, which should be more than six periods.

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