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Detroit Crime Trends: Examining Large Business Labor Practices

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Detroit Crime Trends: Examining Large Business Labor Practices

A Thesis Presented

By

SARAH R MCGUIRE

Submitted to the College of Graduate Studies Bridgewater State University Bridgewater,
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Detroit Crime Trends: Examining Large Business Labor Practices

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Abstract

This study examines the relationship between the changes in large company employment of the top twenty-five large businesses in Detroit and the crime rate from 2012 to 2014. Previous research has asserted that a significant correlation exists between unemployment and crime but does not investigate the effects of large company employment in a city in relation to crime. This study seeks to fill this gap and address the relationship between changes in large company employment, relative to conditions of social disorganization, and changes in the crime rate. It builds upon Blau and Blau's (1982) work on the structural contributors to social disorganization, namely unemployment. Unlike previous studies examined, this study will use Social Disorganization Theory to provide a theoretical framework and will concentrate solely on Detroit. This secondary data is analyzed using logistic regression, which raises unexpected methodological questions.

Key terms: SOCIAL DISORGANIZATION, UNEMPLOYMENT AND CRIME, DETROIT

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Chapter 1

Introduction

According to *The New York Times* (Padnani, 2013), thoughts of Detroit, Michigan evoke for many the image of the once dominant American car manufacturing industry. The city was not diverse in terms of jobs and employment. Rather, it relied on the strength and well-being of a single industry. As the Big Three car manufacturers, GM, Chrysler, and Chevrolet (Chevy) began to experience problems and lay off workers, the economy was not able to provide employment for the newly unemployed. Consequently, unemployment and poverty rose in the city. Currently, when one considers Detroit, thoughts of unemployment, vacant buildings, and high crime come to mind (Padnani, 2013). This image is distant from the once powerful manufacturing hub and raises questions about the trajectory of a city in terms of employment and crime patterns.

In theories of criminal justice, it is well established that poverty, decreased economic opportunity, and increased stress may result in an increase in crime (Barnett & Mencken, 2003; Blau & Blau, 1982; Oh, 2005; Wilson, 1994). Social disorganization theory notes that poor communities with low levels of employment lack the resources and connectivity to exert effective informal social controls in the presence of weakened social institutions (Barnett & Mencken, 2003; Oh, 2005; Wilson, 1997). This increased social disorganization results in increased crime due to decreased formal and informal social controls (Wilson, 1997).

Detroit provides an example of increasing conditions of social disorganization, arguably, due to decreased investment of major companies and the resulting unemployment and poverty. When large companies including the major automotive companies reduce employment in the city, it is impossible for the current economy and industry to absorb these workers without

revitalization of the city, its labor force, and its corporate interests. In the absence of these outcomes, unemployment, poverty, social isolation, transience, racial inequity and other structural factors will contribute to social disorganization (Blau and Blau, 1982). In turn, with weakened institutions and formal and informal social controls, communities will be unable to effectively prevent crime (Barnett & Mencken, 2003; Blau & Blau, 1982; Oh, 2005; Wilson, 1997). Consequently, the area will become conducive to criminal activity and the crime rate will increase (Barnett & Mencken, 2003; Oh, 2005; Wilson, 1997).

Blau and Blau (1982) argued that a continuum from policy to crime exists. Policy contributes to structural factors such as unemployment that lead to social disorganization. Social disorganization weakens formal and informal social controls and creates an environment that is conducive to criminal activity (Blau & Blau, 1982; Barnett & Mencken, 2003). This recognizes that structural factors do not occur in a vacuum. Instead, for example, companies make employment decisions based upon the economy, current government regulations, city and state taxes, etc. It is the first study in the literature to link policy to the continuum of factors leading to crime.

Numerous studies have established a simple correlation between unemployment and crime. Aaltonen and colleagues (2013), for example, discussed the correlation between unemployment and increased property crime. Buonanno, Drago, and Galbiati (2014) compared the unemployment- crime relationship across developed countries. Because their study was much broader in scope, they investigated only a basic unemployment- crime correlation rather than a relationship between unemployment and specific classes of crime (Buonanno et al., 2014). Raphael and Winter-Ebmer's (2001) research also found support for the unemployment-property crime relationship.

Each of the studies mentioned, however, explored only the relationship between unemployment and crime. They did not investigate the effects of corporate investment in a city as relating to employment data. This study hopes to fill this gap and address the relationship between corporate investment, unemployment, and crime. It furthers Blau and Blau's (1982) policy to crime continuum with an emphasis on the structural factors, specifically employment.

I use logistic regression to analyze the relationship between the change in large company employment and the change in the crime rate in Detroit and explore the following research question: Is there a correlation between large business employment and crime rates in Detroit? My hypotheses are: (1) As large business employment decreases, crime rates will trend upwards and (2) Large company employment patterns will correlate with other indicators of social disorganization such as vacancy. These hypotheses are consistent with the established link between unemployment and crime discussed above (Barnett & Mencken, 2003; Buonanno et al., 2014; Wilson, 1994). Before the current study is explained, a review of the literature including social disorganization and its contributing structural factors is explored.

Chapter 2

Literature Review

Social Disorganization

Wilson (1997) described a socially disorganized community as one that is unable to prevent crime due to having weak informal social controls in addition to weakened formal social controls such as schools and other community institutions. Areas with high rates of poverty and low integration and connectivity among residents also tend to have high levels of social disorganization (Barnett & Mencken, 2002; Blau & Blau, 1982; Sun, Triplett, & Gainey, 2004).

Barnett and Mencken (2002) stated that racial and ethnic heterogeneity, socioeconomic status, and residential mobility/ stability, and family structure/ stability all play a role in community connectivity. When bonds among community members are weak due to these variables, the community lacks the ability to police itself. As such, community members do not instruct each other's children, regulate the behavior of community teenagers, form friendships, and participate in local politics and institutional engagement (Barnett & Mencken, 2002; Sun et al., 2004). Without these informal social controls in place, it is easy for children and teens to associate with delinquent peers and engage in criminal behavior themselves. Unsupervised property also becomes an easy criminal target if neighbors are not looking out for each other's interests (Barnett & Mencken, 2002; Sun et al., 2004).

Socioeconomic status and poverty are important to social disorganization because they influence the amount of financial resources that communities have to invest in formal social controls and institutions (Barnett & Mencken, 2002; Sun et al., 2004). Middle class and wealthy communities, for example, are able to organize and raise money for activities for young people such as town sports and clubs or extracurricular activities at schools. These programs occupy

children and teens and help keep them out of trouble. In poor communities, however, schools lack the funding to offer extracurricular activities and community members lack the time, initiative, knowledge, and personal relationships to participate in organizing for increased programming (Barnett & Mencken, 2002; Sun et al., 2004). Additionally, residents of poor communities would lack the resources to contribute to such fundraising efforts even if they were to occur.

Social disorganization theory will provide an appropriate lens through which to conduct this study due to the relationship between widespread unemployment and poverty. Presumably, high unemployment rates will contribute to high rates of poverty and conditions of social disorganization. Furthermore, employment can be viewed as an institution of formal social control that when weakened may result in higher crime rates (Wilson, 1997).

Heterogeneity and social mobility. In social disorganization, heterogeneity is described as diversity in ethnic and racial backgrounds (Barnett & Mencken, 2002; Sampson, 1986). Differences in culture are also noted (Barnett & Mencken, 2002). Social mobility is explained as residential stability or whether neighborhoods are constantly in flux and receiving new members (Bursik Jr. & Grasmik, 1992). Both factors are structural contributors to social disorganization in that they reduce the ability of networks of control to be created at the neighborhood level. Neighbors that have less in common (i.e. language and culture) are less likely to form friendships and networks for childcare and informal crime prevention such as watching over each other's houses and reporting suspicious activity (Sun et al., 2004). Additionally, it is nearly impossible to form these friendship and support networks if the neighborhood is constantly in flux with residents quickly moving in and out of the neighborhood (Clear, 2007; Sun et al., 2004).

Without these networks of informal social controls, neighborhoods become more likely to experience increases in criminal activity (Clear, 2007; Sun et al., 2004).

Sampson (1986) argued that heterogeneity would increase intergroup offending due to increased contact with others of different races, income, and age. Specifically, he stated that although intragroup victimization and association is a prevalent impulse, intergroup victimization and contact will be increased in diverse areas (Sampson, 1986). Urban areas which are densely populated and diverse provide a suitable area to test this hypothesis. Additionally, due to the heavy population of urban areas, avoiding those of different races, incomes, and ages becomes nearly impossible (Sampson, 1986).

Sampson (1986) used National Crime Victim Survey (NCVS) data in order to conduct his study. He evaluated offender and victim group relationships based on victim reports (Sampson, 1986). As expected, Sampson (1986) found that urbanization and heterogeneity increased the likelihood of intergroup victimization. Interestingly, urbanization was more significant and had a more substantial impact on intergroup victimization than did heterogeneity (Sampson, 1986).

Specifically, inter-race victimization was more likely in urban and diverse areas (Sampson, 1986). Victimization of those of a different income or socioeconomic status was not greater in the model, however (Sampson, 1986). This may be due to the isolating effects of poverty in a physical/ residential and social sense. Poverty restricts one's ability to travel outside one's community. Individuals with high socioeconomic status are unlikely to travel to poor neighborhoods making it unlikely that individuals of differing socioeconomic status meet with greater regularity in urban settings (as compared to rural or suburban areas).

Bursik Jr. and Grasmik (1992) explored the relationship between racial and ethnic heterogeneity and delinquency trends in Chicago using a hierarchical linear model. Specifically,

they examined the neighborhoods of Lincoln Park, a relatively stable and homogenous white community, and Humboldt Park, a community marked by its rapidly changing heterogeneous population (Bursik Jr. & Grasmik, 1992).

Bursik Jr. and Grasmik (1992) observed that between the 1950s and 1960s, Humboldt Park experienced a large number of black and Hispanic families moving into the neighborhood while a large numbers of white families left. As such, with increased heterogeneity and decreased residential stability, this location was ideal for examination as the zone of transition in the context of Burgess' Concentric Zone Theory (Bursik Jr. & Grasmik, 1992).

Bursik Jr. and Grasmik (1992) found that increases in the percentage of nonwhites in the neighborhoods occurred alongside increases in delinquency. However, after they controlled for trends in percentages of nonwhites/ racial heterogeneity, the authors observed that neighborhoods with increasing residential stability experienced declining delinquency rates (Bursik Jr. & Grasmik, 1992). This supports McKay's (1967) argument that stabilizing institutions can reverse delinquency trends in neighborhoods with high crime rates (as cited in Bursik Jr. & Grasmik, 1992). Specifically, it is not new populations of people that bring crime to a neighborhood but rather the characteristic of transience within the neighborhood that causes it to be more susceptible to crime.

Interestingly, Bursik Jr. and Grasmik (1992) also found that increasing unemployment rates did not correlate with delinquency rates. Neighborhoods with unemployment accelerating over time however experienced increasing juvenile delinquency trends (Bursik Jr. & Grasmik, 1992).

Family stability. Family stability is another structural predictor of social disorganization. Sampson (1987) examined the high rates of black urban crime through family

disruption due to male unemployment. Specifically, he explored both juvenile and adult rates of homicide and robbery in cities across the United States (Sampson, 1987). Sampson (1987) acknowledged the subculture of violence theory which asserts that blacks are more violent than their white counterparts due to their experiences within a unique cultural system. This cultural exposure to violence contributes to high rates of violent crime (Sampson, 1987).

Subculture of violence theory notes that black and white children are often raised under very different family structures (Sampson, 1987). For example, while only 11% of white children are raised by families headed by women, 42% of black children grow up within this context (Sampson, 1987). Sampson (1987) argued that the high number of black families headed by women may be related to high rates of black male unemployment. Unemployment or lack of stable employment results in men being viewed as unsuitable marriage partners (Sampson, 1987). When black couples do marry, Sampson (1987) stated that lower income couples more frequently seek separation and divorce than their higher income counterparts. As such, they experience higher rates of failed marriages resulting in an increased rate of female headed families.

Family disruption and crime. This disruption at the family level contributes to juvenile criminal behaviors (Sampson, 1987; Sun et al., 2004). Family disruption is an example of weak informal social controls and attenuated social institutions (in this case the family) that are hallmarks of a socially disorganized community. The disruption is caused by a lack of family stability, the structural contributor noted above. According to Sampson (1987), conflict and unhappiness within a marriage are predictors of juvenile delinquency particularly if they lead to family separation. Family separation decreases parental supervision capabilities and formal and informal social controls (Sampson, 1987; Sun et al., 2004; Weicher, 1970).

Sampson (1987), Sun and colleagues (2004), and Weicher (1970) argued that parental separation reduces the guardianship of both children and property through supervision. This makes it easier for children to engage in deviant behavior and makes unsupervised property an attractive potential target (Sampson, 1987; Sun et al., 2004; Weicher, 1970). Unsupervised children are more likely to associate with delinquent peers and/or gangs without parental interference (Sampson, 1987; Sun et al., 2004; Weicher, 1970). Single parents are also less able to engage with their children on a community level through participation in school and community events due to commitments at work (Weicher, 1970). This decreased participation results in fewer connections with other adults in the community. As such, children are not exposed to a wider network of informal social controls in which other adults in the community monitor their behavior (Sampson, 1987). In communities with high levels of female headed households, these wider networks of informal social controls are unlikely to exist.

Sampson (1987) argued that higher rates of family disruption in black communities explained the racial gap in offending particularly for juvenile offenders. He found that structural disadvantage and family disruption was substantially higher in predominantly black areas (Sampson, 1987). Additionally, as expected, family disruption was a major predictor of crime (Sampson, 1987). Increasing the number of stably employed and marriageable men reduced the number of female headed households (Sampson, 1987). This indicates that black male unemployment (or lack of stable employment) substantially contributes to the rate of female headed households.

High levels of male incarceration would contribute to increased rates of female headed households and compound the problem (Clear, 2007; Sampson, 1987). Criminal records impact

marriageability both directly through making men less desirable and indirectly through increasing difficulty in obtaining stable employment.

Sampson (1987) found that family disruption was the most significant predictor of juvenile crime. Family disruption was more weakly correlated with adult homicide (Sampson, 1987). Adult robbery was strongly correlated with male joblessness but with half the coefficient for juvenile robbery (Sampson, 1987). Additionally, male joblessness and the male marriage pool index both substantially indirectly affected juvenile homicide rates through family disruption (Sampson, 1987).

The results did not support the subculture of violence theory which posits that blacks and whites exhibit different rates of criminal violence due to different cultural experiences (Sampson, 1987). Instead they indicated that urban racial composition is not correlated with black homicide and robbery rates for both juveniles and adults (Sampson, 1987). This directly refutes the assumption made by the subculture of violence theory that black urban areas should have higher rates of crime based on racial composition (Sampson, 1987). Instead, differences in offending were correlated with differences in family disruption (Sampson, 1987).

Furthermore, when the data for white communities were analyzed, Sampson (1987) found that the same indicators of crime were present. Family disruption was the primary predictor of white juvenile crime (Sampson, 1987). Male joblessness also had a substantial impact on white adult crime (Sampson, 1987). Again, these findings contradict the subculture of violence theory which would assume culturally unique indicators of crime in black and white communities.

Interestingly, Sampson (1987) found the effects of family disruption to have a more substantial impact on crime in white communities. The results are supported by Clear's (2007)

coercive mobility hypothesis. According to coercive mobility, forced disruption of families and communities leads to an increase in crime (Clear, 2007). The impact is most apparent when studying juveniles (Clear, 2007). Clear (2007) notes that forced disruption may be related to employment concerns or incarceration. It is interesting that in this perspective heavy incarceration in disrupted areas actually contributes to an increase in crime (and resulting incarceration) rather than having a deterrent effect.

Socioeconomic status/ poverty. Low socioeconomic status and poverty are additional structural contributors to social disorganization and crime in that they create conditions that reduce the efficacy of formal and informal social controls. Krivo and Peterson (1996) explored the relationship between structural disadvantage and crime in Columbus, Ohio neighborhoods. They argued that structural disadvantage, not race, explained the differences in crime rates in black and white neighborhoods (Krivo & Peterson, 1996). The authors drew from Wilson's (1987) argument that extreme disadvantage concentrates itself in particular neighborhoods (Krivo & Peterson, 1996).

This concentration of poverty and disadvantage that Wilson described creates a community that is completely unlike its neighbors and acts as an isolating force (Krivo & Peterson, 1996). In their isolation, residents have reduced access to employment, positive conventional role models, and middle class values (Krivo & Peterson, 1996). These neighborhoods also contain negative role models who demonstrate criminal behaviors (Krivo & Peterson, 1996). According to Krivo and Peterson (1996), this reduces the efficacy of social institutions and informal social controls and produces an environment that cultivates criminal behavior.

Krivo and Peterson (1996) furthered Wilson's argument through examining whether structural advantages are equally as important in influencing crime rates in both predominantly black and white neighborhoods respectively. They argue that neighborhoods with high rates of unemployment and idle residents will cultivate criminal behaviors (Krivo & Peterson, 1996). As described above, these communities lack the authority figures (or such figures lack community respect) to chastise deviant behavior (Krivo & Peterson, 1996). Instead, criminal role models are present. These negative role models teach deviant behaviors and survival skills to young community members (Krivo & Peterson, 1996).

Additionally, Krivo and Peterson (1996) noted that as communities adapt to and normalize criminal behavior, they become more violent. Violence serves as a way for residents to protect themselves and their property against others (Krivo & Peterson, 1996). Unfortunately, the posturing and weapons possession typically escalates into further violence and increased criminal behavior (Krivo & Peterson, 1996).

Krivo and Peterson (1996) argued that the lack of informal social controls and weakened or absent social institutions also create spaces conducive to crime. Disadvantaged neighborhoods lack crime hotlines as well as after school programs to reduce juvenile delinquency and increase supervision (Krivo & Peterson, 1996). This is an issue compounded by the high level of female headed and single parent households. In these areas, after school programs would increase supervision of children while parents are at work (Krivo & Peterson, 1996). The supervision would keep children from associating with delinquent peers (Krivo & Peterson, 1996). Additionally, it would involve them in something positive such as sports rather than crime.

Furthermore, schools, community centers, churches, and other community gathering places do not have the resources in order to effectively combat messages of deviance with mainstream middle class values (Krivo & Peterson, 1996). Deviant messages of the nature of success are going to be much stronger in areas with high levels of structural disadvantage. In these areas, Krivo and Peterson (1996) observed that children do not see the benefits of striving for middle class values such as attaining an education and legal employment.

Firstly, legal employment may not be available or pays only minimum wage. It would be much easier to make a living supporting oneself with criminal endeavors. Additionally, for the legal employment that is available, high levels of education are likely not required. As such, education loses value. Finally, even assuming that a child wanted to pursue a college degree, their school system in a disadvantaged area probably was unable to adequately prepare them for further education due to lack of resources and good teachers. Consequently, the children see the only realistic option for their lives as remaining in the community and becoming a part of its criminal culture.

Police departments also lack resources to fight crime efficiently in disadvantaged areas (Krivo & Peterson, 1996). The authors argued that high crime rates in predominantly black neighborhoods could be explained by the greater structural disadvantage they experience when compared to predominantly white neighborhoods (Krivo & Peterson, 1996).

In their ordinary least squares regression analysis, Krivo and Peterson (1996) measured family disruption, male joblessness, occupational composition, rental occupancy, and the vacancy rate. They controlled for percentage of black residents and percentage of males of peak offending age (15-24 years old) (Krivo & Peterson, 1996). Krivo and Peterson (1996) found a high correlation between structural disadvantage and violent crime as expected. Additionally,

the percentage of black residents was strongly correlated with violent crime (Krivo & Peterson, 1996). Property crime rates were also positively correlated with structural disadvantage as hypothesized (Krivo & Peterson, 1996).

Krivo and Peterson (1996) also found that effects of race on property crime rates are not significant once structural disadvantage is considered. Structural disadvantage also equally affected violent crime rates in both black and white communities (Krivo & Peterson, 1996). While there appeared to be some racial differences in rates of offending in black and white communities, Krivo and Peterson (1996) argued that the differences are small and generally insignificant. Additionally, extremely disadvantaged white communities were more similar to extremely disadvantaged black communities than other categories of white communities (Krivo & Peterson, 1996). As such, they stated that the race effect is small and less important than the impact of structural disadvantage (Krivo & Peterson, 1996). These data ultimately supported both Wilson and Krivo and Peterson's (1996) assertion that structural disadvantage is a greater crime rate predictor than predominant race of a community.

Unemployment and crime. William Julius Wilson's (1997) book, *When Work Disappears*, discussed the importance of employment in communities and particularly in poor communities. He stated that poor communities with employed residents are very different from those inhabited primarily by the unemployed (Wilson, 1997). Additionally, he mentioned the connection between unemployment and crime.

In fact, many of his interviews with residents of poor communities with high unemployment rates touch upon this relationship (Wilson, 1997). For example, one research team member described the South Side of Chicago as previously being a hub for commerce and industry (Wilson, 1997). At the time of the study, however, the most noticeable and healthy

looking businesses were liquor stores and currency exchanges (Wilson, 1997). The previous employment and industry opportunities had left leaving the South Side in poverty.

Wilson (1997) linked argued that the relationship between poverty and social disorganization can be reduced if employment opportunities exist. In this case, work would act as a social institution modifying behavior toward socially acceptable actions. Additionally, teenagers with jobs would experience less unstructured and unsupervised free time which would also result in lower crime rates. Jobs also teach responsibility and reinforce middle class values such as the ethic of hard work. This argument assumes that unemployment increases the effects of social disorganization, a point critical for this study.

Weicher (1970) also emphasized the significance of income and employment on juvenile delinquency. He argued that the child's expectation and normalization of their parents' unemployment makes them more likely to engage in delinquent acts. This is very different than the assertion that unemployment in general affects delinquency. Instead, it is patterns of unemployment (or employment) that inform children's expectations regarding their parents and their own roles regarding employment (Weicher, 1970).

The argument regarding the importance of the normalization of unemployment is significant in that it helps to explain Weicher's (1970) other economic and delinquency findings. Specifically, Weicher (1970) found that economic factors were only substantially correlated with delinquency when delinquency was relatively low. In places where delinquency was a major concern, economic factors had a less substantial impact (Weicher, 1970).

This may be explained by children's perceptions and normalization of unemployment. In areas of high delinquency, it is likely that high unemployment rates exist as well. Consequently, children may expect their parents to often be unemployed. This will influence rates of

delinquency regardless of their parent's current state of employment. As such, Weicher (1970) notes that policies to increase employment must do so in a consistent and stable manner in order to reduce juvenile delinquency. In order to truly impact delinquency, policies must both reduce adult unemployment and change children's expectations regarding parental unemployment (Weicher, 1970).

Raphael and Winter-Ebmer (2001) also conducted a study researching the link between unemployment and crime but narrowed their focus to the United States. They specifically looked at the seven index offenses recorded in the UCR: homicide, rape, assault, robbery, car-theft, burglary, and larceny-theft and separated them into categories of violent crime and property crime (Raphael & Winter-Ebmer, 2001). In an effort to prevent validity concerns due to omitted variables, the authors controlled for race, income, and age among other variables (Raphael & Winter-Ebmer, 2001)

Raphael and Winter-Ebmer (2001) found a significant correlation between unemployment and property crime using ordinary least squares regression. A one percentage point decrease in unemployment resulted in a 1.6-2.4 percentage point decrease in property crime (Raphael & Winter-Ebmer, 2001). They did not find a significant correlation between unemployment and violent crime (Raphael & Winter-Ebmer, 2001).

When Raphael and Winter-Ebmer (2001) used 2SLS to analyze their data in case of a two way relationship between unemployment and crime (unemployment causes crime causes unemployment), they found that the previous model had underestimated the effects of unemployment on property crime (Raphael & Winter-Ebmer, 2001). Thus, the 2SLS analysis revealed that a one percentage point decrease in unemployment resulted in a 2.8-5.0 percentage point decrease in property crime (Raphael & Winter-Ebmer, 2001).

The authors stated that the unemployment and violent crime relationship was even weaker when using 2SLS regression (Raphael & Winter-Ebmer, 2001). This remained true when Raphael and Winter-Ebmer (2001) evaluated violent crimes both as a group and individually. The one exception to this finding was the effect of unemployment on assault (Raphael & Winter-Ebmer, 2001). The correlation between unemployment and assault was significant at the $p < 0.05$ level with a stronger relationship than the one demonstrated in the earlier OLS regression (Raphael & Winter-Ebmer, 2001).

International connections. Entorf and Sieger (2014) examined the unemployment- crime link in German towns to determine whether the relationship was affected by varying degrees of crime in different locations. Specifically, the authors wished to determine if higher crime areas would be impacted differently than lower crime areas (Entorf & Sieger, 2014). They conducted a secondary data analysis of German Federal Criminal Police Office data to measure crime, German Federal Employment Agency data to measure employment/ unemployment, and Federal Statistical Office data to measure income and demographics (Entorf & Sieger, 2014).

Through the comparison, Entorf and Sieger (2014) found that increasing unemployment resulted in higher rates of property crime in all locations. Additionally, they noted that the unemployment- crime relationship is curvilinear (Entorf & Sieger, 2014). Thus, increasing unemployment will result in increasing crime until the threshold is reached. Then, crime will level off. While the authors did not find significant effects of unemployment on violent crime generally, when they used quantile regression, a correlation was observed in areas with middling and low crime rates (Entorf & Sieger, 2014). It must be noted that Entorf and Sieger (2014) only used assault to measure violent crime. Their results may underestimate the relationship between unemployment and violent crime since they omitted homicide, robbery, and rape.

Aaltonen, MacDonald, and Kivivuori (2013) examined the relationship between unemployment and various categories of crime specifically property crime, violent crime, and driving under the influence (DUI) in Finland. They wished to determine if the relationship would remain significant after controlling for an individual's low self-control, duration of unemployment, receipt of social welfare funding, and participation in programming (Aaltonen, MacDonald, & Kivivuori, 2013).

In order to complete their study, Aaltonen and colleagues (2013) chose a sample of 15,658 Finnish males between the ages of 20 and 30 in 2001 from the Risk Factors in Crime Finland database. This database contained a stratified random sample of 150,010 Finnish residents (Aaltonen et al., 2013). These participants were followed for six years in order to complete the study (Aaltonen et al., 2013).

Aaltonen and colleagues (2013) used fixed-effects regression to analyze their data and found a significant correlation between unemployment and property crime in Finland. They found that duration of unemployment and crime had a curvilinear relationship (Aaltonen et al., 2013). Thus, as duration of unemployment increased, the crime rate also increased. When the threshold of 60 days unemployed was reached, the crime rate reached a plateau and leveled off before beginning to decrease (Aaltonen et al., 2013).

Finally, Aaltonen and colleagues (2013) stated that participation in active labor programming reduced property crime. They noted that this was perhaps expected based on the time consuming nature and financial benefits of participation in such programs (Aaltonen et al., 2013). Consequently, the financial motivation to commit property crime decreases and rates of property crime decrease as well (Aaltonen et al., 2013).

Buonanno, Drago, and Galbiati (2014) conducted a similar study to Entorf and Sieger's and Aaltonen and colleagues' but evaluated the unemployment- crime relationship across developed countries. Additionally, they examined the effects of economic recessions on crime rates (Buonanno, Drago, & Galbiati, 2014). Buonanno and colleagues (2014) studied multiple categorizations of crime in their research including total crime, homicide, robbery, and burglary rates. These were categories for which each of the eighteen evaluated countries possessed data and a similar definition of the crime (Buonanno et al., 2014). The homicide rate was measured in homicides per 100,000 inhabitants based on police reports and was the most consistent crime variable across countries (Buonanno et al., 2014). Buonanno and colleagues (2014) measured unemployment based on country level statistics and economic well-being of the countries based on gross domestic product (GDP) values.

Buonanno and colleagues (2014) used fixed-effects regression in order to analyze their data and found a significant correlation between unemployment and economic recession and crime. In fact, they found that a four percentage point increase in the unemployment rate resulted in a 5.2 percentage point increase in the crime rate (Buonanno et al., 2014). Although they were unable to conduct a more thorough analysis based on type of crime (violent or property crime) or by country, the authors posited that crime rates would have decreased much more sharply if the 2008 economic recession had not occurred (Buonanno et al., 2014). Unfortunately, it is impossible to support or prove this hypothesis as it is based on something not happening after the fact.

Structure to Crime Continuum

Blau and Blau (1982) proposed a continuum from policy to the creation of structural contributors to social disorganization. These contributors such as poverty and unemployment

lead to socially disorganized communities that are unable to prevent crime. As such, the crime rate increases. For example, they argue that poverty is an important structural contributor to social disorganization (Blau & Blau, 1982). Poverty, particularly intergenerational poverty and concentrated areas of disadvantage do not occur spontaneously and randomly. Instead, they are brought about through policy and systemic obstacles to upward social mobility (Blau & Blau, 1982).

Blau and Blau (1982) argue that ascribed inequality or inequality that one is born into creates anger and aggression within the class of people experiencing it. Due to lack of resources and networking ability, however, the deprived are unable to rise up and engage in a political or physical revolution (Blau & Blau, 1982). Instead, their aggression against the state for its unfair systems is diffused through criminal activity and particularly violent crime (Blau & Blau, 1982).

In their study of 125 large metropolitan areas, Blau and Blau (1982) found that income and racial inequality had a substantial significant correlation with the violent crime rate in these areas. It must be noted that the authors are discussing systemic inequality that is reproduced generationally through policy and social institutions rather than occurring on the individual level. Additionally, this type of inequality creates structural contributors to social disorganization such as poverty and widespread unemployment. Blau and Blau (1982) found that poverty was highly positively correlated with increasing levels of systemic inequality. It should be noted that inequality creates poverty not the other way around (Blau & Blau, 1982).

This poverty and unemployment contributes to markers of social disorganization such as family disruption. In the study, Blau and Blau (1982) used percent of divorces as an approximation for family disruption. The divorce rate was strongly positively correlated with increasing levels of poverty (Blau & Blau, 1982). Finally, the crime rate was higher in areas

marked by higher levels of social disorganization as measured by higher divorce rates in this study (Blau & Blau, 1982). Consequently, Blau and Blau (1982) traced the policy to crime continuum using systemic inequality as a predictor of crime. This was a landmark study in that it was the first to implicate policy and macro level systems in contributing social issues related to social disorganization.

Urban decay and crime. Urban decay is a macro structural contributor to social disorganization through implicated policy driving economic shifts (Oh, 2005). As Oh (2005) notes, although the literature regarding social disorganization and crime is full of structural predictors such as heterogeneity, residential stability, family stability, poverty, and unemployment, few studies have examined the impact on policy and economic shifts on structural contributors to social disorganization and crime.

Deindustrialization has affected cities formerly considered manufacturing hubs in the northeast and midwestern parts of the country (Oh, 2005). Specifically, manufacturing jobs have substantially decreased while jobs in the service sector have become more prevalent (Oh, 2005). The shift in the jobs economy (both type of employment available as well as number of the employed) has substantial impacts on structural contributors to social disorganization and predictors of crime.

Additionally, economic shifts, unemployment, and poverty are closely linked (Oh, 2005). When economic shifts result in widespread unemployment, it is difficult for unemployed individuals to find new employment. When unemployment remains high, poverty increases (Oh, 2005). Problems are also associated with high levels of income inequality in an area (Oh, 2005).

In his study, Oh (2005) found that as manufacturing jobs decreased due to economic restructuring of cities, central city property crime rates increased. Additionally, increases in

suburban employment due to economic restructuring reduced violent crime rates namely robbery and aggravated assault (Oh, 2005). These findings support Blau and Blau's (1982) policy to crime continuum.

Chapter 3

Data and Methods

This study builds upon Blau and Blau's (1982) and Wilson's (1997) arguments that structural factors such as unemployment contribute to increasing social disorganization and a resulting increase in crime. It assumes that the link between social disorganization and crime has been well established in the literature (Blau & Blau, 1982; Peterson & Krivo, 2005; Shaw & McKay, 1942; Wilson, 1997). Additionally, this study furthers Wilson's (1997) unemployment to crime continuum to specifically examine the impact of large business employment practices.

The research question guiding the study follows: Is there a correlation between large business employment and crime rates in Detroit? My hypotheses are: (1) As large business employment decreases, crime rates will trend upwards and (2) Large company employment patterns will correlate with other indicators of social disorganization such as vacancy. The Statistical Package for the Social Sciences (SPSS) was used to analyze the data.

Data Collection

In order to test my hypotheses, I analyzed existing data. According to Maxfield and Babbie (2015), secondary data analysis is an appropriate research design when the data measuring the variables already exist. This type of research design saves a great deal of time and money because original data collection is not required (Maxfield & Babbie, 2015). One potential downfall of analyzing existing data is that the data were originally collected for a different purpose and may not exactly measure studied variables exactly (Maxfield & Babbie 2015). Thus, validity of measures must be carefully considered.

Large business employment was assessed through use of Detroit Chamber of Commerce data¹ in the studied timespan (2012 and 2014). This data set is appropriate for measuring the independent variable because it records employment data on a yearly basis.

The crime rate (dependent variables) will be measured using data from the Uniform Crime Reports (UCR) from 2012-2015. Specifically, the crime rates measured included violent crime, murder, rape, robbery, aggravated assault, property crime, burglary, larceny, arson, and automobile theft. UCR data is collected and published by the Federal Bureau of Investigation (FBI) annually. Additionally, although the UCR measures only reported crime, the violent crimes being investigated are generally reported due to their nature. Thus, this data set will not underestimate their frequency making it appropriate to measure violent crime.

Vacancy data for the years 2012-2015 was measured using city level data collected by the United States Postal Service². In Detroit and other urban areas, mail carriers deemed residences vacant if mail was not collected for 90 days (Center for Urban Studies, 2016). Rural addresses that appeared to be vacant for 90 days, were under construction, or urban addresses that would not soon be occupied were labeled “no-stat” by mail carriers (Center for Urban Studies, 2016). This was tracked monthly by the city for each of the years studied. The vacancy data used in the study was taken from June of each year for consistency. This data was updated frequently as noted by monthly reports and most accurate way to measure city level vacancy.

Unit of Analysis

This study uses companies as the unit of analysis. Maxfield and Babbie (2015) define the unit of analysis as “the thing- what or whom- being studied in a research project” (p. 92). This

¹ Published in *Crain's List*

² Published on drawingdetroit.com, a blog established by the Center for Urban Studies at Wayne State University

study will examine the relationship between large company employment and crime in Detroit. Thus, individual employment by large companies will be analyzed making it the unit of analysis.

This is a different tactic than used in other studies. The literature typically uses the city as the unit of analysis (Bursik & Grasmik, 1992; Krivo & Peterson, 1996; Sampson, 1987). This was impossible for this study because of the study's emphasis. Other research has clearly established the link between unemployment and crime (Buonanno, Drago, & Galbiati, 2014; Entorf & Sieger, 2014; Raphael & Winter-Ebmer, 2001; Wilson, 1997). I wished to examine the correlation between individual company employment and crime.

Using companies as the unit of analysis does present some challenges in terms of additional independent variables. For example, race, income, gender, etc. variables were not available at the company level within Detroit. As such, they have been excluded from the analysis, limiting covariation among independent variables in the model.

Measurement

Independent variables. The independent variables are the change in large business employment numbers in Detroit from 2012 to 2014. Wilson (1997), Blau and Blau (1982), Oh (2005) and others argued that high unemployment rates in urban centers contribute to other markers of social disorganization including family instability, poverty, etc. As such, unemployment has a direct correlation with the crime rate (Buonanno, Drago, & Galbiati, 2014; Entorf & Sieger, 2014; Raphael & Winter-Ebmer, 2001; Wilson, 1997). This study ties unemployment directly to employment trends of large companies in Detroit.

Large business employment was measured through Detroit Chamber of Commerce data³ for 2012 and 2014 as noted above. The initial sample consisted of the top twenty-five employers in Detroit. These businesses included the City of Detroit and school system, health care companies, and auto manufacturers among others. Due to healthcare mergers and major changes in hiring practices between 2012 and 2014, the final sample consisted of only twenty-three large companies with data available for both years.

The small sample size demonstrates the difficulties in obtaining accurate data from large companies and drawbacks associated with secondary data analysis. Due to the unit of analysis at the company rather than city level, the inclusion of other independent variables is severely limited due to unavailability of data, as noted above.

Dependent variables. The dependent variables in this study are the crime rates in Detroit from 2012 to 2015. The crime rates are derived from the Uniform Crime Reports (UCR) for the listed years and include violent crime, murder, rape, aggravated assault, robbery, property crime, burglary, larceny, arson, and automobile theft. The UCR listed incidences of each crime for 2012, 2013, 2014, and 2015. Each crime category was measured using a change in crime incidences much like the employment data.

Vacancy rates for 2012-2015 were also examined and were measured using city level data collected by the United States Postal Service⁴. For the analysis, the vacancy incidences were also conceptualized as change in vacancy incidences between 2010, 2013, 2014, and 2015. As mentioned above, the vacancy incidences in the month of June was used for each year for consistency.

³ Published in *Crain's List*

⁴ Published by the Center for Urban studies at Wayne State University

Vacancy is used as a measure of social disorganization markers. The Blau and Blau (1982) continuum argues that policy influences social systems and structures which contribute to social disorganization within communities. This social disorganization then leads to an increase in crime (Blau & Blau, 1982). The vacancy variables capture the social disorganization piece of the continuum enabled by decreasing employment by large companies. When all the dependent variables were created, a total 66 variables were analyzed.

Variable coding. The dependent variables were dichotomized in order to use logistic regression. The independent variables (employment) measured the change in large company employment between 2012 and 2014. The crime variables measured change in crime incidences and vacant addresses from 2012-2013, 2012-2014, 2012-2015, 2013-2014, 2013-2015, and 2014-2015.

These change variables were dichotomized by coding them one if they changed in the same direction as the independent variable and coding them zero if they changed in a different direction or remained the same. Numeric amounts corresponding to degree or direction of change were not measured. As such, the correlation between the changes in large company employment as correlated with the change in the measured crime rates is able to be assessed.

Logistic Regression

Linear regression requires that the data adhere to eight basic assumptions including (1) a continuous dependent variable, (2) multiple (two or more) continuous or categorical independent variables, (3) independence of observation, (4) the assumption of linearity between the independent and dependent variables, (5) homoscedasticity or equality of variance, (6) a lack of multicollinearity, (7) a no significant outliers, and (8) normally distributed error terms (Allison, 1999; Osborne, 2015).

In cases in which the data do not meet the assumptions of linear regression, it is possible to use other types of regression such as logistic regression. I chose to use bivariate logistic regression in order to analyze the data because the dependent variables in the study are dichotomous and therefore not continuous. Other studies in the literature used ordinary least squares regression (OLS), however, as a type of linear regression, OLS regression assumes that dependent variables are continuous (Osborne, 2015). As such, it was necessary to utilize logistic regression instead.

Much like other types of regression, data must meet certain criteria before analyzed using logistic regression. Firstly, the dependent variables should be dichotomous rather than continuous or ordinal (Laerd Statistics, n.d.). There must be multiple independent variables although they may be continuous or categorical (Laerd Statistics, n.d.). Assumption three states that the categories of dependent variables should be mutually exclusive and exhaustive with an independence of observations (Laerd Statistics, n.d.). Additionally, according to Laerd Statistics (n.d.), there should be a linear relationship between the independent variables if they are continuous.

Due to differences in analytic estimations, logistic regression does not make assumptions regarding population distribution (Osborne, 2015). Additionally, logistic regression is non-linear and thus does not share the OLS regression assumption of linearity (Osborne, 2015). Logistic regression does not assume homoscedasticity or equality of variance because it is not a parametric analysis (Osborne, 2015).

Chapter 4

Results

Table 1

Table 1 presents the sample of large Detroit companies and their employment data for 2012 and 2014. The net change in employment is also noted. This table is included to demonstrate the difficulty presented in using such a small sample and also the challenges associated with the company as the unit of analysis. In many of the companies presented, the net employment change was minimal and thus unlikely to have an effect on the crime rate.

Other companies such as Chrysler Group, General Motors, and Ford Motor Company added significant numbers of jobs between 2012 and 2014 (4846, 4024, and 3616 respectively). Only four large employers (Detroit Medical Center, St. John Providence Health System, and Detroit Public Schools, and the City of Detroit) cut jobs by at least 1000 individuals in the timeframe. These companies were of particular interest regarding their correlation with the crime rates examined.

Table 1.

Top Detroit Company Employment 2012-2014			
	Employment 2012	Employment 2014	Net Employment Change
Ford Motor Company	39134	42750	+3616
University of Michigan	28525	29855	+1330
Chrysler Group LLC.	25733	30579	+4846
General Motors Company	25813	29837	+4024
United States Government	19033	19010	-23
Henry Ford Health System	18402	17949	-453
CHE Trinity Health	13826	13687	-139
Detroit Medical Center	13499	11869	-1630
Beaumont Health System	12767	13330	+563
St. John Providence Health System	12649	11431	-1218
State of Michigan	10226	9718	-508
United States Postal Service	10922	11600	+678
City of Detroit	10920	9847	-1073
Quicken Loans Inc.	6349	9122	+2773
Detroit Public Schools	7839	6622	-1217
Blue Cross Blue Shield Michigan	6239	6484	+245
DTE Energy Company	6277	6438	+161
Oakwood Healthcare Inc.	6167	6131	-36
Wayne State University	5924	6010	+86
Comerica Bank	4891	4831	-60
Johnson Controls Automotive	4039	4500	+461
Faurecia North America	4100	4100	0
Oakland County	3196	3239	+43

Table 2

While running the logistic regression, the data began to show their weaknesses due to the small sample size and lack of independent variables. Despite running the regression analysis 66 times (once for each of the dependent variables), the results grouped into two separate categories of parameter estimates. Both categories were statistically insignificant with large error terms. The grouping may be related to the dichotomous and nominal nature of the dependent variables with only the directionality of the change recorded. The fact that all the independent and dependent variable pairings resulted in only two possible parameter estimates demonstrates the unreliability of the logistic regression analysis in this study. Since the analysis is unreliable, it is impossible to accurately assess my hypotheses without further testing. A thorough examination of the study limitations and methodological concerns will follow the analysis of the results.

In tables two and three, the parameter estimates for the change in violent crime between 2014 and 2015 and the change in larceny between 2014 and 2015 are displayed. These estimates are representative of the two parameter estimate groupings that encompassed all 66 of the independent and dependent variable pairings analyzed. Table 2 displays the results of the analysis with the change in violent crime from 2014 to 2015 representing the first of the two parameter estimate groupings. The first grouping shared a chi square value of 31.492 in the test of model coefficients. As noted above, this grouping of variables did not achieve statistical significance in the regression analysis. In the test of model coefficients, this variable group achieved significance at the 0.001 alpha level. However, due to the grouping of the parameter estimates, these results are unreliable.

Additionally, the error terms were very high for this set of variables. The Cox and Snell R square was 0.746 and the Nagelkerke R square was 1.00. The coefficient displaying the relationship between the change in employment and the change in violent crime from 2014-2015

and variables with the same parameter estimates with a logistic coefficient of -1.005 and statistical significance at the 0.960 alpha level. This means that for every one unit increase in employment, the odds change in violent crime 1 increased by 0.366. However, as stated above, the results did not achieve statistical significance at the 0.05 alpha level. Furthermore, the parameters are unreliable and clearly unstable based on the possible variable combinations resulting in only two estimates.

Table 2. Change violent crime 1

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	31.492	1	.000
	Block	31.492	1	.000
	Model	31.492	1	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	.000 ^a	.746	1.000

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a Change in employment 2012 to 2014	-1.005	19.946	.003	1	.960	.366	.000	34821076 28463866 0.000
Constant	-11.623	334.149	.001	1	.972	.000		

a. Variable(s) entered on step 1: Change in employment 2012 to 2014.

Table 3

Table 3 displays the parameter estimates of the second grouping of variables in the logistic regression analysis. As noted above, the parameter estimates are unreliable due to all the estimates grouping themselves into two separate groups with different coefficients. The second grouping of variables, represented by the first change in larceny variable, shared a chi square value of 31.841 in the test of model coefficients. Like the first set of variables, the second grouping did not achieve statistical significance in the regression analysis. In the test of model coefficients, this variable group also achieved significance at the 0.001 alpha level. However, again, due to the grouping of the parameter estimates, these results are unreliable.

Additionally, the error terms were very high for this set of variables as well. The Cox and Snell R square was 0.746 and the Nagelkerke R square was 1.00. The coefficient displaying the relationship between the change in employment and the change in larceny from 2014-2015 and variables with the same parameter estimates with a logistic coefficient of 0.581 and statistical significance at the 0.973 alpha level. This means that for every one unit increase in employment, the odds change in the larceny rate 1 increased by 1.789. However, as stated above, the results did not achieve statistical significance at the 0.05 alpha level. Furthermore, the parameters are unreliable and clearly unstable based on the possible variable combinations resulting in only two estimates.

Table 3. Change Larceny 1

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step 1 Step	31.841	1	.000
Block	31.841	1	.000
Model	31.841	1	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	.000 ^a	.750	1.000

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a Change in employment 2012 to 2014	.581	17.053	.001	1	.973	1.789	.000	58563717
Constant	-12.446	504.148	.001	1	.980	.000		2732398.500

a. Variable(s) entered on step 1: Change in employment 2012 to 2014.

Chapter 5

Discussion

No study in the social sciences is free from limitations. This study in particular encountered numerous methodological limitations including unavailability of data, violation of key logistic regression assumptions, and a very small sample size. As such, the logistic regression analysis did not produce viable results. Instead, the results grouped into two categories with neither grouping achieving statistical significance in the flawed model. Without viable results, it is impossible to assess my hypotheses. The limitations of the study will be discussed in depth below.

While the analysis failed as a result of methodological concerns, the test of model coefficient chi square estimation was highly significant at the 0.001 alpha level for both groupings of variables. While this result should not be taken out of context of the flawed model, it demonstrates the importance of this line of research. As such, recommendations for alternative research designs and directions for further research are discussed. Finally, policy implications are suggested. These suggestions are contingent upon a statistically significant correlation between change in large company employment and the crime rate.

Limitations

Data availability. The first and perhaps largest challenge encountered in this study was presented by the data. Company level employment data was not widely available at the city level. Although the Detroit Chamber of Commerce did list the top twenty-five largest employers in the city for 2012 and 2014, data for other years was not readily available. Access to the data for some years required payment. Other and older years were not publicly available due to the

relative newness of the chamber of commerce collecting this data. Specifically, 2012 was the first year this information was collected and published by the city.

Ideally, this study would have used a time series research design with at least three employment data points. Unfortunately, as mentioned above, the data was simply not available in order to conduct this sort of study. Furthermore, it would have been preferable to have had access to data points that were at least five years apart as well as the unemployment to crime continuum is not immediate. It is more likely that larger employment trends in large companies rather than individual years of employment would affect crime rates.

Additionally, an increased time span would probably have resulted in larger net employment changes between the two time points. The increased net employment difference would have made it easier to detect a correlating shift in the crime rate. In the current study, half of the companies (12 of 23) experienced net employment changes of less than 1,000 individuals. Of the other companies, only four reduced employment by 1,000 or more individuals. This made it difficult to perform the analysis as the hypothesis linked decreasing large company employment with increasing crime rates. Unfortunately, again due to unavailability of data, it was not possible to use data points that were at least five years apart.

Although the data was not readily available to the public, it is assumed that the companies have the relevant data stored in their records. However, both corporate and government entities are unlikely to share their data freely. This is particularly true based on the nature of my research attempting to correlate their employment numbers with the crime rate. As a result of projected obstacles regarding sharing of data and time constraints, I did not approach the companies in the sample of employment data in earlier years.

Additionally, while data regarding industry is available from the United States Census County and City Data Books, company specific employment data is not available at the city level. Corporate websites typically have national and international employment data displayed on their websites. These data are not listed at the city level, however. Due to the difficulties encountered in this project, future research projects should carefully consider concerns regarding availability of data.

Unit of analysis. This study sought to use the company as the unit of analysis in an effort to address the research question involving change in company employment and its correlation with changing crime rates. This presented a major problem. Although employment data was available for the companies, other independent variables were not. As such, this study could not include other structural predictors of crime such as race and ethnicity, gender, age, income, female headed households etc. at the company level. Other studies in the literature included these variables. The inclusion of more predicting variables and multiple step models allows for a more precise analysis and an increased likelihood of significant results with at least one of the independent variables tested.

Although theoretically possible to approach the companies to request access to the demographic statistics of their employees, it was deemed unlikely that they would cooperate for the reasons discussed above. Consequently, for this reason as well as time constraints, I did not approach the companies to request income, race, and gender data.

If the unit of analysis had been the city, data would have been available to include the variables mentioned above. Based on the current unit of analysis as the company, it would have been inappropriate to include city level demographic data in the model. Using the city as the unit of analysis would have contributed to a more robust logistic regression model and hopefully

more functional results. Future research projects should carefully consider the unit of analysis and its impacts on the viability of the proposed analysis method.

Logistic Regression assumptions. One of the key assumptions of logistic regression is that multiple independent variables are analyzed for their ability to predict of a single dependent variable. Due to limitations regarding availability of data and the unit of analysis, only one independent variable was measured. Each dependent variable was assessed separately in the model in an effort reduce the effect of measuring multiple dependent variables. However, it must be noted that with only a single independent variable, this study violated this assumption of logistic regression. If additional independent variables could have been used, it is possible that the results of the analysis would have been viable. Future studies should consider the viability of their research design given the limitations presented by the data.

Sample size. The final sample in this study was very small with only 23 companies. This is related to the availability of company employment data. The Detroit Chamber of Commerce only published the top 25 employing companies rather than the top 50. Initially, this created a very small sample pool.

Although the two time points (2012 and 2014) are only two years apart, the top 25 employing companies were not the same in both years. Some companies had dropped off the list entirely. As the data noted that all employment data was reported by the companies, this could be due to companies not participating during the second time point rather than massive changes in employment. Other companies, including the Botsfield, Beaumont, and Oakwood health systems participated in mergers between 2012 and 2014. Consequently, individual company employment levels for these companies were not available for 2014. While mergers are

inevitable, if the initial list of presented the top 50 or 100 employing companies, the final sample size would have been larger.

As a result, the final sample size was only 23 companies. This is a very small sample. While logistic regression does not offer specifics regarding sample population, preferred sample size for most statistical analyses is 120 cases (Maxfield & Babbie, 2015). The small sample size could have contributed to the nonviable analysis results. The small sample size may have contributed to error terms that were not independent.

Future Research

Adapting the current study. There are a number of ways to address the methodological challenges of the current study in future research. It is possible that the companies could be surveyed in an attempt to determine employment data for additional years. Data could also be found for gender, race and ethnicity, and income variables within each of the companies.

This approach would have a few advantages. Firstly, it would address the issue of the time points in the current study being too close. Time points that are farther apart and demonstrate more variation in employment could be used. Additionally, it could transform the research design into a time series with three or more time points. This would have the benefit of exploring employment and crime trends over time. With three or more time points, there would be multiple employment change independent variables. This would address the assumption of logistic regression that states that multiple independent variables should be included in the model.

Furthermore, surveying the companies would enable the introduction of additional independent variables including race and ethnicity, gender, and income. These other variables

would make the model more precise and further address the requirement of logistic regression to have multiple independent variables. This method would be most similar to this study.

A potential obstacle with this specific research design would be ensuring the companies' cooperation and correctly identifying the largest companies in the city for each time point. As mentioned in the limitations section for this study, there some companies will likely not be the top 25 (or similar) employing companies for each time point. It would be extremely time consuming to identify the top employing companies through survey research for each data point. One potential way to address this obstacle would be to identify a sample of large companies and follow them for each data point. While this approach would be ideal in keeping with the intent and research design of the current study, it is highly unlikely that companies would volunteer the data needed. Consequently, other approaches are explored below.

Another approach to this line of research would be widen the scope of the study. With this research design, the top 100 (or similar) cities could be examined. In each city, the employment data of the top employing company would be analyzed with the city's crime rates. As the city is the unit of analysis in this method, it would be easy to access gender, income, race and ethnicity data for the inclusion of additional independent variables. Furthermore, the inclusion of a sample group of 100 cities would substantially increase the sample size and reduce the problems associated with having too few cases. This approach would also address the assumptions of logistic regression.

As long as the time points occurred before 2010, the United States Census City and County Data books could be used for demographic variables at the city level. The employment data must be before 2010 as that was the last year the City and County Data books were

published. If appropriate, the data in the data books is easily available for public use making this an attractive approach.

An additional option would be to analyze the employment patterns of specific industries in a particular city or cities. This information is readily available (pre 2010) in the United States Census City and County Data books. The employment data could then be assessed for correlations with the crime rates in the city or cities examined. This would both expand the number of employment independent variables and allow use of the city as the unit of analysis. When using the city as the unit of analysis, it is easy to include other demographic information from the United States Census as additional independent variables.

Each of the approaches mentioned would address the methodological concerns of the current study through using readily available data sources, addressing the unit of analysis and sample size concerns, and following the assumptions of logistic regression. It is clear that there are many ways to adjust the current research study to examine similar research questions with more accuracy and more valid results.

New directions in research. It is also possible to build upon this research study. This study attempted to contribute to Blau and Blau's (1982) continuum of structural and systemic issues leading to crime. It addressed company employment trends as contributing to overall unemployment. In Blau and Blau's (1982) continuum, this contributes to social disorganization and increases the likelihood of an increase in the crime rate. It should be noted that I do not adhere to ecological arguments which ignore policy implications as structural issues do not occur in a vacuum.

Instead, as Blau and Blau (1982) state, policy influences structural and systemic conditions. As stated above, the systemic conditions such as unemployment contribute to social

disorganization and lead to the inability of a community to prevent crime. Future research could examine the policies that influence structural issues such as unemployment. These policies may include those that lower taxes for companies in different states, trade policies that favor foreign manufacturing, government regulations imposed on the companies, etc.

These policies could lead to financial incentive to reduce (or increase) employment in a city. Additionally, they could influence company decisions regarding location of business and may facilitate relocation of a company. Finally, financial and policy factors can cause companies to pursue mergers with other companies. This was demonstrated in the merger between three of the health care systems in the current study although it was beyond the scope of this study to analyze the policies behind these companies' decisions. Future research should measure the impact of policy's influence on the crime rate through its correlation with structural contributors to social disorganization.

Additionally, it is important to note that unemployment does not lead to crime immediately. Instead, policy increasing unemployment leads to increasing social disorganization within a community. It is then the structural contributors of social disorganization that influence the crime rate. As such, it is important to measure the levels of social disorganization in a city at both Time 1, Time 2 and subsequent data points when conducting a time series study.

Additional measures such as alcohol and drug abuse among adults and youth, arrests for domestic violence, school dropout and expulsion rates, elder abuse rate, and coercive mobility (incarceration rate in the community) should be considered to more fully understand levels of social disorganization. In order to operationalize the decline of a community into social disorganization, measures such as collective efficacy on community level projects, political

activism and voter participation, social cohesion, etc. should be included for each time point in the series.

Policy Implications

Determining the relationship between government policies, structural issues such as unemployment, social disorganization and crime is important because it would suggest significant policy implications. Assuming a statistically significant correlation in the policy to crime continuum established by Blau and Blau (1982), the government should assume more responsibility regarding the potential for unintended consequences before instituting policies that would affect labor or other structural trends. For example, policies affecting employment should be carefully weighed with potential for crime considered.

Again, assuming a significant relationship in the policy to crime continuum, the public should become more aware and more educated about the potential consequences of government policies. The impact is both local and national with potential positive and negative outcomes at both levels. If potential for increased likelihood of increased crime rates are considered, at risk cities can prepare their police forces as well as offering employment related programming. This could include job training and career service centers. Individuals who have recently lost their jobs could build updated resumes, learn effective interviewing techniques, and receive additional job training as needed.

In many places like Massachusetts, these services already exist as part of welfare programming but would require expansion to support the newly unemployed (Commonwealth of Massachusetts, 2017). In particular, these services are typically reserved for those with dependent children (Commonwealth of Massachusetts, 2017). As such, a new division would need to be created to assist those without children.

One of the largest impediments to this sort of policy recommendation is finances. Increasing spending on welfare programming is not politically popular. Additionally, this spending increase would be a reallocation of Department of Correction (DOC) funding in order to prevent crime. Reducing the DOC's budget would also be largely unpopular. If this substantial hurdle could be overcome through rebranding and an emphasis on public safety, the expansion of job training and career related programming could positively impact communities with falling employment rates. In fact, it is possible that it may insulate these areas from the increase in crime associated with lower large company employment (assuming a positive correlation between change in large company employment and the crime rate).

Chapter 6

Conclusion

This project was meant to provide support for the structural contributors of Blau and Blau's (1982) policy to crime continuum. Specifically, it explored the correlation between the change in large business employment in Detroit and the crime rate. While previous research has firmly established a link between structural factors including unemployment and crime (Blau & Blau, 1982; Peterson & Krivo, 2005; Shaw & McKay, 1942; Wilson, 1997). This study was the first to examine the relationship at the company level.

Based on the status as an exploratory study, I experienced numerous methodological challenges. While logistic regression was used to analyze the data based on the dichotomous nature of the dependent variables, violation of key assumptions prevented viable results. Instead, the results grouped into two insignificant categories. This is due at least in part to the violation of the logistic regression assumption that states that there must be multiple independent variables (Laerd Statistics, n.d.).

Additional methodological concerns included the small sample size (23 cases in the final sample), the unavailability of data, and the unit of analysis. Ideally, the sample size would have been much larger to allow for a more robust analysis. Data availability was a significant concern as the Detroit Chamber of Commerce did not begin collecting the employment numbers for large companies until 2012. As such, it was not possible to increase the timespan of the study. Additionally, all employment data was based on company volunteered information. Pursuing the companies to determine further employment and demographic information was deemed too time consuming and unlikely to be successful to be attempted in this project.

Finally, using the company as the level of analysis reduced availability of demographic characteristics that are typically employed as independent variables in similar studies. While this information is readily available at the city level, companies do not publish demographic information. Consequently, the only independent variable used in the model was change in company employment between 2012 and 2014.

Although the results of the logistic regression were not valid, the test of model coefficients (chi square) was highly significant at the 0.001 alpha level for both groupings of variables. While these results should be taken in context of the flawed logistic regression model, they demonstrate the importance of this research. Moving forward, future research designs should consider the methodological concerns of this study.

The hypotheses are impossible to assess given the difficulties of the study. They are as follows (1) As large business employment decreases crime rates will trend upwards and (2) Large company employment patterns will correlate with other indicators or social disorganization such as vacancy. Based on the problems associated with the logistic regression, it is impossible to fully support these hypotheses. However, the significance of the tests of the model coefficient estimation do demonstrate the need for further research in this area.

Future research should adapt the current study to address the methodological concerns. Additionally, however, future projects could explore the policy to crime continuum more fully (Blau & Blau, 1982). This would negate the ecological fallacy that structural conditions occur without inducement from policy (Blau & Blau, 1982). Furthermore, this type of research would explore unintended criminal consequences of policy. Policy recommendations from this type of research would be far reaching and important assuming a significant result.

References

- Aaltonen, M., MacDonald, J. M., Martikainen, P., & Kivivuori, J. (2013). Examining the generality of the unemployment- crime association. *Criminology*, 51(3), 561-594. doi: 10.1111/1745-9125.12012
- Allison, P. D. (1999) Multiple regression: A primer. Thousand Oaks, CA: Pine Forge Press.
- Barnett, C. & Mencken, F. C. (2002). Social disorganization theory and the contextual nature of crime in nonmetropolitan counties. *Rural Sociology*, 67(3), 372-291.
- Blau, J. R. & Blau, P. M. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review*, 47(1), 114-129.
- Buonanno, P., Drago, F., & Galbiati, R. (2014). Response of crime to unemployment: An international comparison. *Journal of Contemporary Criminal Justice*, 30(1), 29-40. doi: 10.1177/1043986213509023.
- Bursik, R. J. Jr. & Grasmick, H. G. (1992). Longitudinal neighborhood profiles in delinquency: The decomposition of change. *Journal of Quantitative Criminology*, 8(3), 247-263.
- Center for Urban Studies Wayne State University. (2016). *Detroit Vacant Addresses and Overall Percentage Vacant March 2010 through December 2015* [Data file]. Retrieved from <http://www.drawingdetroit.com/wp-content/uploads/2016/03/Slide3.jpg>
- Clear, T. R. (2007). *Imprisoning communities: How mass incarceration makes disadvantaged communities worse*. New York, NY: Oxford University Press.
- Commonwealth of Massachusetts Executive Office of Health and Human Services. (2017). *Cash assistance: Transitional aid to families with dependent children (tanfdc)*. Retrieved from: <http://www.mass.gov/eohhs/gov/departments/dta/cash-assistance.html>
- Detroit, Michigan Chamber of Commerce. (2013). Largest metro- detroit employers: Ranked by

- full time employees. *Crain's Detroit Business*, Retrieved from <http://www.crainsdetroit.com/article/20130915/list/130919935/largest-metro-detroit-employers>
- Detroit, Michigan Chamber of Commerce. (2014). Largest metro- detroit employers: Ranked by full time employees. *Crain's Detroit Business*, Retrieved from <https://www.crainsdetroit.com/assets/PDF/CD94258420.PDF>
- Entorf, H. & Sieger, P. (2014). Does the magnitude of the link between unemployment and crime depend on the crime level? A quantile regression approach. *International Journal of Conflict and Violence*, 8(2), 262-283.
- Federal Bureau of Investigation. (2012). Crime in the United States 2012: Uniform Crime Reports. Washington, DC: U.S. Government Printing Office.
- Federal Bureau of Investigation. (2013). Crime in the United States 2013: Uniform Crime Reports. Washington, DC: U.S. Government Printing Office.
- Federal Bureau of Investigation. (2014). Crime in the United States 2014: Uniform Crime Reports. Washington, DC: U.S. Government Printing Office.
- Federal Bureau of Investigation. (2015). Crime in the United States 2015: Uniform Crime Reports. Washington, DC: U.S. Government Printing Office.
- Krivo, L. J. & Peterson, R. D. (1996). Extremely disadvantages neighborhoods and urban crime. *Social Forces*, 75(2), 619-650.
- Laerd Statistics. (n.d.) Binomial logistic regression using spss statistics. Retrieved from <https://statistics.laerd.com/spss-tutorials/binomial-logistic-regression-using-spss-statistics.php>.
- Maxfield, M. G. & Babbie, E. R. (2015). *Research methods for criminal justice and criminology*.

- 7th ed. Stamford, CT: Cengage Learning.
- 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*, 42, 569-582. doi: 10.1016.
- Osborne, J. W. (2015). *Best practices in logistic regression*. Los Angeles, CA: Sage Publications.
- Padnani, A. (2013, August 17). Anatomy of Detroit's Decline. *The New York Times*. Retrieved from http://www.nytimes.com/interactive/2013/08/17/us/detroit-decline.html?_r=0.
- Raphael, S. & Winter-Ebmer, R. (2001). Identifying the effect of unemployment on crime. *Journal of Law and Economics*, 44(1), 259-283.
- Sampson, R. J. (1986). Effects of inequality, heterogeneity, and urbanization on intergroup victimization. *Social Science Quarterly*, 67(4), 751-766.
- Sampson, R. J. (1987). Urban black violence: The effect of male joblessness and family disruption. *American Journal of Sociology*, 93(2), 348-382.
- Sun, I. Y., Triplett, R., & Gainey, R. R. (2004). Neighborhood characteristics and crime: A test of Sampson and Groves' model of social disorganization. *Western Criminology Review*, 5(1), 1-16.
- Weicher, J. C. (1970). The effect on income on delinquency: Comment. *American Economic Review*, 60(1), 249-256.
- Wilson, W. J. (1997). *When work disappears*. New York, NY: Alfred A. Knopf Inc.