

ABSTRACT

Social Disorganization Theory and Crime Across the Metropolitan-Nonmetropolitan Divide

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The study of social disorganization and its effects on crime has largely been focused on metropolitan areas. This paper focuses on property and violent crime as they occur in nonmetropolitan counties and advances research on the theory by addressing a few specific areas. First, it investigates the effects of social disorganization measures, including the interaction of socioeconomic status and residential mobility, on crime in nonmetropolitan areas. Second, it introduces the concept of international immigration as a predictor of crime within the framework of social disorganization. Finally, it compares the performance of social disorganization indicators in nonmetropolitan and metropolitan areas. Several aspects of social disorganization are supported, though not precisely as anticipated. Implications of this research as well avenues for future research are discussed.

Social Disorganization Theory and Crime Across the
Metropolitan-Nonmetropolitan Divide

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A Dissertation

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Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of
Doctor of Philosophy

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December 2009

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TABLE OF CONTENTS

LIST OF FIGURES.....	v
LIST OF TABLES.....	vii
ACKNOWLEDGMENTS.....	viii
DEDICATION.....	ix
CHAPTER ONE.....	1
Review of Literature	
Introduction	
Social Integration	
Social Disorganization Theory	
Predictors of Social Disorganization	
Metropolitan/Nonmetropolitan Differences	
International Immigration	
Hypotheses	
CHAPTER TWO.....	34
Data and Methods	
Data and Units of Analysis	
Variables	
Model of Analysis	
CHAPTER THREE.....	57
Results	
SES, Residential Mobility, and Property Crime	
SES, Residential Mobility, and Violent Crime	
International Immigration and Property Crime	
International Immigration and Violent Crime	
Property Crime in Metropolitan Areas	
Violent Crime in Metropolitan Areas	

CHAPTER FOUR.....	94
Conclusion	
Summary of Findings	
Theoretical Implications	
Applied Implications	
BIBLIOGRAPHY.....	105

LIST OF FIGURES

Figure	Page
2.1 Incidents of Property Crime /100,000 Population.....	39
2.2 Incidents of Violent Crime /100,000 Population.....	40
2.3 Percentage Population Change, 1990-2000.....	41
2.4 Percentage Nonwhite.....	42
2.5 Percentage in Poverty.....	43
2.6 Gini Coefficient.....	44
2.7 Percentage Single Female-Headed Households.....	45
2.8 Unemployment Rate.....	46
2.9 Percentage Change in Foreign-born Population.....	47
2.10 Percentage of Small Manufacturing Establishments.....	48
2.11 Number of Associations per Capita.....	49
2.12 Percentage of Civically Engaged Denominations.....	50
2.13 Third Places per Capita.....	51
2.14 Percentage of Population Age 15 to 24.....	52
2.15 Percentage Urban.....	53
2.16 Population Density.....	54
2.17 Total Population.....	55
3.1 Effect of Racial Heterogeneity on Property Crime.....	59

3.2	Effects of SES and Residential Mobility on Property Crime.....	62
3.3	Effect of Racial Heterogeneity on Property Crime.....	63
3.4	Effect of Racial Heterogeneity on Violent Crime.....	65
3.5	Effects of SES and Residential Mobility on Violent Crime.....	67
3.6	Effect of Racial Heterogeneity on Violent Crime.....	68
3.7	Effect of Racial Heterogeneity on Violent Crime.....	75
3.8	Effect of Racial Heterogeneity on Property Crime.....	81
3.9	Effects of SES and Residential Mobility on Property Crime.....	81
3.10	Effect of International Immigration on Property Crime.....	84
3.11	Effect of Racial Heterogeneity on Violent Crime.....	88
3.12	Effects of SES and Residential Mobility on Violent Crime.....	88
3.13	Effects of SES and Residential Mobility on Violent Crime.....	91
3.14	Effect of International Immigration on Violent Crime.....	91
3.15	Effect of Percentage Foreign-born on Violent Crime.....	93

LIST OF TABLES

Table	Page
2.1 Variables Used for Regression Models.....	38
3.1 Regression Estimates for Property Crime in Nonmetropolitan Counties.....	58
3.2 Regression Estimates for Property Crime in Nonmetropolitan Counties.....	60
3.3 Regression Estimates for Violent Crime in Nonmetropolitan Counties.....	64
3.4 Regression Estimates for Violent Crime in Nonmetropolitan Counties.....	66
3.5 Regression Estimates for Property Crime in Nonmetropolitan Counties.....	70
3.6 Regression Estimates for Property Crime in Nonmetropolitan Counties.....	71
3.7 Regression Estimates for Property Crime in Nonmetropolitan Counties.....	72
3.8 Regression Estimates for Violent Crime in Nonmetropolitan Counties.....	74
3.9 Regression Estimates for Violent Crime in Nonmetropolitan Counties.....	76
3.10 Regression Estimates for Violent Crime in Nonmetropolitan Counties.....	77
3.11 Variables Used for Regression Models.....	80
3.12 Regression Estimates for Property Crime in Metropolitan Counties.....	82
3.13 Regression Estimates for Property Crime in Metropolitan Counties.....	83
3.14 Regression Estimates for Property Crime in Metropolitan Counties.....	85
3.15 Regression Estimates for Violent Crime in Metropolitan Counties.....	87
3.16 Regression Estimates for Violent Crime in Metropolitan Counties.....	90
3.17 Regression Estimates for Violent Crime in Metropolitan Counties.....	92

ACKNOWLEDGMENTS

I would first like to thank faculty of the Sociology Department, who have been invaluable in guiding my career as an applied sociologist. In particular I thank my chairman and mentor, Carson Mencken. Years ago I promised him that I would take full advantage of his patience with me, and I am proud to say that I have fulfilled that promise. He has been a great friend, and I look forward to talking to him about things other than crime in nonmetropolitan counties.

I would also like to thank everyone at the Center for Community Research and Development. I am lucky to have had such wonderful colleagues and friends in my time there. Debbie Marable has forever changed my opinion of Halloween. Jodien Johnson and Kathy Krey have been great friends and sources of relentless support. Alex Trouteaud has been an inspiration through his dedicated work ethic and friendship.

I owe special thanks to my brother, Jody Parker, and two friends who are like brothers to me, Youngdae Moon and Ricky Lange.

Finally, none of this would have been possible without my loving parents. They have provided me opportunities that I have not deserved and that I have not hesitated to take for granted. I love you both, and I will never be able to thank you enough.

DEDICATION

For Lindy

CHAPTER ONE

Review of Literature

Introduction

Looking at the world through a sociological lens can provide the viewer a clearer picture than he or she might see otherwise. Using a bird's eye view to observe the interactions of individuals and groups—the forest—only adds to the story one sees from his or her own point of view—the trees. No study of society can explain all individual differences or motivations, nor can any study of individuals account for all group dynamics and processes. The balance lies in the interaction of the two; individuals obviously constitute any society, and society in turn bears great impact on every individual.

Society, though, is not necessarily a well-oiled machine. There will always be those people who buck the systems that are in place or the norms of the prevailing culture. Those people might be inventors or innovators. Or they might develop their own subculture. Or they might be criminals. In any case, these deviants stray from the norm in some way to find their own path.

Perhaps the most interesting group of deviants is the criminals. These are people who not only defy the norms of their community, but they dare to break the codified laws of that community. They in fact choose to work *against* their community.

So how can sociology explain this phenomenon? How could someone choose to break from what is considered normal by most of the people around him or her? And

should not the issue be left to those who study individual criminals? How could sociology account for a few troubled individuals who choose to act against their neighbors?

The obvious methodology for studying this phenomenon is evaluations of individual deviants. Such studies have provided invaluable looks into the minds, motivations, and lives of criminals. They no doubt account for most of the societal factors surrounding the criminals as well. Forces external to the individual certainly affect those minds, motivations, and lives; one cannot escape the influence of society. So, then, if not all crimes are committed by deranged psychopaths, there must also be a piece of deviance that arises from one's unique interactions with society.

That is where the study of crime as a social phenomenon arrives. Each criminal has had interactions with family, schools, friends, and neighbors—as everyone has—right up to the time of their crime. There is something, though, that lies in the confluence of their personality, their previous experiences, and their present situation that leads them to commit a crime.

There are several sociological theories aimed at explaining the motivations of individual criminals. Some hypothesize that crime is learned from peer groups, or posit that crime arises from criminals' unmet needs. But others look at crime more on a grander scale. Instead of looking at individual criminals, they examine the larger society to see how criminals are created. They look for patterns of crime throughout communities so that, along with studies of individuals, the entire story will be told.

If crime were the product of random lunatics, it would be spread out evenly throughout the world. Population size of the community would be the only determinant of how many crimes are committed. This is not the case, though—patterns in crime do exist, and some areas have higher concentrations of criminals than others. Since it is unlikely that criminals convene to decide where to commit criminal acts, there must be some ecological forces at play.

An example of a consistent pattern is the disparity between the crime rates in urban versus rural areas. Urban communities have substantially higher crime rates than rural communities. What characteristics of urban areas lead to the development of criminals? Conversely, what are the characteristics of rural areas that impede the development of criminals? What structures are in place, and how do they interact?

This research will add to the extant literature in several important ways. First, it adds greater depth to the ongoing discussion of the effects of social disorganization in nonmetropolitan areas. The lion's share of social disorganization research to date has focused on metropolitan areas, but with changing population patterns as well as improved technology and transportation options, rural areas offer many opportunities for insight into the structures affecting crime today.

Second, this paper adds a new dimension to the study of social disorganization: international immigration. Previous research has focused on several ecological indicators when studying the theory, and international immigration bears the characteristics of a couple of them and could be another significant phenomenon. The models presented here investigate its proper place among traditional measures of social disorganization.

Finally, this research does not exclusively examine social disorganization; it also includes measures taken from civic engagement literature. The two theories share many commonalities, so looking at them simultaneously is an important theoretical step.

Social Integration

At the root of many criminological theories is the idea of social integration. Social integration is the process by which members of a community interact with one another and feel as though they are a part of one organic unit. As people become more involved in their community, develop their friendship networks, and expand their ties, the more socially integrated they become. Increased participation in one's community can then develop into a sense of ownership or protectiveness of their community.

There are numerous benefits of social integration for a community, not the least of which is the effect that it has on crime. Communities with high levels of social cohesion tend to have lower crime rates than communities whose residents live more autonomous lives (Hirschfield & Bowers, 1997; Kasarda & Janowitz, 1974; Markowitz, Bellair, Liska, & Liu, 2001). Criminologists have studied this trend for decades and have discovered many connections between social integration—or the lack thereof—and crime. It is still a common theme in many major criminological theories today (Kasarda & Janowitz, 1974; Sampson & Groves, 1989).

How well an individual is integrated into his or her community represents the micro level of criminological thought. Examining how well a person accepts and is accepted into a local community is critical to having a complete understanding of crime as a social phenomenon. At some point in the course of a criminal's life, it is likely that

an interaction he or she had, whether in school, in church, with family, or even with a gang, bore a strong effect on their fate as a criminal.

There are several ways that a high level of social integration might prevent individuals from becoming criminals. One way is through the development of formal ties to one's community. This is perhaps the most obvious, as it is apparent both anecdotally and theoretically. Little Billy graduated with honors from the local high school, and his family eats dinner together every night. Little Susie was the star of her swim team, and sang in front of her church every Sunday. These individuals hold strong connections to their community and the institutions therein. They have positive activities in which they participate, and they have strong networks to support them. One would not expect them to become delinquents. (This is not to say that Billy and Susie *cannot* become criminals, but it is certainly less likely.)

The presence of strong local institutions that foster a sense of community and/or promote the accepted norms of the community add to the strength of those communities and can help decrease crime (Coulton, Korbin, & Su, 1999; Elliott et al., 1996; Peterson, Krivo, & Harris, 2000). A community that raises its youths in Mother's Day Out, Little League, and Girl Scouts raises generations that feel tied to one another and to their locality. Participation in local organizations promotes formalized ties to one's community, which reduces participants' inclination to disrupt their community through crime (Morenoff, Sampson, & Raudenbush, 2001; Veysey & Messner, 1999). On the other hand, a community with few organizations for its members to participate in will be more likely to develop into a conglomeration of individuals instead of an integrated

community. Or, if a community has a strong presence of institutions that do not develop children, or that promote ideals that are contrary to the norms of residents (e.g. a bar in a conservative community), residents might frequent those institutions and begin to neglect the overarching community norms (Peterson et al., 2000).

Another way that an individual's social integration into his or her society can help prevent criminality is through the development of a network of informal ties; residents do not need specific ties to civic organizations to feel tied to their community. Looking over the fence to speak with Jim and Doris next door can help develop the feeling of community needed to protect it. When neighbors have consistent interactions with other neighbors within a community, they build a sense of camaraderie, and moreover they build a sense of trust (Elliott et al. 1996; Morenoff et al., 2001; Rountree & Warner, 1999; Veysey & Messner, 1999). In fact, the more connections they have, and the more frequent the interaction with those connections, the greater the chance that crime will decrease (Bellair, 1997).

These types of ties and interactions are easily seen and experienced by all. There is, however, a dimension of social integration that lies above the mundane interactions of Billy and Susie and Jim and Doris. Taking a step back from those individuals, one sees that there is often a pattern to events or conditions that can only be seen from the bird's eye view of macro level analysis. There are, for instance, a number of health indicators that group together spatially, such as homicide, infant mortality, low birthweight, accidental injury, and suicide (Almgren, Guest, Immenwahr, & Spittel, 1998; Sampson, 2001). There are also a "number of social problems [that] tend to come bundled together

at the neighborhood level, including, but not limited to, crime, adolescent delinquency, social and physical disorder, low birthweight, infant mortality, school dropout, and child maltreatment” (Sampson, Morenoff, & Gannon-Rowley, 2002, p. 446). There is something about some communities that contributes to the development of these negative outcomes. If it is not mere coincidence that crime, delinquency, disorder, etc. appear in “bundles,” then there must be specific qualities of communities that nurture them. For the purposes of this paper, the most notable spatial phenomenon is crime.

As mentioned above, there is often a macro level pattern to crime. Crime might run rampant in one community but spare the community across the river. The way members of a community function together—or separately—can determine the preponderance of criminal activity found within that community (Elliott et al., 1996; Kasarda & Janowitz, 1974; Kornhauser, 1978; Shaw & McKay, 1942). The level of social integration an individual enjoys influences his or her fate as a criminal, but so do the greater forces of community networks and social control.

One way of thinking about the larger community force is collective efficacy. Collective efficacy is “cohesion among residents combined with shared expectations for the social control of public space” (Sampson & Raudenbush, 1999, p. 603). Note that the two pieces of collective efficacy—cohesion and shared expectations—have already been mentioned in some capacity. When cohesion develops among neighbors and they begin to share the same hopes and expectations for their area, those residents form a community that is stronger than the sum of its members.

Consensus develops among residents (Bellair, 1997; Crutchfield, Geerken, & Gove, 1982). They realize a unique set of norms and place value on the same things for their children, their safety, and their community as a whole. They trust the other members of their community. They do what they can to protect the integrity of the community they create, including policing themselves (Bellair, 2000). If a resident sees someone breaking from the norms of the community, he or she will reprimand the offender or report them to the rest of the community; residents share a willingness to intervene for the common good (Sampson, Raudebush, & Earls, 1997). In a functional sense, this serves to unite the community even further around the norms they hold dear, and it discourages the perpetuation of crime.

According to the systemic model of crime, a community's structure affects its social networks, which in turn can increase informal control, which can then decrease street crime (Kasarda & Janowitz, 1974). A community's social networks of formal and informal ties develop a set of shared values and compel ordinary citizens to feel so obligated to their community that they willingly enforce shared norms. In communities that are bound together by shared norms, it is difficult for crime to flourish. In communities that have weaker networks, fewer institutions, etc., crime can take hold, as there is no consensus among residents or residents are not willing to defend them.

It is easy to see why criminological theories are often built on the idea of social integration. Control theory, for instance, posits that there are internal and external forces that act upon individuals and deter them from committing a crime (Hirschi, 1969). The stronger the community forces are that act upon him or her, the less likely he or she is to

commit a crime. Differential association theory also utilizes the idea of social integration. It states that individuals learn their behavior from their peer groups, so if someone is more often exposed to deviant norms or behaviors than they are to the common norms of a community, then that person is more likely to become deviant (Sutherland, 1934). Another theory that makes use of social integration is social disorganization theory.

Social Disorganization Theory

Imagine the socially integrated community. Neighbors see each other on the street most days and know one another's names. Their children play together at the local community center, and they worship together at the neighborhood church. When a neighbor vacations, others offer to bring in their mail and keep an eye on their house. Youths are well-behaved when playing in the streets, knowing that any misdeeds might be reported back to their parents.

Communities lacking a certain level of social integration, on the other hand, look substantially different. Neighbors stay in their homes and tend to their own business. There is less participation in community events and less attendance at local institutions. Perhaps there is a stronger presence of street gangs in the neighborhood or a higher crime rate.

It is unlikely that a community would broadly condone crime, but merely passively disagreeing with it is much different than actively fighting it. Residents might be willing to install alarm systems in their own homes for personal protection, but perhaps they are not willing to watch over their neighbors' homes as well. This protects

individuals, not neighborhoods. Is their community then a collection of individuals and their interests, or is it a single unit with singular goals and means?

When communities lack the social cohesion that creates consensus among its members, crime can slip through its cracks. Without a single set of norms governing a community, infractions against that community cannot be punished. Such communities might be described as “socially disorganized.” Social disorganization is characterized by several community-level traits that could lead to the breakdown of community ties and in turn consensus among residents. There are also numerous phenomena that can impede social integration within a community, and once that social integration is weakened, new sets of deviant norms might arise. Social disorganization theory, then, attempts to explain crime through the breakdown of social integration and the structural factors that facilitate that breakdown.

Social disorganization theory has gone through several iterations through the years. It developed and gained popularity fairly quickly, was by and large ignored for many years, and then regained popularity in its modern form. Researchers added to the theory each step of the way, using different methodologies and testing different aspects of it, to arrive at a robust theory of crime.

Social disorganization theory arose out of the early Chicago School. Sociologists at the University of Chicago were developing work stressing the importance of neighborhood-level factors and how they affect individuals (Park & Burgess, 1925; Shaw & McKay, 1942; Thomas & Znaniecki, 1920; Thrasher 1927). “As a booming industrial city, increasingly populated by recent immigrants of diverse racial and ethnic

backgrounds, the city of Chicago provided a social laboratory for the development of American criminology” (Jenson, 2003, p. 1). Researchers took the opportunity to examine the immigrant groups and Chicago neighborhoods to see what they could find.

Thomas and Znaniecki (1920) were the first to mention social disorganization. They investigated the plight of immigrants coming to the United States in the early 1900s. The two researchers noticed high levels of crime among Polish immigrants and their children, and attributed this deviance to the rapid change involved in relocating and the rapid development of their surroundings (1920). These two factors contributed to the breakdown of prior social rules that had been in place in Europe and suppressed crime there. When they came to America, the immigrants were faced with new social rules and institutions that were different than their own. To some degree, those prior rules broke down and gave way to new sets of rules.

Thomas and Znaniecki define social disorganization as a “decrease of the influence of existing social rules of behavior upon individual members of the group” (1920, p. 1128). The influence of the immigrants' earlier culture and its system of social control is undermined and perhaps eventually destroyed. The high levels of crime among immigrants in Chicago, then, was due to the deterioration of the governing norms of the immigrant groups. As they grew accustomed to life in the United States, their social rules broke down and allowed for other more deviant norms to arise.

Park and Burgess (1925) built on the ideas of Thomas and Znaniecki by taking theories from the natural sciences and applying them to social structures. In their view, cities operated like ecological systems—different sections of a community work together

and against each other (1925). Cities, including Chicago, were arranged in a pattern of concentric circles. The innermost circle consisted of the city's central business district. The rings farthest away from the center were comprised of the wealthier residents who were able to commute to work inside the city (Park and Burgess, 1925).

As the city grew and expanded, residents of the inner circles moved into, or “invaded,” the outer circles. The influx of new residents bore several consequences. First, there is only so much space available in one ring, so some residents were forced away from their own neighborhoods or into a different circle altogether. Second, the invading residents were usually of a different class than those living in the area at the time, which had the potential to cause some amount of conflict (Park and Burgess, 1925). Each group has its own set of norms in place, and having two conflicting sets of norms in one area could lead to the weakening of both. The weakening of a community's norms can then translate into a level of social disorganization.

Sutherland (1934) built on Park and Burgess's work and developed the connection between social disorganization and crime. He posited that modern society was becoming increasingly inconsistent and "un-organized" (1934). Capitalism and industrialization, in this case, were the primary drivers of disorganization; people cared more about competition and individual success than they did about the survival of the group. Large kinship networks were replaced by large networks of loose ties. Homogeneous neighborhoods were replaced by neighborhoods with various groups' conflicting sets of rules (Sutherland, 1934). The decline of strong institutions that once enforced rules and

norms now facilitated the rise of systematic delinquency. Communities could no longer have complete control over their streets and their youth.

At the micro level, Sutherland (1934) developed this idea as differential association. Delinquent subcultures arise in disorganized societies, the society does not have the resources to keep the subculture in line, so the subculture is able to persist and pass its deviant norms on to others. Social disorganization theory serves as the macro level side of the delinquency coin. It outlines the processes acting on communities that can lead to their disorganization in the first place.

Shaw and McKay (1942) further developed social disorganization theory. They worked in a time of transition in many large urban centers, as industry was quickly expanding and hordes of people were flocking to major cities. Both the economic and social environment of these cities were in flux. Sections of cities were now home to new residents, many of whom came from other countries. The areas surrounding downtown were becoming more dilapidated, and the poorest workers lived there in run-down tenements.

These areas, Shaw noticed, also had the highest rates of juvenile delinquency (1942). He proceeded to devise several research projects in hopes of understanding the Chicago delinquency problem. He embarked upon several quantitative studies as well as conducting numerous in-depth interviews, or life histories, with juvenile delinquents. He and his colleagues published the results of several of these projects, in which they outlined their version of social disorganization theory.

Shaw was trained in the Chicago School and was a student of Park and his theory of human ecology. Shaw was interested in how one's community and its characteristics might influence delinquency. Much research had been conducted at the time regarding the biological origins of crime, but Shaw's training at the University of Chicago and his experience working with Chicago youth convinced him there was indeed more to delinquency than inherited traits. Delinquency rates in particular sections of the city remained fairly stable over time, regardless of the new groups moving into those areas, indicating that delinquency could be related to one's environment (Shaw & McKay, 1942).

According to Shaw and McKay, "communities with high [delinquency] rates have social and economic characteristics which differentiate them from communities with low rates. Delinquency...has its roots in the dynamic life of the community" (1942, p. 315). The authors believed several neighborhood characteristics influenced potential delinquents. By dividing the city into regions, they were able to analyze court records related to juvenile delinquents in each sector of town and create maps based on their findings. Based on these records, Shaw and McKay came to the conclusion that one's surroundings did in fact matter. Areas located closest to the industrial center of the city, with low socioeconomic status, and with a large number of African Americans and foreign immigrants had the highest delinquency rates (1942).

The authors, though, did not attribute delinquency directly to any of these traits. Instead, based on their life histories, they believed delinquency was due to a sort of societal breakdown. "[I]n areas of low rates of delinquents there is more or less

uniformity, consistency, and universality of conventional values and attitudes with respect to child care, conformity to law, and related matters; whereas in the high-rate areas systems of competing and conflicting moral values have developed” (1942, p. 170). That is, though residents of economically-disadvantaged areas may well be poor themselves, poverty is not the driving force behind higher rates of delinquency.

According to Shaw and McKay (1942), inconsistency of norms and values in an area are to blame for high rates of delinquency. They found that in the poorest sections of Chicago, there was not a common, enforceable set of values by which youths were taught to live. In many cases, juvenile gangs had risen to some form of social prominence in the area and presented a different, “unconventional” set of norms to which youths might adhere. Shaw and McKay were seeing empirically the effects of social disorganization on the streets of Chicago.

A socially organized community reaches consensus regarding which values and norms its residents held most dear then actively impresses those upon the youth. This is not to say that the areas with the highest rates of delinquents were devoid of conventional values (Shaw and McKay, 1942). The vast majority of residents abided by those values, but certain factors contributed to the delinquency of a greater proportion of youths in poor neighborhoods, as will be discussed in great detail later. This inability to enforce norms creates disorganization in the community, whereby youths are not fully socialized into the conventional values generally held by the community (Shaw & McKay, 1942). Ties to neighbors and the area are generally weak, resulting in a weak community

network. Neighbors no longer know each other or watch each other's children, thereby letting the youth learn values other than the community's conventional ones.

They might learn unconventional values from a juvenile gang or some sort of organized crime in the area (Shaw & McKay, 1942). These groups might teach youths that delinquent acts such as theft or vandalism are acceptable practices. Without the proper community control, youths are left to deal with opposing sets of values, which could result in those youths becoming delinquent themselves. In an organized community, there is one overarching set of values, theoretically making it less likely that one will become delinquent.

Shaw hoped a practical application would arise from his research and be able to help the city of Chicago. He believed that empirical study would lead to a better understanding of the problem of delinquency. Based on the results of his studies, Shaw started the Chicago Area Project, which served to bring communities together and fight what he considered social disorganization.

Shaw and McKay's theory is, at least in part, a form of control theory. As ties weaken, a community loses its ability to control the youth, and the youth in turn become delinquent. But the authors also place emphasis on the ideas of gangs and learned delinquency.

Kornhauser (1978) points out that there are several models by which one might explore delinquency and crime: strain theory (Merton, 1938), control theory (Shaw & McKay, 1942; Thrasher, 1927), cultural deviance theory (Miller, 1958; Sellin, 1938; Sutherland, 1934), and mixed models (Cloward & Ohlin, 1960; Cohen, 1965; Shaw &

McKay, 1942). She espouses the virtues of control theory; or, perhaps more precisely, she is critical of strain and cultural deviance theories. She goes so far as to state, “Strain models are disconfirmed. Cultural deviance models are without foundation in fact” (1978, p. 253). She presents Shaw and McKay’s theory as a nonrecursive diagram in which weak controls lead to the formation of a delinquent subculture (e.g. juvenile gangs), which leads to the formation of an autonomous delinquent subculture, which then reinforces the delinquent subculture. As such, Shaw and McKay stray from a pure control model. Instead they present a mixed model, combining control and cultural deviance (or differential association) models.

Cultural deviance models assert that deviance is learned; there are subcultures within the greater society that teach different values and norms (Sutherland, 1934). Gangs and other forms of organized crime exist within a society and provide a delinquent set of norms for local youths to follow. Kornhauser does not deny this occurrence, but she does place less emphasis on it than do Shaw and McKay. According to her revised diagram of social disorganization theory, weak community ties abet organized adult crime, which in turn leads to juvenile delinquency. She points out that the delinquent subculture could not itself exist without the weakened community ties. Therefore, social disorganization and lack of community control are the factors allowing for the origins of delinquency, including any delinquent subculture.

Kornhauser writes:

[Shaw and McKay’s] conclusion that the “preponderance” of slum delinquency is accounted for by the autonomous delinquent subculture must be false if their control model is true. If the delinquency tradition exists, the community must, according to Shaw and McKay, be disorganized; the delinquent-criminal system is

said to batten only on weakly controlled communities. If the community were disorganized but devoid of a delinquency tradition, it would still produce a new crop of delinquency and crime... (1978, p. 69).

In short, Kornhauser took Shaw and McKay's social disorganization theory and made it less circular. Instead of a model in which the end product impacts the initial processes, all the arrows in the diagram now flow in one direction. Not only is this now a simpler model of social disorganization, it is also more easily tested.

The latest researcher to take the reins of social disorganization theory is Robert Sampson. He and his collaborators have sought to explore not necessarily the causes, effects, or proxies of disorganization, but the disorganization itself in their research. Previous iterations of social disorganization theory investigated the linkages between community structure and crime, but Sampson wanted to know more about the community organization that mediated those relationships (Sampson & Groves, 1989). He looked into what characterized real social disorganization, if social structural factors indeed influenced it, and if that organization in fact had an influence on crime in communities.

He examined data from individuals along with community-wide data to gain a more complete picture of society (Sampson & Groves, 1989). He introduced the ideas of collective efficacy and social capital's effects on crime and showed the importance of networks and consensus in protecting neighborhoods from crime (Morenoff et al., 2001; Sampson, 1988). In short, Sampson and his collaborators have added depth to social disorganization theory. Their insight into the "nuts and bolts" of social disorganization have shown how robust a theory it is.

Together, these theorists and others have helped develop social disorganization theory. They have shown time and again that there are ecological factors that influence crime—that one is not immune to his or her surroundings. More precisely, they have shown that structural conditions affect crime indirectly through a community's organization—or disorganization, as the case may be. Macro level processes disrupt the networks and institutions of a neighborhood, which allows criminals or even a criminal subculture to emerge.

Larger structures can affect several aspects of a community's organization, and the deterioration of that organization in turn paves the way for crime (Bursik, 1999; Kornhauser, 1978; Sampson & Groves, 1989; Warner & Rountree, 1997). Sampson and Groves (1989) outline three of the important aspects of community organization, which are reflective of Kasarda and Janowitz's (1974) systemic model. In Kasarda and Janowitz's (1974) view, communities are made up of a "complex system of friendship, kinship, and associational networks into which new generations and new residents are assimilated while the community passes through its own life-cycle" (p. 328).

The first aspect is the formation of friendship networks. If a community's residents are unable or unwilling to associate freely with one another, the entire neighborhood suffers. Learning from Hunter (1974) and Kasarda and Janowitz (1974), Sampson and Groves (1989) state, "locality-based social networks constitute the core social fabric of human ecological communities" (p. 779). Strong and extensive friendship networks serve many positive purposes for a community. When everyone knows everyone else in a neighborhood, they can identify strangers more easily

(Sampson & Groves, 1989; Skogan, 1986). By knowing who does and does not belong in one's community enhances residents' ability to report any strange behavior to one another or to the police. As such, informal ties play a key role in holding a community together and keeping its crime rate to a minimum.

The second community aspect is the level of participation in voluntary organizations (Sampson & Groves, 1989; Shaw & McKay, 1942). Local institutions serve several purposes in a community. They reinforce a community's norms; they enable residents to come together to discuss or celebrate the common threads that hold their community together. Local institutions also provide a place where parents and children can go together, and in doing so, children can be monitored and kept off the streets, which is discussed below (Kornhauser, 1978; Shaw & McKay, 1942, Simcha-Fagan & Schwartz, 1986; Wilson 1996). "Community organizations reflect the structural embodiment of local community solidarity" (Sampson & Groves, 1989). These formal ties, then, also play a key role in making a community strong enough to prevent crime. Together, friendship networks and participation in voluntary community organizations help establish common values within communities (Bellair, 1997; Bursik, 1988; Bursik & Grasmick, 1993; Shaw & McKay, 1942).

“Simply stated, civic welfare should increase where there are more organizations that encourage association and are oriented toward the public good. Some organizations (for instance, charitable organizations) are formed specifically to enhance some aspect of the public good” (Tolbert, Irwin, Lyson, & Nucci, 2002, p. 95). The more organizations there are to serve community members, the stronger the community. Voluntary

organizations contribute to a community's level of civic engagement, and they even make residents more likely to remain in the community (Irwin, Tolbert, & Lyson, 1999). By encouraging residents to remain in their communities and stay civically active in those communities, voluntary organizations strengthen bonds and develop cohesion among residents. Voluntary organizations, then, also serve to reduce the amount of residential mobility in an area, which is critical in reducing the amount of social disorganization there. Residential mobility is discussed in more detail below.

More directly, communities with a strong presence of voluntary organizations often have lower crime rates. Some research has shown that crime is lower in communities with more voluntary organizations, greater local investment, and higher levels of civic engagement (Lee, 2008; Lee & Bartkowski, 2004; Lee & Ousey, 2005). Having the structures in place to encourage community participation and investment is a powerful in the fight against crime. Lee (2008) shows that even apart from resource disadvantage, factors such as residential stability, local investment, local capitalism, and civic engagement can significantly reduce the amount of violent crime in an area.

The third key aspect is a community's ability to control the local teenage population (Sampson & Groves, 1989; Shaw & McKay, 1942; Thrasher, 1963). The idea of unsupervised youths and gangs is important to both social disorganization theory and differential association theory, and they go hand in hand. Gangs can develop from children's play groups that go unmonitored and unchecked (Shaw & McKay, 1942; Sutherland, 1934). These gangs participate in delinquent activities, and can in turn teach

future generations of a community's children to engage in the same criminal behavior. If a community is to remain free from crime, it must manage its teenage peer groups.

Predictors of Social Disorganization

There are any number of structural conditions that can have an effect of a community's level of social disorganization. As noted above, anything that disrupts a neighborhood's ability to develop consensus among its members, impairs friendship networks, or impedes neighbors' ability to join together in protecting themselves and each other can affect the level of crime in that community. The three factors that studies have examined most often for their effects on social disorganization are an area's racial heterogeneity, socioeconomic status, and residential mobility (Bursik, 1999; Land, McCall, & Cohen, 1990).

Any type of heterogeneity in a community can affect the level of organization. When some sections of a community share traits or goals that differ from other sections, it is difficult for the entire area to define its common interests (Land et al., 1990; Osgood & Chambers, 2000). The different factions could in fact have competing goals for the community, or they might have trouble communicating effectively with each other. Without shared goals and consensus, a community lacks important tools in the fight against crime. Heterogeneity also fosters fear and mistrust in a neighborhood; residents will join associations based on their similarities, and thereby segment the community and impede communication across all parts of the area (Suttles, 1968).

The most studied type of heterogeneity is racial heterogeneity (Messner & Rosenfeld, 1994; Sampson & Groves, 1989; Sampson & Lauritsen, 1994). If there is a

significant amount of racial difference in a community, residents may group together based on their demographic similarities and exclude other residents who not share the same characteristics. This segmentation necessarily divides a community and diminishes its capacity to reach consensus and protect itself from crime.

Another characteristic of communities with high levels of social disorganization is low socioeconomic status. Poor neighborhoods lack the resources to protect themselves from disorganization and, in turn, crime. High levels of poverty affect a community's friendship networks, civic engagement, and ability to manage the teenage population (Bursik, 1999; Kornhauser, 1978; Sampson & Groves, 1989; Warner & Rountree, 1997). Residents are more likely to spend their time and money doing what they can to "get by," and feel they do not have resources available to invest in their community. Multiple studies have shown that the economically disadvantaged are less likely to participate in voluntary organizations, so they have fewer venues where they might interact with their neighbors, or nurture a sense of collective efficacy (Beggs, Hurlbert, & Haines, 1996; Byrne & Sampson, 1986; Kilburn & Shrum, 1998; Stark, Bainbridge, Crutchfield, Doyle, & Finke, 1983; Tomeh, 1973). Neighborhoods with low SES are unable to provide extracurricular activities to occupy teens and prevent them from engaging in delinquent behavior (Bursik, 1988; Kornhauser, 1978; Land et al., 1990; Rose & Clear, 1998; Sampson, 1988; Sampson & Groves, 1989; Smith & Jarjoura, 1988). Instead, teens often go unmonitored and have no organized activities in which to participate. In some cases, these teenage peer groups can form gangs and wreak havoc in a neighborhood.

A third cause of social disorganization within a community is the level of residential mobility. How many people are moving into or out of a community? Both adding and subtracting members of a community will have an impact on how well it is able to regulate itself. When new people enter a neighborhood, or existing members leave, they disrupt the social networks that are in place and affect the level of civic engagement (Crutchfield et al., 1982; Irwin, Tolbert, and Lyson, 1999; Smith & Jarjoura, 1988). As new residents move in, they are unfamiliar with the structures already in place in a neighborhood, and they don't know about the norms that govern the area (Freudenberg & Jones, 1991; Jobes, 1999). The new residents must undergo a period of assimilation, which delays the development of friendship networks and associational ties (Kasarda & Janowitz, 1974). As existing members leave the neighborhood, so do nodes in the network. Each resident has his or her place in the social fabric of the community, so each time someone leaves, the entire community can be affected. Both processes disrupt the amount of trust neighbors have in one another. New members must adjust to the norms of the community and gain the trust of the existing members to minimize the amount of social disorganization.

Metropolitan/Nonmetropolitan Differences

During the development of social disorganization theory, one of the assumptions was that many of the problems associated with disorganization arose from urbanization (Osgood & Chambers, 2000). From the Industrial Revolution forward, massive numbers of people were moving from nonmetropolitan areas to cities to find work. As they did, entire cities changed along with the friendship networks that existed within them. As

mentioned above, a disruption of the networks in place is likely to affect a community's ability to regulate itself and in turn impact the crime level.

As such, most research has historically focused on metropolitan areas alone. What about nonmetropolitan areas, though? Certainly as residents moved out of those areas and into cities, the social networks were affected as members exited. Or the population structure and level of heterogeneity was altered. Or the socioeconomic status of the community changed, as residents fled to the city to find jobs. Recent research has examined the plight of nonmetro areas and how social disorganization operates in these communities.

In examining how structural processes function in nonmetro areas, one must understand how nonmetropolitan macro-level processes differ from their metropolitan counterparts. Foremost, "sociological theory presupposes that levels of social integration are higher in nonmetropolitan than metropolitan communities" (Barnett and Mencken, 2002, p. 373). In particular, multiple studies have shown that the level of social integration is high in nonmetropolitan communities that have a stable population (Freudenberg, 1986; Freudenberg & Jones, 1991; Jobes, 1999; Kowalski & Duffield, 1990; Weisheit & Wells, 1996). Granovetter (1973) discussed specifically the relevance of both strong and weak social ties. Wilkinson (1984) added to that discussion through his investigation of how those ties affect nonmetropolitan areas. The strong primary ties that exist in nonmetropolitan areas serve to enhance the social control residents bear on their community, which in turn reduce crime. Nonmetropolitan areas, though, have fewer

weak ties among residents, which makes it more difficult for members of a community to cope when even one member of the community leaves.

The importance of strong ties in nonmetropolitan areas, combined with the dearth of weak ties, show how critical residential stability is to nonmetropolitan areas. Each connection a resident has is vitally important, and if he or she loses a connection, there is no safety net of weaker ties to catch them. As residents stay in nonmetropolitan areas for an extended amount of time, their local bonds grow stronger (Goudy, 1990). As such, any degree of residential mobility can have a tremendous effect on the nonmetropolitan community's ability to stay connected to one another and maintain consensus.

This is not to say that nonmetropolitan areas function entirely differently from metropolitan areas. The notion of social disorganization persists in rural areas, and the same structural conditions seem to have an effect on the community's organization. For example, in cases where a nonmetropolitan area experiences rapid population growth, or becomes a "boomtown," they often experience an increase in crime, violence, and other forms of deviance, mirroring the early urbanization of metro areas (Dixon, 1978; Freudenberg, 1986; Freudenberg & Jones, 1991; Little, 1977; McKeown & Lantz, 1977). The entire community is affected by an influx of new residents, different norms, and changing network structures.

Such research on the structure of nonmetropolitan areas is particularly pertinent, given their changing population structures toward the end of the 21st century. Processes that had been in place for decades were beginning to change. Take for example rural residential mobility. Some groups are likely to flee rural settings for a life in the city,

while others will choose the country life. Young people are more likely to leave nonmetropolitan communities, as are the more educated. This creates a sort of “brain drain” on nonmetropolitan communities, as the workers with the most potential for the future leave their homes to take higher paying jobs in the cities (Huang, Orazem, & Wohlgemuth, 2002; Johnson & Fuguitt, 2000).

As young, highly skilled migrants leave their rural homes, they leave behind an older, less educated, lower skilled community that could consequently struggle to meet social service needs (Cushing, 1999; Fuguitt, Brown, & Beale, 1989; Lichter, McLaughlin, & Cornwell, 1995). The “brain drain,” in turn, can leave pockets rural poverty in its wake. One can see, then, the pattern of interconnectedness between residential mobility and socioeconomic well being of a community. And this is not to say that poorer residents are completely immobile. These residents, however, tend to move to even more disadvantaged areas, thereby continuing the cycle of rural poverty (Foulkes & Newbold, 2008; Nord, 1998; Nord, Luloff, & Johnson, 1995).

Some people, though, might find comfort in nonmetropolitan settings and choose life there over a big city. Older people with children are more likely to move to nonmetropolitan areas. Small businesses are more likely to remain there. Also, as one might expect, those residents who are the most civically engaged are more likely to stay in nonmetropolitan areas (Irwin, Tolbert, & Lyson, 1997; Irwin et al., 1999; Tolbert, Lyson, & Irwin 1998). “[L]ocally oriented capitalism and civic engagement are the foundations of civic institutions that nurture trust and cooperation among citizens” (Tolbert et al., 2002, p. 92).

In the 1990s, these areas experienced a “rural rebound,” as growth that had shifted to metropolitan areas returned to nonmetropolitan areas (Johnson & Beale, 1998; Johnson & Fuguitt, 2000). The return to rural areas was in part due to, as modern human ecology would expect, advances in transportation and telecommunication technologies (Johnson & Beale, 1998; Johnson & Fuguitt, 2000; Nelson & Beyers, 1998). Metropolitan areas were beginning to lose some manufacturing jobs to markets abroad (Mencken, 2004). Labor was cheaper in other parts of the world, and the transportation technology was in place to make this overseas transition economically feasible. Also, workers no longer needed to punch in at a static office each morning; they could now take advantage of modern technologies that enable them to communicate with coworkers or clients remotely. As Johnson (2008) states, “This is important for nonmetropolitan areas because people are moving to where they want to live, not where they work” (p. 4).

No longer are workers necessarily moving into cities to find work. Instead, they might remain in the rural community while working for an urban firm. City residents could even decide to move farther away from their workplace and into a nonmetropolitan area. This could in fact be the natural response to the increasing telecommunications and transportation technology, as some research has shown that Americans prefer to work in low-density settings (Brown, Fuguitt, Heaton, & Waseem, 1997). So, as technology improves, not only does the population structure of nonmetropolitan areas change, but they do so differently than they did in the decades before.

Rural areas, then, also experienced a drop in the poverty rate that caught even some experts by surprise (Weber, Duncan, & Whitener, 2002). In the 1990s,

nonmetropolitan poverty rates declined more rapidly than did the poverty rates in metropolitan areas, and there was also a decline in the number of high poverty nonmetropolitan areas (Lichter & Johnson, 2007). The improving economic conditions in rural areas did not affect all groups equally, though. In 2000, of all the nonmetropolitan counties with poverty rates over 20%, two-thirds of them were either predominantly African American or Hispanic counties (Beale, 2004).

International Immigration

Nonmetropolitan counties in the 1990s were also experiencing an increase in the number of international—particularly Hispanic—immigrants. Among other factors, restructuring in some key industries caused Hispanics to disperse from their previously concentrated homes and move to smaller nonmetropolitan areas (Broadway, 2007; Kandel & Parrado, 2005). In fact, the foreign-born Mexican population increased at a higher rate in nonmetropolitan counties than it did in metropolitan counties (Donato, Tolbert, Nucci, & Kawano, 2007). As such, some residents were leaving rural areas for jobs in cities, but their numbers were largely being replaced by foreign immigrants.

The influx of new foreign-born residents raises a number of issues for nonmetro communities. First, as discussed above, the addition of any new residents to a community has the ability to disrupt the established networks. Second, immigrants also bring with them an entirely separate culture, which is certain to differ from the existing norms of a community. These two factors have severe implications for what can happen an area's level of social disorganization.

There are, however, reasons for optimism. New foreign-born immigrants could serve a need in a community. Employers are delighted to have a new workforce to fill their low skill, low wage positions (Hernández-Léon & Zúñiga, 2005). In times of economic prosperity, immigrants can serve as the backbone of a community's manufacturing industry, so they could be more likely to be accepted by the community as a whole. Donato et al. (2007) point out though that "this optimism must be tempered by declines in naturalization and English competency rates..." (p. 554). Also, if the community experiences an economic downturn, the benefits of immigrant labor will no longer be realized (Crowley, Lichter, & Qian, 2006; Lichter et al., 2005). Immigrants and their children could turn into a burden on the community as they "present difficult challenges to health and educational institutions because they are not likely to be equipped with the cultural competencies and economic resources necessary to insure success" (Donato et al., 2007, p. 554).

Despite the fact that little research has been conducted on the direct effects of international immigration on crime, the implications are clear, particularly within a social disorganization framework. If the foreign-born immigrants have difficulty infiltrating the networks of a nonmetro area, they could seclude themselves and affect the community's ability to form consensus.

Hypotheses

Based on the findings of previous research, several directions for new research come to light. This paper will examine more closely the effects and interplay of the three major predictors of crime from social disorganization theory: socioeconomic status, racial

heterogeneity, and in particular, residential mobility. The importance of residential stability has been shown time and again (Crutchfield et al., 1982; Freudenberg & Jones, 1991; Jobes, 1999; Smith & Jarjoura, 1988,), so much so that it is conceivable that such stability is able to, in some cases, counteract elevated levels of resource disadvantage or heterogeneity. Also addressed in this research is the effect of international immigration on crime.

Not only do the three main predictors have independent impacts on crime, but research has shown that there is an interaction between residential mobility and SES—that is, changes in population affect communities differently, depending on the level of resource disadvantage present in that community, particularly nonmetropolitan communities (Barnett & Mencken, 2002). When a community suffers from a high level of population change, it is difficult for residents to maintain their ties to one another and in turn a low crime level. When they have economic resources in place, though, they might be able to deflect some of the adverse effects of mobility through civic programs or access to government resources. It is when high levels of population change *combine* with high levels of resource disadvantage that the greatest effects are felt within a community. So, at varying levels of resources, residential mobility will affect a community differently.

H₁: There is an interaction between resource disadvantage and population change on property crime in nonmetropolitan counties.

H₂: There is an interaction between resource disadvantage and population change on violent crime in nonmetropolitan counties.

International immigration bears the distinction of combining *two* of social disorganization theory's predictors of crime: residential mobility and racial heterogeneity. New residents who are unfamiliar with existing norms are coming into a community and disrupting the networks in place. Not only that, but these new international immigrants are increasing the heterogeneity in the area, thereby making it doubly hard for the community to maintain consensus and protect against crime. At a certain point, though, it stands to reason that as more international immigrants settle in a community the crime rate could in fact decrease. International immigration functions more like racial heterogeneity than it does residential mobility; increasing levels of international immigration should have a curvilinear effect on crime. As the level of immigration grows, so will the crime rate. Somewhere along the way, though, so many immigrants come into the community that they could no longer be sequestered into enclaves—or even become the dominant group in a community—and, as such, there is an inflection point at which the crime rate lowers while immigration continues to increase.

H₃: International immigration has a curvilinear effect on property crime in nonmetropolitan counties.

H₄: International immigration has a curvilinear effect on violent crime in nonmetropolitan counties.

Finally, what are the differences in the effects of social disorganization on metropolitan and nonmetropolitan communities? Because of the importance of strong ties in rural areas, population stability is critical to maintaining a peaceful, crime-free setting. As such, losing even a few connections to one's community to outmigration or

seeing a few too many new immigrants in town can have quite a large effect on nonmetropolitan communities. Metropolitan residents, on the other hand, might have large enough networks of loose ties to fall back on in instances of high degrees of residential mobility, thereby protecting them against increased levels of crime.

H₅: The effects of population change, resource disadvantage, racial heterogeneity, and international immigration are more pronounced in nonmetropolitan counties on both property and violent crime.

CHAPTER TWO

Data and Methods

Data and Units of Analysis

To investigate the impact of social disorganization on a community, this research will utilize secondary data from two major sources. The first is the Uniform Crime Report, which collects data from law enforcement agencies from across the United States as they are reported to the Federal Bureau of Investigation. The specific crime data used in this research are taken from the National Archive of Criminal Justice Data at the Inter-University Consortium for Political and Social Research. The other source of data used in this paper is the United States Decennial Census.

The research presented in this paper is conducted at the county level. Performing county-level analyses in social disorganization research is advantageous for several reasons. First, though county boundaries are established for political rather than social or economic purposes, it is fairly easy to distinguish metropolitan counties from nonmetropolitan counties. In this case, nonmetropolitan counties are those not contained within a Metropolitan Statistical Area. Second, counties present the simplest “common denominator” by which to align FBI and Census data. Finally, county-level analyses are necessary to compare the results to some previous studies on social disorganization theory.

Variables

The dependent variables in the models to follow are county crime rates (incidents per 100,000 population) reported to the FBI averaged over the three year period 1999-2001 (averaging the rates over a span of years helps control for fluctuations between years). This research looks both at counties' violent and property crime rates. Violent crime, as defined in Part I of the UCR, includes the index crimes murder, non-negligent manslaughter, forcible rape, robbery, and aggravated assault. Property crime, also defined in Part I of the UCR, includes burglary, larceny-theft, and motor vehicle theft.

There are several independent variables used to model crime. The primary predictors of relevance in this study are those measuring the important social disorganization concepts of residential mobility, racial heterogeneity, socioeconomic status, and international immigration. Residential mobility is presented simply as the percentage change in population from 1990 to 2000.

Racial heterogeneity in this research is shown as the percent of residents in a county who are nonwhite, including Hispanics. This is modeled as a quadratic expression in the models, as both a very low level and a very high level of nonwhite residents indicate a high level of racial *homogeneity*. Percent nonwhite is sometimes included within measures of socioeconomic status and resource disadvantage indices, but it is kept separate here for theoretical purposes.

Socioeconomic status is presented here as a resource disadvantage index. It is comprised of the percent of the population living in poverty in 1999, the Gini income

inequality coefficient in 1999, the percent of female-headed households present in 2000, and the unemployment rate in 1999. The resource disadvantage index includes a family structure variable with the other measures of SES, which Barnett and Mencken (2002) defend, saying that “these indicators are correlated very highly, and using them as separate measures in the same equations causes estimation problems” (p. 380). Also, they say, communities with high levels of single-parent households are at a disadvantage in their ability to control the local teenage population, so it is useful to include this in a broad resource disadvantage measure. To construct this measure, the standardized scores of each variable were summed into one index, with a Cronbach’s alpha of 0.84. This new measure has no meaningful metric, so as Aiken and West (1991) suggest, it is centered to aid in interpretation.

International immigration is presented in this paper as the percentage change in number of foreign-born persons in a county from 1990 to 2000, as counted by the Census.

Several variables related to civic engagement literature are also included. The first is the percentage of manufacturers in an area that are “small,” in this case, those who employ fewer than twenty people. Irwin et al. (1999) report that:

The proliferation of small manufacturing firms may directly increase nonmigration by providing a predictable and stable economic base and through the corresponding enhancement of economic outcomes for residents. Indirectly, as small manufacturing firms rely on the very social institutions that build a sense of community, they may actively work to increase the cultural contexts that embed populations in place. (p. 2226)

Second, the models include a variable for the number of associations in a community.

Business associations, neighborhood associations, fraternal organizations, and others

contribute to trust and “civic embeddedness” (Irwin et al., 1999). The third civic engagement variable measures the number of third places in a community. Third places are retail and service establishments where community members can gather. Finally, the models include a measure of the percentage of civically engaged denominations in an area. This is primarily a measure of the percentage of mainline Christian denominations in an area, including Catholic and Latter-Day Saints congregations. Lee and Bartkowski (2004) point out that:

when a substantial proportion of a community's population adheres to civically engaged religious institutions, horizontal social networks may be strengthened, normative consensus on acceptable and unacceptable behaviors may be elevated, interpersonal trust may be enhanced, and the community's ability to express and pursue collective goals may be bolstered. (p. 1003)

Finally, several control variables related to social disorganization theory are included in the models. The percent of the population age 15 to 24 is an indicator of the presence of teenage peer groups. The percent of the population living in an urban area and population density are further indicators of the differences between metropolitan and nonmetropolitan areas.

This research uses a random sample of 750 nonmetropolitan counties for most of its models. Many counties do not systematically report their crime data to the FBI, so taking a random sample of counties aids in controlling for clusters of those counties. Also, Florida, Illinois, and Wisconsin did not report crime data at all in the 1999-2001 period, so they are excluded entirely. The means and standard deviations for each variable are shown in Table 2.1.

Table 2.1
Variables Used for Regression Models

Type	Description	Mean	Standard Deviation
Dependent Variables	Property Crime Incidents per 100,000 Population	396.422	250.838
	Violent Crime Incidents per 100,000 Population	125.663	100.154
Social Disorganization Variables	Percentage Population Change, 1990-2000	8.862	13.988
	Percentage Nonwhite	17.757	19.146
	Percentage in Poverty	14.196	5.299
	Gini Coefficient	0.408	0.027
	Percentage Single Female-Headed Households	10.306	4.347
	Unemployment Rate	4.553	1.716
	Percentage Change in Foreign-Born Population, 1990-2000	157.353	287.468
Control Variables	Percentage of Small Manufacturing Establishments	65.694	21.447
	Number of Associations per Capita	0.0003	0.0003
	Percentage of Civically Engaged Denominations	23.760	10.794
	Third Places per Capita	0.002	0.001
	Percentage of Population Age 15 to 24	13.383	2.905
	Percentage Urban	29.022	25.069
	Population Density	40.090	49.241
	Total Population, 2000	24,784.54	23,131.54

Values for each of the variables are also shown geographically in Figures 2.1 to 2.17.

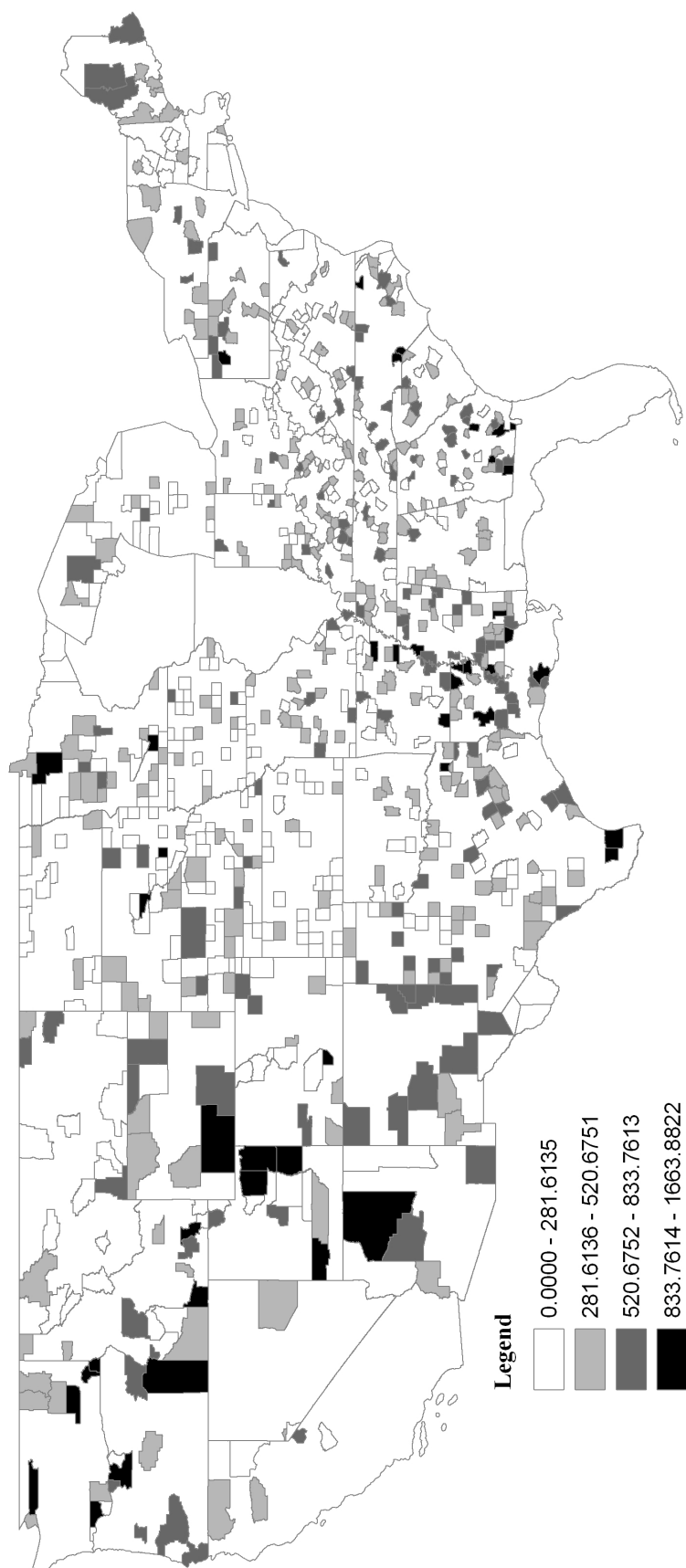


Figure 2.1. Incidents of Property Crime/100,000 Population in Nonmetropolitan Counties; N=750

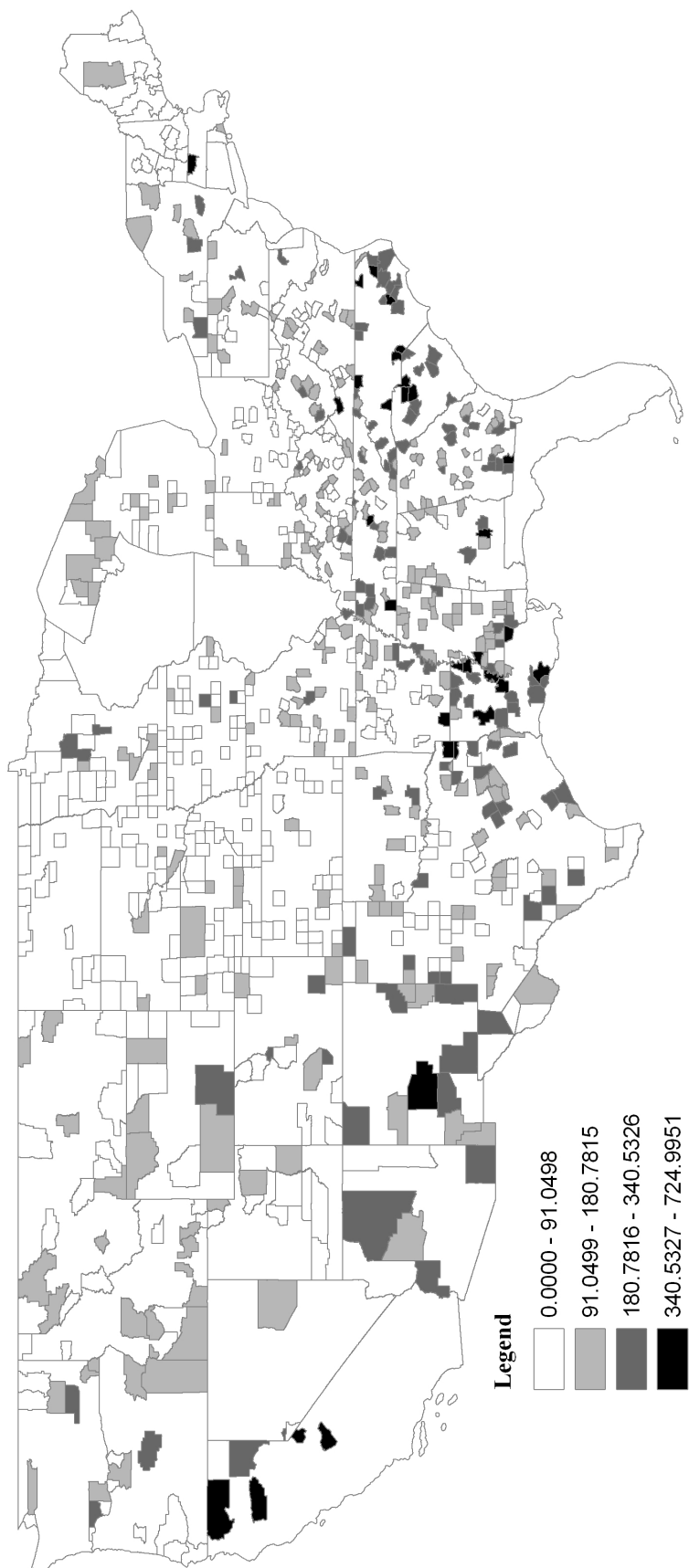
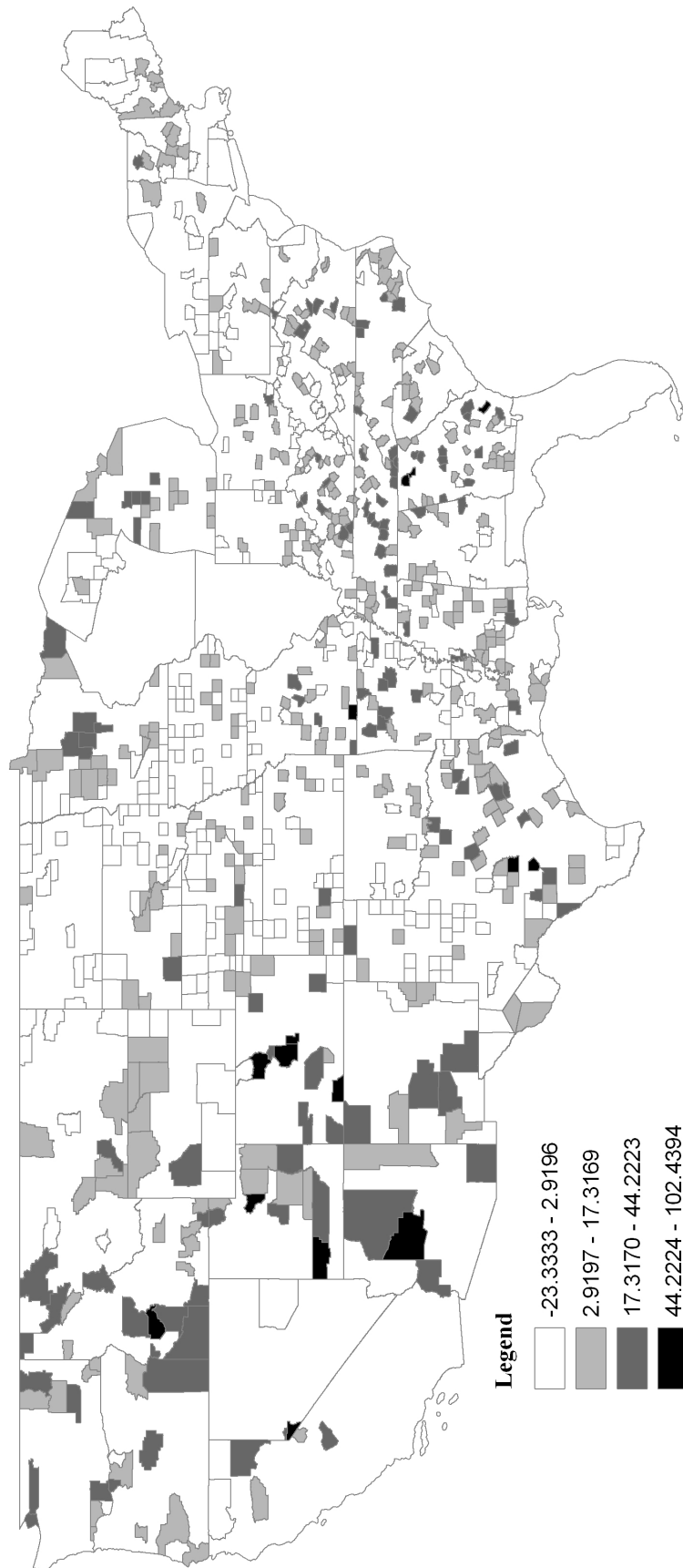


Figure 2.2. Incidents of Violent Crime/100,000 Population in Nonmetropolitan Counties; N=750



*Figure 2.3. Percentage Population Change, 1990-2000
in Nonmetropolitan Counties; N=750*

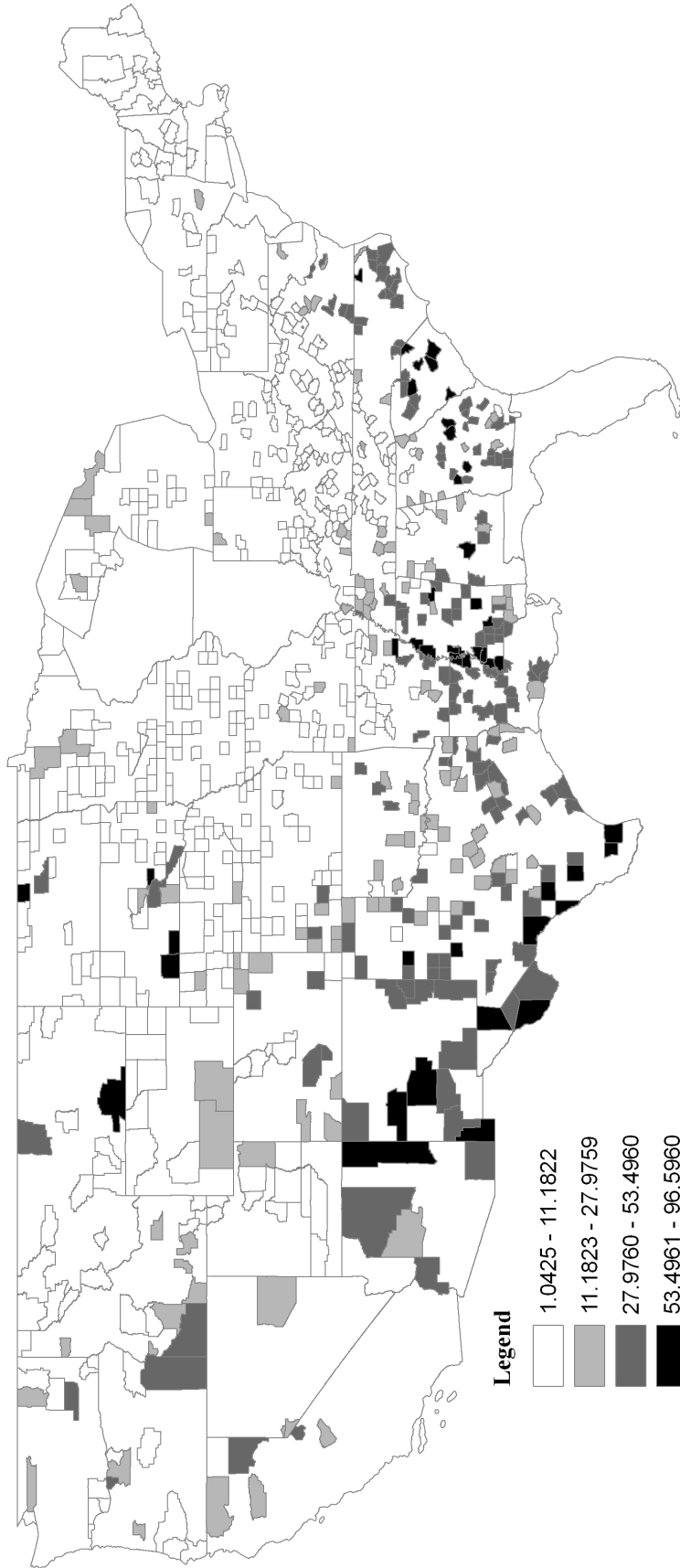


Figure 2.4. Percentage Nonwhite in Nonmetropolitan Counties; N=750

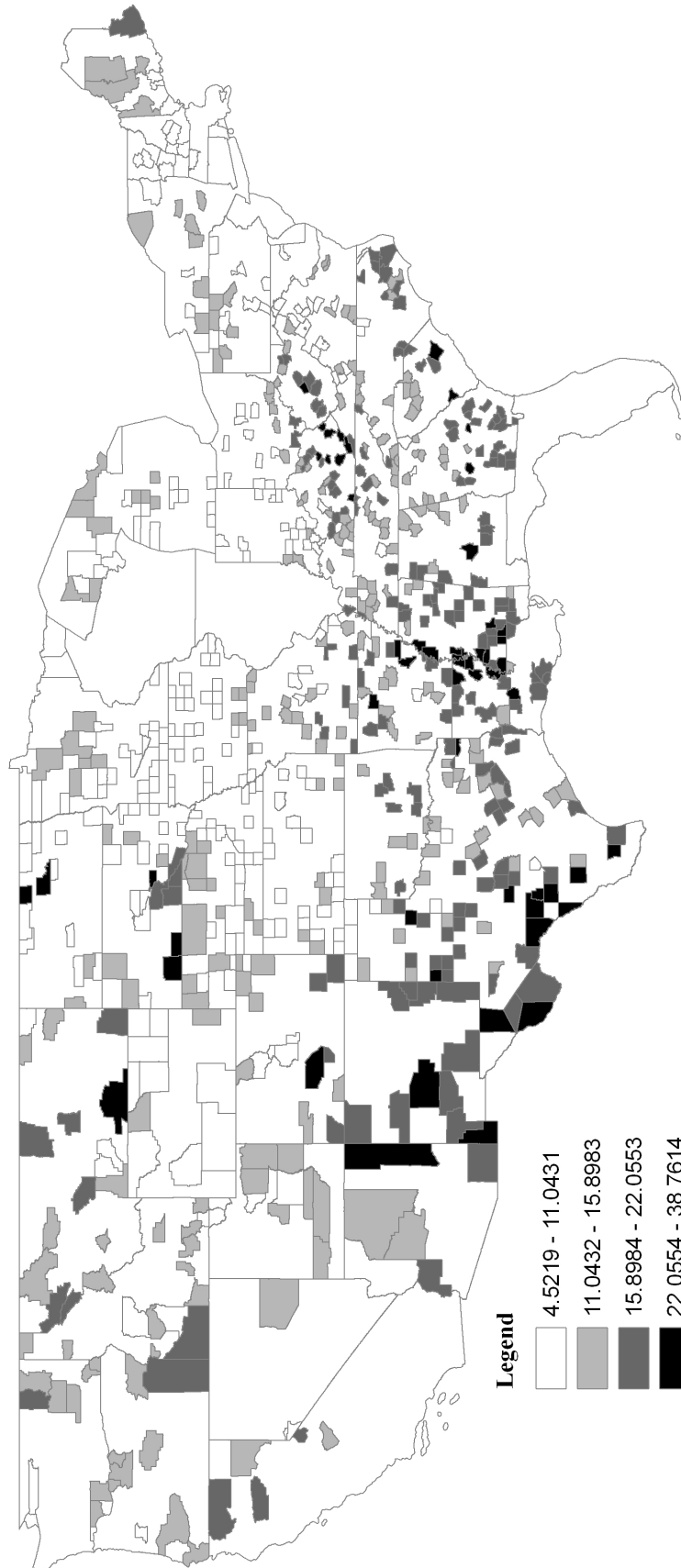


Figure 2.5. Percentage in Poverty in Nonmetropolitan Counties; N=750

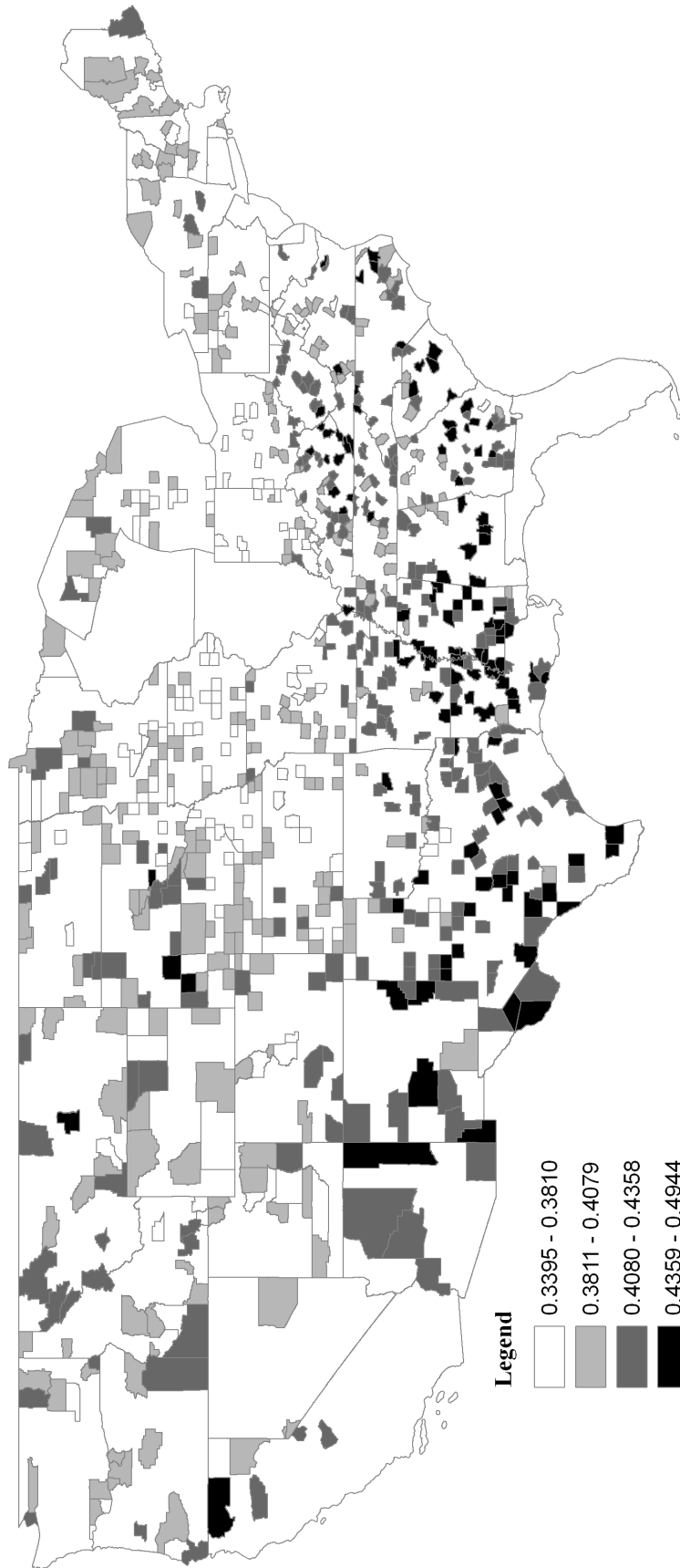


Figure 2.6. Gini Coefficient in
Nonmetropolitan Counties; N=750

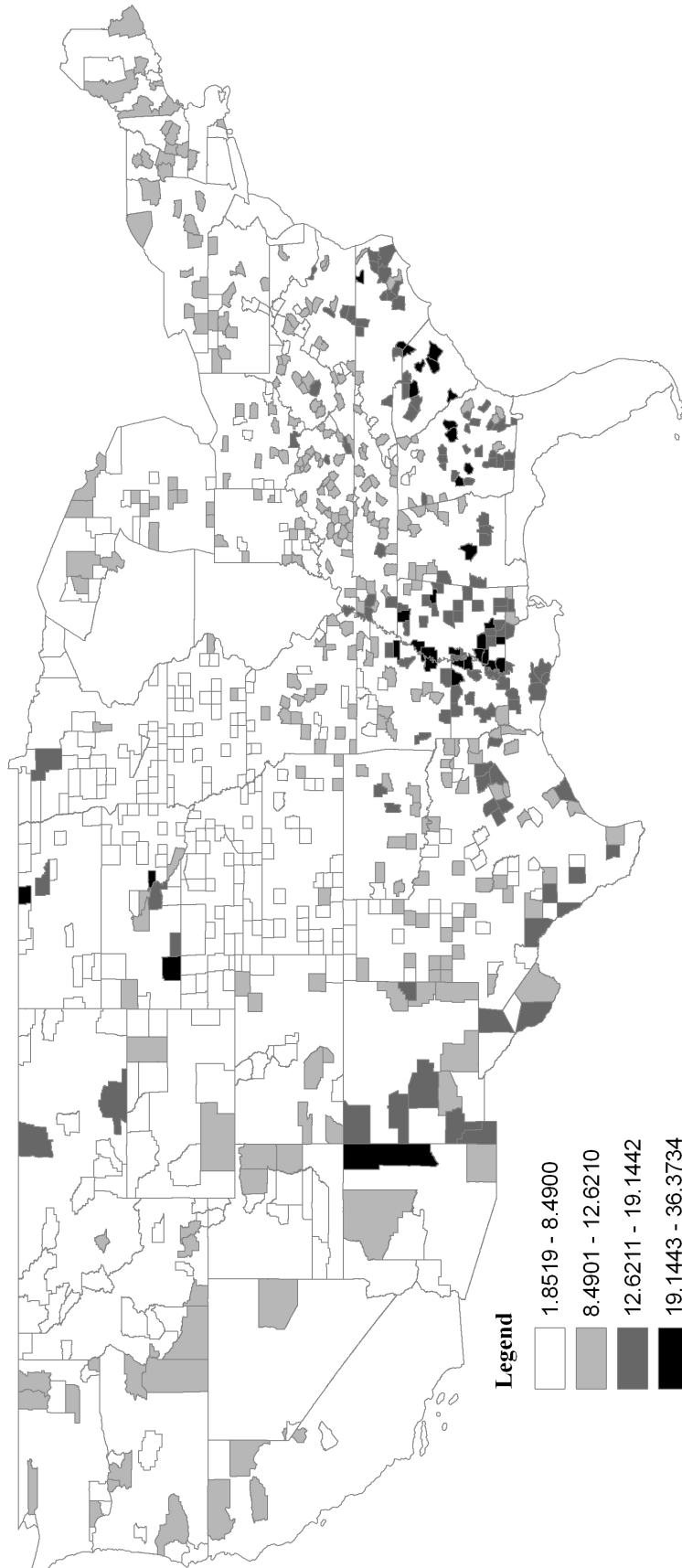
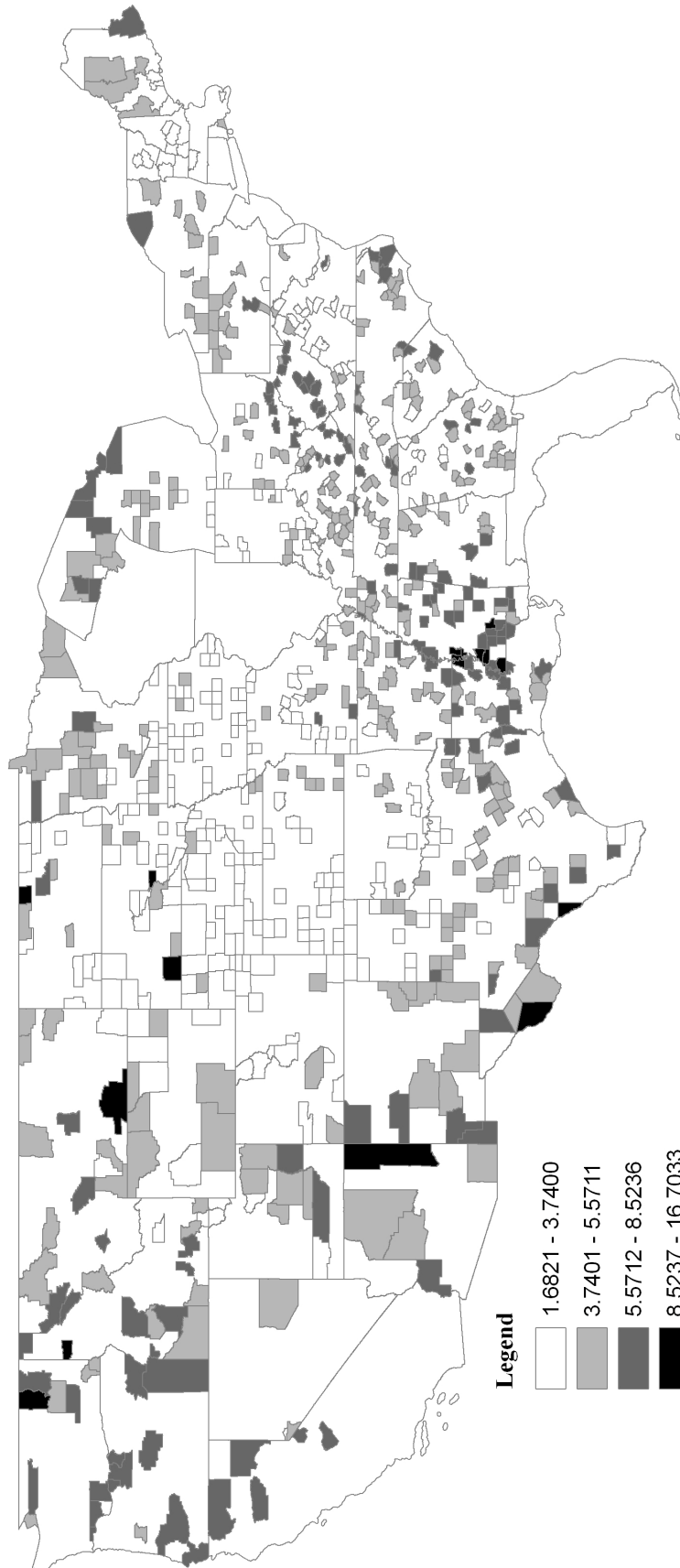


Figure 2.7. Percentage of Single Female-Headed Households in Nonmetropolitan Counties; N=750



*Figure 2.8. Unemployment Rate in
Nonmetropolitan Counties; N=750*

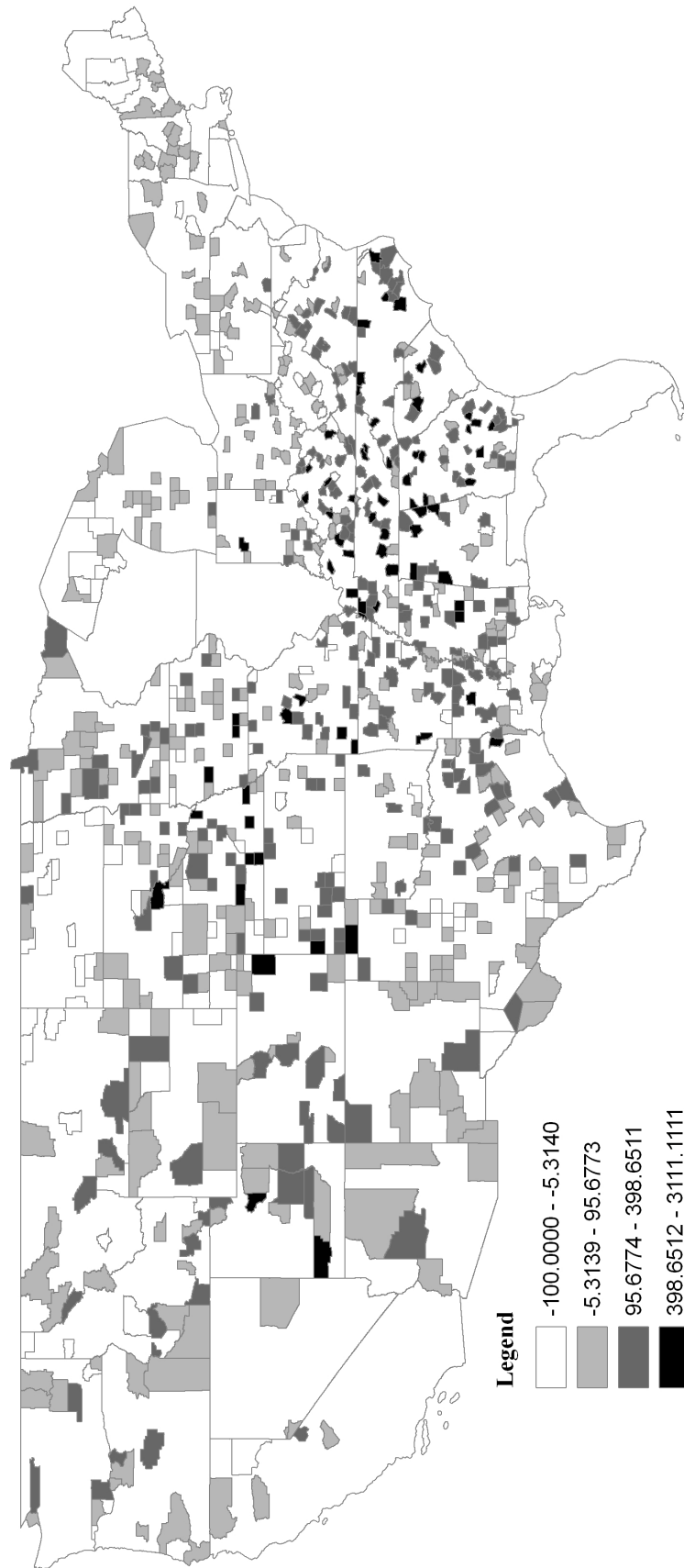


Figure 2.9. Percentage Change in Foreign-born Residents, 1990-2000, in Nonmetropolitan Counties; N=750

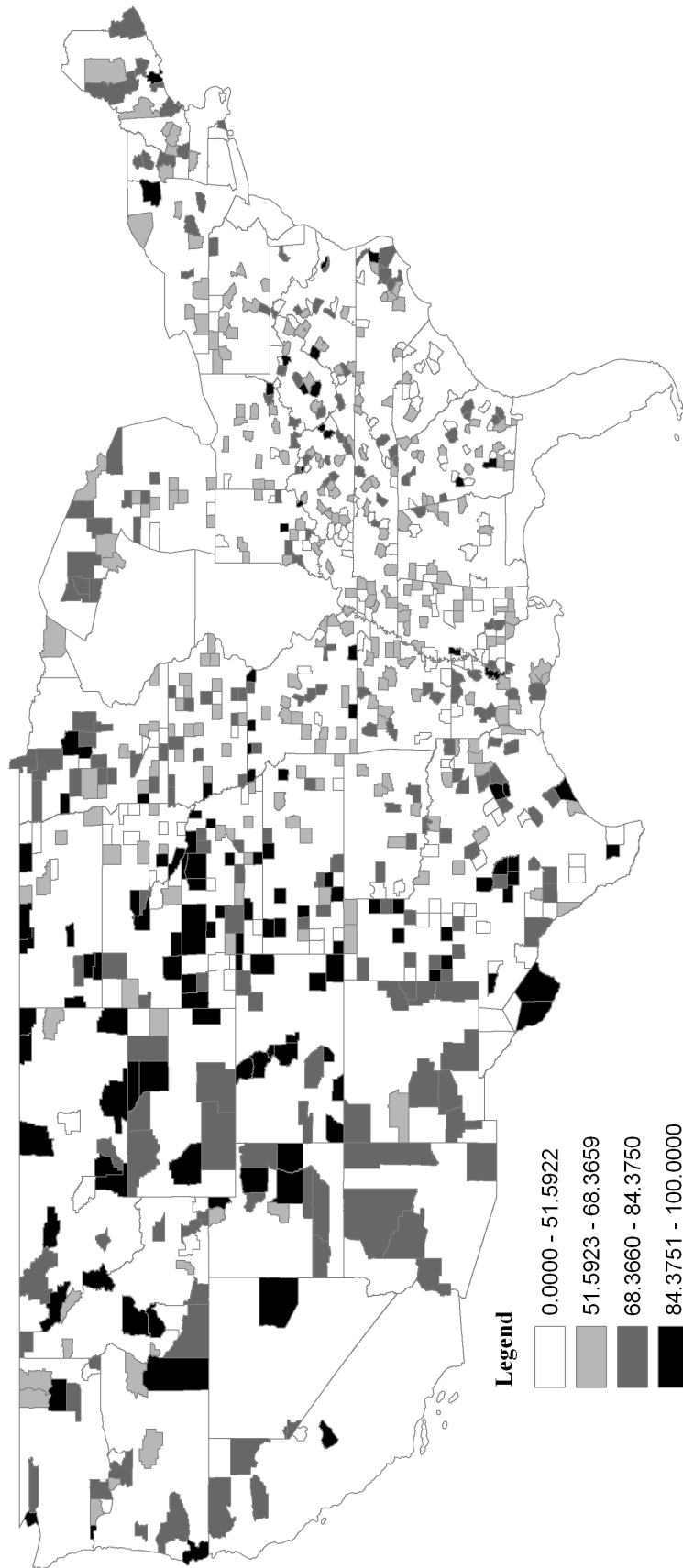


Figure 2.10. Percentage of Small Manufacturers
in Nonmetropolitan Counties; N=750

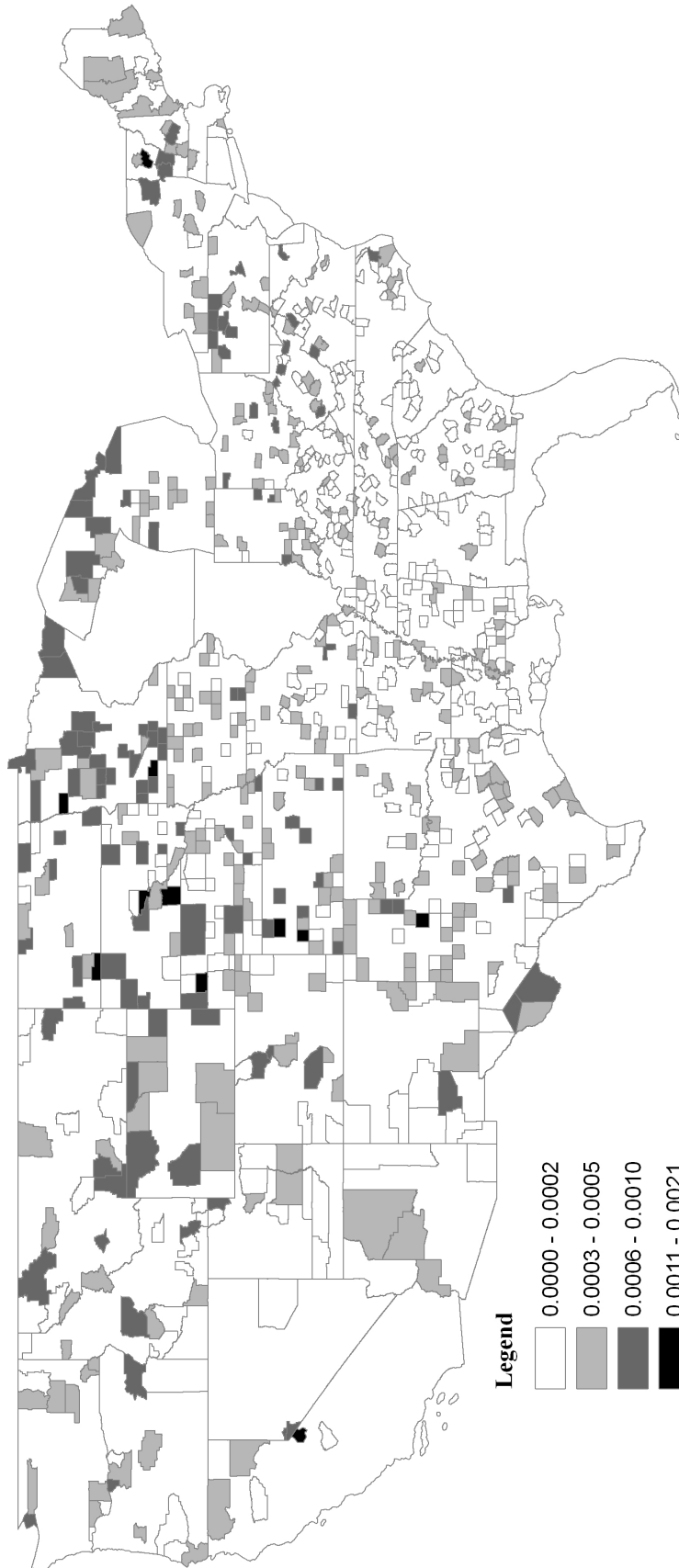


Figure 2.11. Number of Associations per Capita
in Nonmetropolitan Counties; N=750

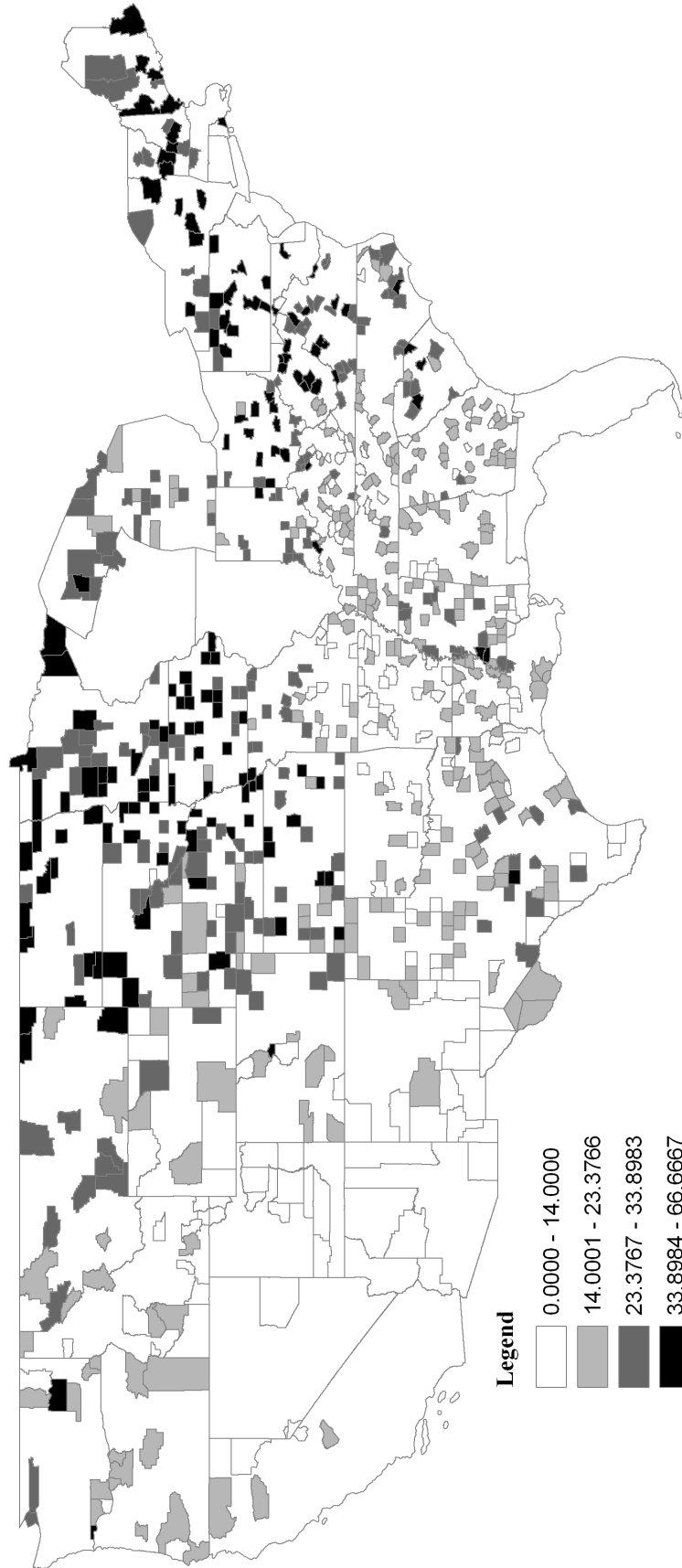


Figure 2.12. Percentage of Civically Engaged Denominations in Nonmetropolitan Counties; N=750

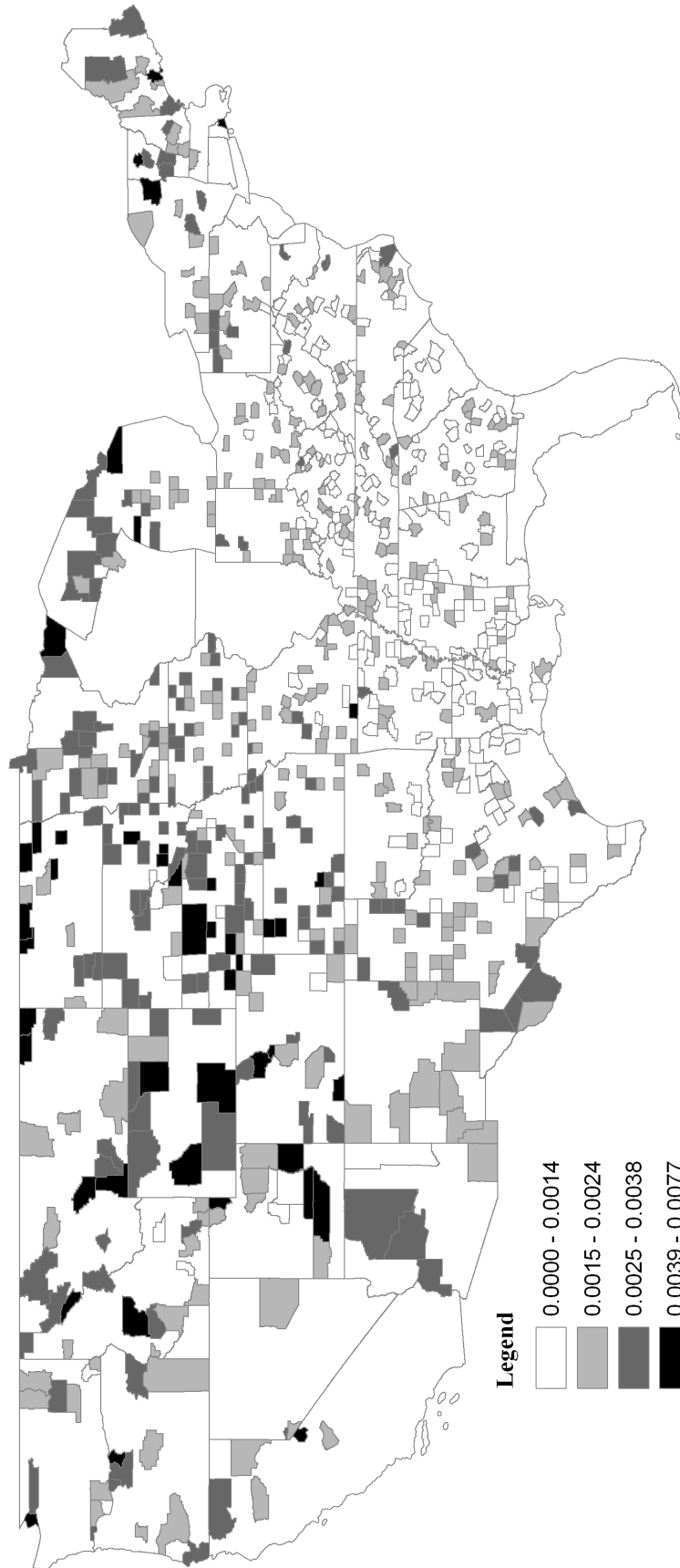


Figure 2.13. Number of Third Places per Capita in Nonmetropolitan Counties; N=750

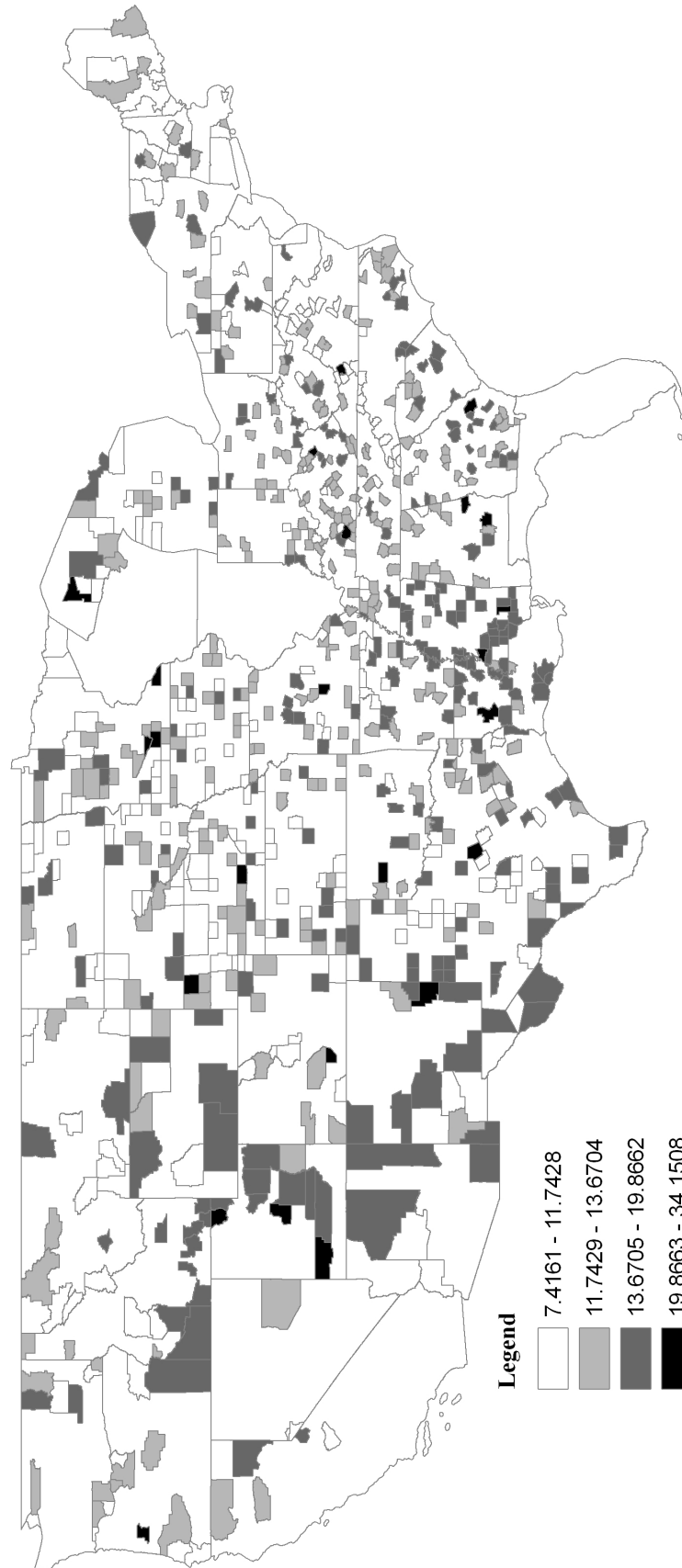


Figure 2.14. Percentage of Population Age 15 to 24 in Nonmetropolitan Counties; N=750

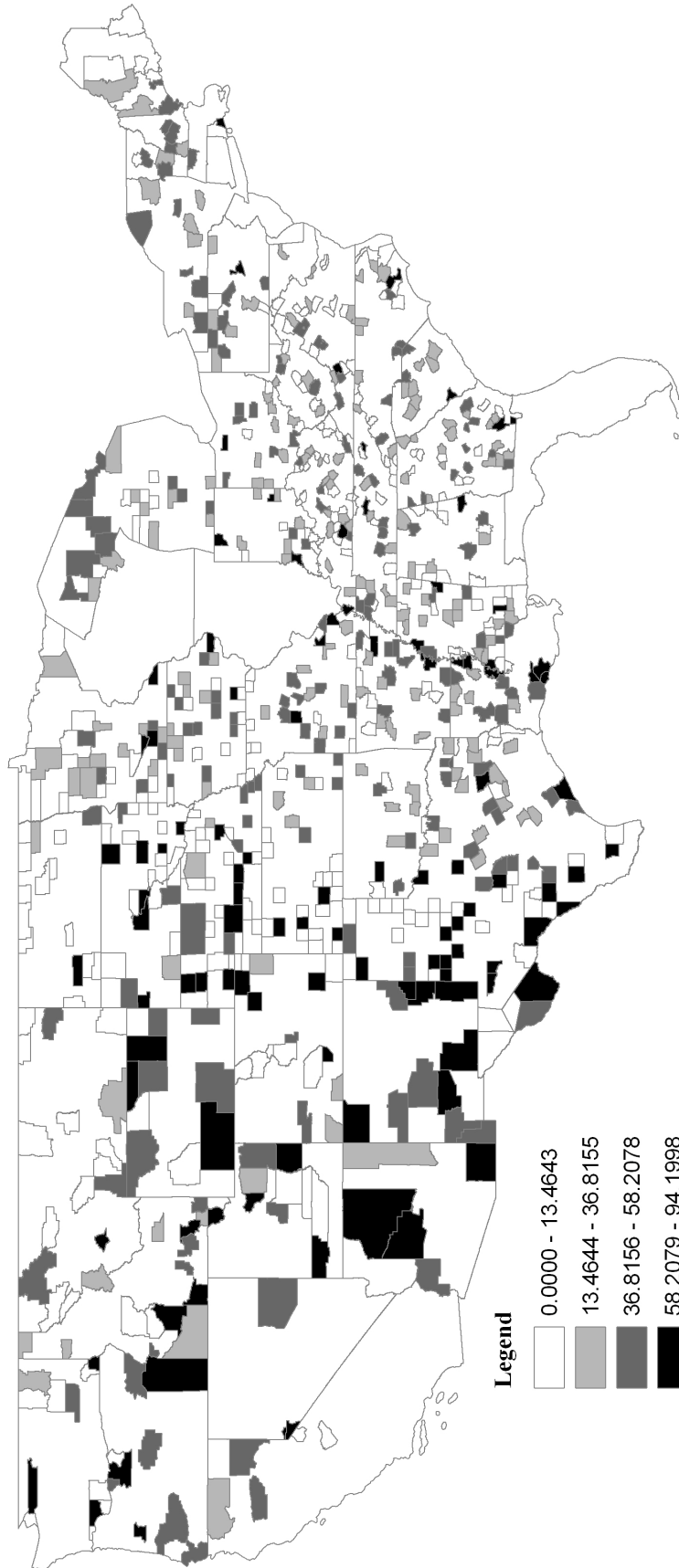


Figure 2.15. Percentage Urban in Nonmetropolitan Counties; N=750

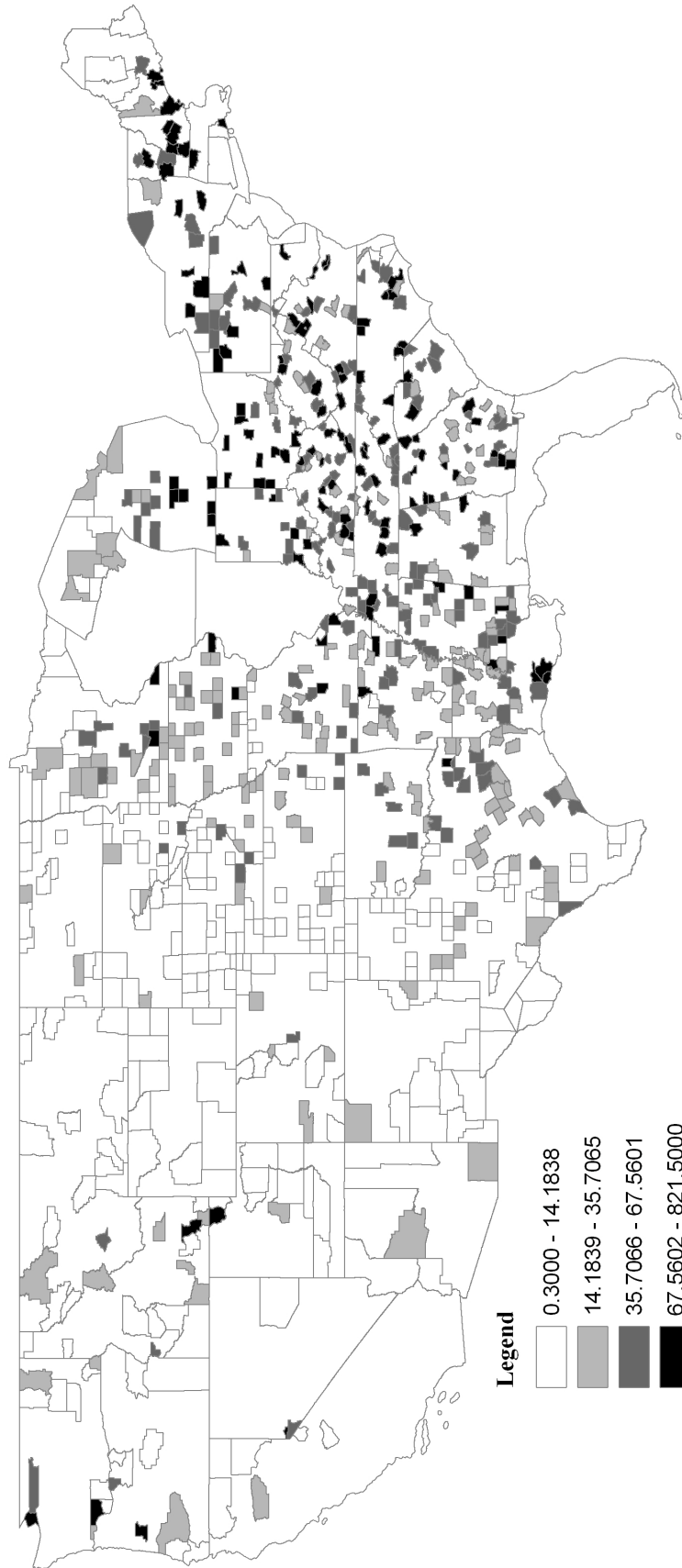


Figure 2.16. Population Density in Nonmetropolitan Counties; N=750

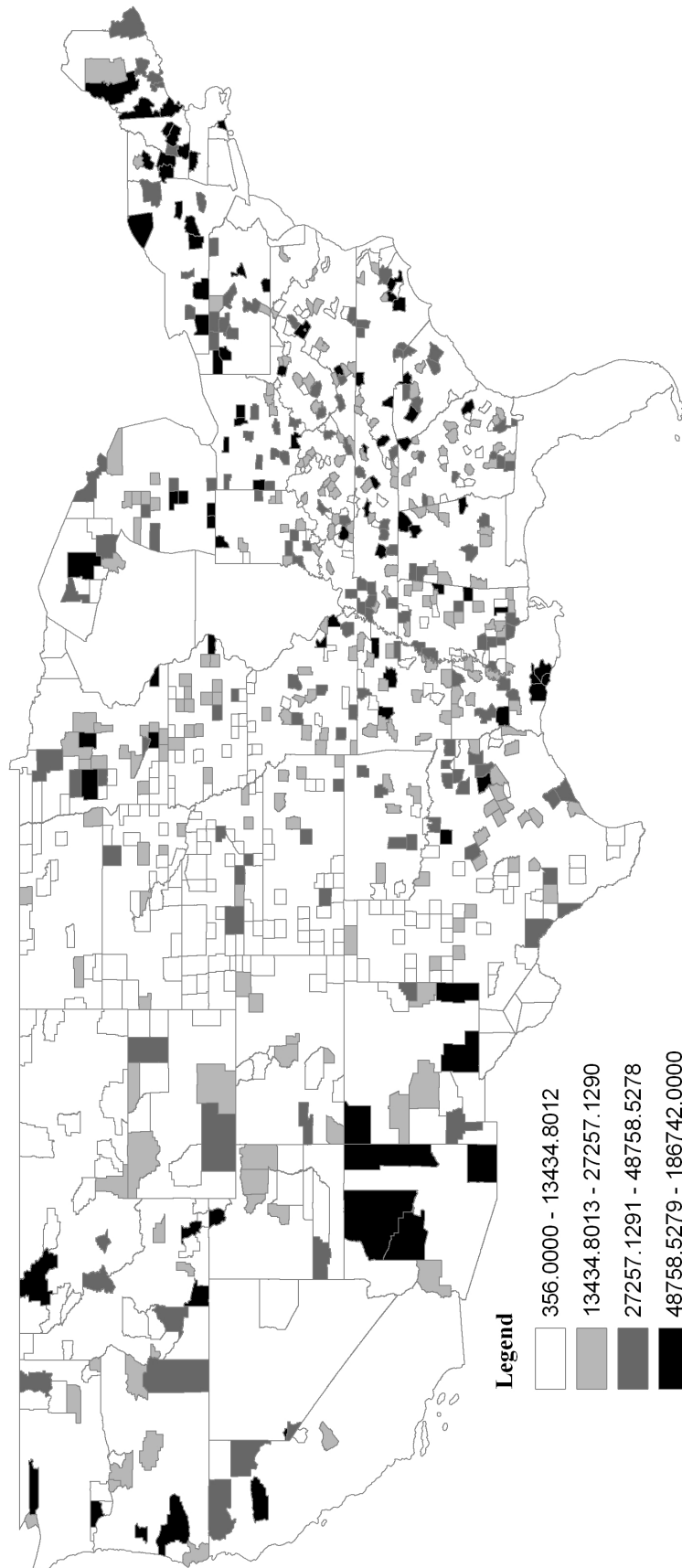


Figure 2.17. Total Population in Nonmetropolitan Counties; N=750

Model of Analysis

The analysis will use ordinary least squares regression to predict the violent and property crime rates in the sample of metropolitan and nonmetropolitan areas in the 48 contiguous states from the independent variables. Included in each model are spatial lag variables for either the property or crime rate. According to Johnson (2008), “The spatial lag variable allows for each model to control for spatial effects that occur when processes cross the geographical unit of analysis...[T]here are often processes that cross over the defined boundaries creating spatial autocorrelation among units” (pp. 31-32). Spatial lag regressions require the dependent variables to approximate normality, so the models utilize the natural log transformations of the violent crime rate. Plotting property crime resembles a normal distribution, so no transformation is necessary.

Also included in the models are an interaction term showing the conditional effects of population stability and either socioeconomic status or racial heterogeneity, depending on the hypothesis being tested.

CHAPTER THREE

Results

SES, Residential Mobility, and Property Crime

The regression results for the effects of the social disorganization indicators and controls on property crime in nonmetropolitan areas are shown in Table 3.1. Looking first at the social disorganization variables, one sees that two indicators are statistically significant. The resource disadvantage index has a significant positive effect on property crime, as social disorganization theory would predict—that is, counties with the fewest socioeconomic assets at their disposal are likely to have the highest property crime rate. Also as predicted, racial heterogeneity (shown as a quadratic term of the percentage of the population that is nonwhite) has a predicted curvilinear effect. By taking the first derivative of the race equation and setting it equal to zero, one sees that racial heterogeneity holds its greatest effect at 46% nonwhite, and the effect is displayed in Figure 3.1. The mobility measure, however, does *not* prove to be a significant predictor in nonmetropolitan areas; the net in- or outmigration of residents does not make a statistical difference when it comes to property crime. Together, these three measures show that social disorganization appears, at least in part, to apply to nonmetropolitan areas.

Turning to the measures of civic engagement, one notices that the proportion of manufacturers that are small (fewer than 20 employees) and the percentage of denominations in the county that are civically engaged have strong negative effects on

property crime, as one would expect based on the civic engagement literature. These are both indicators that residents are invested and involved in their community and that in turn strengthen the community as whole. The number of associations, counterintuitively, has a significant *positive* effect on property crime. The number of third places per capita, though, does not affect the property crime rate.

Table 3.1

Regression Estimates for Property Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	-287.956 **	107.394
Social Disorganization Variables		
Percentage Population Change, 1990-2000	-0.305	0.615
Resource Disadvantage Index	11.354 ***	3.763
Percentage Nonwhite	5.065 ***	1.182
Percentage Nonwhite, squared	-0.055 **	0.017
Control Variables		
Percentage of Small Manufacturing Establishments	-0.815 *	0.355
Number of Associations per Capita	40,466	32,706
Percentage of Civically Engaged Denominations	-3.401 ***	0.836
Third Places per Capita	30,811 ***	8,733.032
Percentage of Population Age 15 to 24	3.787	2.888
Percentage Urban	2.877 ***	0.417
Population Density	-0.048	0.181
Total Population, 2000 (natural log)	60.354 ***	11.192
Spatial Lag	-.017 **	0.006
		R ² =0.39

*p<.05, **p<.01, ***p<.001

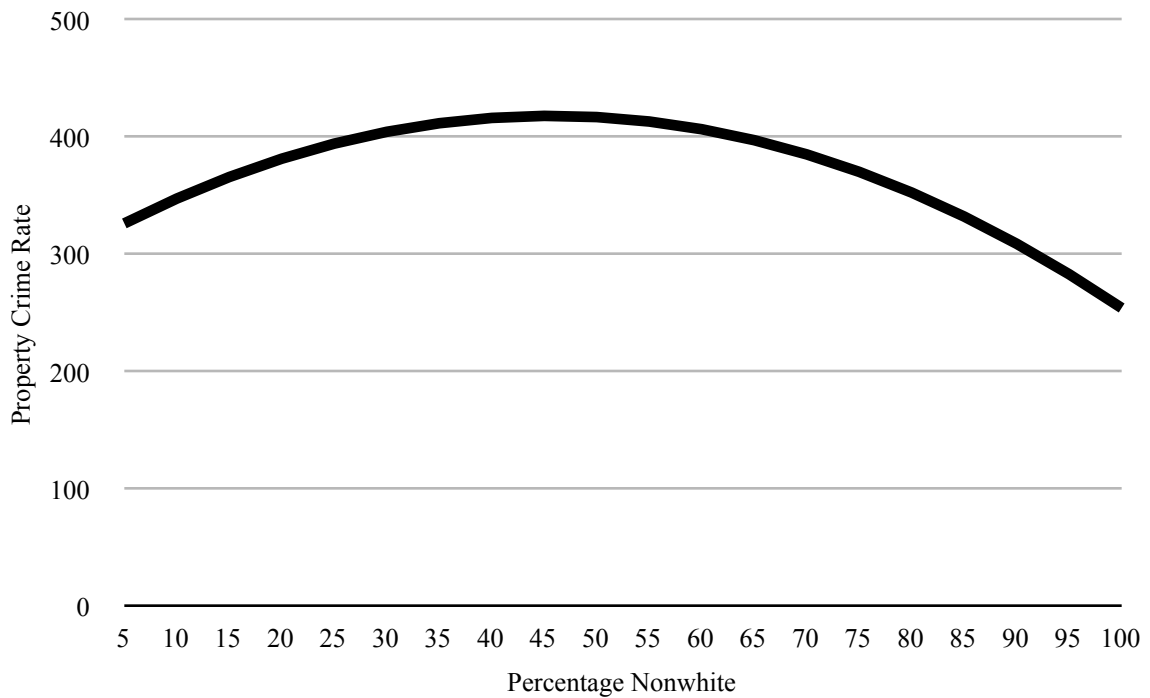


Figure 3.1. Effect of Racial Heterogeneity on Property Crime

Looking at the effects of the other control variables, one sees that most of them—county population, percent urban, and the spatial lag variable—prove to be statistically significant. They generally act as one would expect; population positively affects crime, as does percent urban. The spatial lag measure is also significant and negative, indicating that the property crime rate is less related to the crime rates of neighboring counties than one would expect by chance alone (Mencken & Barnett, 1999). Turning to the standardized coefficients, it is clear that the percentage of a county that is considered urban is the most important factor among the controls in predicting property crime.

Next, an interaction term multiplying the residential mobility measure by the socioeconomic status measure is introduced into the model, and can be seen in Table 3.2. Looking first at the direct effects of the social disorganization variables, one sees that the

Table 3.2

Regression Estimates for Property Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	-282.758 **	107.281
Social Disorganization Variables		
Percentage Population Change, 1990-2000	-0.623	0.615
Resource Disadvantage Index	13.217 ***	3.763
Population Change x Resource disadvantage	-0.306	0.17342
Percentage Nonwhite	4.837 ***	1.182
Percentage Nonwhite, squared	-0.052 **	0.017
Control Variables		
Percentage of Small Manufacturing Establishments	-0.832 *	0.354
Number of Associations per Capita	39,073	32,669
Percentage of Civically Engaged Denominations	-3.335 ***	0.836
Third Places per Capita	30,510 ***	8,722.173
Percentage of Population Age 15 to 24	4.079	2.889
Percentage Urban	2.853 ***	0.416
Population Density	-0.049	0.181
Total Population, 2000 (natural log)	60.016 ***	11.177
Spatial Lag	-.018 **	0.006
		R ² =0.39

*p<.05, **p<.01, ***p<.001

residential mobility measure (percent of change in population, 1990-2000), as in the previous model, is not statistically significant. The measure is an interaction effect, though, which means that population change, in this case, is conditioned by the socioeconomic status measure (the resource disadvantage index). Because the resource disadvantage index has been centered, the nonsignificant residential mobility variable indicates that at average levels of resource disadvantage, the effect of population change on property crime is not significant. This could be a positive finding for some

nonmetropolitan communities. If they have even average socioeconomic resources available to them, they should be able to withstand a great deal of population change with no impact on the property crime level.

The resource disadvantage index, however, does emerge as a significant predictor of property crime in nonmetropolitan counties. It too is a conditional interaction effect, so a one unit increase in the resource disadvantage index will lead to a 13.2 increase in the property crime rate, assuming population change is held at zero. This does not bode as well for nonmetropolitan counties. Even if their population—and moreover the bonds between neighbors—stays steady, if their resources decline, the crime rate is likely to increase. Additionally, the interaction term is marginally significant and negative at the $p < 0.08$ level. The interaction is shown graphically in Figure 3.2.

These findings support Hypothesis 1, but not in the way one might expect. As seen in Figure 3.2, the effects of SES are conditioned by population change. Counties that are losing the greatest proportion of their population will experience the most dramatic increases in property crime as their level of resource disadvantage increases; on the other hand, counties with no population change will also experience an increase in property crime as the resource disadvantage index increases, but at a lower rate. Counties experiencing substantial population increase, meanwhile, will also feel the effects of resource disadvantage, but they will be able to handle them more effectively.

Additionally, according to social disorganization theory, one might expect population stability in nonmetropolitan areas to moderate the effects of SES. Nonmetropolitan areas are dependent on their networks of strong ties. So if those remain

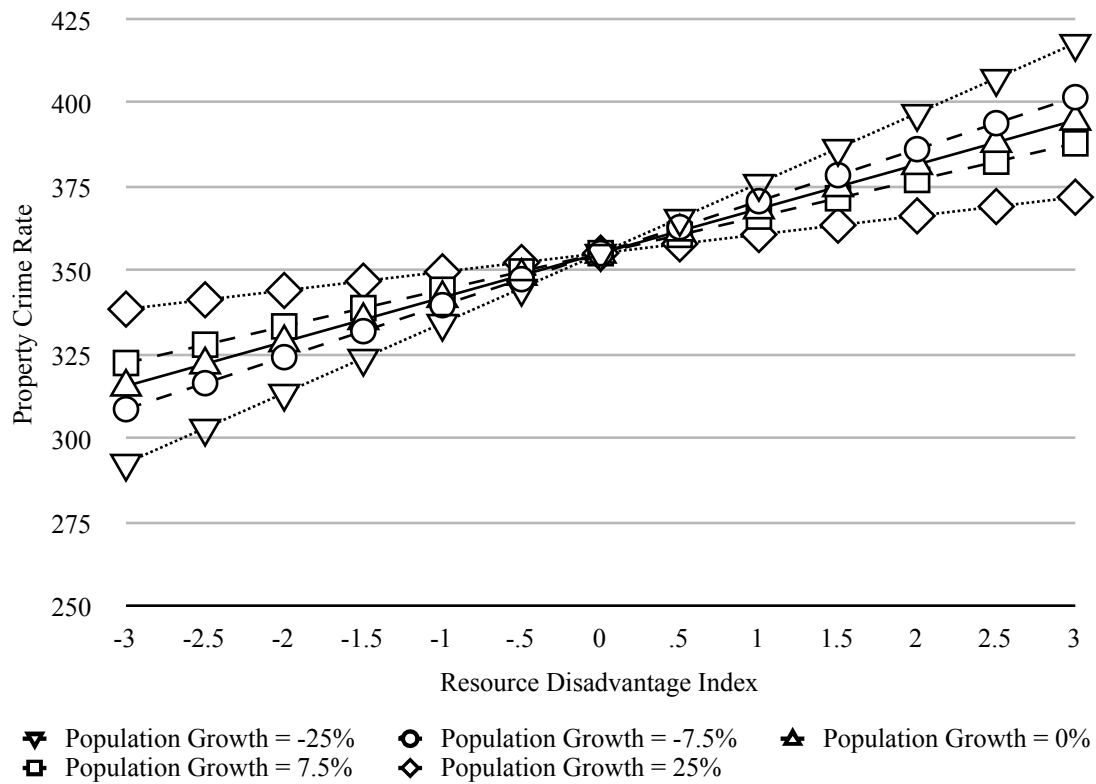


Figure 3.2. Effects of Resource Disadvantage and Population Change on Property Crime

intact, one would expect the communities to be able to withstand fluctuations in other ecological factors. This model, however, does not support that notion. Looking at the interaction effect, when the population is steady, the resource disadvantage index still has a significant and strong positive effect, indicating that having a stable population is not enough to protect a community from property crime when the area is missing key social and economic advantages.

The other measure of social disorganization, though, again has a significant impact on property crime in nonmetropolitan areas. Racial heterogeneity has an expected curvilinear effect, and this time holds its greatest effect at 47% nonwhite. It is shown in Figure 3.3.

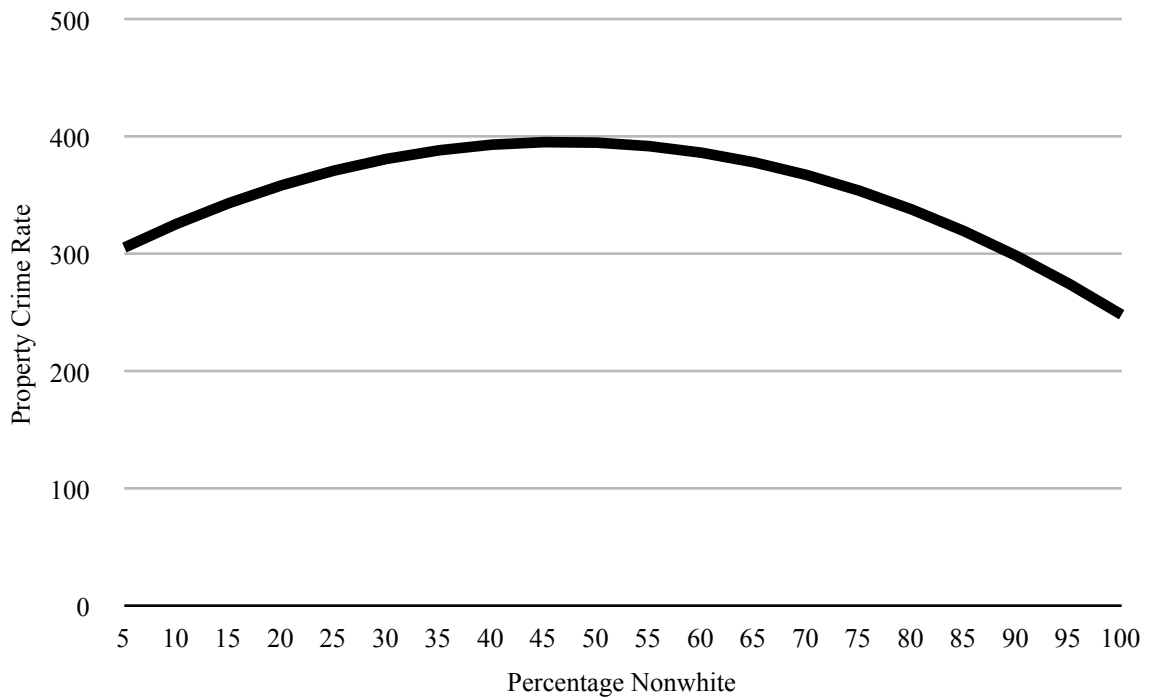


Figure 3.3. Effect of Racial Heterogeneity on Property Crime

The civic engagement and other control variables hold nearly exactly the same effects in this model as they did in the previous model that did not include an interaction term.

SES, Residential Mobility, and Violent Crime

As in the property crime models, two of the social disorganization measures emerge as significant predictors (Table 3.3). The resource disadvantage index has a highly significant positive effect on violent crime, and racial heterogeneity has a predicted curvilinear effect. The percentage nonwhite holds its greatest effect at 37% nonwhite, which is displayed in Figure 3.4. Surprisingly, though, residential mobility still does not prove to be a significant predictor of crime.

Table 3.3

Regression Estimates for Violent Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	1.532 **	0.466
Social Disorganization Variables		
Percentage Population Change, 1990-2000	0.0003	0.003
Resource Disadvantage Index	0.088 ***	0.016
Percentage Nonwhite	0.035 ***	0.005
Percentage Nonwhite, squared	-0.0005 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.005 **	0.002
Number of Associations per Capita	74.846	141.713
Percentage of Civically Engaged Denominations	-0.015 ***	0.004
Third Places per Capita	36.884	38.255
Percentage of Population Age 15 to 24	-0.031 *	0.013
Percentage Urban	0.002	0.002
Population Density	-0.0003	0.001
Total Population, 2000 (natural log)	0.358 ***	0.049
Spatial Lag	0.001	0.0003
		R ² =0.38

*p<.05, **p<.01, ***p<.001

A couple of the measures from civic engagement literature appear as significant predictors of violent crime in this model. Both the percentage of small manufacturers in a county as well as the proportion of civically engaged denominations have expected significant negative effects on violent crime. The number of associations and third places, however, have no impact.

Looking at the other control variables, an increase in population size leads to an increase in the violent crime rate. A higher percentage of 15-24 year olds, though,

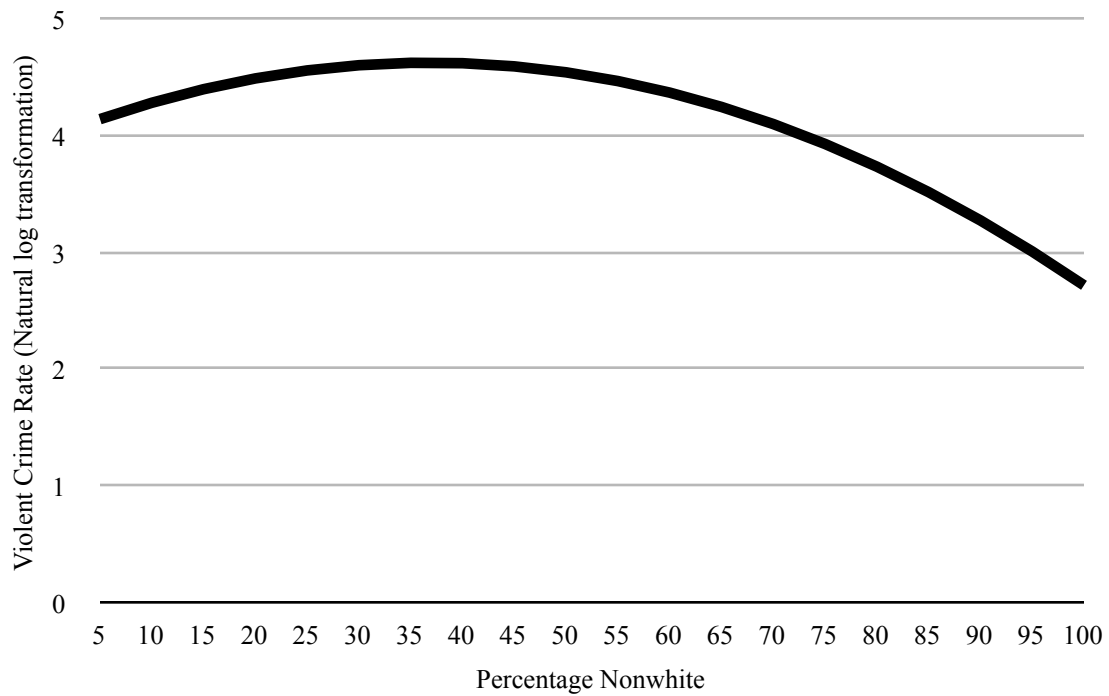


Figure 3.4. Effect of Racial Heterogeneity on Violent Crime

appears to *decrease* the violent crime rate in an area, contrary to what one would expect. The spatial lag variable is significant as well, showing that violent crime is related to the crime rate in nearby counties.

Table 3.4 shows the results of the same regression model as above, but now an interaction term between population change and resource disadvantage is included. Once again, the population change measure is not significant on its own, indicating that at average levels of the resource disadvantage disadvantage index, population change does not significantly impact the violent crime rate. This is the same effect as in the previous property crime model. The resource disadvantage index is significant and positive on its own. The dependent variable in this model is the natural log transformation of the violent crime rate, so even when population change is held steady at zero, for each standard

deviation increase in the resource disadvantage index, the violent crime rate will increase by 10%. As such, it seems that population stability is not sufficient to maintain a low level of crime in the presence of other indicators of social disorganization. The interaction term between population change and resource disadvantage is also significant, and is shown in Figure 3.5.

Table 3.4

Regression Estimates for Violent Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	1.569 ***	0.463
Social Disorganization Variables		
Percentage Population Change, 1990-2000	0.0003	0.003
Resource Disadvantage Index	0.102 ***	0.016
Population Change x Resource disadvantage	-0.002 **	0.001
Percentage Nonwhite	0.033 ***	0.005
Percentage Nonwhite, squared	-0.0004 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.005 **	0.002
Number of Associations per Capita	63.372	140.890
Percentage of Civically Engaged Denominations	-0.015 ***	0.004
Third Places per Capita	34.750	38.086
Percentage of Population Age 15 to 24	-0.028 *	0.012
Percentage Urban	0.002	0.002
Population Density	-0.0003	0.001
Total Population, 2000 (natural log)	0.356 ***	0.048
Spatial Lag	0.001	0.0002
		R ² =0.39

*p<.05, **p<.01, ***p<.001

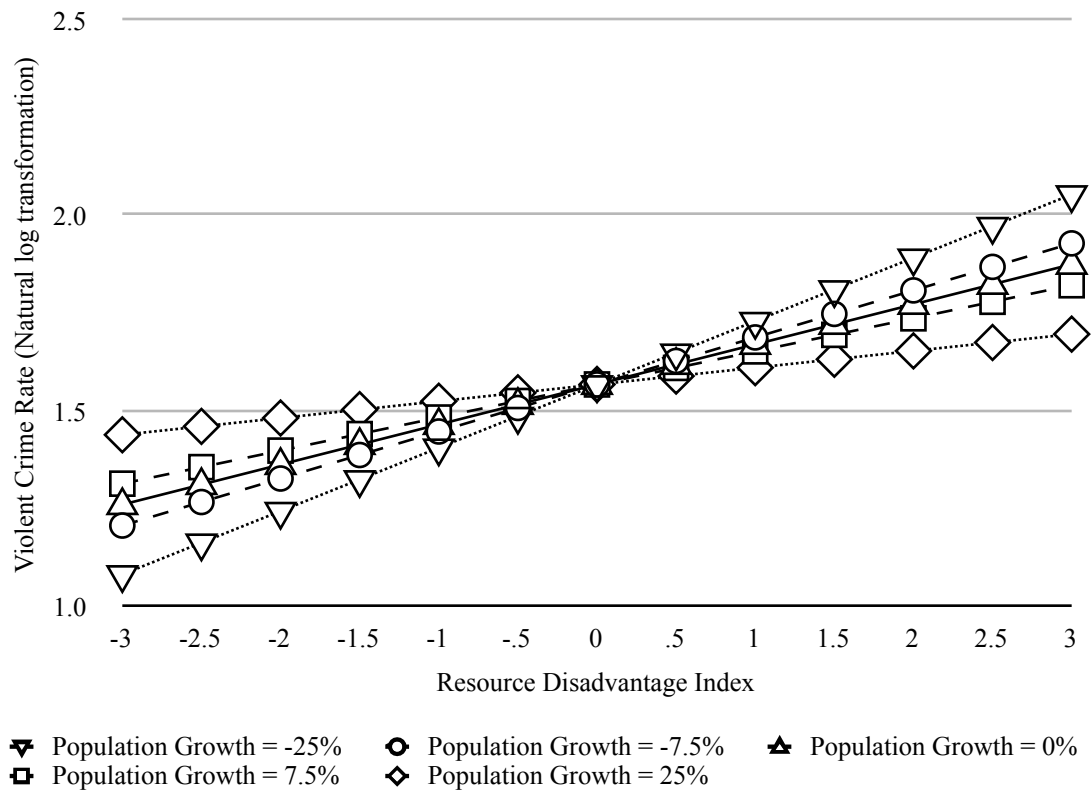


Figure 3.5. Effects of Resource Disadvantage and Population Change on Violent Crime

The pattern shown here is quite similar to that of nonmetropolitan property crime. Counties with substantial population loss are the most susceptible to the effects of resource disadvantage—that is, each unit increase of the resource disadvantage index in those counties causes a substantial increase in the violent crime rate. According to this model, as population change gets closer to zero and then moves into positive numbers, the effects of resource disadvantage slow.

This model supports Hypothesis 2, but turning once again to social disorganization theory, not exactly in the expected way. Population change is not statistically significant in the model, but resource disadvantage is, showing that resource

disadvantage matters even when the population is stable. At average levels of resource disadvantage, however, population change does *not* affect violent crime.

The racial heterogeneity measure is also significant and displayed in Figure 3.6. Its inflection point—and in turn its greatest effect on violent crime—is at 38% nonwhite.

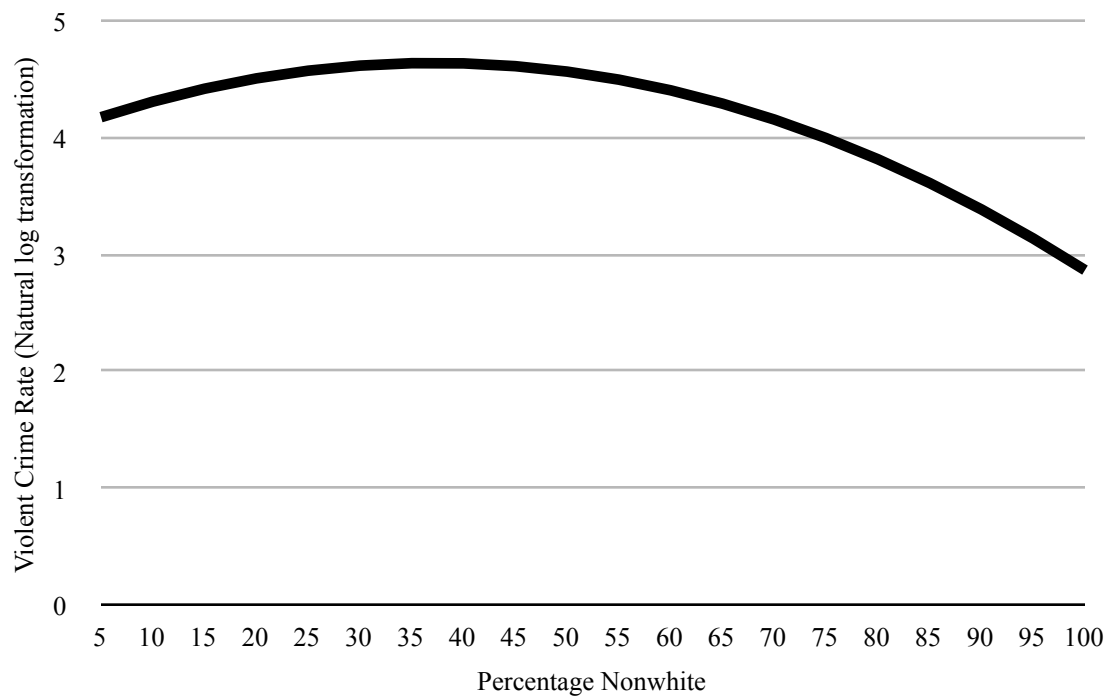


Figure 3.6. Effect of Racial Heterogeneity on Violent Crime

The civic engagement and other control variables show up as nearly identical to the previous model without the interaction effect. Percent of small manufacturers and civically engaged denominations both hold significant negative effects. Percentage of the population age 15 to 24 also continues to have a significant *negative* effect, net of resource disadvantage. Total population and the spatial lag variable also appear as significant in the model.

International Immigration and Property Crime

Next, a measure of international immigration is introduced into the model, in addition to the other measures of social disorganization. As the reader will recall, Hypotheses 3 and 4 predict that international immigration bears characteristics of both racial heterogeneity and population mobility, so it fits well within the social disorganization framework. It is displayed as a quadratic term in the regression model in Table 3.5, and it is expected to have a curvilinear relationship with property crime in nonmetropolitan areas.

Looking at the regression results, one sees that when percentage change in the foreign-born population is added to the model with the other measures of social disorganization, it does not emerge as a significant predictor of property crime in nonmetropolitan areas. In fact, the international immigration variables had little impact on the model at all; all the same variables from the model that did not include the international immigration model remain significant and maintain similar strength in the model.

Perhaps, though, the non-significance of international immigration in this full model is due to other social disorganization variables “canceling out” its effects. To account for this, Table 3.6 shows the results of a regression model that presents the impact of a change in foreign-born population quadratic term, but this time with no other social disorganization variables included. Once again, though, international immigration does not show up as a significant.

Table 3.5

Regression Estimates for Property Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	-269.176 ***	108.652
Social Disorganization Variables		
Percentage Change in Foreign-born Population, 1990-2000	-0.022	0.054
Percentage Change in Foreign-born Population, 1990-2000; squared	-0.000004	0.00003
Percentage Population Change, 1990-2000	-0.496	0.634
Resource Disadvantage Index	13.262 ***	3.766
Population Change x Resource disadvantage	-0.301	0.174
Percentage Nonwhite	4.961 ***	1.193
Percentage Nonwhite, squared	-0.054 **	0.017
Control Variables		
Percentage of Small Manufacturing Establishments	-0.857 *	0.356
Number of Associations per Capita	36,218	32,827
Percentage of Civically Engaged Denominations	-3.322 ***	0.836
Third Places per Capita	29,690	8,804.418
Percentage of Population Age 15 to 24	4.037	2.891
Percentage Urban	2.860 ***	0.417
Population Density	-0.039	0.182
Total Population, 2000 (natural log)	59.299 ***	11.211
Spatial Lag	-0.018 **	0.006
		R ² =0.39

*p<.05, **p<.01, ***p<.001

Table 3.6

Regression Estimates for Property Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	-130.206	106.111
Social Disorganization Variables		
Percentage Change in Foreign-born Population, 1990-2000	-0.020	0.054
Percentage Change in Foreign-born Population, 1990-2000; squared	-0.000005	0.00003
Control Variables		
Percentage of Small Manufacturing Establishments	-1.100 **	0.368
Number of Associations per Capita	19,184	33,951
Percentage of Civically Engaged Denominations	-4.796 ***	0.769
Third Places per Capita	10,309	8,652.094
Percentage of Population Age 15 to 24	6.387 *	2.957
Percentage Urban	3.335 ***	0.408
Population Density	-0.136	0.187
Total Population, 2000 (natural log)	55.866 ***	10.702
Spatial Lag	-0.020 **	0.007
		R ² =0.35

*p<.05, **p<.01, ***p<.001

The change in the foreign-born population has no effect on property crime in nonmetropolitan areas, but what about the proportion of foreign-born residents in a community? Perhaps an increasing percentage of foreign-born residents acts similarly to an increase in the percentage of nonwhite residents and has a curvilinear effect on crime. Table 3.7 looks at just this. Controlling for all other measures of social disorganization, though, the proportion of foreign-born residents has no significant effect on property crime.

Table 3.7

Regression Estimates for Property Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	-268.141 *	107.72
Social Disorganization Variables		
Percentage Foreign-born Population, 2000	-3.109	4.982
Percentage Foreign-born Population, 2000; squared	-0.033	0.199
Percentage Population Change, 1990-2000	-0.486	0.621
Resource Disadvantage Index	11.349 **	4.026
Population Change x Resource disadvantage	-0.264	-.177
Percentage Nonwhite	5.157 ***	1.356
Percentage Nonwhite, squared	-0.050 **	0.018
Control Variables		
Percentage of Small Manufacturing Establishments	-0.825 *	0.354
Number of Associations per Capita	38,493	32,664
Percentage of Civically Engaged Denominations	-3.532 ***	0.848
Third Places per Capita	31,671 ***	8,790.663
Percentage of Population Age 15 to 24	3.736	2.906
Percentage Urban	2.981 ***	0.424
Population Density	-0.048	0.181
Total Population, 2000 (natural log)	58.886 ***	11.210
Spatial Lag	-0.018 **	0.006
		R ² =0.39

*p<.05, **p<.01, ***p<.001

International Immigration and Violent Crime

Now turning to the effects of international immigration on violent crime, Hypothesis 4 predicts that as more foreign-born residents enter a community, the violent crime rate will increase to a point, level off, and then decrease. The regression results for this hypothesis are shown in Table 3.8.

It appears that international immigration does not emerge as a significant predictor of violent crime either. Two of the other social disorganization variables, racial heterogeneity and resource disadvantage, as well as the interaction term, do show up as significant, though. The racial heterogeneity variables are graphed in Figure 3.7.

Performing the same analysis as above, Table 3.9 shows the results of a regression with international immigration as the only social disorganization variable in the model, accompanied by the standard control variables. Just as with property crime, international immigration is not a significant predictor of violent crime in nonmetropolitan areas, so neither Hypothesis 3 nor 4 is supported.

Table 3.10 shows a model that includes each of the social disorganization variables and, instead of the percentage change in the foreign-born population, the proportion of the population that is foreign-born. One sees that percentage foreign-born does not significantly affect violent crime in nonmetropolitan areas.

Property Crime in Metropolitan Counties

The final hypothesis predicts that the effects of social disorganization will be more prevalent in nonmetropolitan areas than in metropolitan ones. So far, this research has shown that a couple of the social disorganization measures (resource disadvantage,

Table 3.8

Regression Estimates for Violent Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	1.516 **	0.469
Social Disorganization Variables		
Percentage Change in Foreign-born Population, 1990-2000	0.0002	0.0002
Percentage Change in Foreign-born Population, 1990-2000; squared	-8.775x10 ⁻⁸	1.136x10 ⁻⁷
Percentage Population Change, 1990-2000	-0.0002	0.003
Resource Disadvantage Index	0.102 ***	0.016
Population Change x Resource disadvantage	-0.002 **	0.001
Percentage Nonwhite	0.033 ***	0.005
Percentage Nonwhite, squared	-0.0004 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.005 **	0.002
Number of Associations per Capita	71.725	141.641
Percentage of Civically Engaged Denominations	-0.015 ***	0.004
Third Places per Capita	38.860	38.423
Percentage of Population Age 15 to 24	-0.028 *	0.012
Percentage Urban	0.002	0.002
Population Density	-0.0003	0.0008
Total Population, 2000 (natural log)	0.358 ***	0.048
Spatial Lag	0.001 *	0.0003
		R ² =0.39

*p<.05, **p<.01, ***p<.001

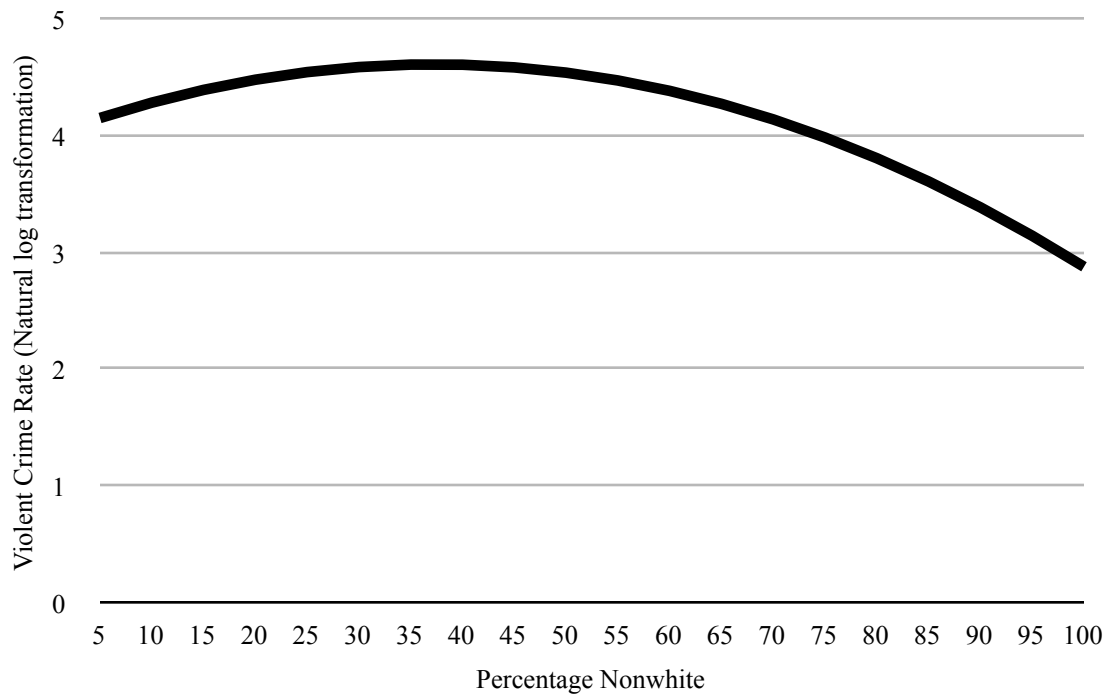


Figure 3.7. Effect of Racial Heterogeneity on Violent Crime

racial heterogeneity) consistently matter when predicting crime in nonmetropolitan areas. It has also been shown that the effect of resource disadvantage is conditioned by population change in a community. International immigration, contrary to prediction, does not have an effect on crime in nonmetropolitan areas. What effects do these measures have in metropolitan counties?

The means and standard deviations of the variables in metropolitan counties are shown in Table 3.11. Both the property and violent crime rates are significantly higher in metropolitan areas. In fact, metropolitan counties are significantly different than nonmetropolitan counties on every variable other than the percentage of small manufacturers and civically engaged denominations.

Table 3.9

Regression Estimates for Violent Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	1.907 ***	0.479
Social Disorganization Variables		
Percentage Change in Foreign-born Population, 1990-2000	0.0003	0.0002
Percentage Change in Foreign-born Population, 1990-2000; squared	-1.317x10 ⁻⁷	1.214x10 ⁻⁷
Control Variables		
Percentage of Small Manufacturing Establishments	-0.006 ***	0.002
Number of Associations per Capita	-17.259	152.366
Percentage of Civically Engaged Denominations	-0.026 ***	0.003
Third Places per Capita	-49.523	39.665
Percentage of Population Age 15 to 24	-0.017	0.013
Percentage Urban	0.004 *	0.001
Population Density	-0.001	0.001
Total Population, 2000 (natural log)	0.376 ***	0.048
Spatial Lag	0.001 ***	0.0003
		R ² =0.29

*p<.05, **p<.01, ***p<.001

Table 3.10

Regression Estimates for Violent Crime in Nonmetropolitan Counties, N=750

Variable	Coefficient	Standard Error
Intercept	1.574 ***	0.466
Social Disorganization Variables		
Percentage Foreign-born Population, 2000	-0.013	0.022
Percentage Foreign-born Population, 2000; squared	0.001	0.001
Percentage Population Change, 1990-2000	0.0002	0.003
Resource Disadvantage Index	0.101 ***	0.017
Population Change x Resource disadvantage	-0.002 **	0.001
Percentage Nonwhite	0.035 ***	0.006
Percentage Nonwhite, squared	-0.0004 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.005 ***	0.002
Number of Associations per Capita	65.667	141.056
Percentage of Civically Engaged Denominations	-0.015 ***	0.004
Third Places per Capita	36.562	38.311
Percentage of Population Age 15 to 24	-0.027 *	0.013
Percentage Urban	0.002	0.002
Population Density	-0.0002	0.001
Total Population, 2000 (natural log)	0.355 ***	0.048
Spatial Lag	0.001	0.0002
		R ² =0.39

*p<.05, **p<.01, ***p<.001

Table 3.11
Variables Used for Regression Models

Type	Description	Mean	Standard Deviation
Dependent Variables	Property Crime Incidents per 100,000 Population	530.985	261.154
	Violent Crime Incidents per 100,000 Population	177.448	128.313
Social Disorganization Variables	Percentage Population Change, 1990-2000	17.695	18.485
	Percentage Nonwhite	21.040	17.237
	Percentage in Poverty	10.217	4.113
	Gini Coefficient	0.396	0.028
	Percentage Single Female-Headed Households	11.399	3.066
	Unemployment Rate	3.784	1.349
	Percentage Change in Foreign-Born Population, 1990-2000	122.511	157.623
Control Variables	Percentage of Small Manufacturing Establishments	65.998	10.502
	Number of Associations per Capita	0.0003	0.0002
	Percentage of Civically Engaged Denominations	23.729	8.307
	Third Places per Capita	0.002	0.001
	Percentage of Population Age 15 to 24	13.942	3.079
	Percentage Urban	67.694	24.843
	Population Density	749.437	3,348.08
	Total Population, 2000	266,381.33	515,148.05

Table 3.12 shows the results of property crime in metropolitan areas regressed on the standard control variables, as well as all of the social disorganization measures, excluding international immigration. Overall, the model explains 41% of the variance in property crime. The results are remarkably similar to those of nonmetropolitan areas, but one immediately notices that, unlike in the nonmetropolitan models, the residential mobility measure *is* significant. For every unit increase in population—in this case, a percentage point—the property crime rate in metropolitan areas is expected to increase by 1.61. The other social disorganization variables are significant in the expected direction as well. Looking at the unstandardized parameter estimates, though, one sees that the strength of the effect of the index of resource disadvantage is nearly twice as strong in the metropolitan model than in metropolitan one. The racial heterogeneity quadratic is shown graphically in Figure 3.8. It also appears as significant and has a similar curvilinear effect.

Additionally, the interaction term is marginally significant at the $p < .06$ level and is shown graphically in Figure 3.9. Resource disadvantage has a positive impact on crime at every level of population change, and the slope increases as the change rate gets more positive. So, at more positive levels of population change, increases in resource disadvantage have more dramatic effects on property crime in metropolitan counties.

Turning to the control variables, the same civic engagement indicators appear to be good predictors of crime in both types of area. Higher percentages of small manufacturers and civically engaged denominations tend to lower the property crime. The number of third places per capita, though, continues to exert an unexpected *positive*

Table 3.12

Regression Estimates for Property Crime in Metropolitan Counties, N=723

Variable	Coefficient	Standard Error
Intercept	482.81 ***	142.903
Social Disorganization Variables		
Percentage Population Change, 1990-2000	1.611 *	0.632
Resource Disadvantage Index	23.666 ***	4.235
Population Change x Resource disadvantage	0.217	0.113
Percentage Nonwhite	4.986 **	1.520
Percentage Nonwhite, squared	-0.088 ***	0.022
Control Variables		
Percentage of Small Manufacturing Establishments	-2.291 **	0.799
Number of Associations per Capita	-96,224	66,020
Percentage of Civically Engaged Denominations	-2.885 *	1.257
Third Places per Capita	95,812 ***	20,553
Percentage of Population Age 15 to 24	3.572	2.787
Percentage Urban	3.488 ***	0.599
Population Density	-0.003	0.003
Total Population, 2000 (natural log)	-16.948	12.339
Spatial Lag	0.217	0.113
		R ² =0.33

*p<.05, **p<.01, ***p<.001

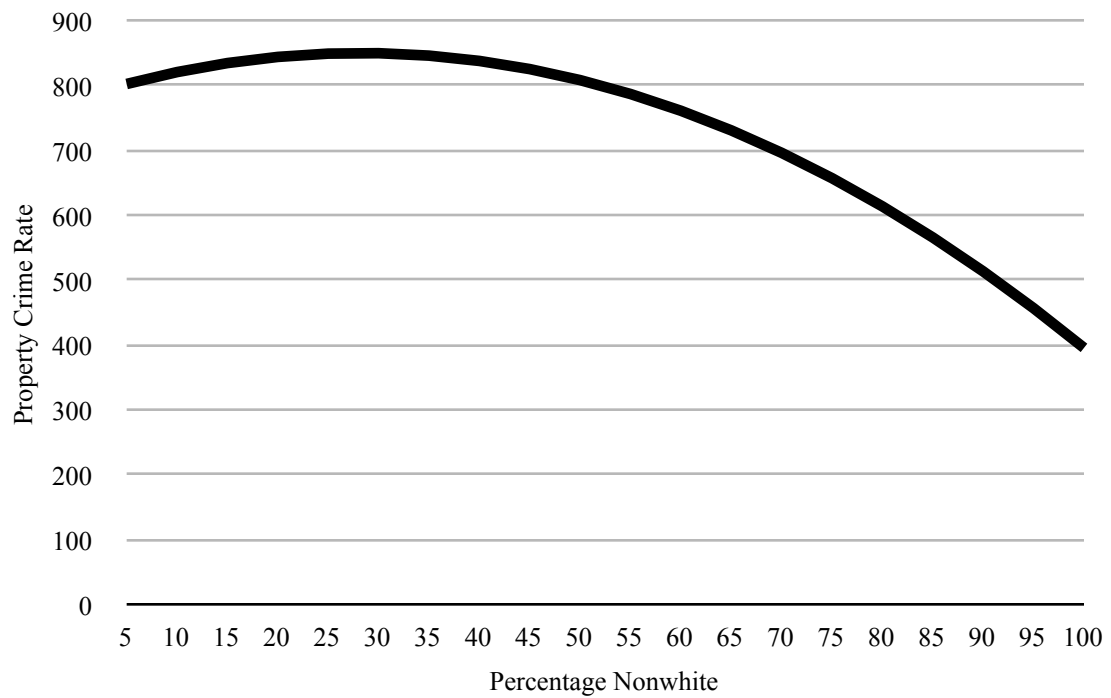


Figure 3.8. Effect of Racial Heterogeneity on Property Crime

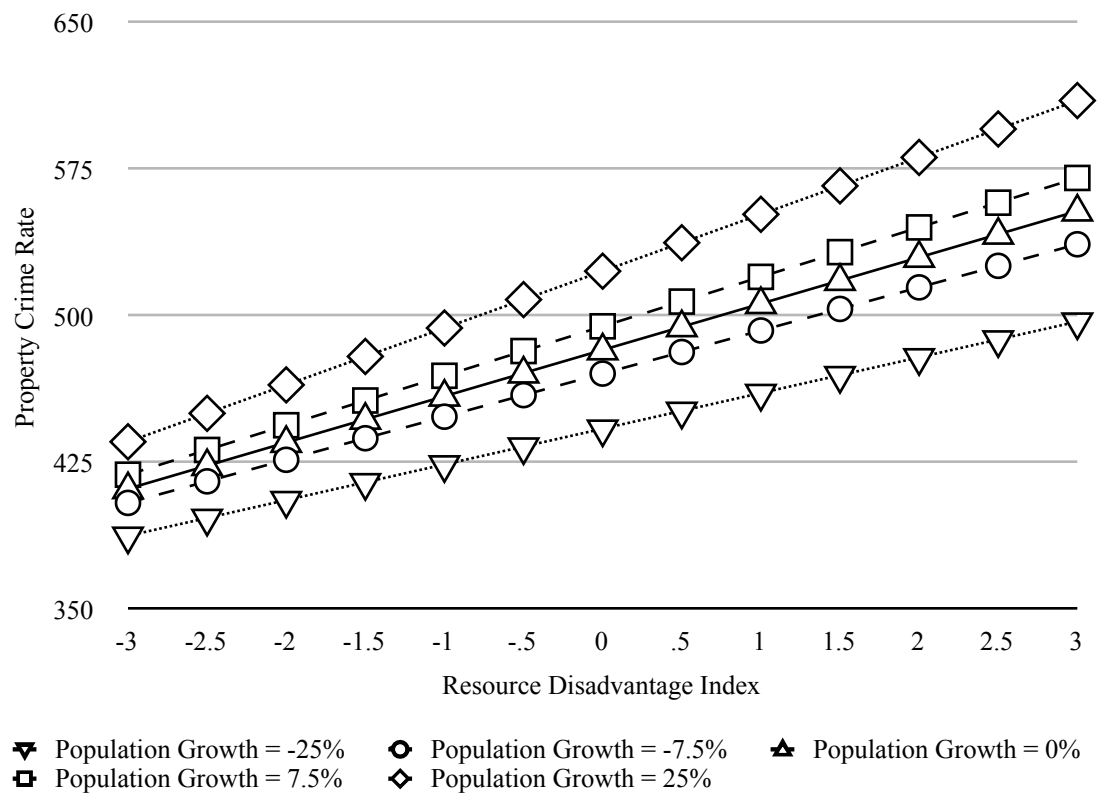


Figure 3.9. Effects of Resource Disadvantage and Population Change on Property Crime

effect on property crime. The percentage of the county that is urban and the spatial lag variable are also significant.

Looking at the same model, but adding in the international immigration quadratic, one sees that the new international immigration variable is now significant (Table 3.13). (The reader will recall that in none of the nonmetropolitan crime models did the international immigration variable emerge as significant.) The percentage change in a county's foreign-born population has a curvilinear effect, and its greatest impact is at a 615% increase. This effect is shown in Figure 3.10.

One also notices that the residential mobility measure is no longer significant in this model, just as in the nonmetropolitan model. Nor is the interaction term a significant predictor.

For the first time in all of the models in this research, the percentage of small manufacturers is not significant. The percentage of civically engaged denominations persists in its negative effect, though. The number of third places per capita again poses a significant positive effect on crime. The only other control variables that show up as significant are percentage urban and spatial lag, both positive.

Looking now at the percentage of the population that is foreign-born instead of the percentage *change* in the foreign-born population (Table 3.14), one sees that the percentage foreign born—but not its quadratic—is significant. So, somewhat unexpectedly, percentage foreign-born holds a linear relationship with property crime and does not act exactly like the proportion of nonwhite residents; that is, the effect has an

Table 3.13

Regression Estimates for Property Crime in Metropolitan Counties, N=723

Variable	Coefficient	Standard Error
Intercept	314.065 *	144.198
Social Disorganization Variables		
Percentage Change in Foreign-born Population, 1990-2000	0.667 ***	0.130
Percentage Change in Foreign-born Population, 1990-2000; squared	-0.001 ***	0.0001
Percentage Population Change, 1990-2000	0.070	0.693
Resource Disadvantage Index	24.935 ***	4.174
Population Change x Resource disadvantage	0.160	0.112
Percentage Nonwhite	3.434 *	1.522
Percentage Nonwhite, squared	-0.067 **	0.022
Control Variables		
Percentage of Small Manufacturing Establishments	-1.243	0.814
Number of Associations per Capita	-52,420	65,431
Percentage of Civically Engaged Denominations	-2.850* *	1.236
Third Places per Capita	95,517 ***	20,192
Percentage of Population Age 15 to 24	4.442	2.744
Percentage Urban	3.551 ***	0.590
Population Density	-0.004	0.003
Total Population, 2000 (natural log)	-12.367	12.153
Spatial Lag	0.017	0.004
		R ² =0.36

*p<.05, **p<.01, ***p<.001

anticipated positive relationship with crime at first, but there is no inflection point at which the relationship becomes negative.

Taken together, these models seem to indicate that social disorganization matters *more* in metropolitan areas than in nonmetropolitan, and Hypothesis 5 is not supported. Population change and international immigration are both significant predictors of crime in metropolitan areas, which has not been the case for rural counties. Even the resource disadvantage index, which was significant in nonmetropolitan areas, had a greater effect in metropolitan areas.

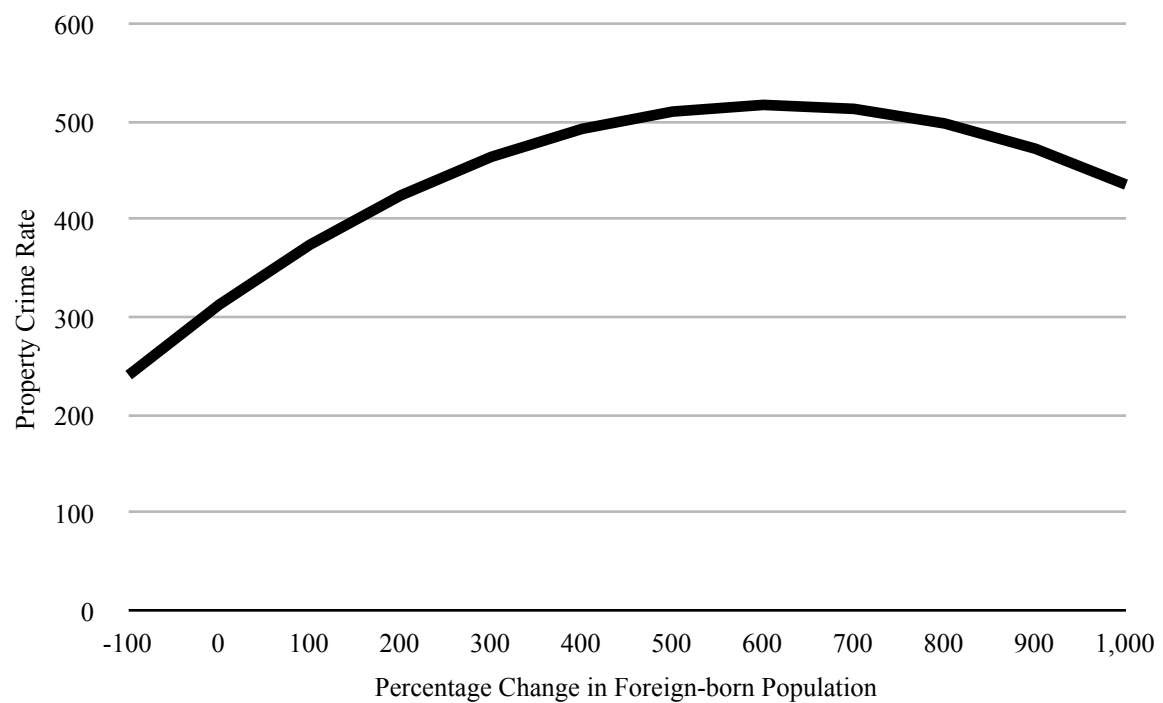


Figure 3.10. Effect of International Immigration on Property Crime

Table 3.14

Regression Estimates for Property Crime in Metropolitan Counties, N=723

Variable	Coefficient	Standard Error
Intercept	214.455	153.064
Social Disorganization Variables		
Percent Foreign-born Population, 2000	-13.135 **	4.524
Percent Foreign-born Population, 2000; squared	0.107	0.134
Percentage Population Change, 1990-2000	2.237 ***	0.646
Resource Disadvantage Index	17.273 ***	4.379
Population Change x Resource disadvantage	0.380 **	0.117
Percentage Nonwhite	6.041 ***	1.593
Percentage Nonwhite, squared	-0.073 **	0.023
Control Variables		
Percentage of Small Manufacturing Establishments	-1.765 *	0.796
Number of Associations per Capita	-97,843	65,045
Percentage of Civically Engaged Denominations	-2.824 *	1.245
Third Places per Capita	100,468 ***	20,300
Percentage of Population Age 15 to 24	3.233	2.757
Percentage Urban	3.690 ***	0.598
Population Density	-0.0002	0.003
Total Population, 2000 (natural log)	2.691	12.841
Spatial Lag	-0.014 ***	0.004
		R ² =0.35

*p<.05, **p<.01, ***p<.001

Violent Crime in Metropolitan Counties

The regression results for the effects of the social disorganization variables, excluding international immigration, on the natural log transformation of violent crime in metropolitan counties are seen in Table 3.15. One sees in those results that two of the social disorganization measures are significant: racial heterogeneity and resource disadvantage. The strength of those variables, however, was greater in the nonmetropolitan model. The unstandardized coefficient for the resource disadvantage index in this model is 0.081, compared to a coefficient of 0.102 in the previous one. Both the percentage nonwhite variable and its quadratic also have less pronounced effects in this metropolitan model (Figure 3.11).

Population change is not a significant predictor here, but the interaction term is. This relationship is illustrated in Figure 3.12. Again, resource disadvantage effects violent crime differently at various levels of population change in metropolitan areas. At the lowest levels of resource disadvantage, it appears that the highest level of positive population change results in the lowest crime rate, so when communities are in fine socioeconomic shape and are prone to a high influx of residents, their crime rate should be relatively low. However, the slope of that population change is the steepest, so at high levels of resource disadvantage, communities with the highest level of positive population suffer the greatest amount of crime.

Looking at the control variables, one sees that *all* of the measures from civic engagement literature are significant, and excluding the number of third places per capita, each has the anticipated negative effect. Percentage of the population age 15 to 24

continues to have a counterintuitive significant negative effect. Population density has a significant positive relationship, as one would expect. Total population and the spatial lag variable are both marginally significant at the $p<0.06$ and $p<0.07$ level, respectively.

Table 3.15

Regression Estimates for Violent Crime in Metropolitan Counties, N=723

Variable	Coefficient	Standard Error
Intercept	4.815 ***	0.367
Social Disorganization Variables		
Percentage Population Change, 1990-2000	-.0002	0.002
Resource Disadvantage Index	0.081 ***	0.011
Population Change x Resource disadvantage	0.001 *	0.0003
Percentage Nonwhite	0.028 ***	0.004
Percentage Nonwhite, squared	-.0004 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.008 ***	0.002
Number of Associations per Capita	-508.746 **	169.986
Percentage of Civically Engaged Denominations	-0.007 *	0.003
Third Places per Capita	196.749 ***	52.888
Percentage of Population Age 15 to 24	-0.030 ***	0.007
Percentage Urban	-0.0003	0.002
Population Density	0.00002 *	0.00001
Total Population, 2000 (natural log)	0.060	0.032
Spatial Lag	-0.0001	0.001
		R ² =0.41

* $p<.05$, ** $p<.01$, *** $p<.001$

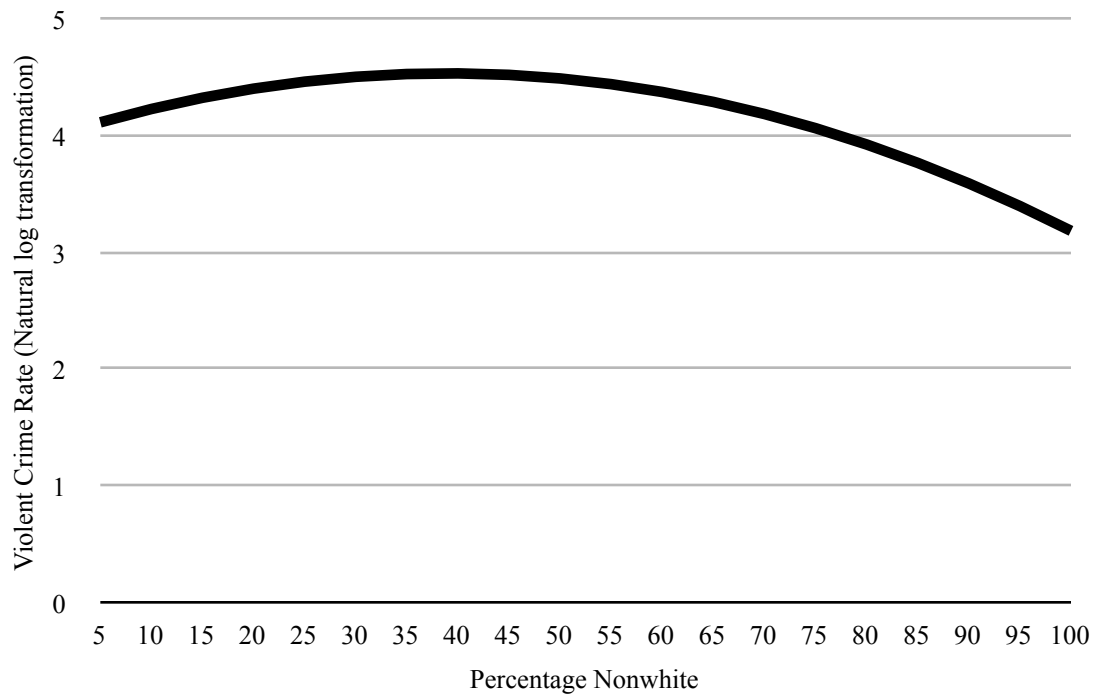


Figure 3.11. Effect of Racial Heterogeneity on Violent Crime

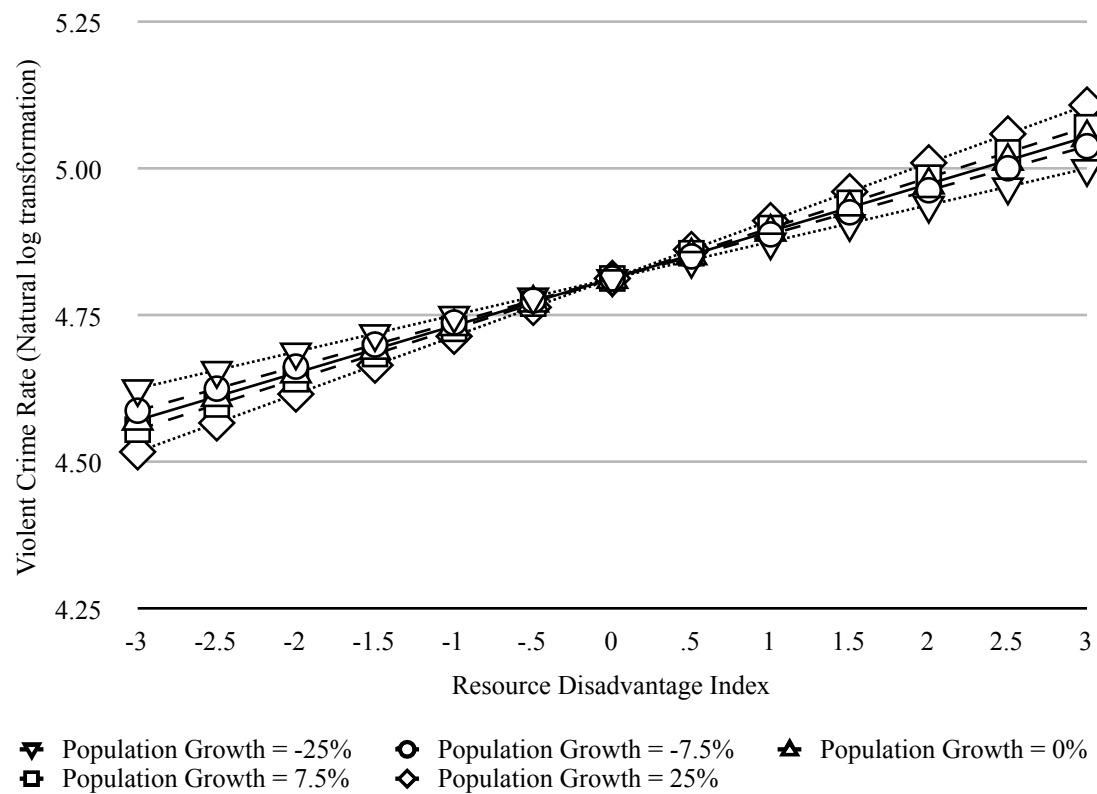


Figure 3.12. Effects of Resource Disadvantage and Population Change on Violent Crime

When international immigration is added into this model, little changes. As can be seen in Table 3.16, the variance explained increases from 41% to 42%. Percentage nonwhite and SES continue to be significant predictors, and their strength is still less than the same variables in the nonmetropolitan model. The interaction term is shown graphically in Figure 3.13, and, despite its slight appearance, is significant. Its story is nearly identical to that of the previous model.

The new additions, percentage change in the foreign-born population and its quadratic, are both highly significant as well, and are shown in Figure 3.14. This finding is certainly noteworthy, despite the fact that it appears in the metropolitan and not the nonmetropolitan model. The inflection point occurs at a 484% increase in the foreign-born population.

Finally, seeing that the proportion of the population that is foreign-born is significant, Table 3.17 examines the effects of the proportion of foreign-born residents in a community on violent crime. It appears that for the first time, both the percentage foreign-born and its quadratic are significant, thereby holding a curvilinear effect on violent crime in metropolitan areas. However, the curve does not look as one would expect (Figure 3.15). The curve begins with an downward trajectory, reaches an inflection point, and turns upward. This indicates that as the percentage of foreign-born residents increases, it holds an even greater detrimental effect on a community.

Table 3.16

Regression Estimates for Violent Crime in Metropolitan Counties, N=723

Variable	Coefficient	Standard Error
Intercept	4.564 ***	0.374
Social Disorganization Variables		
Percentage Change in Foreign-born Population, 1990-2000	0.001 ***	0.0003
Percentage Change in Foreign-born Population, 1990-2000; squared	-.000001 ***	3.521 x 10 ⁻⁷
Percentage Population Change, 1990-2000	-0.002	0.002
Resource Disadvantage Index	0.084 ***	0.011
Population Change x Resource disadvantage	0.001 *	0.0003
Percentage Nonwhite	0.026 ***	0.004
Percentage Nonwhite, squared	-0.0003 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.006 **	0.002
Number of Associations per Capita	-445.790 **	170.211
Percentage of Civically Engaged Denominations	-0.006 *	0.003
Third Places per Capita	197.976 ***	52.484
Percentage of Population Age 15 to 24	-0.029 ***	0.007
Percentage Urban	-0.0004	0.002
Population Density	0.00002 *	0.00001
Total Population, 2000 (natural log)	0.067 *	0.032
Spatial Lag	-0.0001	0.0001
		R ² =0.42

*p<.05, **p<.01, ***p<.001

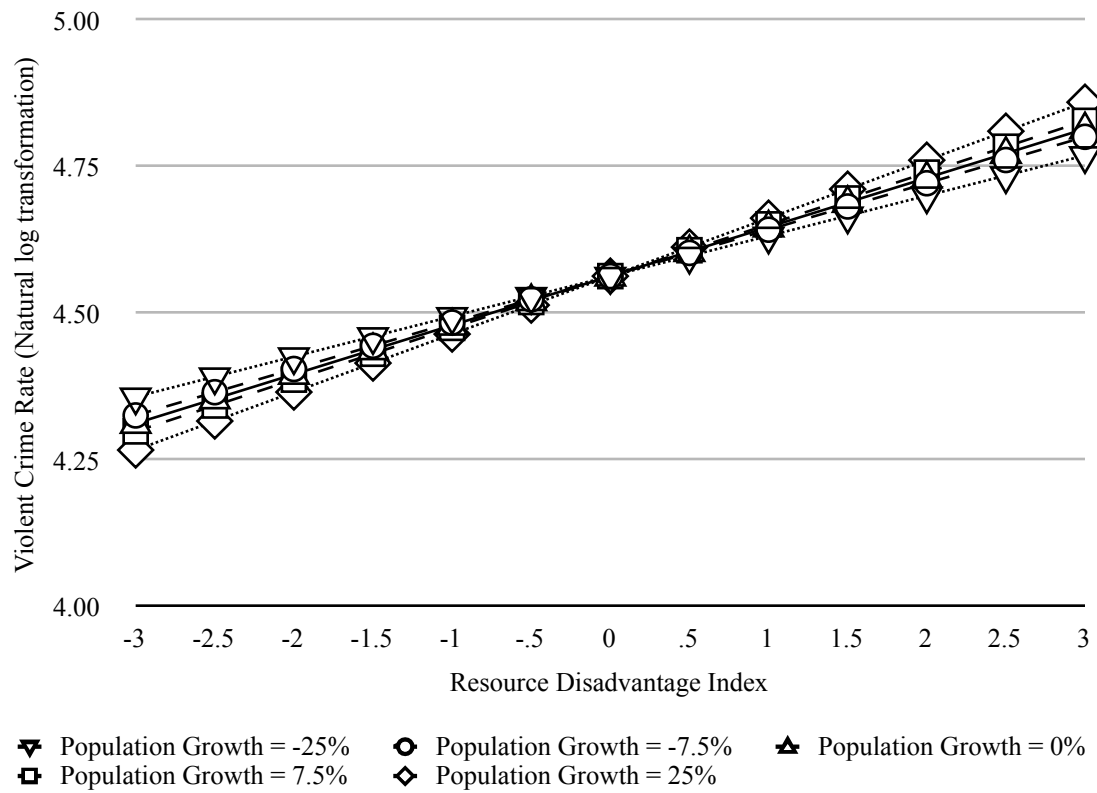


Figure 3.13. Effects of Resource Disadvantage and Population Change on Violent Crime

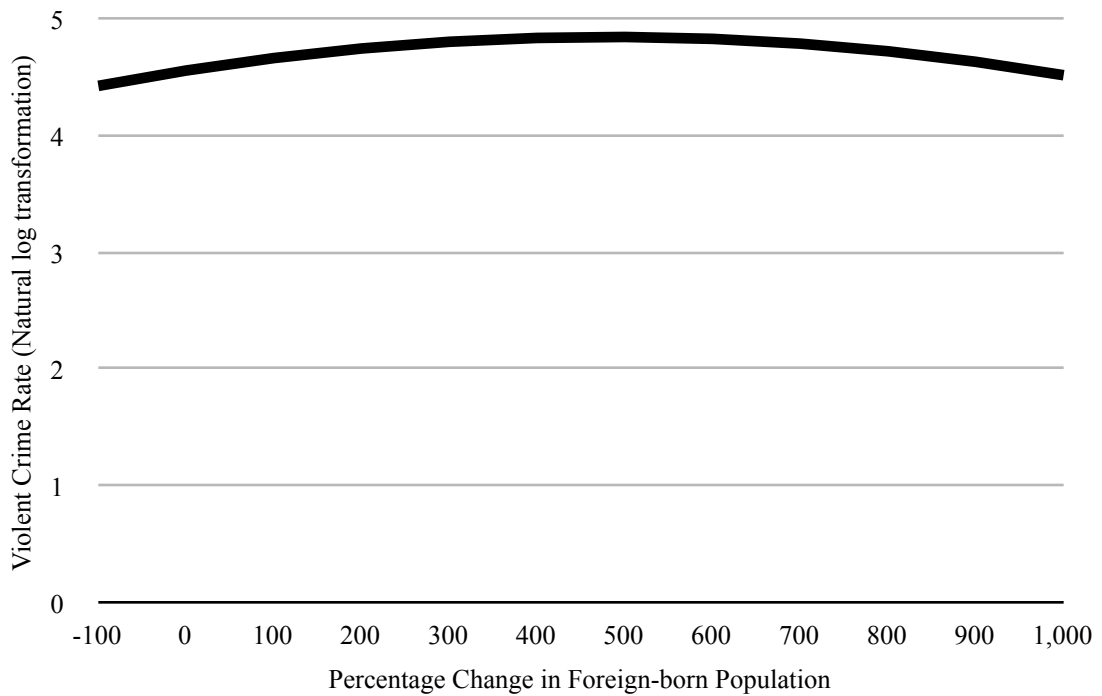


Figure 3.14. Effect of International Immigration on Violent Crime

Table 3.17

Regression Estimates for Violent Crime in Metropolitan Counties, N=723

Variable	Coefficient	Standard Error
Intercept	4.713 ***	0.396
Social Disorganization Variables		
Percent Foreign-born Population, 2000	-.0259 *	0.012
Percent Foreign-born Population, 2000; squared	.001 **	0.0004
Percentage Population Change, 1990-2000	0.001	0.002
Resource Disadvantage Index	0.080 ***	0.011
Population Change x Resource disadvantage	0.001 *	0.0001
Percentage Nonwhite	0.032 ***	0.004
Percentage Nonwhite, squared	-0.0004 ***	0.0001
Control Variables		
Percentage of Small Manufacturing Establishments	-0.007 ***	0.002
Number of Associations per Capita	-521.081 **	169.254
Percentage of Civically Engaged Denominations	-0.006	0.003
Third Places per Capita	201.089 ***	52.745
Percentage of Population Age 15 to 24	-0.028 ***	0.007
Percentage Urban	0.0005	0.002
Population Density	0.00002	0.00001
Total Population, 2000 (natural log)	0.061	0.033
Spatial Lag	-0.0002 *	0.0001
		R ² =0.41

*p<.05, **p<.01, ***p<.001

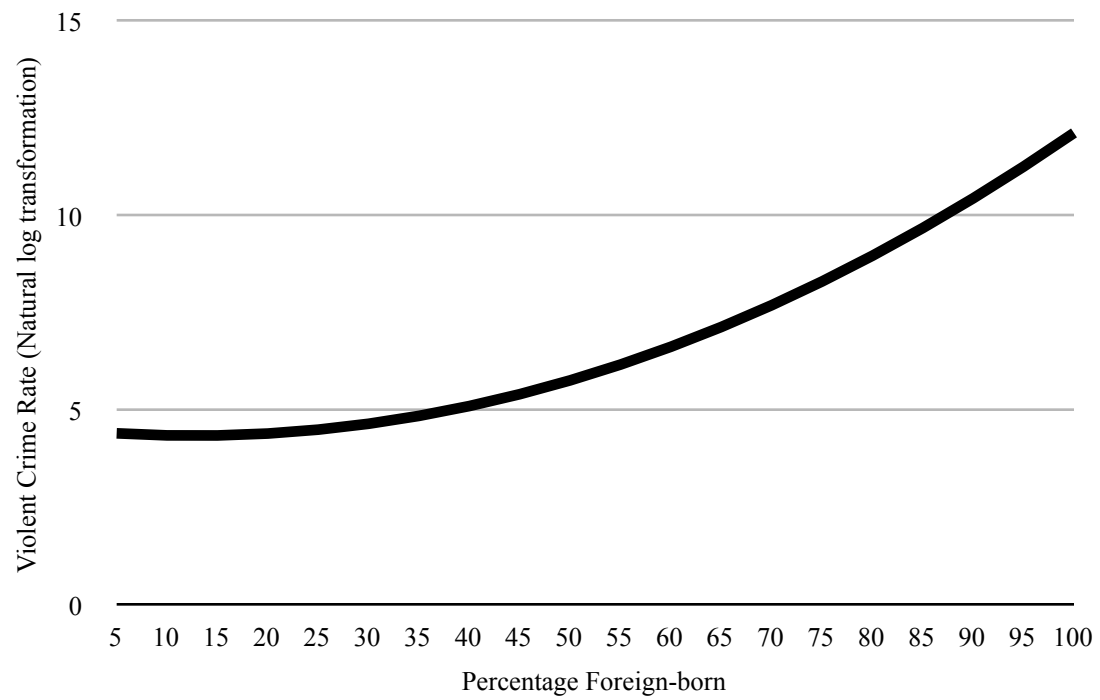


Figure 3.15. Effect of Percentage Foreign-born on Violent Crime

CHAPTER FOUR

Conclusion

Recent data from the Uniform Crime Report show that in 2008 the property and violent crime rates in metropolitan areas were nearly *twice* what they were in nonmetropolitan areas (United States Department of Justice, Federal Bureau of Investigation, 2009). Seeing what a wide gap exists between these two types of areas leads one to ask, “What structural factors are in place to create such a disparity?”

The overall aim of this research has been to apply the tenets of social disorganization to nonmetropolitan areas in order to answer that exact question. Specifically, the data presented have examined the effects of population change, resource disadvantage, and racial heterogeneity on both the violent and property crime rates in counties outside of metropolitan statistical areas. This research has also assessed the place of international immigration in the social disorganization discussion. Finally, it has compared the effects of all those indicators in nonmetropolitan and metropolitan areas.

Summary of Findings

The research has returned many interesting results, and each hypothesis deserves to be addressed. The first hypothesis predicted that the effect of SES on property crime is conditioned by the degree of population stability; that is, at varying levels of population change, the effect of a resource disadvantage index could be greater or less. The data

support this hypothesis, though even when there is no population change, greater levels of resource disadvantage still leads to higher levels of property crime.

The data also support Hypothesis 2, which anticipated an interaction between SES and population mobility in regard to violent crime in nonmetropolitan areas. Again, population stability on its own does not prove to be enough to diminish the effects of resource disadvantage in a community. These two findings are quite interesting within a context of social disorganization theory, and their implications are addressed in greater detail in the sections to follow.

Also of note, though outside the scope of the above two hypotheses, is the effect of racial heterogeneity. In the case of both property and violent crime, the percentage of the population that is nonwhite holds a significant curvilinear effect, as predicted by social disorganization theory. Increasing levels of heterogeneity will lead to increasing crime levels, until the group that was once a minority starts to become the majority, at which time the effect of heterogeneity on crime becomes negative.

Hypotheses 3 and 4 posited that international immigration deserved to be discussed with other, more established measures of social disorganization, and that it would have a curvilinear effect on property and violent crime in nonmetropolitan areas. This theory, however does not receive support from the data. The percentage change in the foreign-born population of a county did not have significant effects on either type of crime.

Finally, Hypothesis 5 predicted that the effects of social disorganization would be more dramatic in nonmetropolitan areas than in metropolitan ones. Rural areas rely more

heavily on their strong ties and are known for having higher levels of social integration, so it stands to reason that introducing an ecological factor such as population change to those areas would have a more detrimental effect than if the same circumstance was applied to a metropolitan area. The data, however, do not fully support this assertion. In fact, the effects of social disorganization are felt *more* strongly in metropolitan areas in regard to property crime. International immigration even emerges as a significant predictor in metropolitan areas. When one turns to violent crime, one sees that the effects of social disorganization are still felt, but to a lesser degree than in nonmetropolitan counties. International immigration, though, is significant in metropolitan areas while it was not in rural areas.

Theoretical Implications

These empirical results lead to a number of important theoretical implications. First, and perhaps most important, the data largely support the assumptions of social disorganization theory. Both resource disadvantage and racial heterogeneity are consistently significant predictors of crime in the above models, in line with the social disorganization framework. As a community—whether metropolitan or not—deals with depleted socioeconomic assets, such as poverty, income inequality, and family structure, crime is likely to be high. Also, in areas with high levels of heterogeneity, there is great potential for a breakdown in communication and for the community to be unable to develop consensus regarding the norms and values of their area. Crime is likely to be higher in these areas as well.

Population change, though, did not often emerge as significant in the regression models. This is a departure from one of the most consistent findings in previous research in this area—population change affects crime in nonmetropolitan areas (Freudenberg & Jones, 1991; Jobes, 1999; Osgood & Chambers, 2000). This is a finding that is worthy of future research, as it would seem to go against what one would expect from social disorganization research, and certainly against the expectations of this research.

Perhaps this is an indication of the “virtualization” of networks. In the 1990s, the Internet began to develop mass appeal, and social ties were more easily kept across long distances, thereby reducing the impact of new people leaving or entering one’s community. Also, it was possible to feel connected to one’s immediate surroundings without even leaving the comfort of their own home. Neighborhood websites, message boards, and email lists became popular ways to communicate with neighbors and made it even easier to tell friends and neighbors about the goings on of the community. The presence of social networking sites and activities boomed in the 2000s, so future research should account for this trend when studying the effects of population change on social integration and crime.

Though population change did not appear as a significant predictor net of all the other measures present in this research, most of the interactions in which it was involved were at least marginally significant, indicating its importance in conditioning other factors. When combined with the effects of resource disadvantage, it is clear that population does in fact make some difference in places. In nonmetropolitan areas that are losing population, resource disadvantage has a much greater impact on crime. In

metropolitan areas, on the other hand, it is the counties that are *gaining* population that feel the most detrimental effects of resource disadvantage. This difference jibes with the importance of strong social ties in nonmetropolitan areas. There are fewer nodes in the networks of rural residents, and each one is more important in maintaining connections to the community. So, the effect of losing even one of those nodes is generally greater than losing a node in a metropolitan area. This finding could also speak to Jobes's (1999) argument that, as population grows, the bonds one has with family and neighbors could actually grow stronger, thereby protecting the community against crime. This could be the case in nonmetropolitan communities, as it appears they are less susceptible to the effects of resource disadvantage when there is population growth.

The same cannot be said for metropolitan counties—the opposite, in fact, is true in these areas. Metropolitan counties are most likely to be affected by resource disadvantage when they are gaining population. Building off of the arguments above, this could make sense in metropolitan areas; because their networks are weaker to begin with, residents might not have the structures in place to protect themselves against a large influx of new neighbors. This is speculation, though, and deserves the attention of researchers in the future.

The significance of two out of the three primary indicators of social disorganization contributes to the long history of mixed or inconsistent empirical results in the literature; Barnett and Mencken (2002) point out several such studies (e.g., Kposawa & Breault, 1993; Kposawa, Breault, & Harris, 1995; Petee & Kowalski, 1993). One consistent result from this research, though, is the important positive effect of

resource disadvantage in both metropolitan and nonmetropolitan areas when predicting crime, which is what one would expect from social disorganization, but contradicts several previous studies (Kposawa et al., 1995; Osgood & Chambers, 2000; Petee & Kowalski, 1993).

Of particular interest when comparing this research is the 2002 work of Barnett and Mencken, who looked at a similar phenomenon as the first and third sets of models presented in this paper. The first apparent difference between their work and this is the effect of population change. The percentage change in population (1980-1990, in their research) is a consistently significant predictor of crime when an interaction term between population change and resource disadvantage is in place, indicating that at average levels of resource disadvantage, greater population change leads to more crime. Such is rarely the case in this research, showing that, net of other variables, population stability appears to be a less stabilizing force than it has been in the past. Population change does, however, emerge as significant in most of the interaction terms here, which tells the reader that it is still an important factor when the level of resource disadvantage in an area is above or below average. Barnett and Mencken (2002) also find no significant interaction between SES and population change on either type of crime in metropolitan areas. That interaction is significant in nearly all metropolitan models here.

Also, Barnett and Mencken (2002) do not include any civic engagement variables in their research. This is an important distinction, as at least some measures from the civic engagement literature emerged as significant predictors of crime, even when in the presence of the social disorganization variables. The two theories, then, appear to go

hand-in-hand when it comes to crime. Both civic engagement and social disorganization theory have foundations in the ideas of social integration and investment in one's community. The models in this research demonstrate that social disorganization is not the only way to view crime at the community level. It is likely that future research will test theories in addition to these two and find that they all play well together, particularly if those theories are based around the importance of strong bonds in a community.

There is one final substantive difference between Barnett and Mencken's (2002) work and this one: in their analysis, when population change is positive, property crime *decreases* as resource disadvantage increases. They consider this relationship a "by-product of the estimation method" (p. 385) and this pattern seems to have righted itself in the decade studied here.

The effects of international immigration on crime also hold theoretical implications for the study of social disorganization. Hypotheses 3 and 4 posit that international immigration bears characteristics of both population change and racial heterogeneity and should therefore have a positive impact on the crime rate. These hypotheses, however, did not prove to be true—at least not in nonmetropolitan counties. The average change in the foreign-born population in the sample of nonmetropolitan counties from 1990-2000 was 157%, and only 14% of the counties experienced any loss of foreign-born residents. Fortunately for nonmetropolitan counties, though, the results above have shown that those communities seem to be able to handle population growth fairly well when it comes to crime, and this could apply to new foreign-born residents as

well. International immigration, though, *does* have a significant effect on both property crime and violent crime in metropolitan areas, net of overall population change.

Applied Implications

A number of applied implications also arise from the data presented in this research. First is the importance of civic engagement in a community. Throughout all the models presented in this paper, at least one of the civic engagement predictors has arisen as significant. It appears that communities that bear certain characteristics indicating that their residents are invested in their community and in one another are generally going to have lower property and violent crime rates. The percentage of small manufacturers and the percentage of civically engaged denominations in a county are consistently negatively associated with both types of crime, as one would expect. Net of other factors, the number of third places per capita in a county tends to have a *positive* impact on crime. This could in some way reflect a change in the nature of third places in society today, and is certainly worth a closer look from researchers in the future.

The collective results demonstrate the importance of strong institutions in a community that wishes to control crime. The large proportion of small manufacturers in communities with less crime represents a strong local economic network. The high percentage of civically engaged denominations show how much religious institutions that are involved in their community can impact the crime rate in their area.

The number of associations per capita only appear as significant negative predictors of violent crime in metropolitan areas, implying the importance of social networks and access to strong civically inclined organizations in these areas. This is

interesting for a couple of reasons. First, one would expect from both the civic engagement *and* social disorganization literature that the number of associations per capita would be quite important (Irwin et al., 1999; Lee, 2008; Lee & Bartkowski, 2004; Sampson & Groves, 1989; Shaw & McKay, 1942; Tolbert et al., 2002). Second, this relationship is yet another indicator of the different nature of crime in metropolitan areas. In these areas, the number of associations per capita is a significant predictor, along with the percentage change in foreign-born population.

Turning now to implications for the study of social disorganization, this research brings several applied findings to light. First, international immigration should be carefully watched in metropolitan areas. Looking at Figures 3.10 and 3.14, one sees that international immigration holds a significant effect on both property and violent crime; as the percentage change of foreign-born residents increases, so does the crime rate to a point before turning downward. Nonmetropolitan areas do not have this issue. Even when all other measures of social disorganization are taken out of the models, international immigration has no affect on crime. It is clear that international immigration is a different phenomenon in metropolitan areas and must be treated differently. It appears that large influxes of foreign-born residents possibly interrupt the social networks that are in place, which in turn lets crime slip into those communities.

Government officials and urban planners should keep a close eye on how their cities and counties are changing over time, and they should be prepared with the appropriate amount of law enforcement. Nonmetropolitan counties' ability to withstand any amount of international immigration without a corresponding increase in crime is an

attribute and deserves to be studied further. Perhaps the new foreign-born residents are able to penetrate the networks of and fill a particular need in those nonmetropolitan counties (Hernández-Léon & Zúñiga, 2005). It will be interesting to keep track of this trend in the upcoming years, particularly the effects of immigration in these areas during times of economic downturn, when previous research has found that immigrants are less likely to be accepted by community members (Crowley et al., 2006; Lichter et al., 2005).

Second, Barnett and Mencken's (2002) use of a resource disadvantage index has shown to be a very powerful predictor of crime and a useful measure of SES for future research. The index combines a family structure variable (percentage of single female-headed households) with other more direct measures of economic stability and equity (percentage in poverty, unemployment rate, and the Gini coefficient) to create a single conceptual variable that is germane to social disorganization theory.

Their new measure proved to be even more important in this research than in Barnett and Mencken's (2002) study of the 1980-1990 period. The resource disadvantage index has a similar Cronbach's alpha score here (0.84), but moreover, it is a highly significant positive indicator of crime in *every* model in which it is involved. The index holds together both theoretically and statistically, and it shows itself to be consistently important in the study of crime in both metropolitan and nonmetropolitan areas.

This research is limited by a few factors that lend themselves to the future study of social disorganization in nonmetropolitan areas. First, much writing has been dedicated to the assessment of the quality of crime data from the Uniform Crime Report,

but the data are generally considered to represent accurately crime data as reported to law enforcement agencies (Barnett & Mencken, 2002).

Second, the research in the paper is conducted at the county level. This is useful in that secondary data are available at this level of geography for both crime and structural factors. Counties, however, are politically imposed boundaries that do not necessarily match the actual social and economic extent of a community. As such, there is the possibility that crime varies within, and is more affected by changes at, the smaller neighborhood level rather than by larger county-level changes.

Both of these limitations demonstrate the need for a replication of Sampson and Groves's (1989) seminal work on social disorganization theory. Their community-based survey research relied on self-reported crime data and included enough residents from each community to provide representative results. Such a project could shed more light on the specific reasons for the results in this paper and perhaps answer some of the questions it raises.

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