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HOW POPULATION DENSITY AND WELFARE AFFECT CRIME RATES: A STUDY IN EAST JAVA PROVINCE, INDONESIA

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ABSTRACT

Purpose: A one-fold increase in population has the potential to increase the per capita crime rate by more than two times and possibly four or six times. In a country with a large population like Indonesia, the threat of crime can occur at any time. An increase in crime can also occur due to declining welfare levels such as during a recession in a country. Therefore, this study aims to see how population density and welfare affect crime rates.

Desaign/methodology/data analysis: The analysis used panel data from 38 regencies/cities in East Java province. This study separates the forms of crime based on the type so that the results will be more in-depth. The methods used are the Common Effect Model, Fixed Effect Model and Random Effect Model.

Finding: The results of this study show that per capita income and population density affect the crime rate in East Java. It found no significant association between economic shock and crime rates. When a shock occurs, government policy will provide peace for the community. So, they will focus more on improving their economic conditions rather than committing crimes.

Originality/value: This study provides a valuable empirical contribution by analyzing how population density and welfare impact the increase in crime in the community. This study examines the impact that occurs when an area experiences an economic shock that causes its welfare to decline, whether it will make people tend to commit crimes or focus on economic improvement.

Practical Implication: In densely populated areas, even though their welfare has declined due to economic shocks, it turns out that people are more focused on making economic improvements than committing criminal acts to improve their welfare. This is because of government intervention through policies that guarantee the economy so that people feel safe and can work and do better.

Keywords: Crime, Income, Population, Welfare.

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COMO A DENSIDADE POPULACIONAL E O BEM-ESTAR AFETAM AS TAXAS DE CRIMINALIDADE: UM ESTUDO NA PROVÍNCIA DE JAVA ORIENTAL, INDONÉSIA

RESUMO

Objetivo: Um aumento da população de uma só vez tem o potencial de aumentar a taxa de criminalidade per capita em mais de duas vezes e possivelmente quatro ou seis vezes. Em um país com grande população como a Indonésia, a ameaça de crime pode ocorrer a qualquer momento. Um aumento da criminalidade também pode ocorrer devido ao declínio dos níveis de bem-estar social, como durante uma recessão num país. Portanto, este estudo tem como objetivo ver como a densidade populacional e o bem-estar afetam as taxas de criminalidade.

Desenho/metodologia/análise de dados: A análise utilizou dados do painel de 38 regiões/cidades da província de Java Oriental. Este estudo separa as formas de crime com base no tipo, de modo que os resultados serão mais aprofundados. Os métodos utilizados são o Modelo de Efeito Comum, o Modelo de Efeito Fixo e o Modelo de Efeito Aleatório.

Conclusão: Os resultados deste estudo mostram que a renda per capita e a densidade populacional afetam a taxa de criminalidade em Java Oriental. Não encontrou associação significativa entre o choque económico e as taxas de criminalidade. Quando ocorre um choque, a política do governo provê paz para a comunidade. Por isso, vão concentrar-se mais na melhoria das suas condições económicas, em vez de cometerem crimes.

Originalidade/valor: Este estudo fornece uma valiosa contribuição empírica ao analisar como a densidade populacional e o bem-estar impactam o aumento da criminalidade na comunidade. Este estudo examina o impacto que ocorre quando uma área sofre um choque económico que faz com que o seu bem-estar diminua, se vai fazer com que as pessoas tendem a cometer crimes ou se concentrar na melhoria económica**.**

Implicações práticas: Nas áreas densamente povoadas, embora o seu bem-estar tenha diminuído devido a choques económicos, verifica-se que as pessoas estão mais focadas em fazer melhorias económicas do que em cometer atos criminosos para melhorar o seu bem-estar. Isto é devido à intervenção do governo através de políticas que garantem a economia para que as pessoas se sintam seguras e possam trabalhar e fazer melhor.

Palavras-chave: Crime, Renda, População, Bem-Estar.

CÓMO LA DENSIDAD POBLACIONAL Y EL BIENESTAR AFECTAN LAS TASAS DE CRIMINALIDAD: UN ESTUDIO EN LA PROVINCIA DE JAVA ORIENTAL, INDONESIA

RESUMEN

Finalidad: Un aumento de la población por una sola vez puede aumentar la tasa de delincuencia per cápita más de dos veces y posiblemente cuatro o seis veces. En un país con una gran población como Indonesia, la amenaza del crimen puede ocurrir en cualquier momento. También puede producirse un aumento de la delincuencia debido a la disminución de los niveles de bienestar, como durante una recesión en un país. Por lo tanto, este estudio tiene como objetivo observar cómo la densidad poblacional y el bienestar afectan las tasas de criminalidad.

Diseño/metodología/análisis de datos: El análisis utilizó datos de panel de 38 regencias/ciudades de la provincia de Java Oriental. Este estudio separa las formas de delincuencia en función del tipo, de manera que los resultados sean más profundos. Los métodos utilizados son el modelo de efectos comunes, el modelo de efectos fijos y el modelo de efectos aleatorios.

Hallazgo: Los resultados de este estudio muestran que el ingreso per cápita y la densidad de población afectan la tasa de criminalidad en Java Oriental. No se encontró asociación significativa entre la conmoción económica y las tasas de delincuencia. Cuando se produce una conmoción, la política gubernamental proporcionará paz a la comunidad. Así, pues, se centrarán más en mejorar sus condiciones económicas que en cometer delitos.

Originalidad/valor: Este estudio aporta un valioso aporte empírico al analizar cómo la densidad poblacional y el bienestar impactan en el incremento de la criminalidad en la comunidad. Este estudio examina el impacto que se produce cuando una zona experimenta un choque económico que hace que su bienestar decaiga, ya sea que las personas tiendan a cometer delitos o se centren en la mejora económica.

Consecuencias prácticas: En zonas densamente pobladas, aunque su bienestar ha disminuido debido a las conmociones económicas, resulta que la gente está más centrada en hacer mejoras económicas que en cometer actos criminales para mejorar su bienestar. Esto se debe a la intervención del gobierno a través de políticas que garantizan la economía para que la gente se sienta segura y pueda trabajar y hacerlo mejor.

Palabras clave: Crimen, Ingreso, Población, Bienestar.

1 INTRODUCTION

A one-fold increase in population could potentially more than double the per capita crime rate and possibly increase four- or six-fold (Braithwaite, 1975). Furthermore, Braithwaite (1975) also explained that population growth in cities will indirectly increase the level of housing mobility. The city's progress will encourage people to make houses or rent houses on the city's outskirts. The movement of people from the city to the suburbs will cause shock to people who have been on the city's outskirts since the beginning. Cultural differences and existing social values will give birth to social jealousy and anti-change attitudes. Therefore, unknown newcomers in the new community introduce the criminogenic effect of anonymity. Boivin (2018), in his research, explained that population growth in a particular area will increase and decrease crime.

An increase in crime can also occur because the level of welfare decreases. Basic needs that are met properly and adequately will create a sense of security and comfort in life activities. It is in line with Handayani's research (2017), which found that problems of poverty, unemployment, and life pressures contribute to the occurrence of conflict and crime both directly and indirectly. It means that a prosperous society can meet its needs well.

More research on crime is carried out using regional analyses such as research from Andresen (2006), Rotolo and Tittle (2006), and Boivin and Felson (2018). Some studies also try to see how the motive for crime can occur at the family level, such as the research of Pratt and Cullen (2005) and Glaeser and Sacerdote (1999). Discussions related to population and macro crime rates develop by including several variables that affect the pattern of development and distribution of crime rates, such as location and environment (Andresen 2011), number of buildings and population (Boivin, 2018), GDP per capita and economic shocks (Buhaug and Urdal, 2013). To see the specific pattern of each crime, Boivin (2018), Buhaug and Urdal (2013)

divide the types of crimes ranging from offences caused by the political system, and general crimes such as theft, robbery, rape and others.

Increasing population growth in developing countries such as Indonesia will impact crime rates, eventually adding obstacles to society and state stability if not anticipated early. Indonesia supports this fact. It is the 3rd most populous country after India and the United States, so the opportunity for crime rates is quite high. Six provinces with the largest population in Indonesia, such as West Java, East Java, Central Java, North Sumatra, and Banten, have always entered the top five crime rates, according to the local police report in 2016. It reinforces the hypothesis about the effect of population growth on crime rates. Of these provinces, East Java is the province that has the most administrative areas, namely 29 regencies and nine cities. The number of towns and districts will trigger the crime rate due to location factors, so it is interesting to study.

Therefore, this study will analyze population growth and community welfare against crimes in East Java. To discover more about the crime pattern in East Java, this study separates several variables such as assault, motorcycle or car theft, theft with aggravation, robbery, sexual assault, and theft as dependent variables. This study also includes several variables, such as shock in the economy, to determine if there are economic downturn conditions, such as COVID-19. This study used panel data from 38 cities and regencies in East Java from 2014-2016. By analyzing the data, the panel is expected to discover crime patterns occasionally throughout East Java.

2 THEORETICAL FRAMEWORK

2.1 POPULATION AND CRIME RATE

There are several perspectives to explain the relationship between population density and crime (Oliveira, 2021). First is the theory of structural criminology, which emphasizes the importance of understanding the structural factors in society that can influence crime rates. This approach highlights the role of the social and structural environment in shaping criminal behavior and tackling crime, which often involves efforts to address inequality and anomie in society (Chamlin and Cochran, 2004; Rotolo and Tittle, 2006; Oliveira, 2021). From a structural perspective, higher population numbers increase opportunities for social interaction, which increases the occurrence of crime. Some reasons can explain the increase. More interaction increases an individual's chances of being exploited, offended, or disadvantaged in line with

population size (Mayhew and Levinger, 1976; Chamlin and Cochran, 2004; Oliveira, 2021). As conflictive associations increase, other integrative associations also increase, leading to a linear growth of crime. In particular, the structural perspective focuses on the quantitative consequences of population growth.

The second perspective of social control emphasizes that individuals with strong ties, high involvement, strong beliefs, and commitment to conventional goals will engage less in criminal behavior (Groff, 2015; Oliveira, 2021). Large population sizes lead to population density and heterogeneity. If foreign groups or individuals enter, it will complicate social control, especially in urban areas. The large population makes it difficult for social integration, increasing the number of crimes (Freudenburg, 1986; Sampson, 1986; Oliveira, 2021). On the other hand, regular and continuous social interaction will result in community networks with effective social control mechanisms (Bursik and Webb, 1982; Oliveira, 2021).

In contrast to structural theory, substructural theory explains that population concentration brings together people with similar interests and backgrounds (Fischer, 1975; Oliveira, 2021). These similarities can produce solid social networks within the population. The large population makes it easier for people to find common ground. A strong substructural social network enables crime prevention.

2.2 WELFARE AND CRIME RATE

Some literature explains that the level of well-being is related to the level of crime (Abhishek and Balamurugan, 2023; Rudolph and Starke, 2020; Maume and Lee, 2003; Brown, 2016; Gruner, 2015; Worrall, 2005). Two theories explain the relationship between welfare and crime levels: institutional anomie theory (IAT) and social support theory (SST). IAT and SST have a connection due to their similar core theoretical proportions (Rudolph and Starke, 2020; Pratt and Godsey, 2003). SST and IAT have different expectations regarding how the state affects crime rates throughout society. SSTs pay more attention to support mechanisms that can reduce individual tension, especially in marginal groups of society, whereas the IAT pays more attention to cultural and structural mechanisms that influence anomy levels in society as a whole to explain crime (Savolainen, 2000; Rudolph and Starke, 2020).

Specifically, SST can be in the form of government support for its people. Poor public welfare can encourage crime. The state needs to provide social support to its citizens. This support can be government social programs, social networks, family and interpersonal relationships. Legally, government support can be the existence of a fair judicial system, fair

law enforcement apparatuses, and laws that protect the public from crime. This social support from the government is a social factor that can reduce crime (Cullen, 1994; Rudolph and Starke, 2020). It does not mean that the state is the single or even the most critical source of social support. Still, it does mean that differences in the level of resources and the specific mix of services the state provides should affect a country's crime rate.

The second theory of the IAT focuses more on the influence of social institutions, especially economic and educational institutions, on crime rates. According to the IAT, imbalance or anomie arises when individuals feel frustrated or hindered in achieving social goals recognized by society. It could be due to the failure of social institutions to provide adequate means to achieve these goals. Two types of anomie may occur in society. First, differential anomie occurs when individuals or groups cannot achieve social goals. It causes them to seek alternative means, including crime, to achieve those goals. Second, Institutional Anomie focuses on imbalances in the distribution of opportunities social institutions provide. If social institutions do not provide adequate alternatives or if there are inequalities in providing such options, individuals may be inclined to turn to criminal activities. This imbalance can trigger the development of crime subcultures among certain groups in society. These subcultures may produce values that support criminal behavior to achieve goals that the group considers essential (Messner and Rosenfeld, 1997; Messner, Thome, and Rosenfeld, 2008; Rudolph and Starke, 2020).

3 METHODOLOGY

This study used panel data from 29 districts and nine cities in East Java. The data used is secondary data published by the Central Bureau of Statistics East Java in 2014 – 2016. The variables used in this study are as follows.

Table 1

List Of Variables In the Research

Variable	Items	Description
Type of crime rate	TCR	Number of Crime rates divided by crime type
Population Density	dencity_pop	Number of inhabitants per km^2
Income per capita	p_incom	The amount of money earned per person in a country or geographical area.
Economic shock (GDP)	eco_shock	Dummy circumstances are when a region's GDP falls equal to 1 and when GDP increases or remains equal to 0

Source: Prepared by authors (2024)

Several methods of estimating panel data can be done by choosing the best way between Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM). The selection of the best model between CEM and FEM is done with the Chow test; the Chow Test will show which is the best of the two methods; if the results of the Chow test show FEM is the better model, then proceed with the Hausman test. The Hausman test will choose between FEM or REM, which is the best model. The Hausman test is used if there is a fixed individual effect and the estimator β is consistent. In contrast, the estimation of the random effect is inconsistent, and β refers to the vector coefficient that affects the regressor (time-varying). Then, in this case, it can be tested using the Hausman test even though both are equally significant (Cameron and Trivedi, 2005). If the Hausman test shows the best model is REM, then the test will be performed Breusch Pagan LM test to determine using CEM or REM. Two tests were used to test the quality of data on panel estimation: heterogeneity and multicollinearity (Gujarati and Porter, 2009).

After determining the best estimation method and the classical assumptions are met, the model evaluation is carried out by considering the significance of the variables. The models in this study are divided into ten research models based on the type of crime, with the main models as follows.

$$TCR_{it} = dencity\_pop_{it} + ln\_incom_{it} + eco\_shock_{it} + \varepsilon_{it} \quad (1)$$

Notes:

i: City/County Panel Entity
t: Time period, t = 1, 2, ..., n
TCR_{it}: type of crime rate
$dencity\_pop_{it}$: population density of districts/cities in year t
ln_incom_{it}: Log Natural Income per capita District/City in year t
eco_shock_{it}: Dummy economic shock (GRDP) of Districts/Municipalities in year t
ε_{it}: Error term

This study's dependent variable (TCR) was divided into several types of crime rates. So, in this study, there will be ten models that will be estimated. This division refers to Cohen and Felson (1979), Haboug and Urdal (2013), and Boivin (2018). The division of crime rates is divided as follows:

Table 2

List type crime rate

No	Type of Crime Rate (TCR)	No	Type of Crime Rate
1.	Murder		- Violent Theft
2.	Persecution and Violence		- Common Theft
	- Severe persecution		- Motor Vehicle Theft
	- Mistreatment		- Theft by incrimination
	-	**6.**	Destruction/Destruction of Goods
	- Domestic Violence	**7.**	Intentional burning
3.	Immoral	**8.**	Narcotics and Psychotropics
	- Rape	**9.**	Cheating
	- Obscenity		- Fraud/Cheating
4.	Abduction		- Embezzlement
5.	Theft and Robbery	**10.**	Corruption

Source: Prepared by authors (2024)

This division of ten characters, as described by Boivin (2018), will give different results according to the characteristics of the type of crime itself.

Furthermore, the independent variable used in this study was population growth. Research on population growth associated with crime refers to two main papers: Cohen and Felson (1979) and Fischer (1975). In empirical terms, population numbers do not always positively affect Boivin's crime rate (2018). Furthermore, this study added the variable per capita income. The community's low level of per capita income tends to have the potential for crime when viewed from the side of the perpetrators of crime (Cohen and Felson (1979). Social class friction, as Fischer (1975) explained about suburban will encourage corruption (Sagandykova et al., 2023). This class shift can occur due to *a shock* in the economy. An increase or decrease in the regional economy that affects the unemployment rate threatens the opportunity for crime. The shock that occurs can also be like the COVID-19 pandemic. Based on these considerations and limited data, this study included *a dummy economic shock* to see the impact.

4 RESULTS AND DISCUSSIONS

The author provides an overall sample picture to analyze how population and welfare affect the crime rate in East Java. Table 3.1 represents descriptive statistics of variables in this study. The data below is panel data from 38 cities/regencies in East Java.

Table 3

Summary of tests in selecting the best model

Variable	Obs	Mean	Std. Dev.	Min	Max
Murder	114	2,605	2,917	0	14
Persecution and violence	114	74,754	93,200	0	473
Immoral	114	9,728	12,886	0	59
Abduction	114	0,439	1,089	0	7
Theft and Robbery	114	197,395	138,865	0	875
Destruction	114	8,368	11,156	0	64
Intentional Burning	114	1,132	4,860	0	39
Narcotics dan Psychotropics	114	50,482	65,629	0	435
Cheating	114	103,456	91,016	0	451
Corruption	114	2,895	7,437	0	59
Income per capita	114	10,388	0,652	9,491	12,846
Population density	114	184,509	2.146,074	277	8.606
Shock	114	0,570	0,497	0	1

Source: Central Bureau of Statistics East Java in 2014 – 2016

The number of conservationists in this study was 114. Table 3 shows that the highest crime rate is theft and robbery, with an average incidence of 197 cases. Next, high crime rates include persecution, violence, cheating, and narcotics and psychotropics. The incidence rate varies in each city/regency, reflected in the varying minimum and maximum values. There are some areas where these types of crimes often occur, but there are also those that do not experience certain crimes.

After we know the data description used in this study, the next step is selecting the right method. Based on the results of the Chow test of the whole model, it can be concluded that the best approach is from CEM, and FEM is CEM. Next, we performed Hausman tests across models, the result of which was that the FEM method was better than the REM method. Therefore, the method used in this research is the CEM method.

Table 4

Summary of tests in selecting the best model

Model	Type of Crime Rate	Chow test	Hausman test
1	Murder	0,696	0,920
2	Persecution and violence	0,860	0,679
3	Immoral	0,881	0,834
4	Abduction	0,703	-11,13
5	Theft and Robbery	0,913	0,417
6	Destruction	0,939	0,867
7	Intentional Burning	0,796	0,978
8	Narcotics dan Psychotropics	0,274	0,047
9	Cheating	0,891	0,516
10	Corruption	0,770	0,000

Source: Prepared by authors (2024)

Because the basis of the CEM test is OLS, the next data quality test will be carried out. The classical assumption test used in this estimation is the heterogeneity and multicollinearity test (Gujarati and Porter, 2009). The test results showed that some models were exposed to issues of heterogeneity and multicollinearity. Therefore, in testing the results using stata14, we use a robust model in trying data through STATA. The estimated effects are as follows:

Table 5

Results of Parameter Estimation Using CEM

Model	Type of Crime Rate	Independent Variable		
		p_incom	*dencity_pop*	*eco_shock*
1	Murder	0.00313	-0.000358***	0.694
		(0.01)	(-3.60)	(1.30)
2	Persecution and violence	16.75	-0.00597**	-3.105
		(1.35)	(-2.55)	(-0.17)
3	Immoral	1.349	-0.000932***	1.773
		(0.76)	(-2.69)	(0.74)
4	Abduction	0.106	-0.0000413	-0.193
		(0.70)	(-1.02)	(-0.89)
5	Theft and Robbery	39.24*	-0.00758	-11.38
		(1.89)	(-1.46)	(-0.42)
6	Destruction	0.849	-0.000849***	0.196
		(0.76)	(-3.09)	(0.09)
7	Intentional Burning	1.809	-0.0000947	1.262
		(1.53)	(-0.33)	(1.61)
8	Narcotics dan Psychotropics	32.33***	-0.00176	-6.532
		(3.07)	(-0.58)	(-0.61)
9	Cheating	26.83**	-0.00489	-0.0524
		(2.25)	(-1.47)	(-0.00)
10	Corruption	-2.409	0.000353	-1.108
		(-1.60)	(1.63)	(-0.73)

t statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$
Source: Prepared by authors (2024)

The increase in per capita income positively affected the rate of theft and robbery by 39.24 with a standard error of 0.1. A 1% per capita income increase in the city/district will increase the risk of theft and robbery by 39 cases. The phenomenon in which theft and robbery crimes increase as a region's per capita income rises is often known as the "*paradox of crime and affluence."* As per capita income increases, people may perceive that their area is safer and that crime has decreased. As a result, they may be less wary of criminal acts, thus creating opportunities for criminals to act. Another factor that can affect this is the existence of economic inequality. According to Rufrancos et al. (2013), changes in income inequality have a significant positive effect on crime. When per capita income increases, people may have the perception that their area is safer and that crime has decreased. As a result, they may be less wary of criminal behavior, creating opportunities for criminals to act. Another factor that can

influence it is the existence of economic disparity. An increase in per capita income does not necessarily mean that all members of society benefit equally. Sometimes, economic inequality can increase, with a small portion of the population benefiting greatly while others are still struggling. This is explained by Fajnzylber et al. in their research on the causality of crime and income inequality across 39 countries over a 30-year period. The results showed a positive correlation between income inequality or economic inequality and crimes such as theft, robbery, and murder. Such disparities can create social tensions and potential discontent, which can lead to criminal behavior.

Per capita income also positively affects the risk of Narcotics and Psychotropic Crime Rate of 32.33 with a standard error of 0.01. This result can be interpreted that a 1% per capita income will increase the crime risk in 32 Narcotics and Psychotropic Drugs cases. Narcotic and psychotropic crimes tend to grow when an area's per capita income rises, which can be caused by several complex factors. Easier Access became an influential one. Increased purchasing power can allow individuals to purchase more expensive narcotics or psychotropic substances or to obtain them more easily. Another factor is that an increase in per capita income can sometimes mean a more demanding job or higher stress levels. People who experience high stress may be more likely to seek escape from narcotics or psychotropic substances. This is relevant to research that has been published by Beccaria (1995) and Bentham (1843), where the research explains the rational choice theory, where criminals have a rational choice to commit crimes based on the calculation of rational benefits. The choice of these benefits causes neglect of legal actions as well as the pain that will be received and the costs that will be incurred (Eide et al., 2006).

The increase in per capita income positively affects the level of fraud in cities/regencies in East Java. A 1% increase in per capita income will increase the risk of fraud cases by 26 cases. People may feel more financially secure as their income rises, which can increase their ambition to achieve higher levels of lifestyle. Due to this ambition, some individuals may be tempted to commit financial fraud to earn more money. Increased income can also create social pressure to maintain or improve social status. It can make people less likely to engage in cheating to preserve the appearance of financial success. The Triangle Fraud Theory, by Donald Cressey (1953), explains this. The Triangle Fraud Theory explains that there are three factors that support the occurrence of fraud crimes: pressure, opportunity, and rationalization. Pressure to commit fraud consists of many things, such as economic demands, both financial and non-financial, as well as lifestyle; opportunity is a situation that opens up the possibility of fraud due to lack of supervision and abuse of authority; and rationalization is an ethical condition that

allows certain parties to commit fraud (Abdullahi and Mansor 2015). Lien (1986), Beck, and Maher (1986), in their research, showed that the increase in crimes related to financial fraud could increase due to inefficient bureaucracy.

In Table 5, it can be seen that the population density reduces the rate of occurrence of cases of murder, persecution and violence, immorality, and destruction of property. This finding aligns with the social control theory proposed by Sampson and Wilson (1995). In their approach, they explain that high levels of population density can affect the effectiveness of social control in preventing criminal acts. Developing strong communities with healthy social networks can help reduce levels of violence. It can be achieved through a community approach that promotes collaboration and shared problem-solving. Furthermore, the social control theory developed by Albert J. Reiss Jr. in his research states that social control theory is divided into two parts, namely personal control and social control. Social control has the ability to mobilize social groups to comply with and implement norms and regulations more effectively (Wells, 2011). Therefore, developing strong communities with healthy social networks can help reduce levels of violence. This can be achieved through community approaches that promote collaboration and joint problem-solving.

Table 5 has no significant relationship between economic sock and crime rates. One criminological theory relevant to explain this phenomenon is the theory of criminal opportunity by Cloward and Ohlin (1960). The theory explains that the level of crime is influenced by the opportunities available to individuals to commit criminal acts, be they opportunities to comply or opportunities to deviate.. When there is a significant economic shock, such as an economic recession, such as during the covid 19 pandemic, some of the economic opportunities that can drive individuals to criminal acts can be reduced. For example, when the unemployment rate rises during a recession, some people may spend more time looking for work than engaging in criminal acts. Government policies and people's responses to economic shocks can also play a role in controlling crime rates. Therefore, to understand the financial impact on crime rates more comprehensively, it is important to consider the specific context and other factors that might moderate the relationship.

5 CONCLUSIONS

The results of this study show that per capita income and population density affect the crime rate in East Java. The separation of forms of crime according to type gives an increasingly clear picture that we cannot assess all crimes through one treatment but must know the kind of

crime and the characteristics of the area where the crime occurred. Such as the crime rate of Theft and Robbery of Narcotics and Psychotropic Drugs, and fraud, which is influenced by the level of per capita income of an area, as well as the level of population density reducing the rate of murder, persecution and violence, immorality, and destruction of property destruction

The study also found no significant relationship between economic sock and crime rates. When a shock occurs, government policy will provide peace for the community. So, they will focus more on improving their economic conditions rather than committing crimes.

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