

# Income Inequality, Unemployment, and Urbanization: Key Determinants of The Crime Index in ASEAN

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## Abstract

This comprehensive study evaluates the impact of socio-economic factors—specifically income inequality, unemployment, and urbanization—on crime index across five ASEAN countries (Malaysia, Philippines, Indonesia, Thailand, and Singapore) utilizing annual panel data from 2012 to 2022. The analysis was conducted through the Panel Autoregressive Distributed Lag (ARDL) model to ascertain both the long-term and short-term effects of these variables on the crime index. The findings reveal diverse impacts across the countries studied. In the long term, both income inequality and urbanization showed a positive and significant relationship with the crime index, suggesting that increases in these factors are likely to elevate crime rates. Conversely, unemployment did not demonstrate a significant long-term effect on crime. In the short term, income inequality's impact on crime was positive but not significant, while unemployment exhibited a negative and significant effect in countries like Indonesia and Malaysia, suggesting that higher unemployment may actually reduce crime rates in these contexts. Urbanization showed no significant short-term impact on the crime index across the studied nations. The study also highlights the contextual variability of these relationships, influenced by local socio-economic conditions and policy frameworks. For instance, while income inequality and urbanization are significant drivers of crime in some countries, their impact is negligible in others, where social policies or economic structures may mitigate these effects. These results underscore the necessity of tailored policy interventions that consider local socio-economic dynamics and structural factors. Effective crime prevention strategies must adapt to the diverse conditions within ASEAN countries, reflecting the complex interplay between socio-economic factors and crime. This study contributes to the understanding of how socio-economic disparities and urban development correlate with crime rates, providing insights for policymakers to formulate nuanced and effective strategies for crime reduction in various socio-economic contexts.

## Keywords

Socio-Economic Factors, Crime Index, ASEAN Countries, Panel ARDL Model

## Introduction

The relationship between socio-economic factors and crime has long been a focal point in social and economic research. Recent studies highlight the significant impact of income inequality, unemployment, and urbanization on crime rates. Alwee et al. (2022) identified economic indicators such as GDP, unemployment, and inflation as primary drivers of property crime rates. Anozzi (2023) further underscored that high unemployment rates and income inequality are significant predictors of increased property crime in Indonesia. The spatial distribution and temporal patterns of crime have also been extensively explored. Chege et al. (2019) utilized Bayesian spatio-temporal modeling to map crime data, revealing key insights into the distribution of criminal activities. Deng et al. (2021) investigated the impact of streetscape factors on crime, emphasizing the importance of urban design in crime prevention.

Regional studies offer broader perspectives on the socio-economic determinants of crime. Dumitran (2020) discussed the adverse effects of crime on regional economic and social development, while Harahap (2023) examined how population density, unemployment, and the Human Development Index influence crime rates in North Sumatra. These studies collectively highlight the multifaceted relationship between socio-economic variables and crime. Additionally, the COVID-19 pandemic has exacerbated these issues, as demonstrated by Harun (2024), who noted an increase in crime rates in Malaysia due to economic downturns and rising unemployment. This is supported by Hashim et al. (2019) and Hussin et al. (2020), who explored the long-term relationship between economic instability and crime.

Globally, studies by Sachsida et al. (2010) and Hooghe et al. (2011) have revisited the relationship between inequality, unemployment, and crime, providing further evidence that economic inequality is a significant predictor of crime. The importance of effective legal frameworks and proactive public administration in reducing crime has also been emphasized (Pai, 2023; Parshintseva, 2023). Costantini et al. (2018) confirmed that income inequality, unemployment, and preventative efforts affect crime over the long term. Goh et al. (2018) found a positive relationship between income inequality and crime through dynamic panel data approaches. Yildiz et al. (2013) demonstrated that unemployment, income, and education have significant effects on crime based on individual data. Wang and Arnold (2008) also showed that local income inequality and concentrated disadvantage are closely related to homicide rates. Şentürk-Ulucak and Bilgili (2020) added that economic analysis of crime in Turkey and European countries indicates that economic instability and social factors influence crime rates.

This research aims to contribute to the existing literature by examining the influence of income inequality, unemployment, and urbanization on crime indices. By integrating findings from various regions and employing comprehensive analytical techniques, this study seeks to provide a deep understanding of the socio-economic determinants of crime and inform the formulation of effective crime prevention policies.

## Methods

Income inequality, unemployment, and urbanization are key factors frequently associated with increased criminal activity. Prior studies indicate that high levels of income inequality can engender dissatisfaction among populations, which in turn may propel criminal behavior as a form of expressing perceived injustices (Fajnzylber et al., 2002). Unemployment also exerts a significant impact on criminality, as high unemployment rates often lead to social instability and increased crime rates (Machin & Meghir, 2004).

Research by Chien et al. (2020) employed the Autoregressive Distributed Lag (ARDL) model to identify the impact of income inequality and urbanization on crime indices. Their findings revealed significant relationships both in the short and long term between income inequality and criminality in several developing countries. Zaman et al. (2022) demonstrated that the ARDL method is effective in analyzing the impact of unemployment on criminality, where it was found that high unemployment rates significantly affect the rise in crime indices. In the ASEAN context, where each country exhibits varying levels of urbanization and income inequality, this method accommodates such variability and provides more accurate estimations.

Research by Sugiharti et al. (2022) identified income inequality and poverty as determinants of crime rates across 34 provinces in Indonesia, showing that higher income levels and greater income disparities are associated with higher crime rates. Poverty also maintains a positive relationship with crime; a wider poverty gap (a measure of poverty) and severity index correlates with higher deprivation among the poor, leading to more crime. The significant and positive effects of poverty on crime rates, along with the positive relationships between crime, income, and inequality, suggest that Indonesia might face higher crime risks as the nation's prosperity increases.

This study utilizes secondary panel data spanning from 2012 to 2022. The observed countries include the ASEAN-5: Malaysia, the Philippines, Indonesia, Thailand, and Singapore. Data for this study were collected from various sources including Numbeo, the World Income Inequality Database, the World Bank, and the Global Organized Crime Index. Included information comprises crime indices, income inequality levels, unemployment rates, and urban population growth.

This study employs the Panel Autoregressive Distributed Lag (ARDL) approach to analyze the influence of income inequality, unemployment, and urbanization on crime indices in the five ASEAN countries. The Panel ARDL is a dynamic econometric method that utilizes a combination of time series and cross-sectional data (panel data). This approach allows for the examination of both long-term and short-term relationships among variables.

The Panel ARDL model is specified as follows:

$$\Delta Y_{it} = a_i + \beta_1 Y_{it-1} + \beta_2 X_{it-1} + \sum_{j=1}^p \gamma_j \Delta Y_{it-j} + \sum_{j=0}^q \delta_j \Delta X_{it-j} + e_{it}$$

Here:

$Y_{it-1}$  represents the crime index for country  $i$  at time  $t$

$X_{it-1}$  represents the independent variables (income inequality, unemployment, and urbanization)

$a_i$  denotes the fixed effects for each country

$\beta_1$  and  $\beta_2$  capture the long-term relationships

$\gamma_j$  and  $\delta_j$  capture the short-term dynamics

$e_{it}$  is the residual error

The estimation procedure involves the following steps:

1. Testing for Stationarity: Conducting unit root tests (such as the ADF Fisher and PP Fisher tests) to determine the integration order of the variables.
2. Model Estimation: Estimating the Panel ARDL model using the maximum likelihood estimation method, including selecting the appropriate lag length based on information criteria (AIC, BIC).
3. Cointegration Testing: Testing for cointegration among variables using the Kao test approach to determine the existence of long-term equilibrium relationships.
4. Diagnostic Checking: Performing diagnostic tests to check the adequacy of the model, including tests for serial correlation, heteroscedasticity, and residual normality.

The analysis is conducted using the EViews software, which provides comprehensive tools for panel data econometrics. EViews is utilized to estimate the Panel ARDL model and to perform diagnostic testing and sensitivity analysis.

## Results and Discussion

### Stationarity Testing

The stationarity test employs a panel unit root test using the ADF - Fisher Chi-square and PP-Fisher approaches for all research variables, namely crime index, income inequality, unemployment, and urbanization. The testing is conducted by considering individual intercepts and trends.

**Table 1.** Unit Root Test

Variable	Level & First Diff	Intercept/Trend	Prob		Result
			ADF- Fisher	PP- Fisher	
Crime Index	Level	Intercept	0.0007	0.0013	I (0)
		Interc. & Trend	0.0031	0.0280	
	First Diff.	Intercept	0.0013	0.0000	
		Interc. & Trend	0.1555	0.0003	
Income Inequality	Level	Intercept	0.1060	0.0056	I (0)
		Interc. & Trend	0.0642	0.0039	
	First Diff.	Intercept	0.0032	0.0002	
		Interc. & Trend	0.0903	0.0046	
Unemployment	Level	Intercept	0.0210	0.0875	I (0)
		Interc. & Trend	0.0007	0.0000	
	First Diff.	Intercept	0.0000	0.0000	
		Interc. & Trend	0.0017	0.0001	
Urbanization	Level	Intercept	0.8320	0.6693	I (1)
		Interc. & Trend	0.0151	0.0006	
	First Diff.	Intercept	0.0001	0.0002	
		Interc. & Trend	0.0010	0.0430	

Source: Eviews 12 output (Data processed)

The results of the stationarity tests employing the panel unit root test with the ADF-Fisher and PP-Fisher approaches indicate that the variables of crime index, income inequality, and unemployment are stationary at level ( $I(0)$ ), while the urbanization variable is stationary at first difference ( $I(1)$ ). These findings reveal a mixture of variables that are stationary at both level and first difference, fulfilling the assumptions required for analysis using the Panel Autoregressive Distributed Lag (ARDL) method. Consequently, all variables are validated and the analysis can proceed to the next phase using the Panel ARDL approach.

### Determination of Optimum Lag

The determination of the optimum lag is conducted using several information criteria: the Akaike Information Criterion (AIC), the Schwarz Information Criterion (SIC), and the Hannan-Quinn Criterion (HQC). The output from these criteria provides values for various combinations of model lags.

**Table 2.** Optimum lag

Model	LogL	AIC*	BIC	HQ	Specification
1	-98.996018	5.079841	6.150574	5.487582	ARDL(1, 1, 1, 1)

Source: Eviews 12 output (Data processed)

Generally, selecting a higher lag based on the Akaike Information Criterion (AIC) often considers the model's complexity and better fit. However, for a balance between complexity and precision, the lag values indicated by the Schwarz Information Criterion (SIC) and Hannan-Quinn Criterion (HQC), typically lag 1, are often chosen. Therefore, for subsequent analysis, lag 1 is selected as the optimal lag for this Panel Autoregressive Distributed Lag (ARDL) model. This choice ensures a good balance between explaining the variability in the data and avoiding overfitting, thereby providing more accurate and reliable results.

### Cointegration Test

The Kao cointegration test is utilized to examine the presence of long-term relationships among the variables within the model. Based on the output from the Kao cointegration test, the results are as follows:

**Table 3.** Kao Cointegration Test

ADF	t-Statistik	Probabilitas
	-1.596211	0.0552
<b>Residual variance</b>	17.69517	
<b>HAC variance</b>	18.72556	

Source: Eviews 12 output (Data processed)

The Kao cointegration test is employed to examine the presence of long-term relationships among the variables in the model. A probability value smaller than 0.1 indicates that the null hypothesis, which states that there is no cointegration, can be rejected. In other words, there is substantial evidence of long-term relationships among the variables in the model. This finding supports the use of the Panel ARDL model to analyze the effects of these variables on the crime index in the ASEAN-5 countries.

### Panel ARDL Model Estimation Results

The long-term equilibrium results indicate that income inequality and urbanization have significant coefficients. These coefficients suggest a positive relationship between income inequality and urbanization and the crime index, while unemployment shows no significant relationship in the long term. This implies that increases in income inequality and urbanization tend to elevate crime rates, whereas long-term changes in unemployment rates do not appear to correlate with crime levels.

Based on the Panel ARDL model estimation output, the short-term equilibrium results show significant coefficients for the unemployment variable. This indicates that changes in unemployment rates have a direct and significant impact on the crime index in the short term. These results highlight differing dynamics between short-term and long-term interactions among these variables and the crime index, which are crucial to consider in policy-making aimed at crime reduction in the ASEAN-5 countries.

**Table 4.** ARDL Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>Long-term Equation</b>				
INEQ	0.921549	0.448054	2.056783	0.0495
UNEMP	0.989567	0.621165	1.593082	0.1228
URBAN	21.56452	1.332978	16.17770	0.0000
<b>Short-term Equation</b>				
COINTEQ01	-0.517072	0.264924	1.951773	0.0614
D(INEQ)	1.262951	1.848634	0.683181	0.5003
D(UNEMP)	-2.753432	1.012373	2.719779	0.0113
D(URBAN)	0.306069	16.66980	0.018361	0.9855
C	-15.69395	8.376592	1.873548	0.0719

Source: Eviews 12 output (Data processed)

### Panel ARDL Test Results by Country

Based on the output from the Panel Autoregressive Distributed Lag (ARDL) model estimation for the short-term relationships between income inequality, unemployment, and urbanization and the crime index in Malaysia, the results reveal several important findings. Income inequality is shown to have a positive and significant influence on the crime index, indicating that an increase in income inequality tends to raise crime rates in the short term. Conversely, unemployment exhibits a negative and significant effect, suggesting that an increase in unemployment tends to decrease crime rates. Meanwhile, urbanization does not have a significant impact on the crime index in the short term.

**Table 5.** Malaysia ARDL Panel Output

Variable	Coefficient	Std. Error	t- Statistic	Prob.
COINTEQ01	-1.364311	0.016989	80.30507	0.0000
D(INEQ)	6.354949	0.886186	7.171120	0.0056
D(UNEMP)	-2.783215	0.610186	4.561254	0.0198
D(URBAN)	28.77053	121.3634	0.237061	0.8279
C	-27.52698	572.2999	0.048099	0.9647

Source: Eviews 12 output (Data processed)

Additionally, the results indicate a significant short-term adjustment mechanism toward long-term equilibrium. This adjustment mechanism ensures that if imbalances occur, the analyzed variables will revert to their long-term equilibrium states. The constant in this model does not exhibit a significant influence, suggesting that other factors are more dominant in determining the crime rate in Malaysia. Overall, these findings indicate that in the short term, income inequality and unemployment are significant factors affecting the crime rate in Malaysia, while urbanization does not have a substantial impact.

Based on the output from the Panel Autoregressive Distributed Lag (ARDL) model estimation for the short-term relationships between income inequality, unemployment, and urbanization on the crime index in the Philippines, the results reveal several key findings. Income inequality does

not have a significant impact on the crime index in the short term, as indicated by small coefficients and high probability values. Similarly, unemployment also does not show a significant effect on the crime index, with a negative coefficient but high probability values. Urbanization also does not have a significant influence on the crime index in the short term.

**Table 6.** Philippines ARDL Panel Output

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ01	-0.816367	0.077476	-10.53702	0.0018
D(INEQ)	-0.165362	3.139860	-0.052665	0.9613
D(UNEMP)	-1.927177	9.178062	-0.209976	0.8471
D(URBAN)	-38.53625	816.6942	-0.047186	0.9653
C	-38.67851	513.7870	-0.075281	0.9447

Source: Eviews 12 output (Data processed)

Furthermore, the adjustment coefficients indicate a significant short-term adjustment mechanism towards long-term equilibrium. This negative coefficient suggests that if imbalances occur, the analyzed variables will revert to their long-term equilibrium. The constant in this model is also not significant, indicating that other factors are more dominant in determining the crime rate in the Philippines. Overall, these results suggest that in the short term, income inequality, unemployment, and urbanization do not have a significant impact on the crime rate in the Philippines, but there is a mechanism for adjustment towards long-term equilibrium.

Based on the output from the Panel Autoregressive Distributed Lag (ARDL) model estimation for the short-term relationships between income inequality, unemployment, and urbanization on the crime index in Indonesia, the results reveal several key findings. Income inequality shows a positive but non-significant influence on the crime index in the short term. In contrast, unemployment has a negative and significant impact on the crime index, indicating that an increase in unemployment levels tends to decrease crime rates in the short term. Urbanization does not have a significant effect on the crime index in the short term.

**Table 7.** Indonesia ARDL Panel Output

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ01	-0.410132	0.001839	-223.0030	0.0000
D(INEQ)	4.258959	1.740482	2.447000	0.0919
D(UNEMP)	-4.535057	0.946596	-4.790911	0.0173
D(URBAN)	-34.06074	154.1385	-0.220975	0.8393
C	-18.05327	48.88401	-0.369308	0.7364

Source: Eviews 12 output (Data processed)

Additionally, the adjustment coefficients indicate a highly significant short-term adjustment mechanism toward long-term equilibrium. This negative coefficient suggests that, in the event of imbalances, the analyzed variables will revert to their long-term equilibrium. The constant in this model is also not significant, indicating that other factors are more dominant in determining the crime rate in Indonesia. Overall, these results suggest that in the short term, unemployment is a significant factor affecting the crime rate in Indonesia, while income inequality and urbanization do not have a significant impact. Nevertheless, there is a strong adjustment mechanism toward long-term equilibrium.

Based on the output from the Panel Autoregressive Distributed Lag (ARDL) model estimation for the short-term relationships between income inequality, unemployment, and urbanization on the crime index in Thailand, the results reveal several key findings. Income inequality does not

have a significant influence on the crime index in the short term, as indicated by very small coefficients and high probability values. Similarly, unemployment also does not show a significant effect on the crime index, despite its negative coefficient. Urbanization also does not have a significant impact on the crime index in the short term.

**Table 8.** Thailand ARDL Panel Output

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
COINTEQ01	-0.146428	0.020567	-7.119573	0.0057
D(INEQ)	0.081196	0.269530	0.301251	0.7829
D(UNEMP)	-5.102946	23.93009	-0.213244	0.8448
D(URBAN)	45.66289	2235.990	0.020422	0.9850
C	-1.487751	60.40434	-0.024630	0.9819

Source: Eviews 12 output (Data processed)

Additionally, the adjustment coefficients reveal a significant short-term adjustment mechanism toward long-term equilibrium. This negative coefficient indicates that, in the event of imbalances, the analyzed variables will revert to their long-term equilibrium states. The constant in this model is also not significant, suggesting that other factors are more dominant in determining the crime rate in Thailand. Overall, these results indicate that in the short term, income inequality, unemployment, and urbanization do not have significant impacts on the crime rate in Thailand, yet there exists a mechanism for adjustment toward long-term equilibrium.

Based on the output from the Panel Autoregressive Distributed Lag (ARDL) model estimation for the short-term relationships between income inequality, unemployment, and urbanization on the crime index in Singapore, the results reveal several key findings. Income inequality does not have a significant influence on the crime index in the short term, as indicated by a negative coefficient and high probability values. Similarly, unemployment also does not show a significant effect on the crime index, despite its positive coefficient. Urbanization likewise does not have a significant impact on the crime index in the short term.

**Table 9.** Singapore ARDL Panel Output

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
COINTEQ01	0.151877	0.006998	21.70162	0.0002
D(INEQ)	-4.214988	4.883285	-0.863146	0.4515
D(UNEMP)	0.581235	6.782470	0.085697	0.9371
D(URBAN)	-0.306084	0.362717	-0.843866	0.4607
C	7.276750	20.67582	0.351945	0.7482

Source: Eviews 12 output (Data processed)

Additionally, the adjustment coefficients indicate a highly significant short-term adjustment mechanism toward long-term equilibrium. This positive coefficient suggests that if imbalances occur, the analyzed variables will revert to their long-term equilibrium states. The constant in this model is also not significant, indicating that other factors are more dominant in determining the crime rate in Singapore. Overall, these results suggest that in the short term, income inequality, unemployment, and urbanization do not have significant impacts on the crime rate in Singapore, yet there is a mechanism for adjustment toward long-term equilibrium.

## Discussions

### Income Inequality on the Crime Index

The findings of this study show that the influence of income inequality on the crime index varies across the ASEAN-5 countries. In the short term, income inequality has a significant impact in some countries, while in others, its influence is not significant. In Malaysia, income inequality has been proven to have a positive and significant impact on the crime index. This result aligns with previous research suggesting that income inequality can increase crime rates due to social dissatisfaction and heightened economic pressure on low-income individuals (Sachsida et al., 2010). High inequality often creates a sense of injustice and frustration, which can, in turn, drive criminal behavior as an attempt to counteract these inequalities.

Conversely, in the Philippines, income inequality does not have a significant impact on the crime index in the short term. This may be due to other factors that are more dominant in influencing crime, such as unemployment or urbanization. Studies by Hooghe et al. (2011) also found that the impact of income inequality on crime can vary depending on the social and economic context of each country. In Indonesia, the influence of income inequality is also not significant, possibly indicating that factors such as education level or social policies play a more substantial role in affecting crime rates.

In Thailand, the findings indicate that income inequality does not have a significant impact on crime. This could reflect social resilience or the effectiveness of government policies in addressing economic disparities. In Singapore, income inequality also does not have a significant impact on the crime index in the short term. Singapore, with its stringent legal system and robust social policies, may have effective counterbalancing mechanisms to mitigate the impact of income inequality on crime.

Overall, the results of this study suggest that the impact of income inequality on crime is highly contextual and influenced by various social, economic, and policy factors unique to each country. These findings are consistent with literature indicating that although income inequality is often linked to crime, its effects can vary depending on the specific context of each country. Therefore, policies aimed at reducing crime through the reduction of income inequality need to be tailored to the conditions and characteristics of each country.

### Unemployment on the Crime Index

This study reveals that the impact of unemployment on the crime index varies across the ASEAN-5 countries. In Malaysia, unemployment has a negative and significant influence on crime, suggesting that increases in unemployment actually reduce crime levels. This finding may be attributed to social assistance programs that help unemployed individuals so they do not resort to crime. Studies by Hooghe et al. (2011) also note that the impact of unemployment on crime can vary depending on the existing social and economic policies.

In the Philippines, unemployment does not show a significant influence on the crime index. This might reflect a more complex economic condition where other factors, such as political instability or social injustice, play a more significant role in determining crime levels. In Indonesia, unemployment shows a negative and significant impact on crime, similar to the findings in Malaysia. This indicates that in some contexts, high unemployment might not directly increase crime because there may be mechanisms or policies in place that help alleviate the economic

pressures on unemployed individuals.

In Thailand, unemployment does not have a significant influence on crime. This might be due to effective social and economic policies or different cultural factors that affect how individuals behave when unemployed. In Singapore, unemployment also does not have a significant influence on crime, which may be due to a strong legal system and effective government policies in handling unemployment issues and ensuring social welfare.

Overall, the results of this study indicate that the influence of unemployment on crime is highly contextual and influenced by various social, economic, and policy factors unique to each country. These findings align with literature suggesting that the impact of unemployment on crime can vary depending on the specific conditions and policies implemented in each country. Therefore, efforts to reduce crime through the reduction of unemployment need to be adapted to the local context and socioeconomic characteristics of each country.

### **Urbanization on the Crime Index**

The findings of this study indicate that urbanization does not have a significant impact on the crime index in most ASEAN-5 countries in the short term. In Malaysia, the Philippines, Indonesia, Thailand, and Singapore, urbanization does not show a significant relationship with crime levels. This suggests that other factors may be more dominant in influencing crime rates, such as income inequality and unemployment.

Previous research by Wang and Arnold (2008) also noted that the impact of urbanization on crime can vary depending on the social and economic structure and government policies. In some countries, urbanization can enhance economic opportunities and access to social services, which can reduce the pressures that drive crime. However, in other countries, rapid urbanization without adequate infrastructure support can lead to increased social tensions and crime.

In Malaysia and Indonesia, the insignificance of urbanization's impact on crime may reflect the effectiveness of urbanization policies that manage city growth well, thereby not triggering an increase in crime. Conversely, in countries like Thailand and Singapore, the insignificant results may indicate that other factors, such as unemployment and income inequality, play a more significant role in determining crime levels compared to urbanization itself.

Overall, these results emphasize the importance of considering the local context when examining the relationship between urbanization and crime. Urbanization is not a singular factor determining crime levels, and its impact can vary depending on socioeconomic conditions and policies applied in each country. This study highlights the need for comprehensive and locally tailored policy approaches to manage urbanization and minimize the risk of increased crime.

### **Conclusion**

This study aimed to analyze the influence of income inequality, unemployment, and urbanization on the crime index in five ASEAN countries, namely Malaysia, the Philippines, Indonesia, Thailand, and Singapore, using annual panel data for the period 2012-2022 and the Panel ARDL method to evaluate both long-term and short-term impacts. The research findings indicate that in the long term, income inequality and urbanization have a positive and significant impact on the crime index, suggesting that increases in income inequality and urbanization tend to increase crime levels. Conversely, unemployment does not show a significant influence in the long term.

In the short term, the influence of income inequality on the crime index is positive but not significant, while unemployment has a negative and significant impact on crime in some countries, such as Indonesia and Malaysia. Urbanization does not show a significant influence in the short term in most of the studied countries. These conclusions affirm the importance of a contextual and diverse policy approach to addressing crime in ASEAN countries, taking into account the long-term and short-term dynamics of these socioeconomic variables. These findings support the research objective to understand the complexities of the relationships between income inequality, unemployment, urbanization, and crime, and provide insights for more effective policy formulation.

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