POVERTY, INEQUALITY, AND CRIME RATES IN CHICAGO

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Abstract: This study examines the relationship between socioeconomic conditions and crime rates across Chicago's neighborhoods using multiple regression analysis. Drawing on Social Disorganization Theory, Relative Deprivation Theory, and supporting empirical research, the analysis tests six hypotheses related to poverty, unemployment, education, residential crowding, demographic composition, and a composite Hardship Index. The results identify the Hardship Index as a significant predictor of crime, reinforcing the argument that broader structural disadvantage undermines informal social control. In contrast, traditional predictors such as poverty, unemployment, and educational attainment did not show statistically significant associations. Additionally, neighborhoods with larger dependent populations (children and elderly) exhibited lower crime rates, suggesting the protective role of demographic composition. This evidence demonstrates that urban crime is context-dependent and reinforces the value of multidimensional approaches to neighborhood-level criminological analysis.

Keywords: Structural Inequality, Poverty and Crime, Income Inequality and Crime, Chicago Crime

1 INTRODUCTION

Urban crime remains a pressing concern in cities marked by deep socioeconomic disparities. In Chicago, a city renowned for its cultural richness and economic vitality, persistent challenges of poverty, inequality, and crime continue to shape neighborhood dynamics. Understanding the complex interplay between these factors is crucial for developing targeted and effective crime prevention strategies.

This study examines how key socioeconomic variables—poverty, income inequality, educational attainment, unemployment, and demographic characteristics—affect crime patterns across Chicago's 77 community areas. Drawing on two foundational criminological frameworks, Social Disorganization Theory (Shaw & McKay, 1942) and Relative Deprivation Theory (Runciman, 1966), this study also acknowledges the relevance of Merton's Anomie Theory (1938), which conceptualizes crime as a response to structural barriers that prevent individuals from achieving socially valued goals through legitimate means. While Social Disorganization Theory links neighborhood-level factors like poverty, instability, and weak social ties to reduced informal social control and increased crime (Sampson & Groves, 1989; Kornhauser, 1978), Relative

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Deprivation Theory attributes crime to perceived disparities that lead to frustration and resentment (Agnew, 1992; Blau & Blau, 1982).

Importantly, this study treats Relative Deprivation Theory as a specific and central lens, rather than grouping it under the broader category of strain theories. While both frameworks address the impact of inequality and unmet expectations, Relative Deprivation Theory focuses more directly on the psychological and social consequences of perceived inequality, rather than structural opportunity blockages alone.

The central research question guiding this study is: To what extent do socioeconomic factors—specifically poverty, income inequality, unemployment, education levels, and age demographics—explain variations in crime rates across Chicago neighborhoods? The purpose of this study is to empirically assess the relationship between socioeconomic conditions and crime in Chicago and to evaluate the continued relevance of Social Disorganization and Relative Deprivation theories in explaining contemporary crime patterns. It also aims to inform localized policy interventions that address urban inequality and promote public safety. To situate this inquiry within the broader scholarly context, the following literature review synthesizes key theoretical and empirical contributions on the relationship between socioeconomic conditions and crime.

By integrating theoretical frameworks with localized data, this research offers insights into how structural inequalities and demographic features interact to shape urban crime. It also contributes to broader academic and policy debates about how to build safer, more equitable communities.

2 LITERATURE REVIEW

The relationship between structural inequality and crime has been a foundational concern in criminology. Two key theoretical frameworks—Social Disorganization Theory and Relative Deprivation Theory—offer explanations that continue to guide contemporary research. Social Disorganization Theory, initially developed by Shaw and McKay (1942), argues that poverty, residential instability, and ethnic heterogeneity disrupt community cohesion and reduce informal social control, leading to higher crime rates. This model has evolved through the work of scholars such as Sampson and Groves (1989) and Bursik and Grasmick (1993), who introduced the concept of collective efficacy—defined as mutual trust and shared norms among neighbors—as a mechanism for informal regulation of behavior.

Relative Deprivation Theory, grounded in the work of Runciman (1966), identifies perceived inequality rather than absolute poverty as a primary source of frustration that may prompt criminal behavior. Individuals who compare themselves unfavorably to others may experience resentment and alienation, which can lead to deviant outcomes. Blau and Blau (1982) expanded this framework at the macro level by arguing that inequality in socially salient dimensions—particularly race and class—can heighten feelings of injustice and fuel crime. This argument finds additional backing in recent micro-level studies that examine how perceived disparities shape

individual behavior. For instance, Itskovich (2024) reports that individuals who perceive themselves as economically worse off relative to their peers are significantly more likely to engage in both property and violent crimes, even when controlling for absolute income levels.

Merton's (1938) Anomie Theory offers a related but distinct perspective, emphasizing the structural tensions that arise when culturally prescribed goals—such as financial success—are widely promoted, but the legitimate means to achieve them are unevenly distributed across social strata. This disconnect creates a state of normlessness, or "anomie," in which individuals may turn to deviant behavior to attain socially valued outcomes. Unlike Relative Deprivation Theory, which centers on subjective perceptions of inequality and social comparison (Runciman, 1966), Merton's model focuses on the systemic misalignment between aspirations and accessible means. Anomie Theory has been foundational in understanding how structural barriers can foster strain and deviance, particularly in societies that place strong value on achievement and individual success (Bernard, 1990). Although this study adopts Relative Deprivation Theory as its primary explanatory lens, Merton's insights help contextualize how broader social structures may contribute to crime through the production of strain.

While these theories provide compelling insights, empirical studies offer mixed results. A number of investigations have confirmed that income inequality is positively associated with violent and property crime (Fajnzlber et al., 2002; Narayan & Smyth, 2004; Kovandzic et al., 1998), particularly in urban settings. Earlier studies, including those by Loftin and Hill (1974) and Simpson (1985), also found robust associations between structural disadvantage and crime, often using metropolitan areas or states as units of analysis. However, other work has reported nonsignificant or inconsistent effects, especially on homicide, as observed in the studies by Messner (1982, 1983), Bailey (1984) and Chamlin (1989) contributed early evidence to the debate, and Pazzona's (2024) meta-analysis of more than 1,300 estimates reaffirmed that although inequality has a statistically significant impact on crime, its effect size is modest—indicating that inequality may act more as a contextual amplifier than a primary driver.

This nuanced view is reflected in Lacey, Soskice, Cheliotis, and Xenakis's (2021) institutional perspective, which argues that the effects of inequality on crime are deeply mediated by the political economy. In liberal market economies characterized by fragmented welfare systems and adversarial politics, structural inequality often feeds into more punitive criminal justice responses. These institutional arrangements create feedback loops in which inequality, exclusion, and incarceration reinforce one another. In contrast, coordinated market economies such as those in the Nordic countries—with their robust welfare systems and cohesive political structures—tend to exhibit lower incarceration rates and a weaker association between inequality and crime.

Contemporary empirical studies further expand these insights. Errol, Madsen, and Moslehi (2021) analyzed crime data across 16 advanced countries over two centuries and found that long-term declines in family cohesion and community structure predicted crime trends over time, validating the macro-level relevance of Social Disorganization Theory. Sampson et al. (1997)

emphasize that structural disadvantage undermines collective efficacy, particularly in urban settings, leading to social withdrawal, reduced civic participation, and rising crime. This erosion of informal controls is exacerbated by rapid urban changes such as gentrification (Warner, 2007) and the long-term legacy of racially discriminatory policies such as redlining (Powell & Porter, 2023).

Subcultural theories contribute another layer to this discussion by explaining how persistent inequality and institutional neglect can give rise to informal value systems that normalize deviant behavior. Anderson's (1999) ethnographic account of disinvested Philadelphia neighborhoods illustrates how "street codes" emphasizing toughness and retaliation become adaptive strategies for navigating unsafe environments. Venkatesh (2008) and Harding (2010) similarly document how local norms and informal economies evolve in structurally excluded communities. These norms may become more prevalent in political systems that prioritize punitive measures over social inclusion, as noted by Lacey et al. (2021).

Economic indicators such as unemployment and education are also central to understanding crime dynamics. While prior research by Gould et al. (2002) and Altindag (2012) establishes a strong correlation between unemployment and property crime, evidence regarding its impact on violent crime is more mixed and context-dependent (Greenberg & Winter-Ebmer, 2001). Cross-national evidence complicates this relationship further. Hazra and Cui (2018), examining Indian districts, found that higher unemployment was associated with lower crime, likely due to increased supervision. Similarly, the presence of informal labor markets has been identified by Hipp and Boessen (2017) as a potential buffer against the criminogenic consequences of unemployment.

Education has consistently been identified as a protective factor against crime. Lochner and Moretti (2004) found that each additional year of schooling significantly reduces the likelihood of criminal behavior. Hjalmarsson and Lochner (2012) and Chetty et al. (2016) provide further evidence for this trend, underscoring the long-term crime-reducing effects of early educational interventions and access to quality schooling. However, Büttner's (2025) analysis of South African precincts revealed that disparities in education within social groups had a stronger correlation with violent crime than overall levels of educational attainment. This underscores the importance of examining inequality within its social context, rather than relying solely on aggregate indicators.

Demographic composition also shapes neighborhood crime risk. Studies have found that neighborhoods with higher proportions of dependent populations—namely, children and older adults—tend to exhibit lower crime rates due to stronger familial bonds and more consistent social surveillance (Smith & Jarjoura, 1988; Freudenburg & Jones, 1991). Büttner (2025) and Sugiharti et al. (2023) both observed that multigenerational households and greater age diversity within neighborhoods bolstered informal social controls, reducing the risk of violent crime.

Recognizing the limitations of single-variable models, some researchers advocate for multidimensional indices to capture the complex interplay of socioeconomic stressors. The Chicago Hardship Index, for example, integrates data on poverty, unemployment, education, housing crowding, and age structure to provide a composite measure of neighborhood-level deprivation (CDPH, 2012). This approach reflects Sampson and Wilson's (1995) assertion that concentrated disadvantage operates through multiple overlapping pathways. The Hardship Index serves not only as a proxy for absolute deprivation but also captures elements of perceived inequality, making it a relevant operationalization of Relative Deprivation Theory.

Taken together, the literature indicates that although poverty, inequality, unemployment, and educational attainment are linked to crime in various ways, their impacts are highly context-dependent and influenced by broader institutional, demographic, and cultural conditions.

In cities like Chicago—marked by historical segregation and enduring spatial inequality—these dynamics play out in particularly complex ways. To address these gaps and provide a localized empirical assessment, this study formulates a set of hypotheses that directly test the relationship between specific socioeconomic indicators and crime rates across Chicago's neighborhoods. Based on this body of research, the following hypotheses were formulated to test the relationship between socioeconomic factors and crime rates in Chicago.

Despite the breadth of research linking structural inequality to crime, the empirical findings remain mixed and context-dependent. While many studies support a positive association between poverty, unemployment, and crime, others report weak or inconsistent effects, particularly when accounting for factors such as social cohesion, informal economies, or local institutional arrangements. Moreover, although education is widely cited as a protective factor, emerging evidence suggests that intra-community disparities in educational attainment may play a more critical role than absolute levels. These contradictions highlight the need for localized studies that examine how combinations of socioeconomic variables interact within specific urban environments. In light of these complexities, the present study formulates hypotheses tailored to Chicago's distinct social and spatial context, using both traditional and composite indicators to assess their influence on neighborhood-level crime.

2.1 Hypotheses

1. Neighborhoods with a greater percentage of households below the poverty line will exhibit higher crime rates due to economic strain and limited access to resources.
2. Higher per capita income will be negatively associated with crime rates, reflecting the mitigating effects of greater economic stability and resources.
3. Higher unemployment rates will be positively correlated with crime rates, emphasizing the role of limited economic opportunities as a key driver of criminal behavior.

4. Lower levels of educational attainment (percentage of individuals without a high school diploma) will be positively associated with crime rates, as education promotes social mobility and economic stability.
5. Higher levels of socioeconomic stressors, as measured by the Hardship Index, are positively associated with higher crime rates in Chicago neighborhoods.
6. Neighborhood areas of Chicago with a higher percentage of dependent populations (individuals under 18 or over 64) will experience lower crime rates, as these demographics often indicate stronger familial and community networks.

Building on the insights from Social Disorganization Theory and Relative Deprivation Theory, this study operationalizes key socioeconomic indicators that reflect structural inequality and neighborhood stability. The variables selected—poverty, unemployment, educational attainment, residential crowding, demographic composition, and the Hardship Index—are consistent with prior empirical research that examines community-level crime patterns (Sampson & Groves, 1989; Blau & Blau, 1982). By employing multiple regression analysis, this study seeks to quantify the impact of these socioeconomic stressors on crime rates across Chicago's neighborhoods. The following section outlines the methodology used to examine these relationships, detailing data sources, variable definitions, and statistical techniques."

3 METHODOLOGY

This study employs multiple regression analysis to examine how socioeconomic variables predict crime rates across Chicago's 77 community areas. This method enables the assessment of the individual and combined effects of multiple independent variables on the dependent variable—neighborhood-level crime percentage (Field, 2013). The selected independent variables include the Hardship Index, percentage of crowded housing, percentage of households below the poverty line, unemployment rate (ages 16 and over), percentage without a high school diploma (ages 25 and over), percentage of the dependent population (under 18 or over 64), and per capita income.

Each variable was selected based on its theoretical significance and empirical validation in prior criminological research:

- Hardship Index: A composite measure that integrates multiple dimensions of structural disadvantage, widely used in public health and social research to represent cumulative socioeconomic stress.
- Crowded Housing: Serves as an indicator of residential instability and environmental strain, which may erode informal social control and increase neighborhood tensions.
- Poverty Rate: Reflects economic deprivation, often linked to elevated crime through increased strain and limited access to legitimate opportunities.

- Unemployment Rate: Indicates labor market exclusion, which may increase criminal risk by reducing the opportunity cost of illegal activities.
- Educational Attainment: Lower education levels are associated with reduced economic mobility and weakened social integration, both of which may elevate crime risk.
- Dependent Population: A higher proportion of youth and elderly residents may signify stronger familial networks and community ties, potentially suppressing crime through greater informal surveillance.
- Per Capita Income: Captures the overall economic health of a neighborhood, with higher income generally associated with reduced criminal incentive and improved social conditions.

3.1 Data Collection

Socioeconomic data were obtained from the U.S. Census Bureau's 2018–2022 American Community Survey (ACS) 5-Year Estimates, which provide the most recent, reliable, and stable indicators at the community area level. Crime data were sourced from the Chicago Police Department's public data portal (City of Chicago, 2024), focusing on reported violent crimes (e.g., homicide, robbery) and property crimes (e.g., burglary, larceny-theft) between 2018 and 2022. This five-year window was selected to ensure temporal alignment with the ACS data and to reflect recent crime trends while maintaining statistical stability through data aggregation.

The unit of analysis is the 77 community areas of Chicago, defined in the 1920s and consistently used for urban research and planning due to their stable boundaries and ecological validity (Chicago Department of Planning and Development, 2000).

Socioeconomic and crime data were matched by community area. After verifying completeness and consistency, multiple regression analysis was conducted to estimate the direction and magnitude of each independent variable's relationship with the crime percentage. This analytical strategy enables the identification of statistically significant predictors while accounting for multicollinearity and interaction effects. Model diagnostics—including R-squared, ANOVA, and regression coefficients—are reported in the Results section to assess explanatory power and predictor influence (Allison, 1999).

4 RESULTS

The multiple regression analysis explored how socioeconomic factors predicted crime rates across Chicago's 77 community areas. The regression model included the Hardship Index, percentage of crowded housing, percentage of households below the poverty line, unemployment rate, percentage without a high school diploma, percentage of dependent population, and per capita income as independent variables. The dependent variable was the crime percentage.

Table 1: *Model Summary for Multiple Regression Predicting Crime Percentage in Chicago Neighborhoods.*

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.566[a]	.321	.252	.95261

a. Predictors: (Constant), HARDSHIP_INDEX, PercentageofHousingCrowded, PERCENT_AGED_UNDER_18_OR_OVER64, PER_CAPITA_INCOME, PERCENT_HOUSEHOLDS_BELOW_POVERTY, PERCENT_AGED_over16_UNEMPLOYED, PERCENT_AGED_25_WITHOUT_HIGH_SCHOOL_DIPLOMA

The model summary indicated a moderate positive correlation between the set of predictors and the crime percentage, with an R value of 0.566. The R-squared value was 0.321, meaning that 32.1% of the variation in crime percentage across neighborhoods was explained by the combined predictors. The adjusted R-squared value was 0.252, which accounts for the number of predictors and reflects a moderate level of model fit. The standard error of the estimate was 0.953, indicating the average distance between the observed and predicted crime percentages.

Table 2: *ANOVA Table for Multiple Regression Model Predicting Crime Percentage Across Chicago Neighborhoods*

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.548	7	4.221	4.652	.000[a]
	Residual	62.615	69	.907		
	Total	92.163	76			

a. Predictors: (Constant), HARDSHIP_INDEX, PercentageofHousingCrowded, PERCENT_AGED_UNDER_18_OR_OVER64, PER_CAPITA_INCOME, PERCENT_HOUSEHOLDS_BELOW_POVERTY, PERCENT_AGED_over16_UNEMPLOYED, PERCENT_AGED_25_WITHOUT_HIGH_SCHOOL_DIPLOMA

b. Dependent Variable: Crime_percentage

The ANOVA test confirmed the overall significance of the regression model. The F-statistic was 4.652 with a significance level of $p < 0.001$, indicating that the combination of independent variables significantly predicts crime rates across the community areas. The coefficient analysis revealed varied impacts of individual predictors. The Hardship Index demonstrated a statistically significant positive relationship with crime ($B = 0.056$, $p = 0.042$), indicating that higher levels of socioeconomic stress are associated with increased crime. In contrast, the percentage of crowded housing was positively associated with crime ($B = 0.097$, $p = 0.173$), though the relationship was

not statistically significant, indicating that crowding alone may not be a substantial contributor to crime rates.

Interestingly, the percentage of households below the poverty line demonstrated a negative and non-significant relationship with crime (B = -0.034, p = 0.216), contradicting expectations. Likewise, the unemployment rate was positively associated with crime (B = 0.036), but the effect was not statistically significant (p = 0.375). These results indicate that although these variables may influence crime, their individual effects are not strong enough to achieve statistical significance within this model. Educational attainment, measured as the percentage of individuals without a high school diploma, was significantly and negatively associated with crime (B = -0.084, p = 0.018). Contrary to conventional assumptions, this indicates that neighborhoods with lower educational attainment experienced lower crime rates. The percentage of the dependent population (under 18 or over 64) was also significantly and negatively associated with crime (B = -0.103, p = 0.002), indicating that areas with higher proportions of children and elderly individuals tend to experience lower crime rates. Finally, per capita income had a positive but statistically insignificant relationship with crime (B = 1.723E-5, p = 0.280), implying that income alone does not have a meaningful direct effect in this model.

Table 3: *Regression Coefficients Table for Predictors of Crime Percentage in Chicago Neighborhoods.*

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.144	1.495		2.102	.039	.160	6.127
	PercentageofHousing Crowded	.097	.071	.325	1.376	.173	-.044	.238
	PERCENT_HOUSEHOLDS_BELOW_POVERTY	-.034	.027	-.358	-1.248	.216	-.089	.020
	PERCENT_AGED_over16_UNEMPLOYED	.036	.040	.247	.893	.375	-.045	.117
	PERCENT_AGED_25_WITHOUT_HIGH_SCHOOL_DIPLOMA	-.084	.034	-.898	-2.429	.018	-.152	-.015
	PERCENT_AGED_UNDER_18_OR_OVER64	-.103	.032	-.682	-3.203	.002	-.166	-.039
	PER_CAPITA_INCOME	1.723E-5	.000	.239	1.089	.280	.000	.000
	HARDSHIP_INDEX	.056	.027	1.469	2.068	.042	.002	.111

a. Dependent Variable: Crime_percentage

Table 3 displays the unstandardized and standardized regression coefficients for each predictor in the model. The constant (intercept) is 3.144, representing the estimated baseline crime percentage when all predictors are set to zero. Among the predictors, the Hardship Index (B = 0.056, *p* = .042) has a statistically significant positive relationship with crime, indicating that higher levels of socioeconomic stress are associated with increased crime rates.

A significant negative association was found between the proportion of individuals lacking a high school diploma and crime rates (B = -0.084, p = .018), indicating that, unexpectedly, areas with higher educational attainment experienced more crime in this sample. Similarly, the percentage of the dependent population (under 18 or over 64) has a significant negative effect (B = -0.103, *p* = .002), implying that neighborhoods with larger dependent populations tend to have lower crime rates. Other variables—including poverty (B = -0.034, *p* = .216), unemployment (B = 0.036, *p* = .375), crowded housing (B = 0.097, *p* = .173), and per capita income (B = 1.723E-5, *p* = .280)—did not demonstrate statistically significant effects, although their directions align partially with theoretical expectations. While certain socioeconomic stressors are linked to crime in Chicago neighborhoods, others behave unpredictably, revealing the nuanced nature of local social environments.

Hypothesis 1 predicted that neighborhoods with a greater percentage of households below the poverty line would exhibit higher crime rates. This hypothesis was not supported, as the relationship was negative and not statistically significant (B = -0.034, p = 0.216). Hypothesis 2 proposed that higher per capita income would be negatively associated with crime rates. This was not supported, given the positive but insignificant relationship observed (B = 1.723E-5, p = 0.280). Hypothesis 3 anticipated a positive correlation between unemployment rates and crime. Although the coefficient was positive (B = 0.036), it was not statistically significant (p = 0.375), and therefore, the hypothesis was not supported. Hypothesis 4 expected that lower educational attainment would correlate with higher crime rates. Surprisingly, this was not supported, as the relationship was negative and statistically significant (B = -0.084, p = 0.018), indicating the opposite pattern. Hypothesis 5 predicted that higher levels of socioeconomic stress, as measured by the Hardship Index, would be associated with higher crime rates. This hypothesis was supported, with a positive and statistically significant relationship (B = 0.056, p = 0.042). Hypothesis 6 proposed that neighborhoods with a higher percentage of dependent populations would experience lower crime rates. This was supported, with a strong and significant negative relationship (B = -0.103, p = 0.002).

In summary, the results show the complexity of crime dynamics in Chicago. While structural stress and demographic composition (as captured by the Hardship Index and dependent population) were meaningful predictors, traditional variables like poverty, unemployment, and education did not behave as expected. These findings demonstrate that effective urban crime interventions must be grounded in an understanding of local context and the complex interplay of contributing factors.

The regression analysis yields several important insights. The Hardship Index emerges as a significant predictor of crime rates, underscoring the influence of broader socioeconomic stressors on neighborhood crime patterns. Notably, educational attainment—measured by the percentage of individuals without a high school diploma—and the proportion of the dependent population both show significant negative associations with crime. These unexpected relationships may reflect stabilizing social dynamics, such as stronger familial networks or

increased informal supervision, that reduce crime in communities with larger dependent populations or lower formal education levels. Other predictors, such as poverty, unemployment, and crowded housing, did not exhibit statistically significant effects, although their inclusion helps provide a comprehensive view of socioeconomic influences. This analysis illustrates the complexity of crime in Chicago and highlights the need to address structural socioeconomic factors in efforts to reduce crime.

5 DISCUSSION

This study reveals a complex and locally specific picture of how socioeconomic factors relate to crime in Chicago's neighborhoods. Of the six hypotheses tested, only two were supported: the Hardship Index positively predicted crime rates, and higher proportions of dependent populations were associated with lower crime. Contrary to conventional expectations, traditional predictors such as poverty, unemployment, and educational attainment were not statistically significant positive correlates of crime. These results indicate that urban crime cannot be fully understood through generalized national patterns alone and instead requires context-specific, multidimensional analysis.

5.1 Interpretation in Theoretical Context

The positive association between the Hardship Index and crime aligns with Social Disorganization Theory (Shaw & McKay, 1942), which posits that structural disadvantage weakens community cohesion and informal social control. This result aligns with Blau and Blau's (1982) macrostructural theory and Sampson et al.'s (1998) work on concentrated disadvantage, both of which argue that persistent social and economic inequalities are central to understanding the structural roots of crime. Recent cross-national evidence further validates these perspectives. For instance, Errol, Madsen, and Moslehi (2021) found that long-term weakening of family and community structures significantly predicted crime trends across developed nations over two centuries, reinforcing the enduring relevance of social disorganization principles.

However, the nonsignificant relationships for poverty and unemployment challenge these traditional frameworks. One explanation may lie in the multidimensional nature of the Hardship Index, which captures more than just income levels. This index potentially reveals the broader context in which deprivation occurs, integrating variables such as housing and education. Thus, poverty alone may not serve as a strong predictor when considered independently of broader socioeconomic stressors—a perspective reinforced by Pazzona's (2024) meta-analysis, which found that while inequality is statistically correlated with crime, its overall effect size is relatively small.

The lack of statistical significance for unemployment aligns with the findings of Hipp and Boessen (2017), who argue that neighborhood-specific dynamics—such as informal labor markets and localized social support systems—may mediate or buffer the criminogenic impact of joblessness. Similarly, prior research by Greenberg and Winter-Ebmer (2001) and Rosenfeld and

Fornango (2007) reported weak or context-dependent relationships between unemployment and crime, reinforcing the idea that the effects of economic disadvantage are shaped by local structural and social conditions. Sugiharti et al. (2023) similarly observed that in Indonesia, poverty and inequality—especially when defined by non-essential spending—were stronger predictors of crime than unemployment. These findings strengthen the idea that absolute deprivation and income gaps—rather than employment status alone—are more salient drivers of crime.

While traditionally framed within strain-based approaches, these results also raise important questions about the applicability of Merton's (1938) Anomie Theory in contemporary urban contexts. Merton argued that when societal goals, such as economic success, are pursued without equal access to legitimate means of achieving them, individuals may adapt through deviant pathways, including crime. However, the nonsignificant associations between poverty, unemployment, and crime observed in this study indicate that structural strain—when measured through these traditional indicators—may not fully capture the mechanisms driving neighborhood-level crime in Chicago. This raises the possibility that perceived inequality, rather than objective economic hardship alone, plays a more salient role in influencing criminal behavior—an interpretation more consistent with Relative Deprivation Theory (Runciman, 1966). This distinction helps explain why the analysis emphasizes perceived inequality, operationalized through composite indicators like the Hardship Index, instead of relying solely on absolute deprivation.

Educational attainment revealed a counterintuitive result: lower educational achievement was associated with reduced crime. This contradicts expectations based on theories that link educational access with opportunity structures and informal social control (Bernard, 1990; Sampson & Wilson, 1995). It is possible that neighborhoods with lower educational levels maintain strong informal networks or receive community support services that offset this risk. Büttner (2025) provides a compelling context for this, noting that intra-group educational inequality in South Africa was more strongly associated with violent crime than overall levels of educational attainment. This finding indicates that disparities within communities may carry greater criminogenic significance than overall educational attainment.

The significant negative relationship between dependent population and crime aligns with existing research on the role of family and age-structured social control (Kornhauser, 1978; Sampson & Groves, 1989). Communities with larger populations of children and elderly individuals may benefit from increased supervision and community engagement, factors that can contribute to lower crime rates. This pattern is echoed in recent research by Büttner (2025) and Sugiharti et al. (2023), which demonstrates that in both South African and Southeast Asian contexts, multigenerational households and higher proportions of dependent populations contribute to strengthening informal social controls and reducing crime risk.

While theories such as Relative Deprivation (Runciman, 1966) find partial alignment—particularly through the use of the Hardship Index as a proxy for perceived inequality—this study does not directly measure individual perceptions, frustration, or cultural norms. As a result, interpretations based on subcultural or frustration-aggression theories should be approached with caution. Without direct empirical evidence, cultural explanations remain speculative. That said, recent research by Itskovich (2024) demonstrates that individuals who perceive themselves as economically deprived relative to peers are significantly more likely to engage in criminal behavior, providing new micro-level evidence for Relative Deprivation Theory. This strengthens the theoretical validity of composite indicators like the Hardship Index to approximate relative economic stress. The results present meaningful implications for policy formulation and localized intervention strategies.

5.2 Policy Implications

The findings indicate that effective urban crime prevention strategies should address broader structural inequalities rather than focusing narrowly on individual factors such as poverty or unemployment. Efforts should prioritize reducing overall socioeconomic stress through targeted neighborhood investment, enhanced public services, and comprehensive social support systems. For instance, Lymperopoulou et al. (2022) found that even in high-surveillance urban environments such as Greater Manchester, concentrated disadvantage was a more powerful predictor of crime than traditional indicators of neighborhood instability—suggesting that addressing structural socioeconomic conditions is essential for effective crime reduction.

Tailored community development strategies may be especially effective in areas with large dependent populations or low levels of educational attainment, where conventional crime-prevention assumptions often fall short. In such contexts, where family and age structures support informal supervision, targeted services—such as elder care, after-school programs, and housing assistance—can enhance existing social control mechanisms and strengthen community resilience (Büttner, 2025; Sugiharti et al., 2023).

Additionally, policymakers should account for the complex interplay between structural disadvantage and community resilience. Strategic investments in early childhood education, senior services, and community-based support systems have the potential to strengthen social cohesion—particularly in neighborhoods that demonstrate resilience in the face of economic adversity (Chetty et al., 2016).

5.3 Limitations and Future Directions

Several limitations should be acknowledged. First, the study did not include direct measures of perceived inequality, informal economies, or social cohesion—factors that may mediate or moderate the observed relationships. Second, all data are cross-sectional and aggregated at the community level, limiting causal inference and obscuring variation within neighborhoods. Third, crime was not disaggregated by type, which may mask important distinctions. Future research

should consider longitudinal designs and mixed methods approaches to better understand local dynamics and causal pathways. Measuring subjective experiences of deprivation or resilience would also clarify how structural and perceptual factors interact to shape crime.

6 CONCLUSION

This study examined the relationship between socioeconomic factors and crime rates across Chicago's neighborhoods using multiple regression analysis. Key findings indicate that the Hardship Index—a composite measure of socioeconomic stressors—is a statistically significant predictor of crime rates. The results align with Social Disorganization Theory (Shaw & McKay, 1942; Sampson & Groves, 1989) and point to the role of structural deprivation in shaping neighborhood-level crime (Blau & Blau, 1982; Gordon, 1971; Errol et al., 2021). Additionally, neighborhoods with higher percentages of dependent populations (youth and elderly) experienced lower crime rates, which may reflect the protective influence of strong social and familial networks (Sampson et al., 1998; Kornhauser, 1978; Büttner, 2025; Sugiharti et al., 2023).

Unexpectedly, traditional predictors such as poverty, unemployment, and crowded housing were not found to have statistically significant relationships with crime. Moreover, lower educational attainment was associated with reduced crime rates—an outcome that contradicts established findings in the literature (Loftin & Hill, 1974; Kovandzic et al., 1998; Bernard, 1990). This result aligns with recent research by Büttner (2025), who found that educational inequality—rather than absolute levels of educational attainment—plays a more influential role in shaping crime rates, particularly in high-inequality contexts.

These results point to the complex, context-dependent nature of crime in urban environments like Chicago (Land et al., 1990; Lymperopoulou et al., 2022). This analysis indicates that policymakers should concentrate on systemic sources of socioeconomic stress, rather than limiting interventions to poverty or unemployment alone. Investments in community infrastructure, public services, and programs that strengthen social cohesion can help reduce crime more effectively. Special attention should be given to supporting neighborhoods with large dependent populations through services such as childcare, elder care, and youth engagement programs (Bursik & Grasmick, 1993; Büttner, 2025; Sugiharti et al., 2023).

While this study reflects elements of foundational criminological theories, it reveals the limitations of generalizing across urban contexts. Broader policy strategies should be rooted in localized data and conditions, recognizing that structural disadvantage does not affect all communities in the same way. Pazzona's (2024) meta-analysis adds weight to this perspective, indicating that the effect of income inequality on crime is modest at best and largely shaped by measurement approaches and contextual factors.

Future research should build on this analysis by incorporating qualitative methods to explore why certain socioeconomic variables fail to predict crime as expected. Understanding local dynamics—such as informal economies and public service availability—can offer deeper insights

(Hipp & Boessen, 2017; Itskovich, 2024). Moreover, individual perceptions of inequality and community-level resilience should be directly measured, given that recent studies have identified these subjective factors as critical influences on criminal behavior (Itskovich, 2024).

Ultimately, addressing the multifaceted causes of crime requires an evidence-based, community-informed approach. This study provides a foundation for more tailored crime prevention strategies that respond to the unique social and economic realities of Chicago's neighborhoods. While traditional strain-based perspectives such as Merton's (1938) Anomie Theory anticipate higher crime rates where opportunities for legitimate success are obstructed, this study demonstrates that perceived inequality and broader socioeconomic stressors—rather than absolute poverty or unemployment—offer a more accurate framework for explaining neighborhood-level crime. This affirms the relevance of Relative Deprivation Theory for understanding crime in modern urban contexts.

REFERENCES

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*(1), 47–87. https://doi.org/10.1111/j.1745-9125.1992.tb01093.x

Allison, P. D. (1999). *Multiple regression: A primer*. Pine Forge Press.

Anderson, E. (1999). *Code of the street: Decency, violence, and the moral life of the inner city*. W. W. Norton & Company.

Bailey, W. C. (1984). Poverty, inequality, and city homicide rates: Some not so unexpected findings. *Criminology, 22*(4), 531–550. https://doi.org/10.1111/j.1745-9125.1984.tb00318.x

Barnett, C., & Mencken, F. C. (2002). Social disorganization theory and the contextual nature of crime in nonmetropolitan counties. *Rural Sociology, 67*(3), 372–393. https://doi.org/10.1111/j.1549-0831.2002.tb00111.x

Bernard, T. J. (1990). Subcultural theories of crime and delinquency. *Criminology, 28*(4), 629–650. https://doi.org/10.1111/j.1745-9125.1990.tb01340.x

Blau, P. M., & Blau, J. R. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review, 47*(1), 114–129. https://doi.org/10.2307/2095046

Büttner, D. (2025). Local inequality and crime: New evidence from South Africa. *Journal of Economic Inequality, 23*(1), 33–61. https://doi.org/10.1007/s10888-024-09584-w

CDPH. (2012). *Chicago Department of Public Health: Hardship Index Data*.

Chetty, R., Hendren, N., & Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment. *American Economic Review, 106*(4), 855–902. https://doi.org/10.1257/aer.20150572

Chicago Department of Planning and Development. (2000). *Community area statistics and profiles*.

City of Chicago. (2011). *Chicago Police Department crime data*. https://data.cityofchicago.org

Errol, S., Madsen, J., & Moslehi, S. (2021). Social disorganization and crime in the advanced countries: Two centuries of evidence. *Journal of Economic Behavior & Organization, 191*, 519–537. https://doi.org/10.1016/j.jebo.2021.09.024

Fajnzlber, P., Lederman, D., & Loayza, N. (2002). Inequality and violent crime. *Journal of Law and Economics, 45*(1), 1–40.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Sage.

Gordon, D. M. (1971). Capitalism, class, and crime in America. *Crime and Delinquency, 17*(2), 163–189. https://doi.org/10.1177/001112877101700202

Harding, David J. 2010. Living the drama: Community, conflict, and culture among inner-city boys. Chicago: University of Chicago Press.

Hazra, D., & Cui, Z. (2018). Macroeconomic determinants of crime: Evidence from India. *Journal of Quantitative Economics, 16*(1), 187–198. https://doi.org/10.1007/s40953-018-0127-6:contentReference[oaicite:25]{index=25}

Hjalmarsson, R., & Lochner, L. (2012). The impact of education on crime: International evidence. *CESifo DICE Report, 10*(2), 49–55.

Itskovich, A. (2024). Economic inequality, relative deprivation, and crime: An individual-level examination. *Justice Quarterly*. Advance online publication. https://doi.org/10.1080/07418825.2024.2334976

Kornhauser, R. (1978). *Social sources of delinquency: An appraisal of analytic models*. University of Chicago Press.

Lacey, N., Soskice, D., Cheliotis, L. K., & Xenakis, S. (Eds.). (2021). *Tracing the relationship between inequality, crime and punishment: Space, time and politics*. Proceedings of the British Academy. Oxford University Press.

Land, K. C., McCall, P. L., & Cohen, L. E. (1990). Structural covariates of homicide rates: Are there any invariances across time and social space? *American Journal of Sociology, 95*, 922–963.

Lochner, L. (2010). Non-production benefits of education: Crime, health, and good citizenship. In *Handbook of the economics of education* (Vol. 4, pp. 183–282). Elsevier.

Lochner, L., & Moretti, E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self-reports. *American Economic Review, 94*(1), 155–189.

Loftin, C., & Hill, R. H. (1974). Regional subculture and homicide: An examination of the Gastil-Hackney thesis. *American Sociological Review, 39*, 714–724.

Lymperopoulou, K., Bannister, J., & Krzemieniewska-Nandwani, K. (2022). Inequality in exposure to crime, social disorganization and collective efficacy: Evidence from Greater Manchester, UK. *British Journal of Criminology, 62*(4), 1019–1035. https://doi.org/10.1093/bjc/azab082

Merton, R. K. (1938). Social structure and anomie. *American Sociological Review, 3*(5), 672–682.

Messner, S. F., & Rosenfeld, R. (1997). *Crime and the American dream*. Wadsworth Publishing.

Messner, S. F., & Tardiff, K. (1986). Economic inequality and levels of homicide: An analysis of urban neighborhoods. *Criminology, 24*(2), 297–317.

Narayan, P. K., & Smyth, R. (2004). Crime rates, male youth unemployment and real income in Australia: Evidence from Granger causality tests. *Applied Economics, 36*(18), 2079–2095. https://doi.org/10.1080/0003684042000261842

Pazzona, F. (2024). Revisiting the income inequality–crime puzzle: A meta-analysis. *World Development, 176*, 106520. https://doi.org/10.1016/j.worlddev.2024.106520

Powell, R., & Porter, J. (2022). Redlining, concentrated disadvantage, and crime: The effects of discriminatory government policies on urban violent crime. *American Journal of Criminal Justice, 48*(1), 1–22. https://doi.org/10.1007/s12103-022-09688-3

Rosenfeld, R., & Fornango, R. (2007). The impact of economic conditions on robbery and property crime: The role of consumer sentiment. *Criminology, 45*(4), 735–769. https://doi.org/10.1111/j.1745-9125.2007.00096.x

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social disorganization theory. *American Journal of Sociology, 94*(4), 774–802.

Sampson, R. J., & Wilson, W. J. (1995). Toward a theory of race, crime, and urban inequality. In J. Hagan & R. D. Peterson (Eds.), *Crime and inequality* (pp. 37–54). Stanford University Press. https://doi.org/10.1515/9781503615557-004sampson.scholars.harvard.edu+3

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*(5328), 918–924. https://doi.org/10.1126/science.277.5328.918

Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency and urban areas*. University of Chicago Press.

Simpson, M. E. (1985). Violent crime, income inequality, and regional culture. *Sociological Focus, 18*(2), 199–208. https://doi.org/10.1080/00380237.1985.10570932

Sugiharti, L., Purwono, R., Esquivias, M. A., & Rohmawati, H. (2023). The nexus between crime rates, poverty, and income inequality: A case study of Indonesia. *Economies, 11*(2), 62. https://doi.org/10.3390/economies11020062

Warner, B. D. (2007). Neighborhood social ties and informal social control: Do they influence informal social control actions? *Journal of Quantitative Criminology, 23*(2), 179–206. https://doi.org/10.1007/s10940-007-9022-9

Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy*. University of Chicago Press.