From Steel Cities to Steal Cities: Is Rusty Risky for High Crime?

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ABSTRACT

The country's recent recession has been devastating to hundreds of thousands of cities and families across the United States. One of those cities is Youngstown, Ohio, where roughly forty years ago the closing of the steel industry created a regional crisis of its own. Having survived two major downfalls in less than half a century is one aspect that sets Rust Belt cities like Youngstown apart from other American cities. This research attempted to determine the influence of a city's location in the Rust Belt with crime. Other factors described by social disorganization theory as having a criminological effect were also tested. Crime rate data from 188 cities (94 Rust Belt cities each with an appropriately matched non-Rust Belt city) along with socioeconomic variables were evaluated using four stages of analysis--summary, comparison, correlation, and regression. While the location of a city was not shown to be statistically significantly related to crime, the percentage of married residents, percentage of adults with a high school education, and the percentage of the majority race were shown to be influential variables on crime. Analyzing crime rates and socioeconomic factors before, during, and after the era of steel in America will aid in increasing our understanding of the relationship between Rust Belt status and crime.

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Introduction

Encompassing just under 34 square miles, Youngstown is located in Mahoning County in northeast Ohio. In 2011, over half of the city's 66,846 residents were listed as belonging to a minority race (56%). Youngstown's median family income was recorded at nearly half of the average income of residents statewide—$25,175 to $45,395 respectively. As of August 2012, the unemployment rate in this area was 9.3%, which is higher than the state average of 6.8%. It is home to five colleges and universities within the city limits and is within 45 miles of seven other higher education institutions. The number of full-time law enforcement officers per capita is comparable to the state average and the city is also home to the county sheriff's office and jail (Youngstown, OH, 2012).

One unique quality that sets Youngstown apart from most American cities is that it is settled in the Rust Belt. The Rust Belt is an area spanning primarily across the upper Midwest and northeastern part of the country that became a major source of raw steel material in the early 20th century (Alder, Lagakos,& Ohanian, 2013, January 31). The term "Rust Belt" made its way into American culture during the 1984 presidential campaigns. Democratic candidate Walter Mondale used the term to describe what had happened to the Midwest during President Reagan's term in office (Safford, 2009).

There are eight major crime categories identified by the Uniform Crime Report-homicide, rape, robbery, assault, burglary, theft, auto theft, and arson. In 2011, Youngstown, Ohio ranked within the top/worst 20 in four out of seven categories when compared to cities of similar population between 60,000 and 100,000 (Youngstown, OH, 2012; United States Cities By Crime Rate (60,000-100,000), 2013). Arson was not

included in this ranking. The city even scored within the top/worst ten in two of those categories- homicide and burglary. Although the crime rates for most of the categories have dropped from 2010-2011, the ten year average for the city still exceeds state and national averages (Department of Justice, Bureau of Justice Statistics, n.d.). The rate of homicide was nearly nine times higher than the state average and nearly seven times higher than the national average over an 11 year span (1999-2010). This then begs the question: Why is Youngstown such a high crime area? Once a thriving steel town, the city has since transformed into an area filled with blight and violence. Citizens in this area have heard several derogatory monikers for the city including "Yompton" and "Murder Capital, U.S.A.," and for good reason.

Youngstown has an ongoing problem with crime that spans across a wide range of offenses. The success of the steel mills in the 1940s attracted newcomers from far and wide, including the mafia. Car bombings, bribing of public officials, racketeering, and murders for hire became common activities in the areas for more than 40 years (Grann, 2000, July 10). More recently, joint police agency collaborations have led to the arrest and conviction of several law-breaking citizens on a number of charges. In 2011, Tremaine Mabry and 28 others were accused of conspiracy to sell narcotics such as heroin, cocaine, methamphetamine, marijuana, and crack cocaine. Now sentenced to over four years in prison, Mabry was a part of one of the largest methamphetamine seizures in the state (U.S. Attorney's Office, 2012, July 12). In 2012, 12 people were indicted on charges of conspiracy with the intent to distribute following a raid that yielded over $150,000 cash, 6 firearms, ammunition, body armor, and a large amount of heroin (U.S. Attorney's Office, 2012, June 29). Isiah Taylor was also caught in 2012 by

one of these partnerships and was convicted on over 40 robbery charges. He was sentenced to over 17 years in prison (U.S. Attorney's Office, 2012, April 10).

Although the city is filled with picturesque parks and awe inspiring architecture, it is no surprise that many young adults are advised to leave this disadvantaged community in search of a brighter future elsewhere. The citizens of this city have become so accustomed to such activity that crime and corruption are almost expected. As *Saturday Evening Post* editor John Kobler was quoted in 1963, "[t]he climate of corruption is so pervasive, the tradition of the rake-off so ingrained, that the average citizen, with cynical indifference, assumes all officials are venal" (Kobler, 1963, March 9). This quote exemplifies how people in Youngstown tend to be complacent with crime instead of taking a stand against it. In an era where the mob exerted influence over government and business, car bombs, hit men, and crooked politicians were commonplace. In 2010, after serving seven years for bribery, racketeering, and other charges, former Democratic Congressional Representative James A. Traficant, Jr. decided to run for re-election as an Independent (Montopoli, 2010, May 3). Though he didn't win, nearly 9,000 (20%) Mahoning County residents voted for him, ranking him second out of three candidates in total number of votes in the 2010 general election (Mahoning County Board of Elections, 2010, November 18).

Not all residents believe this Northeast Ohio town is doomed for a bleak future led by criminals. As of 2010, Congressman Tim Ryan, who defeated Traficant in the 2010 election, has helped secure more than $23 million dollars in federal grants for the city during his seven years in office. These grants have been used to fund technology projects such as the audience participation devices used in the television show *Who*

Wants to be a Millionaire? Former Mayor Jay Williams took on the daunting task of revitalizing Youngstown and tearing down vacant housing. His efforts earned him the nickname of "the 'rock star' of the rust belt" (Donahue, 2010, p. 91). Mayor Williams left Youngstown in 2011 when President Barack Obama named him Director of the Office of Recovery for Auto Communities and Workers at the U.S. Department of Labor. The native of Youngstown was also nominated by President Obama in September 2013 to be the head of the Economic Development Administration in the U.S. Department of Commerce (*The Business Journal,* 2013, September 10). Phil Kidd, a local activist and nonprofit business owner, who helped rid the city of vacant drug houses riddled with vandalism and a local liquor store where criminals often gathered. These are just a few examples of people who truly believe that Youngstown has a bright future ahead despite its rocky and unstable past (Donahue, 2010).

A few of the articles referenced previously cite the city's history in the steel industry as having influenced its current bleak state of affairs. Grann (2000, July 10) speaks of the gambling and drinking establishments frequented by steelworkers that drew the attention of Pittsburgh mobsters. Kobler (1963, March 9) blatantly admitted that steelworkers were valued commodities as their knowledge of electrical systems was useful in making car bombs for the mob. The closing of the steel mills was even linked to the despair of the early 1980s that led to a Youngstown having one of the highest arson rates in the country at that time (Donahue, 2010).

Youngstown wasn't the only place facing unemployment on a grand scale: The entire Rust Belt area was suffering. The Rust Belt is a loosely defined stretch of land in the upper Midwest of the United States that served as the primary supplier for raw steel in

the 20th century (Alder et al., 2013, January 31). The area includes all of Ohio and nearly half of Michigan and Indiana, along with parts of Illinois, New York, Pennsylvania, Missouri, Iowa, New Jersey, Wisconsin, Kentucky, and West Virginia. Figure 1 demonstrates this area. The close location of coal and iron mills as well as convenient modes of transportation, such as railroads and the waterways of the Great Lakes, made this area an ideal locale for steel manufacturing (Tiffany, 1988).

As the major employer of the region, the Rust Belt was hit with mass layoffs as the mills closed in the late 1970s and early 1980s (Seely, 1994). Decades later, Youngstown and other previous steel towns like Gary, Indiana, are still struggling to rebound. In 1994, Gary was coined "murder capital of America" by the *Chicago Tribune* (Mertens, 2012, March 2). With a name like that, it is not a stretch to assume that violence plagues the streets of the city. For criminal justice professionals, the real question is what does being a Rust Belt city mean with respect to crime.

High crime in an area, especially violent crime, poses a safety risk to the community. All too often innocent lives are lost as the result of gang violence, drugs, or domestic disputes. On February 6, 2011, Youngstown State University senior Jamail Johnson was killed in an off-campus fraternity house while trying to protect others from gunfire that erupted after an argument at a party earlier in the evening. In addition to Jamail, 11 others were wounded as they tried to escape the residence (Martinez, 2011, February 7). Identifying commonalities among the Rust Belt cities may lead to the inception of programs and techniques that help reduce these seemingly random and senseless acts. These same common factors may also lead to the attraction of new business opportunities, which could lower both unemployment and the number of

residents in poverty, two burdens commonly faced by those in the Rust Belt (Mertens, 2012, March 2). The Rust Belt has fallen off its metaphorical horse and identifying trends in crime could be the first step for climbing back on and restoring the area's prosperity.

The objective of this research is to address the following question: What does being a Rust Belt city denote with respect to crime? Answering this question can aid law enforcement and city leaders in developing crime prevention programs that increase safety of the community. It can also attend to socioeconomic issues such as education, family stability, and household income should they need it. Not only can this research potentially help rebound Youngstown, it may also be able to aid cities both in and out of the Rust Belt and address crime problems throughout the country.

Summary

This chapter highlighted the problem facing Youngstown and discussed why it is important. It stated the objectives of the research and an overview of its goals. The next chapter will discuss the industrial history of the Rust Belt and the reasons those events may be considered contributors to crime. Criminological theory relevant to the problem will also be explained in detail along with previous theory-driven research.

Literature Review

History of the Steel Industry

Financed by J. P. Morgan, the modern steel industry was introduced in 1901 with the formation of the United States Steel Corporation. Because prices were based upon transportation costs of material, large and small companies banded together to assist each other instead of competing against each other. This mutual aid concept began a longstanding feud between the steel industry and the U. S. Government that led to several antitrust lawsuits beginning in 1911. Although the U.S. Supreme Court ruled in favor of the industry in 1920, the decision did little to improve public opinion which often coincided with government labels such as opportunistic and predatory (Tiffany, 1988).

Following World War I, employees began to protest the working conditions in the mills. Even though steel leaders made significant improvements to plants and doubled wages, workers formed informal unions and successfully decreased their 12-hour rotations to more bearable 8-hour shifts. The Great Depression of 1929 slowed manufacturing considerably and continued well into the 1930s. During this time the factories lacked both the technology needed to produce the type of steel that was being utilized and also the capital to fund these upgrades. To avoid mass layoffs, many plants simply cut hours and lowered pay by up to 25%. That same decade the National Labor Relations Act brought forth a new opponent to the industry—the formalized union. Slowly but surely, all U.S. mills had reluctantly signed wage contracts by 1942 (Seely, 1994).

Production was ramped up in preparation for the Second World War in the late 1930s and companies were forced to expand to keep up with national demands. Industry

leaders vehemently opposed this rapid expansion for fear that a post-war recession could prove disastrous as seen after World War I (Tiffany, 1988). New mills were erected between 1940 and 1945 with funds from both the industry and the Defense Plant Corporation under the U.S. Government. As World War II raged on, many industry officials failed to consider that the current production rate could end after the war. They also failed to consider that these foreign nations could become rivals in the upcoming years because of their domination of the markets. This type of elitist attitude led them to reject new and advanced technologies in the decades to come (Seely,1994).

As the war ended, the unions began calling for government policies regarding production that called for long hours and wage freezes to be lifted. Because of these sacrifices, union leaders bargained for a substantial raise. Industry leaders agreed to the raise conditional to the raise of steel prices to account for the extra expenses. The government rejected this compromise and the contract was stalled, causing thousands of workers to strike in 1946. After nearly a month, the laborers returned to work with an agreement on both higher wages and steel prices (Tiffany, 1988). This trend of union inspired strikes, wage hikes, and subsequent price inflations would continue throughout the next thirty years, catapulting steelworkers well into the middle class. In addition to higher net pays, the unions also bargained and received additional benefits such as unemployment compensation and generous pension plans. Although this amount of spending and lifestyle cushioning was acceptable during the more lucrative years directly after the war, they would also continue during the apparent decline, pushing the industry further into dire straits. Another unforeseen consequence of this back and forth negotiating was the surplus of steel that many companies found themselves with after

settlements were reached. Preparing for yet another steel shortage during the strikes, many consumers stocked up on American products and searched out foreign exporters during times of low supply. Because of lower import prices, foreign manufacturers had infiltrated U.S. markets and would ultimately dominate the industry in subsequent years (Hall, 1997).

While collective bargaining certainly contributed to the fall of the steel empire, the companies themselves are not exempt from blame. Domestic prices soared to record highs to support the newly raised wages which were 40% higher than national manufacturing averages (Tiffany, 1988). As mentioned before, the lack of innovation and technological upgrades were a major misstep of company executives. As foreign nations rebuilt after the war, they took the opportunity to explore cutting edge processes that were not only more efficient to run, but made a lighter and higher quality product that was more in line with current trends. Instead of using capital to build newer and more efficient mills capable of strong competition against these foreign producers, U.S. plants spent money on additional open hearth style furnaces that were quickly becoming obsolete. Industry leaders claimed the new technology, basic oxygen furnaces (BOF) and flat rolled steel from hot mills, had not proven to be financially beneficial in terms of operating costs or profits and were therefore not sound investments due to its questionable future. Towards the end of the steel era, the industry realized the error of its way and slowly began to integrate the techniques into their existing mills, as brand new mills with this equipment were extremely expensive. Although they had finally developed a product capable of competing in foreign markets, it proved to be too little, too late (Hall, 1997).

Following World War II, the U.S. turned its attention to the Soviet Union and the ever growing threat of the spread of communism. Seeing Japan, Germany, and other recently devastated countries as easy target for socialist control, the U. S. Government stepped forward and offered financial support. The thought was that if these countries could rebuild and become self-sufficient once again, they would be less likely to fall under communist control. The U.S. also benefitted from the sale of steel products to these nations to be used in new construction projects such as hot mills and BOF plants. This success would be short-lived, however, as the growth of steel in European nations skyrocketed. Around this same time, Americans were converting from heavy steel to concrete and lighter materials such as aluminum to manufacture goods. Not only were the mills suffering from a lack of demand for product, but high domestic prices proved to be non-competitive with foreign suppliers who grew in popularity during the all too common labor strikes (Hall, 1997).

The combination of the greed of the steel companies with government policies created a perfect storm of conditions that led to closing of the first steel mill, Youngstown Sheet & Tube, in 1977 (Hall, 1997). As some mills were forced into shutting their doors for good, others tried to postpone the inevitable by reducing the workforce. The 512,000 employees in 1970 were slashed by 68% leaving a mere 168,000 workers to man what was left of the mills in 1987 (Seely, 1994). This resulted in a mass exodus from the Rust Belt to employment rich areas such as Houston, where Texas oil was an up and coming industry. When these people faced yet another lay-off just two years later (in most cases), they returned back home to see the housing market it utter shambles (Hall, 1997).

Relevant Theories

The movement from one place to another is termed residential mobility and along with heterogeneity and poverty, it has the ability to "undermine a community's ability to collectively intervene and control crime" (Zaykowski & Parker, 2010, p. 312). This concept is described by Clifford Shaw and Henry McKay as "social disorganization" (Zaykowski & Parker, 2010). Because of the history of the Rust Belt, the region is a prime target for high residential mobility, little or no collective efficacy in neighborhoods associated with heterogeneity and high rates of poverty. From these observations, the first and main hypothesis is generated-

Hypothesis 1: Rust Belt cities have higher crime than non-Rust Belt cities.

In stable neighborhoods, there is a sense of trust and camaraderie that is established called collective efficacy. This term coined by Robert Sampson, "is a concept that includes the willingness of community residents both to exercise informal control and to trust and help one another" (Cullen & Agnew, 2003). As a study in the *Journal of Quantitative Criminology* reports, "[t]he most important conclusion from our study is the robust finding that higher rates of violent crime in neighborhoods leads to increasing rates of residential instability" (Boggess & Hipp, 2010, p. 367). This, in turn, will lessen collective efficacy further and increase the chance for deviance. Herein lays the next hypothesis:

Hypothesis 2: Cities with more residential mobility have more crime than those with less residential mobility.

The communication and values necessary for collective efficacy can also be difficult when its residents come from a variety of backgrounds. Through their research

into crime and neighborhood structure, Garcia, Taylor, and Lawton (2007) discovered that "[t]rust is weaker in more racially heterogeneous neighborhoods" (p. 684). While conducting their research, Shaw and McKay also discovered that areas with a wide range of ethnicities have as wide a range of cultures and traditions that might not only challenge each other, but convention as well resulting in deviant behavior. In the Oriental areas of Chicago, they noted that the traditions and ties to the Old World were strong enough to ensure social and minimize delinquency (1942, p. 246). This is a prime example of how the hetero- and homogeneity of a city can affect crime rates. Because of this, Hypothesis 3 states: Homogeneous cities have less crime than heterogeneous cities.

The last of the influences of crime via social disorganization theory is poverty. Historically, European immigrants in particular have tended to settle near low-wage employment opportunities (such as factories) in the 19th and 20th centuries. As they became more financially stable, they migrated towards the more affluent areas of the suburbs leaving vacancies in the impoverished inner city which were filled by southern blacks until the mid-1900s (Thomas, 2011). This demonstrates the trifecta of social disorganization- residential mobility, heterogeneity and poverty. Also associated with poverty is a lack of overall resources such as community and youth centers, urban decay, high rates of unemployment, single-parent households, and drug use and abuse which have been shown to increase the rates of crime and delinquency in these areas (Akers & Sellers, 2004). This leads to the last set of hypotheses:

Hypothesis 4: Cities with higher primary poverty have more crime than those cities with less primary poverty.

Hypothesis 5: Cities with higher secondary poverty have more crime than those cities with less primary poverty.

Previous Research

Although it has been roughly 35 years since the decline of Rust Belt cities, virtually no research has been completed on the location's relationship with crime. Many articles, like Wilson's 2007 piece, "City Transformation and the Global Trope: Indianapolis and Cleveland", reference the economic troubles of Rust Belt cities but fail to investigate its ties to crime. Others tie the location to housing abandonment and unemployment but again fail to explain how the cities' history plays a role in these examples of disadvantage (Wilson, Margulis & Ketchum, 1994). One of the more comprehensive articles written on the Rust Belt and crime was written in 2011 by S. Paul O'Hara. His profile on Gary, Indiana, includes commentary by two *Washington Post* contributors, Hodgson and Crile, who explain the unending cycle of crime:

> Crime fears chase out whites. Businesses follow them to the suburbs. Confidence and the tax base erode a bit further. More crime is bred. More flee. More tax money goes. And Gary becomes that much more dependent on federal help—at a time when federal aid is about to be brutally cut back (O'Hara, 2011, 146).

Even this article neglects to investigate the relationship between the closing of the steel mills and the problem of crime. Instead, it cites ongoing racial tensions as a primary cause of social discourse in Gary, mentioning the steel mills almost as a side note with respect to the problems faced by this town (O'Hara, 2011). With so many articles citing the socioeconomic distress common to Rust Belt cities, an investigation into the possibility of a connection between such a significant event like the closing of the mills

and crime is warranted. This research will hopefully act as a starting point for more exploration into this subject.

Summary

This chapter briefly described how Youngstown, Ohio, differs from other areas of the state. The Rust Belt area was also defined along with the history of the industrial era that occurred over the last century and the chain of events that led to its demise. The ramifications of these events were brought forth. Social disorganization theory was introduced to explain why the closing of steel mills could be considered a contributor to the current crime problem. Past research on this theory was also presented as well as an explanation of the current research on this topic. Additionally, this chapter stated hypotheses congruent to the theory mentioned. The next chapter will clarify the data collection process and outline the stages of the analysis.

Methodology

Design

The research method chosen for this project was content analysis. This decision was driven by the fact that the data to be used in analysis had been previously collected and readily available along with its cost-effective and time-saving features. Because the information was gathered through free internet sources, no expenses were incurred and the availability of the data was convenient. Also, this method was used in order to conform to the time restraint of the research, as responses from human sources were not guaranteed to be timely. This type of research also allowed the data to be gathered from one main source, the FBI's Uniform Crime Report, which made it more likely that the data were collected using the same set of standards across multiple jurisdictions. The crime rate content was collected from two web sources: city-data.com and UCRdatatool.gov. City-data.com was chosen as the primary source of information as it provided not only crime rates for the area, but also the variable data utilized throughout the analysis. By taking the majority of information from one source, the chance for conflicting figures among sources was significantly reduced. Uniform Crime Report (UCR) data not found through city-data.com was supplemented by UCRdatatool.gov. Because the website is administered by the same government agency that collects the UCR data, it was considered a reliable source for crime data.

Sample

To begin this research, the Rust Belt region needed to be defined. The search for a comprehensive list of cities in that area yielded no results. After sifting through several maps and written descriptions, Figure 1 was preferred for its extensive detail (Jennings,

2010). First, the size of the map and the inclusion of borders allowed for easy identification of individual states which was necessary for subsequent data collection processes. Second, because the map was a figure, the span of the Rust Belt was easier to comprehend than written descriptions. The area was also colored coded to distinguish it from the coal mining districts and provide a general boundary for the region. This map was later edited to include a border around the Rust Belt region for easy identification as a grayscale image. Last, as compared to the other maps, this figure included the largest amount of identified points (cities) which increased the sample size and reduced the error value of the results.

In all, 97 cities in 12 states were labeled as belonging to the Rust Belt via indentified points on the map. Once this list was generated, population (2011) and median household income (2009) figures were collected from city-data.com for each of the cities to be used as matching criteria for non-Rust Belt cities. Median household income was chosen as a variable because it is a primary indicator of poverty. For the purposes of this research, a primary indicator of poverty is defined as a variable that measures the value of one's assets, such as income. A secondary indicator of poverty is a variable that can influence a primary indicator. Education, for example, is a secondary indictor of poverty. Although it does not measure assets directly, the education of a person can determine the pay rate/income of the employee. These two variables, population and income, were also chosen because they are listed as factors affecting the volume and types of crimes across jurisdictions by the Federal Bureau of Investigation in reference to comparing crime statistics (Federal Bureau of Investigation, 2011).

Using a 5% error value based on an *N*=197 beginning sample size, a population and median household income range was generated for each of the cities. A large potential list of matches (*N*=8,689) was compiled using 2010 U.S. Census data (Department of Commerce, n.d.). For each city, the list was narrowed first by excluding those cities that did not fall within the given range for population. During this matching phase, two cities, Philadelphia, Pennsylvania, and Chicago, Illinois, were eliminated from the list of Rust Belt cities because their large populations were unable to be matched to another city. The pool of potential matches for each city was again filtered using median household income as a discriminating characteristic. After this second step, 24 out of the remaining 95 cities were left without a match within the range but were flagged for further examination. All of the 95 Rust Belt cities were removed from the list of potential non-Rust Belt matches. Cities located in the 12 identified Rust Belt states were located on a map to determine whether or not they fell within the "Belt". Cities that clearly fell within the bounds or that fell near the bounds of the Rust Belt during visual comparison were excluded from the list of possible matches. Only those cities that were clearly not located within the Rust Belt were included in the list.

The next step in this process involved pulling population and income figures from city-data.com. Because the original Rust Belt figures were taken from this website, the city-data.com values were used as final matching criteria. While some cities were limited to just one city after this stage due to exclusion of all other possibilities through the matching process, a majority were subjected to further scrutiny. These matches were chosen by determining which city had the least overall difference in population and income values as compared to those in the Rust Belt. Furthermore, a small number of

cities were left with no matches and were then grouped with those previously flagged for further review. For these select cities, the list of potential cities was modified to include some that originally fell outside the original income range. Although 21 cities (22%) were left unmatched after this edit, they were still partnered with a non-Rust Belt city that was closest to meeting the selection criteria. These cities were still included in this research but were noted as not having an exact match. On average, matches not meeting the criteria varied in income value by 18% of their Rust Belt partner's income, with the highest variance between Detroit, Michigan, and its match Fort Worth, Texas, at 83%. The list of Rust Belt cities, their matches, and related criteria values are include in Table 1.

Measures

Once the matches were made, the dependent variable, crime, was collected by utilizing data from the FBI's Uniform Crime Reporting Program (UCR). The UCR was created in 1929 after requests for reliable crime reporting statistics throughout the nation were made by the International Association of Chiefs of Police. The FBI was chosen as the agency responsible for the collection, archiving and publishing of this data in 1930. While participation in the program is strictly on a voluntary basis, most recently data are currently collected from over 18,000 jurisdictions across the country (Federal Bureau of Investigation, n.d.). Although arson is an index included in the UCR, it was excluded from this research due to the lack of available data. UCR data from a three year period (2007-2009) were selected to strengthen the validity of the analysis. These years were selected because the data were available for most cities during this time frame. Holes left by city-data.com were filled by using data from ucrdatatool.gov. Some cities (12)

presented with incomplete yearly data, and those figures were annualized to generate 12 month rates. No UCR data were found for Ashtabula, Ohio, so it—along with its corresponding non-Rust Belt partner—was excluded from the usable sample. This brings the final sample size to 188 cities. Because a few (3) cities had UCR data for only two years, the data were averaged over the available years. This arithmetic average is used in all multiple year calculations of crime. Moorhead, Montana, provided no rape data and is therefore excluded from the analysis of that index, violent crime, and total crime. It is included in all other analyses.

As for the independent variables, nine were chosen in conjunction with social disorganization theory: poverty (Akers & Sellers, 2004; Barnett & Mencken, 2002; Boggess & Hipp, 2010; Cullen & Agnew, 2003; Garcia, Taylor, & Lawton, 2007; Oh, 2005; Sampson & Wilson, 1990; Shaw & McKay, 1942; Thomas, 2011; Warner & Burchfield, 2011), racial diversity (Barnett & Mencken, 2002; Boggess & Hipp, 2010; Drakulich & Crutchfield, 2013; Garcia et al, 2007; Shaw & McKay, 1942; Warner & Burchfield, 2011; Sampson & Wilson, 1990; Zaykowski & Parker, 2010), population change (Akers & Sellers, 2004; Barnett & Mencken, 2002; Boggess & Hipp, 2010; Ellen & O'Regan, 2010; Thomas, 2011; Warner & Burchfield, 2011; Zaykowski & Parker, 2010), education (Barnett & Mencken, 2002; Drakulich & Crutchfield, 2013; Ellen & O'Regan, 2010; Garcia et al, 2007; Lochner & Moretti, 2004; Warner & Burchfield, 2011), age (Ellen & O'Regan, 2010; Drakulich & Crutchfield, 2013; Garcia et al, 2007; Sampson & Laub, 1992), population density (Akers & Sellers, 2004; Drakulich & Crutchfield, 2013), renter status (Boggess & Hipp, 2010; Garcia et al, 2007), family structure (Akers & Sellers, 2004; Barnett & Mencken, 2002; Cullen & Agnew, 2003;

Drakulich & Crutchfield, 2013; Garcia et al, 2007; Oh, 2005; Sampson & Laub, 1992; Sampson & Wilson, 1990; Thomas, 2011), and household value (Boggess & Hipp, 2010; Bottoms & Wiles, 2002; Ellen & O'Regan, 2010). Of these, the percentage of renters, median household value, population change, and percentage of population with a high school education are associated with residential mobility. The racial diversity of an area can determine the level of homogeneity present and, in turn, the amount of collective efficacy. For the purposes of this research, only the majority race was used in the analysis. Social disorganization theory would suggest that as the percentage of majority race increases, the occurrence of crime decreases. Poverty rate and median household income are listed as primary measures of poverty. The remaining categories described are characterized as secondary measures of poverty. The percentage of married citizens affects levels of poverty due to the increased chance of multiple incomes for the household. Median household value can measure poverty through urban decay. The median age of residents and population density are thought to affect the amount of resources available within the community and the percentage of adults with a high school education can affect income and poverty as well. The values for these items were collected from city-data.com and were added to the dataset containing the UCR data.

Analysis

The analysis of this information is comprised of four stages- summaries or profile generation, comparisons, connections, and regressions. The Data Analysis ToolPak feature of Microsoft Excel and the Statistical Package for the Social Sciences (SPSS) version 17.0 were used to complete the analysis. The first or summary stage includes performing descriptive calculations including the minimum, maximum, median, and

mean values along with the standard deviation for each of the individual crime measures as well as their three compilation measures (i.e. violent crime, property crime, and total crime) and each of the independent variables. The profile for the UCR data is found in Table 2 while the profile for the independent variables is found in Table 3.

This first stage of analysis provided some of the information necessary to initially test the first hypothesis: Rust Belt cities have more crime than non-Rust Belt cities. To further test this statement, comparisons were made between Rust Belt and Non-Rust Belt cities using paired t-test analysis in stage two of the analysis. While stage one provided the raw data, the t-test comparisons indicated whether or not the means for the measures variables for the two groups were statistically significant. Because of the sample size used, the statistical significance was set at .05. The results for these comparisons are located in Table 4.

The third stage of analysis produced the data to test the hypotheses involving simple correlations among the crime and independent variables. The hypotheses are specified below:

Hypothesis 2: Cities with more residential mobility have more crime than those with less residential mobility.

Hypothesis 3: Cities with greater homogeneity have lower crime than those with lower of homogeneity.

Hypothesis 4: Cities with higher primary measures of poverty have more crime than those cities with lower measures of primary poverty.

Hypothesis 5: Cities with higher secondary measures of poverty have more crime than those cities with lower measures of secondary poverty.

At this stage correlations were performed on the ten UCR-related measures (seven individual crime types and three summary measures: overall crime, violent crime, and property crime) and ten independent variables (nine previously mentioned and median household income) to measure the impact of the items on one another. Because of incomplete rape data for one of the cities (Moorhead, Minnesota), correlations for rape, violent crime, total crime, and independent variables were completed using a data set that excluded Moorhead. The results from this stage of analysis are located in Table 5.

The last stage of analysis, ordinary least squares or linear regression, also provided information useful in evaluating the hypotheses. This type of analysis was chosen because it shows the unique explanatory power of each independent variable in predicting the dependent variable while controlling for the other variables in the equation. The regressions were completed using eight of the ten independent variables. For multiple regression statistics, it is recommended to have at least 20 cases for each variable in the regression equation (StatSoft, Inc). Because the sample size is 188, nine variables were included, eight independent and one dependent variable at a time.

As introduced earlier, the type of regression performed was ordinary least squares (OLS or linear) regression. With this type of analysis, there are a few assumptions that should be noted. The first assumption is that the variables are normally distributed. If the data are not normally distributed, the error will be underestimated. The second assumption is that there are no issues of multicollinearity. Simply put, this assumption ensures the independent variables do not influence each other too much. Multicollinearity can be avoided by excluding one of the variables in a relationship where the correlation coefficient (r) is above .60. The third and last assumption is

homoscedasticity. This means that for this study, the variances among the UCR data are equal across all indices (Williams, 2009). All three were supported by the data in the analysis. Median household income and population were excluded in the regression analysis because they were used as match criteria in the beginning of the research. Because median age showed to have the smallest impact on crime, as reported during the correlation stage, it too was excluded from the regression analysis. SPSS was the program utilized to complete this stage of analysis, as Excel failed to provide the values of the standardized regression coefficients. The regression results are presented in Table 6.

Summary

This chapter described the type of research design utilized for this study. It also detailed the processes of finding and selecting the data used throughout this project. The chapter provided explanations for the use of each variable and how they would be used during analysis. Finally, the chapter featured the methods necessary to carry out each of the four stages of analysis. The next chapter, results, will discuss the results of each stage of analysis and provide the meaningful interpretations relative to each of the hypotheses put forth.

Results

The data collected were gathered specifically to address the hypotheses previously listed. The following tables present the results of the four stages of the analysis. Table 1 lists each of the Rust Belt cities, their respective match, and the values of the match criteria. Tables 2 and 3 display the summary information from the first stage of analysis. Table 4 shows results from the second stage, the paired t-tests. The correlations performed in the third stage of the analysis are represented in Table 5, and regression outputs from the fourth stage are contained in Table 6.

City Matching

Pertaining to Table 1, the population (POP) given for each of the listed cities is for the year 2011. The median household income (MHI) for each city is the 2009 reported value. The cities are listed in ascending order with respect to population of the Rust Belt city. The respective matches are listed in the same row as its Rust Belt partner, and the last column, labeled "MATCH?", shows whether or not the paired cities fell within the 5% error value of the median household income. With the exception of Reading, Pennsylvania, the inability to find an exact match was derived from the low income of the Rust Belt locations. The cities, in essence, were simply too poor to be paired with another. These cities are distinguished from the others by an "N" (No Match) in the "MATCH?" column of Table 1. Two cities from the initial list, Philadelphia and Chicago, are excluded from this list as their populations were too large and therefore too exclusive to be matched. As the populations rose above 100,000 the potential list of

matches dropped steadily. As that list narrowed to fit the slim income criteria, it was not surprising that the most populated cities resulted in a "no match" status.

Once all the UCR (dependent variable) data were gathered, Ashtabula, Ohio, and its partner city, El Dorado, Arkansas, were excluded due to unavailable UCR data for the chosen years (2007-2009). The arithmetic averages are used in the remaining analyses for crime and are labeled as "three year averages" regardless of the number of years of data used. Of the 188 cities, 185 (98%) had three years of data used to calculate the respective average. Tables 2 and 3 showcase the descriptive profile (minimum, maximum, median, mean, and standard deviation) values for each of the dependent and independent variables. Table 2 shows the summary data for the dependent variables (UCR data), while Table 3 lists the values for the independent variables (location demographics).

"Poverty" refers to the percentage of residents below the poverty line in 2009. The poverty line thresholds as reported by the U.S. Department of Health and Human Services for 2009 were $10,830 for a single person and $22,050 for a family of 4 (2011). The percentage of white, black, and other race citizens are represented as "W", "B", and "O", respectively. While "other" consists of a combination of Hispanic, Asian, Native American, and citizens reporting more than one race, these figures are interpreted as representing the Hispanic population, as they provided the bulk of the figure. Because the research uses race as a measure of homogeneity, only the majority race is used in stages two through four of the analysis. This figure can be found under the "MAJ" column. The percentage of population change between 2000 and 2011 is listed as "POP CHG". "HS ED" refers to the percentage of citizens over the age of 25 with a high

school education. The median age of a city is labeled "MD AGE" while population density is measured under "DENSITY". The percentage of renters is listed under "RENT" and the percentage of persons over the age of 15 who are married are listed under "MAR". The median housing value reported in 2009 is listed under "MH VALUE" and the median household income for that same year is represented by "MHI".

Stage One Analysis

Using these tables, it is possible to test Hypothesis 1: Rust Belt cities have more crime than non-Rust Belt cities. Looking at total crime results, the hypothesis is not supported. The non-Rust Belt average rate for total crime (5832) is higher than the total crime rate of the Rust Belt group (5560). Rust Belt cities have higher violent crime (755) than Non-Rust Belt cities (741), but they again are topped by non-Rust Belt cities in property crime, 4805 compared to 5063. Of the seven individual crime measures, Rust Belt cities have higher rates in all four of violent crime categories- homicide, rape, robbery, and assault, while non-Rust Belt cities claim or "own" the property crimes (burglary, theft, and auto theft).

Stage Two Analysis

To determine whether or not the differences measured in Stage One held any statistical significance, a paired t-test was run in Stage Two of the analysis comparing Rust Belt and non-Rust Belt cities. As shown in Table 4, none of the UCR crime measures were significant at or below a $p < .05$ level.

Stage Three Analysis

Further evaluation of Hypothesis 1 was completed during Stage Three which consisted of a correlation matrix presented in Table 5. Looking at the relationship between location (Loc) and the ten measures of crime, six show positive relationships (homicide, rape, robbery, assault, burglary, and violent crime) and four show negative relationships (theft, auto theft, property crime, and total crime). Because Rust Belt cities were coded as one and non-Rust Belt cities as zero, these values indicate that Rust Belt cities have higher crime in those six measures of crime than non-Rust Belt cities, and lower crime in four crime measures. The strengths of these relationships are weak with the strongest relationship shown between rape and location at .131. This output is consistent with the information in the summary tables which show higher average rates of crime in Rust Belt cities compared to non-Rust Belt cities for those same six measures. Despite the positive correlations, the weak magnitude of those relationships combined with the low significance reported in the t-tests further strengthens the conclusion that Hypothesis 1 is indeed null.

Table 5 can also be used to address the remaining hypotheses as well. In conjunction with Hypothesis 2—cities with higher measures of residential mobility have higher overall crime than those with lower measures of residential mobility—the focus is on the percentage of renters, median housing value, percentage of population change, and percentage with a high school education. Similar to the correlations with location, all four show a low magnitude, or weak relationship with overall crime. Median housing value presents with the strongest correlation, measuring -.212, and is in line with social disorganization theory purports: As the value of the houses decrease in the neighborhood

the rate of crime increases. Additionally, the percentage of renters and the percentage of those with a high school education also support the theory. The percentage of population change does not follow suit, as it suggests the smaller the population change, the greater the amount of crime, which is contradictory to the proposed theory. The results of this analysis provide evidence, albeit weak, to support the hypotheses at this stage.

Hypothesis 3 states that cities with greater homogeneity have lower crime than those with lower homogeneity. To test this statement, the correlation between the percentage of the majority race and crime was examined. The value with regards to overall crime is -.254, showing that as the racial diversity within the community increases, the crime in that community also rises. Property crime and violent crime also show a negative relationship with homogeneity, with magnitudes measuring -.180 and -.475, respectively. All of the ten measures showed a negative correlation with homogeneity, six of which were moderate in strength: homicide (-.400), robbery (-.418), assault (-.368), burglary (-.303), theft (-.300), and violent crime (-.475). Furthermore, the values for these six measures are considered very significant with $p < .01$.

Hypotheses 4 and 5 consider the relationship between measures of poverty and crime. For Hypothesis 4, the primary measure of poverty, the percentage of those under the poverty line, is compared to the crime measures. For all ten items, a positive relationship is noted with the poverty percentage. Five of those ten measures—homicide (.363), robbery (.357), violent crime (.344), assault (.344), and burglary (.323)—present with moderate strength. Again, these measures are considered very significant with $p < .01$.

Hypothesis 5 investigates the proposed link between crime and the secondary measures of poverty: percentage of citizens over 15 who are married, median housing value, average age of citizens, population density, and percentage with a high school education. Because median housing value and percentage of citizens with a high school education were already discussed with respect to crime in Hypotheses 2 they are noted as supporting Hypothesis Five. The direction of all the values relating the percentage of married citizens to the ten measures of crime is negative, meaning that as the percentage of married citizens rises, the rate of crime falls. This finding is consistent with social disorganization theory which suggests that two person households (married couples) are more likely to have two incomes and therefore are less likely to fall into poverty. The strength of this relationship was moderate in five of the ten categories: homicide (-.571), robbery (-.548), assault (-.385), auto theft (-.399), and violent crime (-.526). Each of these values held a significance level of $p < .01$. The links between crime and population density, however, show mixed results. Only one relationship is considered moderate in strength (auto theft, .306; $p < .01$) and the number of positive correlations equal the number of negative correlations with five each. Comparing density with total crime, the association is weak and negative with a value of -.169, but is statistically significant with a value of $p < .05$. Because the social disorganization theory would assume an increase in density would increase the strain on community resources and consequently an increase in crime, the negative correlation provided by the analysis opposes the theory and the hypothesis.

Stage Four Analysis

During the regression analysis, eight independent variables were evaluated on their ability to predict the respective dependent variable, crime measures. The results are reported in Table 6. As a whole, they were found to be strong predictors of six of the ten UCR indices with adjusted R^2 values above .20, with homicide measuring the highest at .461. Rape, theft, property crime and total crime fell below the .20 threshold, with theft reporting the lowest value (.089). Looking at the overall predictive power, percentage of the majority race, percentage of married residents, and percentage of adults with a high school education appear together as the top three most powerful predictors in four indices: homicide, robbery, assault, and violent crime. They also collectively account for 18 (62%) of the 29 significant values calculated in the regression outputs. Of those three variables, the percentage of married residents has shown to be the strongest predictor of crime, measuring four moderate β strengths (β >.300) in the categories of homicide (-.469), robbery (-.412), auto theft (-.329) and violent crime (-.386). The β values for the percentage of married also held significance in those categories along with $p < .05$ values in the categories of rape and theft.

Referring to Hypothesis 1—location of a city in the Rust Belt predicts higher rates of crime than those outside the Rust Belt area—the results were expected to be positive as Rust Belt cities were coded with a "1" during analysis and Non-Rust Belt cities' assigned a value of "0". This was not the case. For all ten indices, the β values were both negative and weak, indicating that non-Rust Belt cities were predicted to have higher crime, though its explanatory power was weak and statistically not significant.

Hypothesis 2 asserts that cities with higher residential mobility have more crime than those with less residential mobility. To evaluate that statement, the β values and significance levels of the median household value, percentage of adults with a high school education, and percentage of population change were reviewed with respect to total crime. To support the hypothesis, the β values for each of those measures should present as negative. While the results support this, the weak magnitude of the standardized coefficient (β) combined with the statistically non-significant p values indicate that all three of these variables to be poor predictors of crime and should not be used to evaluate Hypothesis 2 at this stage of analysis.

As Hypothesis 3 asserts homogeneous cities have less crime than heterogeneous cities, the percentage of majority race is studied with respect to all ten measures of crime. Concurrent with both social disorganization theory and the hypothesis, all ten β values of the percentage of majority race were negative. Additionally, all ten of these β values had significance values of $p < .05$. While the magnitude of most of values were weak, the value was moderate (-.343) with respect to violent crime.

Table 6 was also used for evaluating Hypothesis 4, which states that cities with higher primary measures of poverty have more crime than cities with lower primary measures of poverty. For each of the crime measures, the percentage of residents in poverty was reviewed for β magnitude, direction and significance. Looking at total crime the β value is positive indicating that as the poverty level increases, crime increases. The magnitude of this value was weak, .072, and the p value statistically not significant. Integrating the other measures, the output showed mixed results. The β values were positive for rape, assault, burglary, property and total crime while the other five

measures, homicide, robbery, theft, auto theft, and violent crime measured negative values. All ten of the values were weak with $\beta < .300$. One measure, burglary, reported a p value as significant, measuring .025 despite the others measuring $p > .05$. Because of the inconsistencies in direction, weak magnitude, and p values, poverty is said to have little explanatory power and should not be used to evaluate Hypothesis 4 during this stage of analysis.

The last hypothesis, Hypothesis 5, states that cities with higher secondary measures of poverty have more crime than cities with lower measures of secondary poverty. Although median household value and percentage of adults with a high school education are considered secondary measures of poverty, they will not be discussed here as they were already evaluated in Hypotheses 2 and are noted as having weak explanatory power. The two variables that will be discussed are percentage of married residents and population density. Regarding the percentage of married residents, social disorganization theory would suggest that as the percentage of married residents decreases, the crime would increase which predicts a negative relationship. The values for all ten UCR variable measurements were indeed negative. As stated earlier, this independent variable is considered the strongest and most significant of the independent variables with four moderate β values and six significant p values. The β values for population density are also all negative. As density rises, resources should become strained and indicate a higher level of poverty and subsequently higher crime. While all of these values are weak, four are seen as significant with $p < .05$- rape, burglary, property crime, and total crime. Because the four secondary poverty variables as whole cannot either support or

oppose the hypothesis, they should not be used to evaluate Hypothesis 5 at this stage of analysis.

Summary

This section presented the results of the four stages of analysis completed to test the five proposed hypotheses. The results of each of the tables were described and the interpretations of the data were delivered for each stage of analysis. The next chapter, Discussion, will provide more interpretation and details on the findings as well as offer implications and its limitations.

Conclusions

The goal of this research was to explore the possible relationship between Rust Belt city location and crime as proposed by social disorganization theory. This action was completed throughout the four stages of the analysis. The first summary stage provided a profile of all the items involved. Unexpectedly, total crime was higher in non-Rust Belt cities than Rust Belt cities though the difference was not statistically significant. One explanation for this event is that property crime rates of non-Rust Belt cities are higher than Rust Belt cities. Because the rate of property crime average seven times higher than violent crimes, property crimes account for a greater proportion of total crimes. Therefore, the higher number of property crimes among non-Rust Belt cities ensures the number of total crimes will be higher than Rust Belt cities. This explanation is supported by the correlation among property crimes and total crimes which is valued at .982 and holds a significance of $p < .01$.

The second stage of the analysis used paired t-tests to determine whether or not there were statistically significant differences in Rust Belt versus non-Rust Belt cities in terms of supporting social disorganization theory. These differences were found not to be statistically significant. This can be explained by examining what a t-test actually measures. When completing this type of analysis, the group averages are compared in relation to the distribution of all the data points in the groups. So while the averages of the crimes may appear to be quite different, there is enough similarity among the distribution the data points to render the difference in means statistically insignificant (Trochim, 2006). This led to the conclusion that the crime rates for both groups are essentially equal and thus fails to support Hypothesis 1.

Stage three of the analysis consisted of measuring the influence of the variables on each other via Pearson's r correlation coefficients. Of the 253 correlations, 149 (59%) were weak with values under .300. Eighty-six values (34%) were ranked as moderate with values ranges between .300 and .599. The remaining 18 (7%) correlations were strong, measuring at or above .600, 12 (66%) of which were among UCR variables. The highest correlation noted was between property crimes and total crimes with a value of .982. All of the correlations among UCR indices were positive relationships, indicating similar directionality on both variables. Violent crime reported the strongest relationships, with 15 of the 18 variables appearing as moderate or strong in magnitude. Also, all of the moderate and strong correlation values were considered significant at the $p < .01$ level. It will also be noted that of 149 weak correlations, 47 (32%) were significant at a $p < .01$ level and 16 (11%) were significant at a $p < .05$ level.

The location variable presented with both positive and negative correlations of weak magnitude which further strengthened the rejection of Hypothesis 1. The values used for evaluation of Hypothesis 2 were weak, but the high significance level led to the acceptance of the statement. With six of ten indices having moderate values with the percentage of majority race, Hypothesis 3 was easily accepted. Hypothesis 4 was also easily accepted, as the relationships between the poverty rate and the UCR indices as half of them were of moderate magnitude. Although a large number of the values were of weak magnitude when looking at secondary measures of poverty and crime in Hypothesis 5, the direction and significance of the values allowed for acceptance of the statement.

In addition to the relationships relevant to the hypotheses, several others correlations should be noted for their strength and significance in Table 5. For example,

the percentage of black residents held moderate positive correlations with eight of ten UCR offenses (robbery, assault, burglary, theft, auto theft, violent crime, property crime, and total crime) and a strong correlation with one of the offenses (homicide). Although rape showed a positive correlation of high significance, the magnitude of this relationship was weak. Acknowledging this relationship can spurn ideas for decreasing crime through the development of programs aimed at deterring at-risk community members from deviant and criminal activity. Because of the strength of these connections, further research is suggested on this topic.

Also of note is the strong connection between Hispanic residents (previously explained as percent of other races, or % O) and the percentage of adults with a high school education with a value of -.659 and a significance of $p < .01$. Seventeen (18%) of 94 non-Rust Belt cities are located in the southwest states of Texas, Arizona, and California, a region known for its high Hispanic populations. The use of a large number of cities within that region may have exaggerated this relationship. However, the inverse relationship of this variable in eight of ten UCR offenses suggests further research should be completed to explore both the validity of the results in this study and the implications of such results on the affected communities.

Another relationship worth mentioning is between population change and the crime variables. While a higher population change is said to predict higher rates of crime, the opposite was supported for data provided in this study. Social disorganization theory states higher residential mobility lessens collective efficacy and therefore increases the chance of crime. A major point of the theory also states that as the more affluent members of society move into the suburbs, the inner city is left with the

disadvantaged residents who cannot afford to relocate and do not possess the education and skills necessary to obtain good paying jobs. To compensate for these difficulties, members may turn to criminal behavior to supplement a low or non-existent income and provide for themselves and their families (Shaw & McKay, p. 245). Despite the rejection of Hypotheses 2 based on population change alone, in both stage three and stage four of the analysis, the results are not in complete disagreement with the criminological theory; Although the population does not change, the stable presence of a largely disadvantaged population may account for the crime rates in accordance with the theory's poverty assumptions.

In stage four of the analysis, linear regression, Hypothesis 1 was not supported, a conclusion reinforced by the previous analyses of the statement. Similarly, Hypothesis 3 was supported sustaining the previous three stages' results. Hypotheses 2 and 4 could be neither supported nor opposed at this stage due to weak magnitudes and opposing directions of the standardized coefficient (β) values and p values not meeting a significance level of $p < .05$. The grouping of the percentage of adults with a high school education, percentage of the majority race, and percentage of married as the top three strongest predictors of four out of ten indices should be further explored.

The combination of these variables as leading predictors of crime is not all that surprising given the independent research on the topics. Drakulich and Crutchfield (2013) concluded that racial and ethnic minorities have a poorer perception of police efficacy and that these perceptions decrease the level participation in informal social control measures and can lead to higher crime. As for education, a 2001 study by Lochner and Moretti found that incarceration rates are reduced with the completion of a

high school education and a strong positive effect between drop outs and crime. Life course theory, as described by Sampson and Laub (1992) associates strong family ties, specifically marital bonds, with less crime and deviance among both delinquent and non-delinquent individuals. The additional observations of race and education during stage three should further heighten the need for research in these areas.

Limitations

This research has some limitations that should be addressed and five of them will be described. The first and largest limitation is the lack of data available to address the research question core to this thesis: How do Rust Belt cities compare to non-Rust Belt cities in terms of levels of crime. Retrieving Census information needed to match the cities posed quite a challenge in that a complete list of all U.S. cities was not available from which to choose. Out of the hundreds of thousands of cities in the United States, the list of potential matches included only 8,689 cities after a search that spanned several weeks. The restricted list is one possibility why some Rust Belt cities were not able to be matched. It is also suspected that a more comprehensive list that included a larger number of cities could have impacted the results as different cities may have had differing rates of crime and variable information.

The second limitation involved the UCR data. While some (2%) cities did not provide data for entire years, others (4%) only reported figures for partial years which led to those figures being annualized. This process resulted in estimates of crime that may not be an accurate representation of the actual crime for that area. Also, the collection process at the local level did not always meet UCR reporting standards set by the FBI's

National Incident-Based Reporting System manual. These results, specifically the rape data for Illinois locations, may not be accurate representations of the actual number of crimes committed. Illinois' inaccurate reporting accounted for 12 cities, or 6% of the total data pool. (The collection process for Rockford, Illinois, met the standards of the UCR and is therefore not included in the list of 12 cities.) The missing years of data could have also affected the results as the averages were not based upon the same amount of data across all cities. Most (98%) involved three years worth of data while others (2%) included only two years. Missing rape data excluded Moorhead, Minnesota, from analysis. This means the number of observations was not consistent throughout the analysis and is consequently seen as a limitation of this study.

A third limitation of this research is the lack of history of the non-Rust Belt cities. A significant amount of time was spent researching the history of the Rust Belt cities and the complications faced by such cities in the wake of the collapse of the steel industry. Just because non-Rust Belt cities were not directly affected by this disaster, it should not be assumed that other events have not influenced the current crime rates in those areas. The same could be said of Rust Belt cities. Because the UCR data were only taken from recent years, it is unknown whether or not crime has been a significant problem for several decades or if it a phenomenon with possible connection to the fall of steel. The collection of UCR data over several decades could provide answers to these questions. Analyzing the progression of crime rates, starting before the collapse and extending through current years, can paint a more detailed picture of the influence of the steel industry on the criminal justice system.

A fourth limitation is the use of a single criminological theory to guide the research. Although social disorganization theory was appropriately chosen given the circumstances surrounding the steel collapse, a more integrative approach should be used. The socioeconomic reality of today is certainly different that it was nearly forty years ago when the mills first closed. Introducing additional theories in tandem with social disorganization theory may help better explain how the crime rates of the cities have evolved over time and in turn offer ways to minimize criminal behavior.

The fifth and last limitation is found in the variables used to measure the three areas of the theory: poverty, residential mobility, and homogeneity. Because the percentage of married couples in a community was shown to have significant ties to crime in multiple areas, an investigation into the differences among single and married household incomes should be conducted to determine whether this is an accurate secondary measure of poverty in these cities. Also, as previously noted, the measure of residential mobility can have several interpretations. High mobility can breed distrust among its residents; where as a low mobility can symbolize an inability to remove oneself from disadvantaged conditions. Both situations can be theoretically linked to crime. The time frame of 11 years to measure the population change can also be seen as a limitation. Utilizing population data from those three years only (2007-2009) may have led to a more accurate correlation among residential mobility and crime for the identified years. As for homogeneity, the current study limited this measure to race only. Because each race can consist of a mixture of ethnicities that have their own set of morals and beliefs, using the ethnic blend as an additional variable may have influenced the results of the study as well.

The lack of previous research added to the complexity described in limitations four and five. While the subjects of the Rust Belt, crime, and social disorganization theory had been developed individually, the idea of combining them into a single study was a new concept. Without this theoretical and methodological guidance, the current study involved more exploration into hypothesis testing than originally expected.

Future Research

Due to the aforementioned limitations, there are several areas that are in need of further study. Five of these areas will be presented. The first involves the relationships among race, education, marriage, and crime that have shown to be important, as they have been prominent in two of the four stages of analysis. By completing more research in these areas, it might be possible to address the factors that may lead to crime to prevent it from occurring in the first place.

The second avenue for future research on the topic involves additional investigation into the history of crime in these cities would also shed light upon the validity of the current study and would address the question of the steel industry's role in criminal justice. Historical events that occurred in the non-Rust Belt cities should also be researched in conjunction with past crime rates to determine if other variables may have influenced the results of the current study.

The third area recommended for future investigation involves including a larger number of observations, as it would increase the confidence of the results and could allow for the exclusion of cities with missing data instead of using incomplete data, as was done in this study.

Fourth, opening the research to include foreign nations who have had similar success and failures may help determine if industrialization and crime is only a domestic problem and what can be done to remedy it. From the history of the steel industry, it is known that both Japan and Germany faced industrial challenges when their plants and mills were destroyed during the war. How did those countries cope with the devastation immediately after the war? Did they face similar unrest? These two countries not only returned to the market, but dominated it to a point where America's steel mills could no longer compete. How have these countries adjusted to the changing economy where steel is no longer a major commodity and lighter materials are now favored? Studying foreign markets such as Japan and Germany can provide our own country with ideas to stimulate our economy and help control the criminal element of society.

The fifth suggested area for future research is in the efficacy of the measured variables. Discussed in the limitations, variables such as single/married households and determining homogeneity may not have accurately depicted the status of the cities chosen for the study. Because the racial composition (homo- and heterogeneity) showed to have a significant impact on crime, this area is of particular importance for further study as emphasized earlier in this section. This can be accomplished by conducting research similar to Shaw and McKay's Chicago experiment which developed social disorganization theory. Briefly, there are areas within a city that exhibit higher rates of crimes and they should be investigated as to why they are hotspots for criminal behavior. This analysis used data grouped at the city level and narrowing the scope will be helpful to future criminal justice professionals. Evaluating these subjects in greater detail can

increase our theoretical understanding in order to build even more effective policy than currently exists.

References

AdvaMeg, Inc. (n.d.). Retrieved throughout Spring/Summer 2013 from the World Wide Web: http://www.city-data.com/

Akers, R.L., & Sellers, C.S. (2004). *Criminological theories: Introduction, evaluation, and application (4th Ed.).* Oxford University Press.

Alder, S., Lagakos, D., & Ohanian, L. (2013, January 31). *The decline of the U.S. rust belt: A macroeconomic analysis*. Retrieved March 26, 2013, from the World Wide Web: http://www.econ.yale.edu/seminars/macro/mac13/lagakos-130212.pdf

Barnett, C. & Mencken, F.C. (2002). Social disorganization theory and the contextual nature of crime in nonmetropolitan counties. *Rural Sociology. 67*(3). 372-393.

Boggess, L.N. & Hipp, J.R. (2010). Violent crime, residential instability and mobility: Does the relationship differ in minority neighborhoods? *Journal of Quantitative Criminology.* 26, 351-370.

Bottoms, A.E. & Wiles, P. (2002). Environmental criminology. In M. Maguire, R. Morgan, & R. Reiner (Eds.), *The Oxford Handbook of Criminology* (pp. 620-656). New York: Oxford.

Cullen, F.T. & Agnew, R. (Eds.). (2003). *Criminological Theory: Past to Present.* Los Angeles: Roxbury.

Department of Commerce. United States Census Bureau. *American FactFinder.* Retrieved June 25, 2013, from the World Wide Web: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Department of Justice. Bureau of Justice Statistics. (n.d.). *State-by-state and national crime estimates by year(s).* Retrieved February 12, 2013, from the World Wide Web: http://bjs.ojp.usdoj/ucrdata/Search/Crime/State/RunCrimestatebystate.cfm

Department of Justice. Federal Bureau of Investigation. (n.d.) *Single agency reported crime.* Retrieved throughout Spring/Summer 2013 from the World Wide Web: http://ucrdatatool.gov/Search/Crime/Local/JurisbyJuris.cfm?CFID=15462551&CFTOKEN=2f71ecf04f89208e-60FA7A61-99D4- 9894-C06DE4CC92F35572

Donahue, B. (2010, May). Semper Youngsotwn. *Inc.* 32(4). 86-96.

Drakulich, K.M. & Crutchfield, R.D. (2013). The role of perceptions of the police in informal social control: Implications for the racial stratification of crime and control. *Social Problems. 60*(3). 383-407.

Ellen, I.G. & O'Regan, K. (2010). Crime and urban flight revisited: The effect of the 1990s drop in crime on cities. *Journal of Urban Economics. 68.* 247-259

Federal Bureau of Investigation. (2011, January). *Uniform crime reporting statistics: Their proper use.* Retrieved August 6, 2013 from the World Wide Web: http://www.fbi.gov/about-us/cjis/ucr/ucr-statistics-their-proper-use

Federal Bureau of Investigation. (n.d.). *Uniform crime reports.* Retrieved August 6, 2013 from the World Wide Web: http://www.fbi.gov/about-us/cjis/ucr/ucr

Garcia, R.M., Taylor, R.B. & Lawton, B.A. (2007, December). Impacts of violent crime and neighborhood structure on trusting your neighbors. *Justice Quarterly. 24*(4). 679-704.

Grann, D. (2000, July 10). Crimetown, USA. *New Republic.* 223(2/3). 23-31.

Hall, C.G. (1997). *Steel phoenix: The fall and rise of the U.S. steel industry.* New York: St. Martin's Press.

Jennings, B. (2010). *The Rust Belt of the United States of America and outlying cities*. Retrieved June 2, 2013 from the World Wide Web: https://www.google.com/search?site=&tbm=isch&source=hp&biw=1440&bih=781&q=Rust+Belt+map&oq=Rust+Belt+map&gs_l=img.3..0.1299.3471.0.3706.13.12.0.1.1.0.89.789.12.12.0....0...1ac.1.24.img..1.12.724.51GGMxJu6Fs#facrc=_&imgdii=_&imgrc=xvWblJ1Ly5gKsM%3A%3BysergVGbAI8xUM%3Bhttp%253A%252F%252Fpaulhertneky.files.wordpress.com%252F2011%252F08%252Frust-belt-map1.jpg%3Bhttp%253A%252F%252Fpaulhertneky.wordpress.com%252F%3B1600%3B1004

Kobler, J. (1963, March 9). Crime town USA. *Saturday Evening Post.* 236(9). 71-75.

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

Mahoning County Board of Elections. (2010, November 18). *Mahoning County general election official results.* Retrieved August 7, 2013, from the World Wide Web: http://vote.mahoningcountyoh.gov/wp-content/uploads/2012/10/2010-GENERAL-OFFICIAL.pdf

Martinez, E. (2011, February 7). *Omega Psi Phi: Witnesses say shots, fatal, led to stampede at Ohio frat party.* Retrieved August 7, 2013 from the World Wide Web: http://www.cbsnews.com/8301-504083_162-20030880-504083.html

Mertens, R. (2012, March 2). *Can Gary, Ind., be saved? A new mayor's bid to revive Rust Belt city.* Retrieved August 7, 2013, from the World Wide Web: http://www.csmonitor.com/USA/Politics/2012/0302/Can-Gary-Ind.-be-saved-A-new-mayor-s-bid-to-revive-Rust-Belt-city

Montopoli, B. (2010, May 3). *James Traficant files to run for Congress as an Independent.* Retrieved August 7, 2013 from the World Wide Web: http://www.cbsnews.com/8301-503544_162-20004011-503544.html

O'Hara, S.P. (2011, March). "The very model of modern urban decay": Outsiders' narratives of industry and urban decline in Gary, Indiana. *Journal of Urban History.* 37(2). 135-154.

Oh, J-H. (2005). Social disorganizations and crime rates in U.S. central cities: Toward an explanation of urban economic change. *The Social Science Journal. 45.* 569-582.

Safford, S. (2009). *Why the garden club couldn't save Youngstown: The transformation of the rust belt.* United States: Harvard College

Sampson, R.J. & Wilson, W.J. (1990). Toward a theory of race, crime, and urban equality. In J. Hagan & R.D. Peterson (Eds). *Crime and Inequality.* Stanford University Press.

Sampson, R.J. & Laub, J.H. (1992). Crime and deviance in the life course. *Annual Review of Sociology. 18.* 63-84.

Seely, B.E. (Ed.). (1994) *Encyclopedia of American business history and biography: The iron and steel industry of the twentieth century.* United States: Bruccoli Clark Layman, Inc.

Shaw, C.R. & McKay, H.D. (1942). Differential systems of values. In J.E. Jacoby (Ed.), *Classics of criminology* (240-247). Long Grove, IL: Waveland Press

StatSoft, Inc. (2013). *Electronic statistics textbook*. Retrieved August 6, 2013 from the World Wide Web:http://www.statsoft.com/textbook/multiple-regression/#achoice

The Business Journal. (2013, September 10). *Obama nominates Jay Williams to be assistant commerce secretary.* Retrieved September 24, 2013, from the World Wide Web: http://businessjournaldaily.com/politics/ obama-nominates-jay-williams-be-assistant-commerce-secretary-2013-9-10

Thomas, P.M. (2011). Theoretical articulation on immigration and crime. *Homicide Studies.* 15(4), 382-403.

Tiffany, P.A. (1988). *The decline if American steel: How management, labor, and government went wrong.* New York: Oxford University Press

Trochim, W.M. (2006). *The t-test.* Retrieved September 10, 2013 from the World Wide Web: http://www.socialresearchmethods.net/kb/stat_t.php

United States Cities By Crime Rate (60,000-100,000). (2013). Retrieved March 17, 2013 from the World Wide Web http://en.wikipedia.org/wiki/ United_States_cities_by_crime_rate_(60,000%E2%80%93100,000)

U.S. Attorney's Office (2012, April 10). *Isiah Taylor II, 44, of Youngstown, Ohio, was sentenced to more than 17 years in prison for his roles in more than 40 robberies.* Retrieved February 4, 2013 from the World Wide Web: www.justice.gov/usao/ ohn/news/2012/10AprilTaylor.html

U.S. Attorney's Office. (2012, June 29). *Drug and firearms charges filed against Youngstown heroin ring*. Retrieved February 4, 2013 from the World Wide Web: www.justice.gov/usao/ohn/news/2012/29junecitadel.html

U.S. Attorney's Office. (2012, July 12). *Youngstown woman sentenced to four years in prison for her role in drug ring.* Retrieved February 4, 2013 from the World Wide Web: www.justice.gov/usao/ohn/news/2012/12julymabry.html

U.S. Department of Health & Human Services. (2011). *The 2009 HHS poverty guidelines.* Retrieved November 6, 2013 from the World Wide Web: http://aspe.hhs.gov/poverty/09poverty.shtml

Williams, F.P. (2009). *Statistical concepts for criminal justice and criminology.* Upper Saddle River, New Jersey: Pearson Education.

Warner, B.D. & Burchfield, K. (2011, August). Misperceived neighborhood values and informal social control. *Justice Quarterly. 28*(4). 606-630.

Wilson, D. (2007). City transformation and the global trope: Indianapolis and Cleveland. *Globalizations.* 4(1).

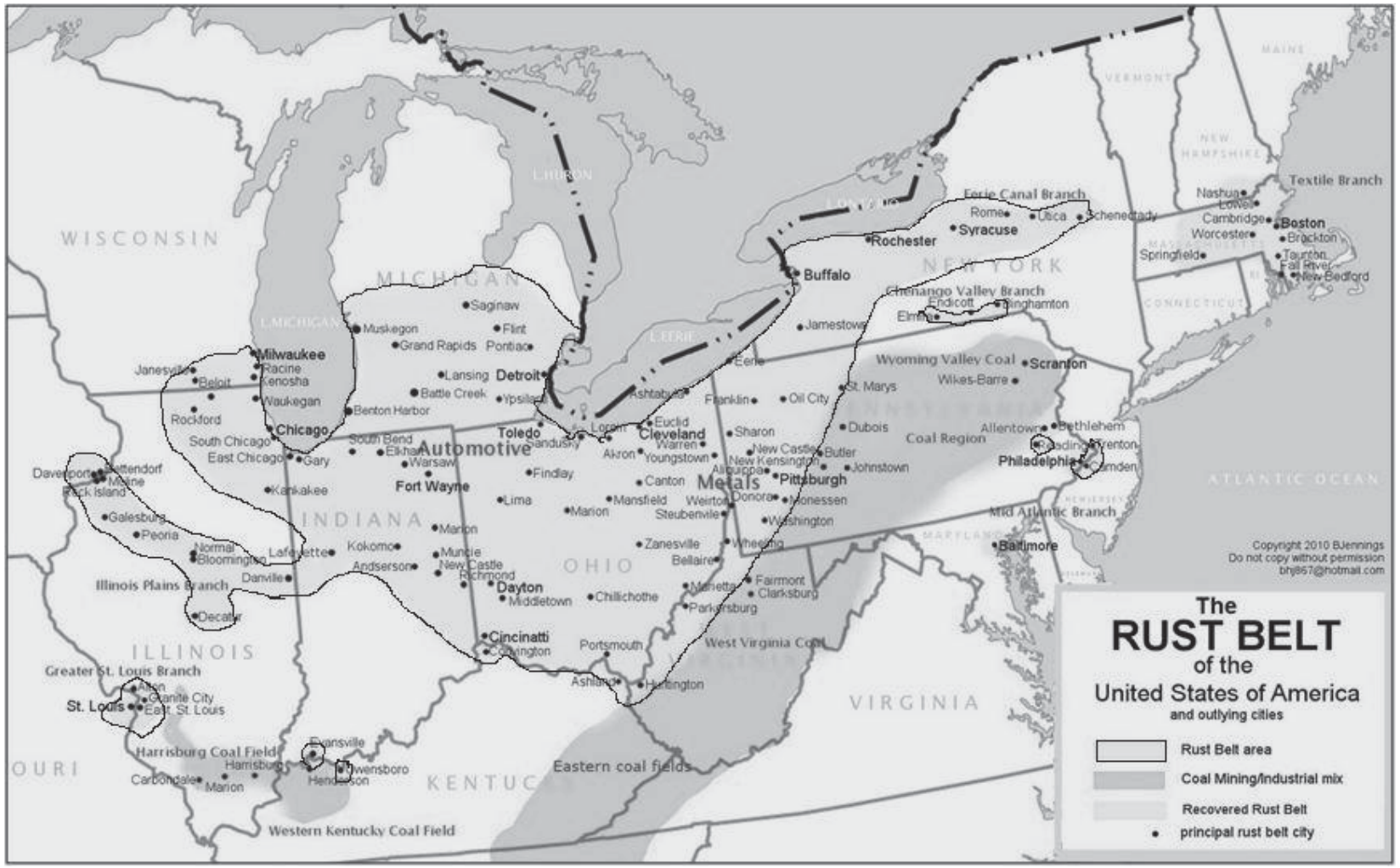
Wilson, D., Margulis, H. & Ketchum, J. (1994). Spatial aspects of housing abandonment in the 1990s: The Cleveland experience. *Housing Studies.* 9(4).

Youngstown, OH. (2012). Retrieved March 17, 2013 from the World Wide Web: http://www.city-data.com/city/Youngstown-Ohio.html

Zaykowski, H. & Parker, K.F. (2010). Problems & prospects revisited: Bursik's mark on Chicago-style criminology. *Journal of Criminal Justice Education*, 21(3), 311

Figure 1

Map of the Rust Belt Region



[1]Copywright 2010 by B. Jennings. Adapted with permission.

Table 1

City Matches List

RUST BELT CITY	POP	MHI	NON RB CITY (MATCH)	POP	MHI	MATCH?
BELLAIRE, OH	4,277	$28,298	LAWRENCEVILLE, IL	4,347	$27,781	Y
DONORA, PA	4,784	$27,872	NASHVILLE, GA	4,949	$27,674	Y
FRANKLIN, PA	6,539	$34,559	WAVELAND, MS	6,449	$36,102	Y
MONESSEN, PA	7,718	$28,711	CLEVELAND, TX	7,699	$29,280	Y
ALIQUIPPA, PA	9,440	$27,153	MONTICELLO, AR	9,472	$27,869	Y
BENTON HARBOR, MI	10,036	$16,267	MIDDLESBOROUGH, KY	10,321	$19,418	N
OIL CITY, PA	10,546	$29,834	UNIONTOWN, PA	10,363	$28,743	Y
ENDICOTT, NY	13,375	$33,353	HARRISON, AR	12,948	$33,386	Y
WARSAW, IN	13,557	$43,408	LIVINGSTON, CA	13,108	$43,473	Y
WASHINGTON, PA	13,668	$30,502	COLLEGE PARK, GA	14,015	$30,257	Y
SHARON, PA	14,026	$32,430	LEBANON, MO	14,501	$31,585	Y
MARIETTA, OH	14,072	$30,501	RED BLUFF, CA	14,113	$30,761	Y
NEW CASTLE, IN	18,130	$31,336	BRISTOL, VA	17,825	$31,277	Y
STEUBENVILLE, OH	18,632	$31,349	THOMASVILLE, GA	18,430	$30,703	Y
ASHTABULA, OH	19,116	$28,201	EL DORADO, AR	18,838	$27,745	Y
YPSILANTI, MI	19,458	$31,322	CENTRAL FALLS, RI	19,381	$32,672	Y
WEIRTON, WV	19,722	$39,985	KALISPELL, MT	19,915	$40,992	Y
PORTSMOUTH, OH	20,230	$20,909	SELMA, AL	20,744	$22,418	N
ASHLAND, KY	21,717	$34,061	LOCKPORT, NY	21,172	$34,196	Y
CHILLICOTHE, OH	21,922	$36,180	FERGUSON, MO	21,201	$36,517	Y
NEW CASTLE, PA	23,240	$32,195	GRIFFIN, GA	23,639	$32,394	Y
ZANESVILLE, OH	25,510	$26,964	WEST MEMPHIS, AR	26,250	$26,512	Y
SANDUSKY, OH	25,778	$31,620	LEBANON, PA	25,506	$32,074	Y
KANKAKEE, IL	27,553	$31,705	KINGSVILLE, TX	26,259	$30,988	Y
ALTON, IL	27,868	$36,919	RUSSELLVILLE, AR	27,969	$36,864	Y
WHEELING, WV	28,506	$32,527	MORRISTOWN, TN	29,177	$31,054	Y
ELMIRA, NY	29,199	$31,285	NEW BERN, NC	29,646	$29,806	Y
GRANITE CITY, IL	29,852	$39,169	BANNING, CA	29,777	$38,386	Y
MARION, IN	29,924	$29,569	LAGRANGE, GA	29,642	$29,289	Y
JAMESTOWN, NY	31,126	$31,088	SOCORRO, TX	32,149	$31,510	Y
PARKERSBURG, WV	31,523	$30,672	RICHMOND, KY	31,445	$30,146	Y
DANVILLE, IL	33,010	$28,611	GREENVILLE, MS	34,341	$27,717	Y
ROME, NY	33,725	$40,015	POUGHKEEPSIE, NY	32,764	$39,108	Y
RICHMOND, IN	36,783	$33,811	GOLDSBORO, NC	36,503	$33,696	Y
MARION, OH	36,823	$32,076	SPARTANBURG, SC	37,074	$31,866	Y
BELOIT, WI	36,956	$36,184	BELL, CA	35,506	$37,483	Y
MUSKEGON, MI	38,380	$26,695	ATLANTIC CITY, NJ	39,544	$29,448	N
LIMA, OH	38,741	$25,935	HUNTSVILLE, TX	38,664	$28,370	N
ROCK ISLAND, IL	39,031	$43,481	MOORHEAD, MN	38,156	$42,343	Y
COVINGTON, KY	40,683	$36,792	HICKORY, NC	40,007	$36,220	Y
FINDLAY, OH	41,171	$40,785	NORTH LAUDERDALE, FL	41,118	$41,696	Y

RUST BELT CITY	POP	MHI	NON RB CITY (MATCH)	POP	MHI	MATCH?
WARREN, OH	41,493	$30,507	BLACKSBURG, VA	42,668	$30,621	Y
MOLINE, IL	43,498	$51,490	CONCORD, NH	42,690	$53,262	Y
KOKOMO, IN	45,470	$37,830	SAN LUIS OBISPO, CA	45,201	$38,031	Y
BINGHAMTON, NY	47,320	$29,705	PINE BLUFF, AR	49,009	$30,067	Y
MANSFIELD, OH	47,747	$29,886	HARRISBURG, PA	49,549	$29,945	Y
MIDDLETOWN, OH	48,792	$37,808	ENID, OK	49,512	$37,863	Y
EUCLID, OH	48,838	$36,263	GALVESTON, TX	47,963	$37,055	Y
HUNTINGTON, WV	49,160	$28,514	MONROE, LA	48,897	$29,063	Y
ELKHART, IN	50,962	$32,303	HARRISONBURG, VA	49,045	$33,038	Y
SAGINAW, MI	51,455	$25,306	PORT ARTHUR, TX	53,840	$30,086	N
BATTLE CREEK, MI	52,322	$35,029	CORVALLIS, OR	54,428	$33,807	Y
NORMAL, IL	52,570	$45,125	LAKE HAVASU CITY, AZ	52,575	$45,632	Y
ANDERSON, IN	56,136	$34,486	BOWLING GREEN, KY	58,242	$34,105	Y
OWENSBORO, KY	57,323	$35,880	HUNTINGTON PARK, CA	58,165	$35,107	Y
PONTIAC, MI	59,531	$30,021	TERRE HAUTE, IN	60,807	$29,978	Y
UTICA, NY	62,233	$31,893	LANCASTER, PA	59,693	$33,312	Y
JANESVILLE, WI	63,558	$48,389	LODI, CA	62,350	$48,009	Y
LORAIN,OH	64,135	$30,526	DAYTONA BEACH, FL	61,011	$29,337	Y
SCHENECTADY, NY	66,221	$36,508	JOHNSON CITY, TN	63,333	$36,990	Y
YOUNGSTOWN, OH	66,846	$25,175	HARLINGEN, TX	65,140	$28,611	N
LAFAYETTE, IN	67,190	$34,998	JACKSON, TN	65,227	$34,138	Y
MUNCIE, IN	70,091	$26,009	PHARR, TX	70,883	$27,834	N
CANTON, OH	72,978	$29,339	PASSAIC, NJ	69,835	$29,218	Y
DECATUR, IL	76,115	$37,132	FAYETTEVILLE, AR	73,921	$38,529	Y
BLOOMINGTON, IL	76,735	$56,289	CRANSTON, RI	80,404	$58,903	Y
CAMDEN, NJ	77,335	$26,752	ALBANY, GA	77,595	$29,981	N
RACINE, WI	78,898	$35,041	BRYAN, TX	76,525	$33,863	Y
GARY, IN	80,314	$24,821	BLOOMINGTON, IN	80,675	$23,772	Y
TRENTON, NJ	85,009	$32,887	FALL RIVER, MA	88,897	$33,124	Y
READING, PA	88,351	$28,597	MACON, GA	91,416	$26,758	N
WAUKEGAN, IL	89,210	$46,885	HESPERIA, GA	90,481	$47,307	Y
KENOSHA, WI	99,379	$47,803	RIALTO, CA	99,508	$49,977	Y
DAVENPORT, IA	100,003	$42,774	TYLER, TX	97,250	$42,831	Y
SOUTH BEND, IN	101,139	$32,778	ROANOKE, VA	96,856	$34,166	Y
ERIE, PA	101,826	$32,136	LAKELAND, FL	97,551	$36,013	N
FLINT, MI	102,271	$27,049	PUEBLO, CO	106,864	$30,270	N
LANSING, MI	114,247	$35,774	PROVO, UT	113,153	$35,937	Y
PEORIA, IL	114,895	$44,893	INDEPENDENCE, MO	116,969	$45,082	Y
EVANSVILLE, IN	117,483	$34,567	ALLENTOWN, PA	118,232	$33,664	Y
DAYTON, OH	141,696	$27,232	SAVANNAH, GA	136,565	$33,332	N
SYRACUSE, NY	145,237	$30,075	PATERSON, NJ	146,309	$29,637	Y
ROCKFORD, IL	152,807	$36,990	SPRINGFIELD, MA	153,134	$36,235	Y
GRAND RAPIDS, MI	188,166	$37,625	COLUMBUS, GA	185,888	$39,500	Y
AKRON, OH	199,005	$32,892	MOBILE, AL	195,166	$35,068	N
ROCHESTER, NY	210,578	$30,553	BIRMINGHAM, AL	212,225	$30,481	Y

RUST BELT CITY	POP	MHI	NON RB CITY (MATCH)	POP	MHI	MATCH?
FORT WAYNE, IN	254,015	$41,038	NORFOLK, VA	242,915	$42,741	Y
BUFFALO, NY	261,229	$29,285	GREENSBORO, NC	270,364	$38,694	N
TOLEDO, OH	287,031	$32,325	NEWARK, NJ	277,185	$35,963	N
CINCINNATI, OH	296,797	$32,754	CORPUS CHRISTI, TX	305,349	$42,157	N
PITTSBURGH, PA	306,956	$37,461	STOCKTON, CA	292,711	$45,730	N
ST. LOUIS, MO	319,008	$34,801	AURORA, CO	326,650	$45,904	N
CLEVELAND, OH	396,166	$24,687	MIAMI, FL	400,509	$28,999	N
MILWAUKEE, WI	595,407	$34,868	BALTIMORE, MD	620,560	$38,772	N
DETROIT, MI	711,700	$26,098	FORT WORTH, TX	745,231	$47,634	N

Table 2

Summary of UCR Data (3-year averages)

	Homicide	Rape	Robbery	Assault	Burglary	Theft	Auto Theft	Violent	Property	Total
MEAN										
All	9.3	55.4	265.8	437.0	1273.8	3199.1	396.8	748.0	4934.1	5695.5
RB	10.1	59.5	268.9	439.2	1314.4	3094.9	363.7	754.6	4805.4	5560.0
NRB	8.5	51.3	262.7	434.7	1233.2	3303.3	429.9	741.4	5062.7	5832.6
MEDIAN										
All	6.8	50.5	208.4	370.9	1193.4	2826.5	310.9	637.4	4863.2	5623.6
RB	7.1	54.1	220.6	370.9	1204.1	2614.3	264.4	700.8	4810.3	5461.1
NRB	5.9	43.9	176.6	371.9	1165.4	3054.2	350.3	617.9	5019.8	5791.0
STDEV										
All	10.0	31.1	236.5	325.3	688.3	1798.6	311.3	461.6	1959.7	2193.1
RB	11.3	27.6	199.5	357.1	692.1	1804.8	318.4	464.8	1775.7	1979.6
NRB	8.4	34.0	269.6	292.1	685.7	1796.0	302.1	460.9	2129.7	2392.7
MINIMUM										
All	0.0	3.6	14.9	0.0	175.9	609.2	10.1	76.2	1259.9	1407.8
RB	0.0	3.6	22.1	0.0	175.9	612.2	36.3	76.2	1259.9	1407.8
NRB	0.0	4.0	14.9	59.4	334.7	609.2	10.1	120.6	1520.7	1782.9
MAXIMUM										
All	58.6	217.3	1902.7	2309.1	4590.0	10679.8	1841.9	2322.5	13562.6	15363.9
RB	58.6	154.4	1009.6	2309.1	4590.0	10679.8	1841.9	2311.8	10531.0	11147.5
NRB	39.8	217.3	1902.7	1692.6	3888.2	10534.9	1573.1	2322.5	12562.6	15363.9

All indicates values for all cites; *N*=188
RB indicates values for Rust Belt cities; *N*=94
NRB indicates values for non-Rust Belt cities; *N*=94

Table 3

Summary of Variable Data

	Poverty	%W	%B	%O	%MAJ	%Pop Chg	% HS Ed.	Age	Density	% Rent	% Mar	MH Value	MHI
MEAN													
All	24.1	57.9	22.1	20.0	69.1	1.6	74.9	34.7	3417	45	45.3	$121,896	$34,054
RB	24.1	65.5	21.2	13.3	70.6	-3.9	77.1	36.0	3250	43	44.5	$92,597	$33,447
NRB	24.1	50.3	22.9	26.8	67.7	7.0	72.7	33.5	3584	48	46.2	$151,194	$34,662
MEDIAN													
All	23.7	61.5	15.1	11.9	70.7	-0.3	76.5	34.5	2544	44	46.6	$100,358	$32,766
RB	23.5	69.9	15.2	9.5	72.0	-3.9	77.7	35.8	2798	41	46.5	$89,527	$32,314
NRB	23.7	45.4	14.0	15.5	69.9	4.5	74.4	33.2	1924	47	46.8	$130,911	$33,359
STDEV													
All	6.7	25.9	21.1	21.2	15.9	12.6	9.6	4.8	3157	11	7.1	$64,615	$6,662
RB	6.7	22.3	18.5	10.9	15.2	8.5	6.1	4.4	1718	8	6.8	$25,972	$6,505
NRB	6.8	27.1	23.4	26.3	16.5	13.6	11.7	4.9	4128	13	7.4	$77,364	$6,795
MINIMUM													
All	9.2	1.6	0.2	2.1	39.2	-31.2	32.2	21.9	450	18	23.2	$50,394	$16,267
RB	10.2	4.9	1.3	3.1	39.2	-25.2	51.0	23.5	450	23	23.2	$50,394	$16,267
NRB	9.2	1.6	0.2	2.1	40.3	-31.2	32.2	21.9	649	18	27.1	$57,108	$19,418
MAXIMUM													
All	48.1	95.4	88.7	98.0	98.0	51.9	93.9	50.3	22439	80	63.2	$507,510	$58,903
RB	48.1	95.3	88.7	61.6	95.3	23.5	93.9	47.9	11102	67	55.7	$166,600	$56,289
NRB	44.5	95.4	80.0	98.0	98.0	51.9	93.0	50.3	22439	80	63.2	$507,510	$58,903

All indicates values for all cites; *N*=188
RB indicates values for Rust Belt cities; *N*=94
NRB indicates values for non-Rust Belt cities; *N*=94

Table 4

Paired t-test Results

VARIABLE	MEAN (RUST BELT)	MEAN (NON RUST BELT)	P-VALUE
DEPENDENT			
HOMICIDE	10.11	8.61	.288
RAPE	59.37	51.15	.060
ROBBERY	271.48	265.37	.843
ASSAULT	442.40	435.44	.891
BURGLARY	1326.32	1241.37	.354
THEFT	3120.52	3332.25	.258
AUTO THEFT	367.23	433.00	.117
VIOLENT CRIME	756.28	744.60	.866
PROPERTY CRIME	4843.52	5100.81	.316
TOTAL CRIME	5598.50	5874.53	.340
INDEPENDENT			
POVERTY	24.05	24.11	.932
% MAJORITY	70.38	67.40	.137
% POPULATION CHANGE	-3.78	7.20	$p < .001$
% HS EDUCATION	77.10	72.66	$p < .001$
MEDIAN AGE	35.86	33.35	$p < .001$
DENSITY	3259.28	3599.83	.455
% RENTERS	42.85	48.16	$p < .001$
% MARRIED	44.48	46.20	.070
MEDIAN HOUSING VALUE	$92,994.23	$152,205.68	$p < .001$
MED. HOUSEHOLD INCOME	$33,501.96	$34,735.76	$p < .001$

Table 5

Correlation Matrix

	Hom	Loc	Rape	Rob	Aslt.	Burg	Theft	Auto	Viol	Prop	Total	Pov	Maj	PopCg	HSEd	Dens	Rent	Mar	MHVal	White	Black	Other	Age
Hom	1																						
Loc	.079	1																					
Rape	.211**	.131	1																				
Robbery	.683**	.013	.296**	1																			
Assault	.530**	.007	.353**	.548**	1																		
Burglary	.451**	.059	.447**	.533**	.501**	1																	
Theft	.342**	-.058	.071	.438**	.248**	.385**	1																
Auto	.700**	-.107	.097	.686**	.460**	.423**	.472**	1															
Violent	.677**	.014	.399**	.783**	.848**	.536**	.377**	.631**	1														
Property	.289**	-.066	.313**	.478**	.315**	.677**	.624**	.419**	.426**	1													
Total	.397**	-.062	.363**	.588**	.455**	.714**	.634**	.503**	.591**	.982**	1												
Poverty	.363**	-.004	.228**	.357**	.327**	.323**	.077	.254**	.344**	.208**	.53**	1											
Majority	-.400**	.092	-.088	-.418**	-.368**	-.303**	-.300**	-.289**	-.475**	-.180*	-.254**	-.139	1										
PopChg	-.405**	-.435**	-.291**	-.313**	-.269**	-.329**	.000	-.276**	-.325**	-.144*	-.190**	-.234**	.030	1									
HSEd	-.242**	.227**	.029	-.292**	-.198**	-.048	.024	-.372**	-.273**	-.028	-.074	-.262**	.028	001	1								
Density	.170*	-.053	-.211**	.295**	.058	-.183*	-.083	.306**	.197**	-.234**	-.169*	.117	-.092	-.011	-.503**	1							
Rent	.259**	-.236**	.013	.372**	.158*	-.006	.090	.302**	.313**	.066	.119	.417**	-.210**	-.126	-.285**	.512**	1						
Married	-.571**	-.130	-.192**	-.548**	-.385**	-.265**	-.169*	-.399**	-.526**	-.138	-.235**	-.591**	.338**	.435**	.010	-.250**	-.655**	1					
MHVal	-.098	-.455**	-.292**	.018	-.108	-.315**	-.088	.102	-.048	-.227**	-.212**	-.107	-.028	.296**	-.134	.504**	.475**	-.061	1				
White	-.542**	.295**	-.027	-.542**	-.416**	-.294**	-.183*	-.583**	-.524**	-.108	-.200**	-.352**	.495**	.029	.633**	-.428**	-.330**	.313**	-.201**	1			
Black	.672**	-.041	.237**	.589**	.475**	.562**	.312**	.526**	.565**	.344**	.422**	.384**	-.484**	-.404**	-.117	-.020	.235**	-.566**	-.159*	-.611**	1		
Other	-.006	-.321**	-.203**	.077	.036	-.200**	-.087	.190**	.078	-.211**	-.175*	.049	-.125	.367**	-.659**	.544**	.170*	.181*	.405**	-.616**	-.248**	1	
Age	-.088	.263**	-.010	-.132	-.123	.018	-.056	-.178*	-.161*	.021	-.023	-.410**	.245**	-.308**	.157*	-.284**	-.478**	.376**	-.339**	.420**	-.126	-.388**	1

* p < .05

** p < .01

Values for rape, violent crime, and total crime are based upon 187 observations. All other variables are based on *N*=188.

Table 6

Linear Regression Prediction Summary

Predictor	Homicide *N*=188	Rape *N*=187	Robbery *N*=188	Assault *N*=188	Burglary *N*=188	Theft *N*=188	Auto Theft *N*=188	Violent *N*=187	Property *N*=188	Total *N*=187
Adj. R^2	.461	.150	.434	.265	.298	.089	.333	.454	.149	.192
Location	-.033	-.012	-.046	-.049	-.108	-.082	-.155	-.035	-.165	-.164
Poverty	-.073	.126	-.037	.068	.193*	-.072	-.096	-.045	.101	.072
% Majority	-.243***	-.064	-.263***	-.281***	-.273***	-.247***	-.164*	-.343***	-.147*	-.194***
Pop. Change	-.193**	-.199*	-.132	-.148	-.261***	.082	-.266**	-.155*	-.115	-.128
% HS Ed.	-.282***	-.064	-.250***	-.225**	-.086	-.038	-.329***	-.299***	-.117	-.160
Density	-.051	-.219*	.079	-.110	-.191*	-.108	.053	-.042	-.275**	-.250*
% Married	-.469***	-.073	-.412***	-.222*	-.017	-.208	-.306**	-.386***	-.077	-.162
Household Value	-.111	-.129	-.073	-.075	-.190*	-.127	-.006	-.075	-.143	-.153

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