A Multifaceted Examination of Reentry and Recidivism in Ohio

DISSERTATION

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By

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One of the many repercussions of the vast expansion of the American prison system is the increasing amount of ex-prisoners that are released after serving their sentences. Over 700,000 ex-prisoners will be released and will return to their communities this year alone. As a consequence, prisoner reentry has become an important concern among lawmakers, corrections officials, and the general public. Amid this increased attention towards the post-release outcomes of ex-prisoners, a new wave of reentry and recidivism research has emerged as well. This dissertation provides a multifaceted examination of recidivism that addresses the limitations of prior research and offers a more complete and thorough understanding of the role communities play during the reentry process.

The current project provides three separate analyses using a data set comprised of former prisoners in Ohio that is designed to improve the quality and integrity of post-release address data. This dissertation offers distinct data and methodological advantages that allow the overall project to evaluate a wide range of significant individual-level predictors, multiple measurement options and levels of analysis for contextual variables, and multiple measurement options for recidivism outcomes. The first analysis investigates the effects of community contextual variables on the likelihood of reincarceration for a sample of ex-prisoners released on parole and post-release control supervision in Ohio. I find that contextual factors are important predictors of
reincarceration after controlling for individual-level characteristics. However, the results also indicate that the effects of community variables on recidivism are clearly different depending on the particular type of recidivism outcome, the level of geography for the community measures, the length of the follow-up time period, and the particular type of contextual variables. The effects of socioeconomic-based disadvantage and unemployment on reincarceration across several models lend preliminary support to the importance of finding a job during the reentry transition.

The next analysis explores and composes several contextual models to explain racial difference in serious behavior on post-release supervision. Prior recidivism studies that include contextual factors have produced significant results, but these various analyses typically fail to explain racial difference in recidivism. The findings support the argument that racial difference in recidivism can be attributed to disproportionate residence in disadvantaged locales. In particular, disadvantage, unemployment, and retail trade sector employment opportunity explain racial difference in serious behavior for this sample of ex-prisoners in Ohio.

The final analysis focuses on the role employment plays during the reentry process, and investigates whether various measures of labor market opportunity influence serious behavior on post-release supervision. Prior research offers a generally pessimistic view of the employment options for ex-prisoners, but some recent information reveals that certain types of employers are willing to hire and actually do hire former prisoners after release. The findings suggest that that both a measure of overall employment opportunity popular in prior research, and measures of low-skill employment opportunity in the industries likely to hire ex-prisoners influence recidivism for ex-prisoners. Further,
interpretation of interaction effects indicate that the effects low-skill employment options 
on recidivism may differ for African American and white ex-prisoners.

The overall findings from these analyses suggest that communities are one of the 
important determinants of whether former prisoners will have a positive or negative post-
release experience. This dissertation concludes by offering directions for future research 
in this emerging field of study, and some thoughts on how better resource allocation may 
help improve the post-release outcomes of the ever-increasing population of former 
prisoners.
Dedicated to Colette Elizabeth Kowalski
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CHAPTER 1

INTRODUCTION

Over the last thirty years the criminal justice system in the United States has increasingly relied on a more punitive approach to handling criminal offenders leading to unprecedented prison growth. Politicians and corrections officials have moved away from rehabilitative and treatment philosophies to more “get tough” policies focused on incapacitation and punishment (Cullen, 2007; Petersilia, 2003). Longer incarcerations typically reserved for the commission of violent and sex offenses are being applied to offenders of drug and property crimes as well (Lynch, 2002). Other policies such as “three strikes” laws (Benekos and Merlo, 1995), mandatory minimum sentences (Blumstein and Piquero, 2007), and truth-in-sentencing laws have further increased the number of individuals incarcerated in correctional facilities. As a result, incarceration rates at state and federal prisons increased by over 200 percent from 1980 to 1996 (Blumstein and Beck, 1999).

One of the many repercussions of the vast expansion of individuals under the jurisdiction of America’s prison system is the massive amount of ex-offenders that are released after serving their sentences (Petersilia, 2003). The number of individuals being
released from prison incarcerations has nearly quadrupled since the 1970s (Travis, Solomon, and Waul, 2001). Currently, more than 700,000 offenders throughout the United States are released from prison and return to their communities each year (Sabol and Couture, 2008). The sheer immensity of individuals entering and exiting prisons today make prisoner reentry, or the “the process of leaving prison and returning to free society” (Visher and Travis, 2003:89), a unique and complex social issue that has increasingly become a topic of attention among lawmakers, the general public, corrections officials, and scholars.

President George W. Bush referenced reentry in his 2004 State of the Union address (see Mears et al., 2008). Various congressional hearings have laid the groundwork for several proposals to increase funding for treatment, training, and services to help ex-prisoners transition back into the community (Subcommittee on Crime, Terrorism, and Homeland Security, 2005; see also Fields, 2008). The general public is being made aware of the consequences of reentry as well. Media reports have begun to document various reentry-related issues especially in terms of the challenges former offenders face finding meaningful work, adequate housing, counseling services, and substance abuse treatment (Abdullah, 2009; Johnson, 2004; Quinn, 2005; Smith 2008).

As large amounts of prisoners are being released each year, corrections departments across the country have begun to establish policies and programs to provide support during the reentry process (see Wilkinson, Rhine, and Henderson-Hurley, 2005). Ex-offenders face a number of challenges upon release, and reentry policies attempt to minimize some of these issues by providing treatment and counseling services (La Vigne et al., 2003), helping to find legitimate employment and adequate housing (Mears et al.,
providing linkages with external agencies and organizations, and offering possible avenues for offender accountability and restitution (Wilkinson, Rhine, and Henderson-Hurley, 2005). The main goals of these policies are “to prepare adult offenders to return home as contributing members of their communities” (Wilkinson, Rhine, and Henderson-Hurley, 2005:158), to improve ex-prisoner’s quality of life, to prevent future criminal behavior, and to avoid future reincarceration (see also Kubrin and Stewart, 2006).

Scholars have generally focused on the reentry process in terms of studies explaining the various determinants of recidivism. These analyses are especially relevant given the harmful influence prison incarcerations can have on both individual (Pager, 2003; Petersilia, 2003; Travis, Solomon, and Waul, 2001) and community well-being (Clear, 2007; Rose and Clear, 1998). Incarceration and repeated periods of reincarceration (e.g., recidivism) are extremely problematic within the life course by creating gaps in employment (Uggen, 2000) and education (Petersilia, 1999; Travis, Solomon, and Waul, 2001), harming pro-social relationships (Clear, 2007; Sampson and Laub, 1993), and creating other significant challenges due to the stigma and label of being an “offender” (Pager, 2003; Petersilia, 1999). Communities can be affected as well (see Hipp and Yates, 2009). In addition to concerns of public safety (Kubrin and Stewart, 2006), recidivism interrupts and destabilizes important social networks, increases levels of fear and mistrust among community residents, and impacts community resources and agencies due to the massive expenditures directed towards prison operating costs (Clear, 2007; Petersilia, 2003; Rose and Clear, 1998).

Despite the importance and concern directed towards the post-release outcomes of ex-prisoners, prior empirical studies of recidivism are somewhat limited in scope. Until
recently, the majority of research focused solely on individual-level characteristics that predict recidivism (Gendreau, Little, and Goggin, 1996; see also Kubrin and Stewart, 2006). Some aspects of various reentry initiatives direct attention to the communities where ex-prisoners live (see Wilkinson, Rhine, and Henderson-Hurley, 2005), but contextual variables actually measuring the characteristics of these local areas are generally absent throughout most of the scholarly recidivism literature (for important exceptions, see Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007).

An emergent literature is starting to develop assessing the role of communities and the post-release outcomes of ex-prisoners. These scholars cite a sizable theoretical and empirical literature that documents the importance of community factors for examining different types of criminality (Bellair, 1997; Elliot et al., 1996; Krivo and Peterson, 1996; Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997; Shaw and McKay, 1942; Silver, 2000; Velez, 2001; Warner and Rountree, 1997; Wilson, 1996, 1987; for a review see Sampson, Morenoff, and Gannon-Rowley, 2002). As such, they contend that communities may also play an especially influential role in the reentry process for ex-offenders because not everyone is returning to the same community. This makes logical sense. Released prisoners face significant challenges upon returning to their communities (Petersilia, 2003) and access to legitimate employment, appropriate housing, counseling services, substance abuse treatment, and beneficial social networks and relationships can vary based upon the particular circumstances in these various locales. Kubrin and Stewart (2006:167) put this shortcoming in the literature in perspective: “Neighborhood context is fundamental to our understanding of why individuals offend, and potentially even more important for understanding why former
offenders offend again, yet we know very little about how the ecological characteristics of communities influence recidivism rates of this population.”

Several researchers have interpreted that this gap in literature “is due, in part, to the belief that the risk of reoffending is individually determined” (Kubrin and Stewart, 2006:166; see also Mears et al., 2008). This probably stems from the strong and consistent empirical support of several individual-level variables that predict recidivism (Gendreau, Little, and Goggin, 1996). However, another potential factor contributing to the dearth of studies analyzing community factors and recidivism is a lack of relevant data for analysis.

Post-release address information used to create the neighborhood or community of release is usually obtained from ex-prisoners placed on some sort of community supervision. In some cases, the only information available is limited to the county of release. More specific information can sometimes be located in offender records. However, a thorough examination of these records is needed to ensure that the individual is actually living there and to ensure that the address listed is an actual residence that can be geocoded. Correctional agencies across the country generally do not have the time or appropriate funding to confirm the quality and integrity of the post-release address data used in recidivism studies.

Nonetheless, several scholars more recently have overcome this deficiency by actually including contextual variables in their research (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007; see also Gottfredson and Taylor, 1986). These studies provide a prominent contribution to the recidivism literature by merely including community variables within the various analytic models. However, this research
comprises only a small group of studies. The sparse body of work assessing community
context and recidivism, and some of the common problems associated with ex-prisoner
data sets make the conclusions of this emergent literature less definitive.

The goal of this dissertation is to provide a multifaceted examination of
recidivism that addresses the limitations of prior research and offers a more complete and
thorough understanding of the role communities play during the reentry process for ex-
prisoners. This goal will be partly achieved through the use of a unique data set from a
variety of data sources especially designed to improve the quality and integrity of post-
release address data. The PRC/Parole Behavior study contains a wide range of
individual-level predictors, multiple measurement options and levels of analysis for
contextual variables, and multiple measurement options for recidivism outcomes. This
particular data set offers distinct data and methodological advantages compared to prior
recidivism research that includes contextual variables. Additionally, this dissertation will
provide a more developed theoretical explanation and empirical examination of why
community factors are especially relevant for ex-prisoners post-release moving beyond
the association with a large contextual effects literature as the lone rationale for
introducing contextual variables into analyses of recidivism.

The outline of this dissertation will consist of three separate research studies.\(^2\)
Chapter 2 investigates the effects of community contextual variables on the likelihood of
reincarceration for a sample of ex-prisoners released on parole and post-release control
supervision in Ohio. This chapter initially provides background information on prisoner
reentry and recidivism, and reviews prior scholarly research on recidivism including a
small, influential group of studies that have recently introduced contextual variables into
analyses of recidivism. The current chapter further describes the construction of a data set designed to address the limitations of prior research and to provide a more sophisticated analysis of contextual effects for ex-prisoners by examining different sized communities and different recidivism measures. I find that contextual factors are important predictors of reincarceration after controlling for individual-level characteristics. However, the results also indicate that the effects of community variables on recidivism are clearly different depending on the particular type of recidivism outcome, the level of geography for the community measures, the length of the follow-up time period, and the particular type of contextual variables. Further, the consistent effects of socioeconomic-based disadvantage and unemployment on reincarceration lend preliminary support to the importance of finding a job during the reentry transition. This particular issue is further developed in the chapters that follow.

Chapter 3 explores and composes several contextual models to explain racial difference in serious behavior on post-release supervision among ex-prisoners in Ohio. Contemporary recidivism studies that include contextual factors have produced important results, but these analyses typically fail to explain racial difference in recidivism. This chapter provides contextual models that assess the impact of various measures based in community-level disadvantage on the explanation of racial difference in recidivism. In particular, the analysis examines the effect of residential instability, disadvantage, and labor market opportunity after controlling for individual-level characteristics. Further, the current study also develops a more focused theoretical explanation of why communities especially matter to ex-prisoners, and also provides a unique behavioral recidivism dependent measure based on parole officer field notes that capture various
dynamics of post-release supervision. The findings support the argument that racial
difference in recidivism can be attributed to disproportionate residence in disadvantaged
locales. More specifically, disadvantage, unemployment, and retail trade sector
employment opportunity explain racial difference in serious behavior on post-release
supervision in the current analysis.

Chapter 4 provides a closer examination of the role labor market opportunity
plays during the reentry process. The analysis of labor market opportunity for ex-
prisoners is a newly expanding area of study within the reentry and recidivism literature.
Prior research offers a generally pessimistic view of the employment options for ex-
prisoners and consistently operationalizes local labor market conditions as the
unemployment rate at larger levels of geography. Ex-prisoners do struggle to find work,
but some recent data reveal that certain types of employers are willing to hire and
actually do hire former prisoners after release. This chapter connects the current
employment seeking experiences of ex-prisoners to the large scale macrostructural
changes in the overall economy beginning in last several decades, and analyzes labor
market opportunity with business establishment data in the industries most willing to hire
ex-prisoners. The results find that that both a measure of overall employment
opportunity popular in prior research, and measures of low-skill employment opportunity
play a significant role in the reentry process for ex-prisoners. Further, the inclusion of
interaction effects in one of the models indicates that the effects low-skill employment
options on recidivism may differ for African American and white ex-prisoners.

Finally, Chapter 5 revisits the findings from the three previous chapters, discusses
the limitations of these studies in greater detail, and offers directions for future research.
Prisoner reentry is a complex social issue. Amid increased attention towards ex-prisoners, a new wave of reentry and recidivism-related research has emerged. However, scholars have called for “the need for increased attention” to several analytic, methodological, and data concerns within analyses of prisoner reentry (Mears et al., 2008:330; see also Kubrin and Stewart, 2006; Petersilia, 2003; Visher and Travis, 2003). This dissertation attempts to attend to some of these issues. I now turn to the first research study.
NOTES FOR CHAPTER 1

1. Some standard operationalizations of recidivism include rearrest (see Kubrin and Stewart, 2006), reconviction (see Mears et al., 2008), and reincarceration (see Joo, Ekland-Olson, and Kelly, 1995). Some other studies have also examined alternative measures of recidivism (see Maltz, 1984) and other dimensions of the reentry process such as post-release employment and wages (Pettit and Lyons, 2007; Sabol, 2007).

2. These three research studies (located in Chapter 2, Chapter 3, and Chapter 4) will all use various components of the PRC/Parole Behavior study.
CHAPTER 2

ADDRESSING AND EXPANDING CONTEXTUAL MEASUREMENT IN THE RECIDIVISM LITERATURE

INTRODUCTION

The massive growth of the prison system in the United States is a relatively recent phenomenon. After showing a consistent pattern of imprisonment from 1925 to 1975 (Zimring, 2007), state and federal prison populations have exploded. Various “get tough on crime” sentencing perspectives (Cullen, 2007) such as harsher penalties for drug and property offenses (Lynch, 2002), “three strikes” legislation (Benekos and Merlo, 1995), mandatory minimum sentences (Blumstein and Piquero, 2007), and truth-in-sentencing laws (Travis, 2004) have increased the number of incarcerated offenders by over 700 percent from 1970 to 2001 (Petersilia, 2003). As a consequence, over 1.5 million offenders were incarcerated in state and federal correctional facilities at the end of 2006 (Sabol, Minton, and Harrison, 2007) and the vast majority of the these offenders will someday return home to their communities (Travis, 2005).¹

One of the consequences of the massive growth of the American prison system is the unparalleled number of ex-offenders that are being released into the community after serving their sentences (Petersilia, 2003). Prisoner reentry is defined as “the process of leaving prison and returning to free society” (Visher and Travis, 2003:89) and more than
700,000 offenders throughout the United States are released from prison each year (Sabol and Couture, 2008). As a point of comparison, about 150,000 offenders were released from state and federal institutions in 1977 (see Travis, Solomon, and Waul, 2001). In response to the record-breaking number of released prisoners, various corrections officials and scholars began to create and examine prisoner reentry policies “out of intense concern that not enough was being done to prepare adult offenders to return home as contributing members of their communities” (Wilkinson, Rhine, and Henderson-Hurley, 2005:158).

Despite the importance and concern regarding the post-release outcomes of offenders released from prison, previous scholarly studies are somewhat narrow. The majority of research up to this point examines individual-level characteristics that predict recidivism. Beyond inclusion within tables and figures displaying descriptive statistics, contextual measures representing the communities offenders return to have been generally absent throughout the scholarly recidivism literature. More recently, several researchers have started to investigate the role of communities play in the reentry process (see Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007; see also Gottfredson and Taylor, 1986). These scholars criticize the absence of contextual variables in analyses of recidivism by citing a well-established literature detailing the importance of community factors for various types of criminal activity (Elliot et al., 1996; Krivo and Peterson, 1996; Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997; Sampson and Wilson, 1995; Wilson, 1996, 1987).

Scholarship that has begun to examine the influence of community effects on recidivism is part of an emergent literature. Indeed, this body of work provides a
meaningful contribution to the recidivism literature by actually including community variables in analytic models. However, the conclusions of these recent studies are somewhat limited due to several common analytic and methodological shortcomings grounded in ex-prisoner data sets. In particular, these prior studies fail to control for certain important individual-level characteristics, fail to differentiate between different measures of recidivism, fail to examine different levels of geography for community effects, and fail to incorporate a time to failure component within their dependent measures. This chapter investigates the effects of community contextual variables on the likelihood of reincarceration for a sample of ex-prisoners released on parole and post-release control supervision in Ohio. I add to the emergent literature examining community context and recidivism by constructing a unique data set intended to address the limitations of prior research and by providing a more sophisticated analysis of the role context plays during the reentry process by assessing the effects of different sized communities on several different recidivism measures.

Prior research has consistently found individual-level variables to be predictors of recidivism (Gendreau, Little, and Goggin, 1996). In order to properly assess the influence of community factors, studies must control for these important offender characteristics. One of the most important determinants of recidivism is an offender’s prior criminal history (Petersilia, 2003), but some research fails to include an offender’s entire criminal offending history (see Kubrin and Stewart, 2006) and most research fails to capture early contact with the criminal justice system (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). The current study controls for a more complete prior criminal history and age of onset with the criminal justice system.
Next, recidivism has been measured by scholars with different variables over different time periods (Maltz, 1984). Reincarceration is generally viewed as capturing behavior that is more serious in nature since it involves a return to prison. However, ex-offenders can return to prison for a new felony crime such as aggravated assault or robbery, or a technical violation of community supervision such as a failed drug test or an arrest for shoplifting. These two examples highlight the importance of differentiating between particular types of recidivism. A sole reliance on a measure of overall reincarceration captures behavior that can vary drastically in terms of seriousness. A review of the recidivism literature also indicates that prior studies have utilized multiple follow-up time periods (Baumer, 1997; Gendreau, Little, and Goggin, 1996; Petersilia, 2003), while some scholars contend that focusing on first year after release is the most critical (Petersilia, 2003). The current research attempts to resolve these two issues by analyzing multiple measures of reincarceration (overall reincarceration, reincarceration for a new felony offense, and reincarceration for a technical violation) over multiple follow-up time periods (one year and two years). The results emphasize the importance of these distinctions.

Several other methodological advantages set the current chapter apart from prior contextual research in the recidivism literature. The collection of studies that examine community context and recidivism has a rather limited range of variation at the community level. One particular study uses census tracts contained in one particular county (Kubrin and Stewart, 2006), while others rely on county-level data (Mears et al., 2008; Reisig et al., 2007). Studies are often constrained to a particular unit of contextual measurement based on the quality and availability of correctional data. I examine a
representative sample that reflects the actual population of ex-offenders released on community supervision in Ohio. Contextual variables are also analyzed at the census tract, zip code, and county levels. Last, I incorporate an event history analysis to assess the relationship between community factors and recidivism. Prior work that models the dependent measure as a binary outcome (Kubrin and Stewart, 2006; Mears et al., 2008) is less useful because logistic regression techniques can ignore the variation on both sides of the stopping point at the end of the study (see Allison, 1984). Event history methodology addresses this particular issue by providing a more precise estimation of determinants of recidivism because of its treatment and inclusion within the analysis of censored cases.

This chapter provides a more definitive explanation of the influence of contextual variables on recidivism. I will next provide brief background information on prisoner reentry and recidivism. I continue with a review of the prior scholarly literature on recidivism and discuss its limitations in more detail. I will then describe the construction of a data set built to examine community effects that address the limitations of prior research. Following a review of the results, I conclude with the implications this research has for future recidivism studies.

**BACKGROUND**

Prisoner reentry has become an essential topic of discussion “at the forefront of domestic public policy” (Kubrin and Stewart, 2006:166) as lawmakers, scholars, and criminal justice professionals attempt to create programs, support systems, and strategies to keep this increasing population of ex-offenders from returning to prison. The goals of
these policies are to help alleviate some of the problematic issues ex-prisoners face upon release by connecting them with community service providers (La Vigne et al., 2003), while also addressing other challenges such as finding legitimate employment and adequate housing (see Mears et al., 2008). However, these policies have implications for public safety as well because one of the primary goals of reentry philosophy is to reduce future criminal behavior (Kubrin and Stewart, 2006; Wilkinson, Rhine, and Henderson-Hurley, 2005). In fact, Ohio’s slogan for reentry is “Reentry means ‘Going Home to Stay’” (Wilkinson, Rhine, and Henderson-Hurley, 2005:160). The sheer numbers (both nationally and at the state level) suggest that the outlook is much bleaker.

In a review of several studies, Baumer (1997) reports that 22 to 47 percent of adult parolees released in the United States were returned to prison for a parole violation or commission of a new offense within two to five years after release (Beck and Shipley, 1989; Caulkins et al., 1996; Donnelly and Bala, 1994; Gottfredson and Mitchell-Herzfeldt, 1982; Joo, Ekland-Olson, and Kelly, 1995). A study conducted by the Bureau of Justice Statistics spanning three years and 15 states finds that 67.5 percent (of 272,111 former prisoners) were rearrested for a new offense and 51.8 percent were sent back to prison for a new offense or a technical violation (Langan and Levin, 2002).

Reducing recidivism is an extremely important policy goal given the deleterious effects prison incarcerations have on individual and community well-being. The failure of ex-offenders to successfully reintegrate back into society is especially problematic because repeated future periods of incarceration (e.g., recidivism) can be disruptive within the life course by interrupting patterns of employment (Uggen, 2000), blocking the obtainment of new educational and vocational skills (Petersilia, 1999; Travis, Solomon,
and Waul, 2001), and discontinuing relationships that may possibly lead to more stable family structures (Sampson and Laub, 1993). When these offenders are released from prison, they face a number of substantial challenges as they attempt to successfully transition back into the community.

Ex-prisoners exhibit a host of detrimental characteristics and many of these issues have not been addressed during their time of imprisonment (for a review, see Petersilja, 2003; see also Clear, 2007). These individuals generally possess a very low education, practically no viable employment or vocational skills, and many are carrying the burden of drug and alcohol addiction, mental illness, and physical disability (Western, Pattillo, and Weiman, 2004). Appropriate housing is also a challenge as most individuals need to rely on family and friends because the availability of transitional housing and halfway houses has declined due to increased expenditures for prisons (Travis, Solomon, and Waul, 2001), while other ex-offenders have restrictions on the ability to obtain public housing (Petersilja, 2003). Ex-prisoners sometimes struggle to secure legitimate employment because they do not possess the skills and education to find beneficial and meaningful work (Petersilja, 2003). Further, some of these individuals face barriers to employment on the basis of their criminal record (Pager, 2003). Many of these issues are further exacerbated by repeated returns to prison.

Recidivism can have an enormous social cost to communities as well. The constant mobility of offenders leaving and returning to communities can have dire consequences by interrupting and destabilizing important social networks (see Clear, 2007) and disrupting families (Western, 2006). More specifically, recidivism can lead to diminished levels of informal social control, the absence of pro-social networks,
withdrawal of community residents, rising levels of fear and mistrust, and economic and political alienation in these communities that contain large amounts of returned (and removed) offenders (Clear, 2007; Rose and Clear, 1998). Further, Hipp and Yates (2009) find that returning ex-prisoners increase the neighborhood crime rate. Some communities are affected more than others. For instance, 54 percent of male offenders released in Chicago were located in 7 of 77 communities examined (see Visher and Farrell, 2005).

PRIOR RESEARCH ON RECIDIVISM

INDIVIDUAL-LEVEL FACTORS AND RECIDIVISM

Despite the most recent scholarship, the majority of research to date investigates individual-level factors and their influence on recidivism. These studies have mainly focused on socio-demographic characteristics and criminal history variables (Beck and Shipley, 1989; Benedict and Huff-Corzine, 1997; Broadhurst and Maller, 1990; Jones and Sims, 1997; Listwan et al., 2003; Spohn and Holleran, 2002; Ulmer, 2001). Other research has also examined prison environment (Lanza-Kaduce, Parker, and Thomas, 1999), quality of employment (Shover, 1996; Uggen, 2000, 1999), and changes in life circumstances (Horney, Osgood, and Marshall, 1995). Some inconsistencies among these prior studies exist, but there is typically “no disagreement in the criminological literature about some of the predictors of adult offender recidivism” (Gendreau, Little, and Goggin, 1996:576). Age, gender, race, marital status, education, offense characteristics, prior criminality, and employment are some factors that have consistently been found to be predictors of recidivism.
There are very few studies that assess whether community factors increase the likelihood that released offenders will recidivate holding prior criminal history and other socio-demographic characteristics constant (see Kubrin and Stewart, 2006; Mears et al., 2008). Some scholars contend that this gap in research “is due, in part, to the belief that the risk of reoffending is individually determined” (Kubrin and Stewart, 2006:166; see also Mears et al., 2008). This argument seems logical given the strong and consistent empirical support of certain individual-level factors that predict recidivism (Gendreau, Little, and Goggin, 1996). However, another possibility for the dearth of studies analyzing community factors and recidivism is a lack of relevant data. Correctional agencies across the country generally do not have the time or appropriate funding to ensure the integrity of their post-release address data. As such, data quality and availability seems the more likely cause of the absence community factors in the recidivism literature given well-established linkages between community context and various crime related outcomes (see also Sampson and Wilson, 1995). Several researchers have attempted to overcome this problem and include contextual variables in their research. These studies are examined below.

COMMUNITY CONTEXT AND RECIDIVISM

A small group of studies have recently introduced contextual variables into analyses of recidivism (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007) citing a sizable literature that indicates the importance of community factors for examining other various types of criminality (Elliot et al., 1996; Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997; Silver, 2000; Velez, 2001; for a review see Sampson, Morenoff, and Gannon-Rowley, 2002). As Kubrin and Stewart note
(2006:167), communities could be “potentially even more important for understanding why former offenders offend again,” but analyses of ecological factors and recidivism still remain relatively underexplored. Community conditions may play an especially significant role in the reentry process as ex-offenders released into more detrimental contexts with concentrated disadvantage and reduced opportunities in the local labor market may be at a higher risk for criminal behavior and reincarceration.

Ex-prisoners are not all being released to the same areas and different communities will offer different qualities of life (see also Kubrin and Stewart, 2006). It is therefore essential to capture an adequate representation of the communities these individuals are returning to. In particular, ex-offenders released into disadvantaged contexts may be especially at-risk. For instance, the social disorganization perspective contends that disadvantage reduces the ability of local communities to realize common values and to effectively control the behavior of its residents leading to increased levels of crime (Bursik, 1988; Kornhauser, 1978).² These communities have attenuated mechanisms of informal social control because of the withdrawal of community residents stemming from rising levels of fear and mistrust (Skogan, 1990). Further, these communities are characteristic of lower access to beneficial employment opportunities and less visibility to legitimate role models (Wilson, 1987).

If the social relationships in these areas are weak and residents in these areas are less engaged (see Bellair, 1997), released offenders may have trouble successfully reintegrating back into society because of the significant challenges they already face post-release. Developing pro-social relationships and networks is necessary in order to facilitate health care, treatment and services, and access to adequate housing (Kubrin and
Stewart, 2006; Petersilia, 2003). Perhaps even more critical is the availability jobs upon release. Access to legitimate employment opportunity is essential for ex-offenders because “for most returning prisoners, a successful postrelease transition to a conventional lifestyle requires stable employment” (Visher and Travis, 2003:97). The opportunity for these positive networks, social services, and employment opportunities are likely unavailable or diminished in more disadvantaged areas. Further, ex-offenders returning to these contexts are immediately challenged with exposure to the high-risk locations, peers and acquaintances, and situations that may have contributed to their prior criminal activity in the first place (Travis, Solomon, and Waul, 2001).

Some scholars have long recognized the need to actually examine the role community context plays in predicting recidivism (Gottfredson and Taylor, 1988; Kubrin and Stewart, 2006; Petersilia, 2003; Visher and Travis, 2003), but this realization initially resulted in very few empirical studies that actually modeled contextual variables in multivariate analyses. In some early work, Gottfredson and Taylor (1988, 1986) looked at parolees returning to Baltimore neighborhoods and found no direct effects of neighborhood context on recidivism (see also Kubrin and Stewart, 2006; Mears et al., 2008). Uggen (1999) looks at the effect of quality employment in relation to the self-reported criminal activity of a sample of high-risk ex-offenders from 1975-1979. The results suggest that individuals with lower quality jobs are more likely to reoffend, but Uggen (1999) finds no effect for characteristics of the local labor market (e.g., the unemployment rate).

In the most sophisticated analysis to that point, Kubrin and Stewart (2006) highlight the importance of considering the neighborhoods ex-offenders are returning to
and focus on a sample of individuals on community supervision in a county surrounding (and containing) Portland, Oregon. Recidivism is measured as rearrest during a one year time period. Controlling for important offender characteristics and measuring context at the census tract level, they find that residence in disadvantaged neighborhoods increases the likelihood of rearrest, while in a separate model, residence in neighborhoods with large amounts of affluent families relative to poor families reduces the likelihood of rearrest (Kubrin and Stewart, 2006:184).

Next, Mears and colleagues (2008) examine the influence of various indicators of social ecology on recidivism holding individual-level characteristics constant. They also assess whether the influence of these ecological factors will be greater among certain segments (young, nonwhite males) of ex-offenders. In particular, these scholars focus on the direct effects of resource deprivation and racial segregation, while examining several interaction effects including some cross-level interactions. They analyze data based on male offenders released from Florida state prisons during January of 1998 to June of 2001 and incorporate county data to measure contextual effects (see Mears et al., 2008). Recidivism is measured as a felony conviction resulting in community supervision, jail terms, or prison incarcerations during a two year time period. The analysis finds that resource deprivation leads to higher levels of recidivism for violent offenses, but lower levels of recidivism for drug offenses. Mears and colleagues (2008) find no direct effect of racial segregation on the violent, property, or drug recidivism measures. The results for examining cross-level interactions are mixed.

In a similar study using a version of the same data set, Reisig and colleagues (2007) look at racial inequality in race-specific models. Again, county data is used for
contextual effects predicting reconviction during a two year span. The results indicated that racial inequality increased the likelihood of reconviction for black males and that racial inequality “amplified the effects of criminal history on reconviction” (Reisig et al., 2007:427).

**LIMITATIONS OF COMMUNITY CONTEXT AND RECIDIVISM RESEARCH**

Recidivism studies are starting to utilize more appropriate data sets by including geocoded information to examine the effects of neighborhoods and communities. However, this body of work is still in its infancy. The conclusions of these studies are somewhat tempered due to several analytic, methodological, and data shortcomings. This section discusses these limitations in more detail and describes how the current study will move beyond these shortcomings to provide a more thorough understanding of the effects of contextual variables on recidivism.

The most consistent empirical support of the determinants of recidivism has been found at the individual-level. Research therefore must examine if contextual effects are present after controlling for individual factors. One of the most important individual-level characteristics is an offender’s prior criminal history. Previous studies find prior criminal history to be among the “significant and potent predictors of recidivism” (Gendreau, Little, and Goggin, 1996:588). Some evidence indicates that larger prior offending histories lead to more recidivism (see Petersilia, 2003), while other studies have noted the importance of capturing early contact with the criminal justice system (see Gendreau, Little, and Goggin, 1996). Although most prior studies examining community context and recidivism include some measures of criminal history, some research fails to capture an ex-prisoner’s entire criminal offending history (see Kubrin and Stewart, 2006)
and most research fails to include measures of early contact with the criminal justice system (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). The current study overcomes these issues by controlling for a more complete prior criminal history and age of onset with the criminal justice system.

Scholars have long noted that recidivism can be captured in multiple ways (Maltz, 1984). Common examples of recidivism are rearrest (Kubrin and Stewart, 2006), reconviction (Mears et al., 2008; Reisig et al., 2007), and reincarceration (Joo, Ekland-Olson, and Kelly, 1995) and these dependent measures are often examined over multiple time periods (e.g., one year, two years, three years). An issue with having multiple measurements of recidivism is having multiple explanations of what recidivism actually means. For instance, a rearrest variable can capture an arrest for a violent crime, but it also contains potential behavior that is less serious in nature such as arrests for disorderly conduct or petty theft (e.g., misdemeanors). Reincarceration is generally seen as capturing more serious behavior because it involves a return to prison, but the specific nature of reincarceration is also an important distinction. Ex-offenders can return to prison for a new felony crime or a technical violation of community supervision. Prison revocation for technical offenses can occur for a variety of situations involving the failure to adhere to the specific stipulations of community supervision. These can include, but are not limited to, failed drug tests, lack of employment, missing an appointment with a parole officer, rearrest, or changing residences without permission (Petersilia, 2003). For the purposes of content validity and given the public safety emphasis of many reentry policies (Wilkinson, Rhine, and Henderson-Hurley, 2005), it is essential to differentiate between the seriousness of recidivism measures such as isolating returns to prison for
new felony crimes versus returns for technical violations. Multiple follow-up time periods have also been prevalent throughout prior recidivism research (Baumer, 1997; Gendreau, Little, and Goggin, 1996; Petersilia, 2003). However, several scholars contend that looking at the first year after release is most appropriate for recidivism outcomes (Petersilia, 2003; see also Visher and Travis, 2003). In order to highlight these distinctions, I examine overall reincarceration, reincarceration for a new felony offense, and reincarceration for a technical violation for both a one year follow-up time period and a two year follow-up time period.

Recidivism research has taken an important step by beginning to incorporate contextual variables (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007), but the literature would benefit by a more complete and thorough examination of different communities. Kubrin and Stewart (2006) use census tracts that are located in one particular county in Oregon. Mears and colleagues (2008) and Reisig and colleagues (2007) use counties within the state of Florida. Although many census tracts can exist within counties, offenders released into tracts in one particular county may not be an entirely representative sample. Further, some research has found that “structural characteristics differ in their effects based on the level of aggregation employed” (Hipp, 2007:659). It would be useful to compare the effects of community factors on recidivism across multiple levels of analysis since studies are sometimes restricted to one level of geography due to the quality and availability of correctional data. The current study moves beyond prior work by examining a representative sample that reflects the actual population of ex-offenders released on community supervision in Ohio and by examining
the influence of contextual variables at the census tract, zip code, and county levels of analysis.

Finally, community context and recidivism research has generally treated the dependent measure (e.g., recidivism) as a binary outcome (see Kubrin and Stewart, 2006; Mears et al., 2008). Studies that examine recidivism are constrained by their particular follow-up time periods. These time periods are often “arbitrary” because they merely denote an artificial stopping point for the study (Allison, 1984:10). Analyses that measure recidivism as a dummy variable may be inappropriate because this particular technique (e.g., logistic regression) ignores the variation on both sides of the stopping point that marks the end of the study (see Allison, 1984). More specifically, logistic regression cannot account for recidivism that occurs beyond the follow-up time period (e.g., right censoring). Event history methodology provides a more precise estimation of the determinants of recidivism because of its treatment and inclusion within the analysis of these censored cases. The current study utilizes event history analysis to assess the relationship between community context and recidivism. This particular analytic strategy is discussed more fully below.

In summary, a large body of research highlights the importance of the relationship between community factors and crime (for a review, see Sampson, Morenoff, and Gannon-Rowley, 2002). Based on the foundation of this research coupled with the preliminary results of more recent recidivism studies that actually model community effects, I expect contextual measures to influence recidivism net of individual-level controls in the current chapter as well. In general, I expect residence in contexts with higher levels of disadvantage (both measures, see below) and unemployment to be
associated with an increased likelihood of reincarceration. However, I also expect that the exact nature of these associations may differ depending on how the recidivism outcome and the size of the community is measured (see also Hipp, 2007). The next section explains the construction of a unique data set from a variety of data sources designed to test these particular possibilities.

DATA, METHODOLOGY, AND ANALYTIC STRATEGY

DATA SOURCES AND DATA COLLECTION PROCESS

The foundation for the data set is the PRC/Parole Behavior study. This data set was originally created by the Bureau of Research at the Ohio Department of Rehabilitation and Correction (DRC). The sample selection, along with basic demographic and social history information, are utilized from the original data file provided by DRC. Other department resources are also used to supplement the data set in order to create the dependent measures, investigate contextual effects, and to obtain a more complete list of offender characteristics.

Reincarceration information is obtained from DRC’s Departmental Offender Tracking System (DOTS) which is akin to an electronic search engine for information on current and former prisoners. This system can track offender or ex-offender (on supervision) movement through various prison, jail, and supervision statuses. This particular data is collected over a two year time period (and is analyzed over both one year and two year time periods).

A substantial primary data collection effort is undertaken to obtain post-release address information, to account for missing values among the electronic variables
originally provided by DRC, and to collect a number of additional individual-level variables. The information is hand-coded from DRC’s inmate information records. This data source comprises microfiche copies of paperwork resulting from various processing through the criminal justice system including arrest reports, court records, pre-sentence investigations, institutional classification and behavior, and other miscellaneous information.

The main goal of the primary data collection is to confirm the post-release address information of each ex-prisoner in order to investigate contextual effects. A valid address enables each individual to be assigned a proper geocode (or the latitude and longitude coordinates of each home address). Information from the 2000 Decennial Census is then attached to the data set to create the contextual variables.

The educational attainment of each ex-prisoner contains large amounts of missing data in the original file. This information is also supplemented with the primary data collection effort. In addition toremedying problems of missing data, another goal of the primary data collection is to collect a more extensive criminal history of each individual because the PRC/Parole Behavior study only accounts for information concerning the offense (or offenses) leading to the most recent incarceration. As such, a widespread search of offender records allows educational attainment, prior criminal activity (in terms of counts of various offense types), and age at initial contact with the criminal justice system to be added to the data set.

SAMPLE

The original sampling frame of the PRC/Parole Behavior study consists of prisoners released onto parole or post-release control (PRC) during October through
December of 2000. Specifically, these inmates are first-time releases from their original sentences and therefore have not been revoked or sanctioned back to prison on their current offense. The number of cases in the population subject to random selection is 1,991 releases.

All of the female cases subject to random selection are included in the sample, and males are oversampled by ten percent to account for possible problems with missing data. The male subsample is further stratified into groups of counties based on population size (sorted into three particular population tiers). Males are disproportionately sampled by county population (across three population tiers) and by release type (parole versus PRC). A weight variable is attached to the data file to account for the disproportionate sampling technique. The weight variable ensures that the distribution of the sample reflects the normal distribution of the actual Ohio population released on community supervision.

The number of observations in the original sample is 1,171 releases. Additional cases are removed because of missing file information (e.g., no social and criminal histories) or a lack of relevant data (e.g., bad address information, moved out of state, released to an immigration detainer). The final sample consists of 1,036 ex-prisoners on supervision (906 males and 130 females).

**VARIABLE MEASUREMENT**

**Dependent Measures**

Recidivism is conceptualized as time to reincarceration using a continuous time measure in days. Event history analysis requires a particular data structure for the dependent measure (see Allison, 1984): reincarceration (1 = yes, 0 = no) and the number
of days until failure (i.e., continuous time). The DOTS system specifically yields information in date format that indicates whether an ex-offender has returned to prison and whether that return to prison stems from a new felony offense or a technical violation of community supervision. The time to reincarceration dependent variable is analyzed in three ways: overall reincarceration, reincarceration for a new felony offense, and reincarceration for a technical violation. This information is examined over a one year follow-up time period and a two year follow-up time period.

Control Measures

The control measures included in the analysis have consistently been found in the literature to be predictors of recidivism (Baumer, 1997; Gendreau, Little, and Goggin, 1996; see also Petersilia, 2003) and can be consistently and reliably coded from DRC’s electronic and microfiche files. Age is measured as age in years. The analysis accounts for gender with a Male dummy variable (females are the reference group) and accounts for race with an African American dummy variable (whites are the reference group). A High school graduate dummy variable is also included to capture educational attainment (1 = high school diploma, successful completion of a GED, or higher, 0 = less than high school graduate or equivalency).

Criminal history variables are another important set individual-level controls. Age of onset reflects the age (in years) of first contact with the criminal justice system. This particular variable is often missing in analyses of recidivism. The next type of criminal history variables control for an individual’s entire offending history. Offenses against persons, Sex offenses, Property offenses, and Drug offenses reflect the total number of prior convictions for each offense category that lead to community
supervision, jail terms, or prison incarcerations. The Ohio Revised Code is referenced to help place certain offenses into each particular offense category (see Ohio Criminal Law Handbook, 2004). The complete list of all the offenses that comprise each particular offense category is located in Appendix A.

The final control measures depict the type supervision being employed by the Adult Parole Authority (see also Kubrin and Stewart, 2006). The two supervision dummy variables included in the analysis are: High supervision, which consists of intensive supervision and high supervision, and Moderate supervision, which consists of medium supervision. The reference group is ex-prisoners placed on low supervision and monitored time.

**Contextual Measures**

Contextual measures have been generally absent throughout the recidivism literature minus a few important exceptions. Studies that do capture community characteristics are sometimes constrained to one particular level of geography due to the quality and availability of correctional data. As a result, contextual measures in the present research are examined across multiple levels of geography to compare the effects of community factors at different levels of aggregation (see Hipp, 2007). The ex-prisoners in the sample are released into 670 census tracts, 319 zip codes, and 72 counties throughout Ohio.

The contextual measures are derived from the 2000 Decennial Census. Kubrin and Stewart (2006:170) note that “a sizeable literature underscores the importance of assessing contextual effects, particularly neighborhood socioeconomic status, which consistently emerges as an influential factor.” However, the availability of jobs is one of
the most critical and immediate concerns of the reentry transition (Visher and Travis, 2003). As such, I attempt to isolate this distinction by examining two particular measures of disadvantage and a measure of unemployment in separate models, while controlling for important individual-level characteristics.

*Disadvantage without unemployment* is a principal components factor scale comprising the percentage below the poverty line, the percentage of female-headed households, and the percentage of high school dropouts. This is a more global measure of disadvantage capturing a “multidimensional cluster of traits” (Elliott et al., 1996:392).

*Disadvantage with unemployment* is a principal components factor scale comprising the percentage below the poverty line, the percentage of households on public assistance, and the percentage of unemployed individuals among the civilian labor force. This scale focuses more on the socioeconomic status of the community that prior work has found to be a significant predictor of recidivism (Kubrin and Stewart 2006; see also Sampson, Morenoff, and Gannon-Rowley, 2002). The reliability of nearly all of the disadvantage scales at each level of geography produce Cronbach’s alpha coefficients of .82 and above. The lone exception is the global measure of disadvantage at the county-level. This particular scale has a Cronbach’s alpha coefficient of .66.

Although the literature on the effects of the unemployment rate and crime is mixed (see Crutchfield and Pitchford, 1997), unemployment is isolated and analyzed independently as a broad barometer of job opportunity to gauge the importance of securing employment for ex-offenders. A more sophisticated analysis of labor market opportunity among ex-prisoners is undertaken in the chapters that follow. *Percent*
**unemployed** reflects the percentage of unemployed individuals among the civilian labor force.

**ANALYTIC STRATEGY**

The current study uses event history analysis to assess the relationship between community context and recidivism. In particular, a Cox proportional hazards model is employed to examine the various time to failure models. The Cox model is a non-parametric model that is most appropriate using a continuous time measure (e.g., number of days to reincarceration). It is extremely useful because the partial-likelihood estimation technique allows for the creation of a model that is not restricted to fit a particular pre-determined shape. More specifically, the Cox model is ideal for event-based analyses more concerned with the effects of the particular explanatory measures versus the actual shape of the distributional form (see Allison, 1984:35).

The Cox proportional hazards model provides a more precise estimation of determinants of recidivism because of its treatment and inclusion within the analysis of censored cases. In recidivism studies, right censoring occurs because of the arbitrary stopping point at the end of the follow-up time period. It is possible that failure could occur beyond the parameters of the study. To reduce the impact these censored cases have on the estimates, the Cox model puts more weight towards the cases that fail more quickly and thus attenuates the influence of the failed cases at the boundary of the follow-up time period (see also Cleves, Gould, and Gutierrez, 2004).

Some ex-offenders are returning to the same locales at each level of geography. This means that the individual cases are nested within particular census tracts, zip codes, or counties. The clustering of these cases can lead to correlated error terms across
observations which underestimate standard errors increasing the odds of significant, but misleading effects (see Guo & Zhao, 2000). In the analyses that follow, I correct for clustering using the cluster command in STATA (Stata Press, 1997).

**RESULTS**

Basic descriptive statistics for the dependent measures, control measures, and contextual measures are listed in Tables 2.1 and 2.2. Almost 21 percent of the sample has been returned to prison after a one year follow-up, while 34.6 percent of the sample has been reincarcerated after two years. After one year post-release, more ex-offenders return to prison for technical violations (12.9%) than for new felony offenses (8.0%). The opposite is the case two years after release with slightly more ex-offenders reincarcerated for a new felony crime (17.8% versus 16.8% for a technical violation). The descriptive statistics presented in Tables 2.1 and 2.2 for both control measures and contextual measures are weighted.

All of the models in Tables 2.3, 2.4, and 2.5 control for important individual-level characteristics, but these coefficients are not presented due to the sheer number of models presented and in order to focus the discussion on the contextual variables of interest. As such, Tables 2.3, 2.4, and 2.5 present regression coefficients and standard errors from the event history models for the contextual measures only. Each particular table examines a different outcome measure: overall reincarceration (Table 2.3), reincarceration for a new felony offense (Table 2.4), and reincarceration for a technical violation (Table 2.5). Each table also examines the various outcome measures for a one year follow-up time period (Models 1-9) and a two year follow-up time period (Models
and examines contextual measures at the census tract level (Models 1, 2, 3, 10, 11, and 12), zip code level (Models 4, 5, 6, 13, 14, and 15), and county level (Models 7, 8, 9, 16, 17, and 18). Variance inflation factors indicate that multicollinearity is not a problem in any of the models.

Table 2.3 examines the Cox proportional hazards models looking at the overall reincarceration dependent measure. Models 2 and 3 indicate that disadvantage based solely on socioeconomic status factors and the unemployment measure influence the likelihood of reincarceration controlling for individual-level characteristics during a one year follow-up in more localized contexts (e.g., census tracts). Models 11 and 12 offer the same findings for the two year time period. The contextual measures examined here are not significant predictors of reincarceration at the zip code or county level.

Since the measure of overall incarceration can actually represent a broad range of seriousness, Table 2.4 analyzes more serious behavior by modeling the risk of reincarceration for a new felony offense. During the first year after release, the disadvantage with unemployment measure and the unemployment measure are important indicators of felony crime recidivism. These effects are present whether looking at census tracts, zip codes, or counties, and as such, transcend more localized areas such neighborhoods (as measured by census tracts) to more intermediate and larger proxies of communities (as measured by zip codes and counties). The effects of larger contextual measures are consistent with Mears and colleagues (2008) who found some support for resource deprivation and its influence on various types of recidivism at the county level of analysis. Additionally, the disadvantage without unemployment measure tapping a
wider range of community disadvantages is a significant predictor of felony crime recidivism at the zip code level.

The effects of the contextual measures examined in Table 2.4 are almost nonexistent when the follow-up time period is increased to two years. Although all the direction of the effects are all positive, the only significant predictor of recidivism for a new felony offense holding individual characteristics constant is unemployment at the county level. Despite this lone exception, it seems that contextual measures examined here are most relevant in determining serious felony recidivism during the first year post-release.

Table 2.5 indicates that contextual measures do not significantly predict the risk of reincarceration for a technical violation of community supervision. This pattern is seen across all levels of aggregation for the contextual measures and during both follow-up time periods. Reincarceration for failing to adhere to the specific stipulations of community supervision can occur for a variety of reasons including failed drug tests, lack of employment, missing an appointment with a parole officer, rearrest, or changing residences without permission. It appears that the community factors captured here are inconsequential for predicting failure based on these types of behavior on community supervision.

**DISCUSSION**

With an overwhelming number of offenders being released from prison each year (Travis, 2005), a renewed importance has been given to strategies to help ex-offenders successfully reintegrate into society (Clear, 2007). In fact, reentry policies were
mentioned in the President’s 2004 State of the Union address (Mears et al., 2008) and were the subject of hearings before Congress (Subcommittee on Crime, Terrorism, and Homeland Security, 2005). In response to the importance and concern given prisoner reentry, a new wave of reentry and recidivism-related scholarly research has emerged as well.

The majority of prior studies that analyze the determinants of recidivism have been generally focused at the individual-level. Indeed, this work has provided some of the most consistent and strongest empirical support of the predictors of recidivism (see Gendreau, Little, and Goggin, 1996). Scholars are just beginning to examine the role communities play in whether ex-offenders return to prison (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007) referencing a well-established literature that highlights the importance of context (Shaw and McKay, 1942; Wirth, 1938) especially in relation to criminal activity (Elliot et al., 1996; Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997; Sampson and Wilson, 1995; Silver, 2000; Velez, 2001; see also Sampson, Morenoff, and Gannon-Rowley, 2002). However, the small number of studies assessing community context and recidivism, and the common problems associated with ex-prisoner data sets make the conclusions of this emergent literature less definitive. The purpose of this chapter is to address these shortcomings and expand the recidivism literature to provide greater insight concerning the role the communities play during the reentry process through several data and methodological advantages. In particular, the current study moves beyond prior work by controlling for a fuller range of individual-level characteristics (e.g., criminal history variables), by assessing multiple
measurements of recidivism, by examining different levels of geography for community
effects, and by modeling time to failure dependent measures.

This chapter finds that contextual factors are important predictors of
reincarceration after controlling for individual-level characteristics. However, the results
of the current study also indicate that the effects of community variables on recidivism
are clearly different depending on the particular type of recidivism outcomes, the level of
geography for the community measures, the length of the follow-up time period, and the
particular type of contextual variables. Initially, these findings highlight the need of
recidivism studies to capture similar behavior within its dependent measures. Some
dependent measures can potentially contain behavior that vary drastically in seriousness.
For instance, the overall reincarceration dependent variable can capture behavior
considered extremely serious such as felony level robbery or assault offenses, but also
behavior that may be considered less serious in nature such as missing an appointment
with a parole officer or failing a drug test. Rearrest measures provide a similar problem.
Separating these two types of behavior within dependent variables is especially important
given the multifarious goals of reentry policies such as connecting offenders with
treatment and counseling services (La Vigne et al., 2003), and also reducing future
criminal behavior (Kubrin and Stewart, 2006; see also Wilkinson, Rhine, and Henderson-
Hurley, 2005).

Aside from the clear benefits of improved content validity, the results suggest the
distinguishing between reincarceration for a new felony crime versus reincarceration for
a technical violation yields important differences among community effects. The
influence of disadvantaged contexts on serious recidivism is clearly seen in the results.
This is consistent with some prior work examining resource deprivation and violent recidivism (Mears et al., 2008). In contrast, contextual measures do not influence the risk of reincarceration for a technical violation of community supervision in the current analysis. However, this finding is not surprising given the nature of behavior captured by technical violations. Due to the staggering number of offenders already incarcerated, more recent attention has been given to developing systems of progressive sanctions to reduce the dependence on incarceration for addressing problems during community supervision (Martin and Van Dine, 2008). However, many parole agencies were still operating from a law enforcement perspective as opposed to a treatment-oriented perspective in the late 1990s and early 2000s (see also Petersilia, 1999). Petersilia (2003:11) comments that departments that handle community supervision “have developed a prevailing culture that emphasizes surveillance over service.” Indeed, this may have been the case in Ohio. The high supervision dummy variable is positive and significant ($p \leq .001$) in every model in Table 2.5 (coefficients not presented) suggesting supervision type or other individual-level characteristics may be more relevant for predicting returns to prison for community supervision failure than the community variables that focus the present research.

Other valuable components to the current chapter are modeling different levels of geography for the community measures and examining different follow-up time periods. Indeed, Mears and colleagues (2008:329) point out the importance of capturing various contextual measures at various “units of analysis” in order to “identify consistencies across various measures of ecology and levels of aggregation.” First off, disadvantage with unemployment included and unemployment separately predict overall
reincarceration in more localized areas such as neighborhoods (as measured by census tracts), but these effects are not significant at the zip code and county levels. However, consistencies begin to emerge when the dependent variable isolates more specific types of reincarceration. The influence of poorer contexts on serious recidivism seems to transcend more localized areas to larger proxies of communities (as measured more broadly by zip codes and counties). More specifically, disadvantage with unemployment and percent unemployed predict reincarceration for a new felony offense at the census tract, zip code, and county levels, and disadvantage without unemployment predicts reincarceration for a new felony offense at the zip code level. It appears that the economic conditions of both the local neighborhood and the broader community influence new felony offense recidivism beyond individual-level factors. Again, contextual measures are not significant regardless of the levels of aggregation for the community variables when looking at reincarceration for community supervision failure.

Further, Petersilia (2003:141) commenting on a large scale BJS study notes that “the first year after release from prison is the period when most recidivism occurs.” The present research also demonstrates the importance of the length of the follow-up time period. With a few minor exceptions, the models consistently show that the first year of release is most relevant for predicting reincarceration with contextual variables.

The results also indicate that the particular type of contextual measure included in the analysis matters. In general, the disadvantage measure based in socioeconomic status and the independent effect of unemployment are the most consistent predictors of recidivism especially in terms of reincarceration for a new felony offense. The more global measure of disadvantage that moves away from a strict reliance on economic
factors and captures a wider array of disadvantages is a less useful predictor in these particular reincarceration models. This is not to say that more multidimensional disadvantage scales are unimportant. These traditional disadvantage measures have been found to impact crime through their influence on informal social control (Elliot et al., 1996; Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997). In addition to being a significant predictor of felony crime reincarceration at the zip code level, the disadvantage without unemployment measure exhibits positive and significant effects at the $p \leq .10$ level (not presented) in several of the models predicting overall reincarceration and reincarceration for a new felony offense as well.

However, the consistent effects of socioeconomic-based disadvantage and unemployment in the results may lend preliminary support to the immediacy and importance of finding a job during the reentry transition. The current analysis analyzed unemployment independently in order to isolate the importance finding meaningful work for ex-prisoners. Although some prior studies have used unemployment as a broad scale proxy for employment opportunity, unemployment is a primitive measure at best. Labor market opportunity for ex-offenders given their limited (or lack of) job skills and disrupted work histories is much more narrow. Further, prior studies examining the unemployment rate and crime has yielded inconsistent results (for a review, see Crutchfield and Pitchford, 1997). Drawing on the urban sociology literature (see Kasarda, 1988) and the seminal work of Wilson (1996, 1987), research has documented the importance of examining more specific conceptions of opportunity and more sophisticated measurements of labor market structure in relation to crime (Crutchfield, 1989; Crutchfield and Pitchford, 1997; Bellair and Roscigno, 2000; Krivo and Peterson,
2004; Lee and Shihadeh, 1998; Shihadeh and Ousey, 1998). Ex-prisoners generally have trouble finding employment (Petersilia, 2003; Visher and Kachnowski, 2007), but some recent data indicate that certain types of employers are willing to hire ex-prisoners (Holzer, Raphael, and Stoll, 2007; Pettit and Lyons, 2007). Future research needs to explore and analyze whether some particular labor markets are more conducive for ex-offenders to find work. This particular idea is explored in Chapter 3 and Chapter 4.
NOTES FOR CHAPTER 2

1. The small percentage of those that do not return home to their communities are prisoners who are executed, serving life sentences without parole, or die of natural causes in prison.

2. Social disorganization theory is used here to introduce the importance of capturing an adequate representation of the communities of release for ex-prisoners. A more developed theoretical interpretation and analytical exploration of why communities are important for ex-prisoners in particular is more fully discussed in both Chapter 3 and Chapter 4.

3. The majority of research that documents the importance of communities up to this point present descriptive statistics of particular geographical locations where ex-offenders are returning after release from prison (La Vigne et al., 2003; Street, 2002; Visher and Farrell, 2005). For instance, the Chicago Urban League reports that “the city’s top 15 zip codes for prison releases are very nearly (and in nearly the same exact order) identical to the top 15 zip codes for prison population” (Street, 2002:5).

4. These felony convictions are further disaggregated by type: violent reconviction, drug reconviction, and property reconviction.

5. The effect of resource deprivation on property reconviction is not significant.

6. Additionally, the rearrest measure is somewhat problematic because it can be especially influenced by particular police enforcement policies and practices. During the War on Drugs, for instance, it is quite possible that some innocent individuals were arrested as police departments “promoted racial profiling as an effective policing tactic to detect drug offenders” (Engel and Calnon, 2004:50).
7. The original purpose of the PRC/Parole Behavior study is to examine the nature and scope of post-release supervision violations with a focus on the prevalence and severity of these events. An additional goal is to ascertain whether the Adult Parole Authority (APA) in Ohio is consistent and uniform in following basic guidelines regarding its response to supervision violations, while also focusing on possible variation in the frequency and disposition of incidents by APA region and ex-prisoner release type.

8. Post-release control is a period of community supervision after release from prison that is authorized by Ohio Senate Bill 2 (see La Vigne et al., 2003) which effectively abolished parole for most offenses committed after July 1, 1996. Offenders will serve the entirety of their prison sentence in prison with no early release. PRC supervision is mandatory for some serious offenses and discretionary for all other types of crimes in Ohio.

9. In the reincarceration for a new felony offense analysis, ex-offenders that are returned to prison for a technical violation are censored at the date they are reincarcerated, but coded 0 because they did not commit a new felony. In the reincarceration for a technical violation analysis, ex-offenders that are returned to prison for a new felony offense are censored at the date they are reincarcerated, but coded 0 because they were not returned to prison for a technical violation.

10. The race categories collected by the Ohio Department of Rehabilitation and Correction at intake are extremely limited. As a result, only 25 offenders (or less than 2 percent of the original sample) comprised the other racial categories making these comparisons less useful. These particular offenders have been removed from the analysis.
11. These convictions exclude offenses where the sentencing resulted solely in fines or court fees. In general, the convictions resulting in fines, costs, or fees were relatively minor offenses.

12. Not all of the offenses included in each offense category are crimes committed in the state of Ohio. The Ohio Revised Code is a useful reference tool for gathering the description and meaning of certain offenses, especially for the purpose of placing crimes that occurred outside of Ohio into the appropriate offense categories. This is especially true when criminal history records merely listed offense names without providing any details surrounding the crime.

13. Individuals on monitored time generally do not have to report to parole officers and the supervision merely consists of random criminal history checks.

14. The possible influence of key individual-level variables is developed and interpreted more completely in the chapters that follow.
### Dependent Measures

<table>
<thead>
<tr>
<th></th>
<th>One Year Follow-Up</th>
<th>Two Year Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Overall reincarceration</td>
<td>217</td>
<td>20.9</td>
</tr>
<tr>
<td>Reincarceration for a new offense</td>
<td>83</td>
<td>8.0</td>
</tr>
<tr>
<td>Reincarceration for a technical violation</td>
<td>134</td>
<td>12.9</td>
</tr>
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### Control Measures

<table>
<thead>
<tr>
<th>Control Measures</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>32.801</td>
<td>9.789</td>
<td>18</td>
<td>83</td>
</tr>
<tr>
<td>Male</td>
<td>.924</td>
<td>.266</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>African American</td>
<td>.553</td>
<td>.497</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>High school graduate</td>
<td>.476</td>
<td>.500</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Age of onset</td>
<td>18.493</td>
<td>6.484</td>
<td>6</td>
<td>68</td>
</tr>
<tr>
<td>Offenses against persons</td>
<td>1.182</td>
<td>1.262</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Sex offenses</td>
<td>.152</td>
<td>.534</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Property offenses</td>
<td>1.663</td>
<td>2.386</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Drug offenses</td>
<td>1.123</td>
<td>1.652</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>High supervision</td>
<td>.285</td>
<td>.452</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Moderate supervision</td>
<td>.482</td>
<td>.500</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Descriptive statistics for control measures are weighted.

**Table 2.1. Descriptive Statistics for Dependent Measures and Control Measures.**
Table 2.2. Descriptive Statistics for Contextual Measures.

<table>
<thead>
<tr>
<th>Contextual Measures</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantage without unemployment (census tract level)</td>
<td>-.000</td>
<td>1.005</td>
<td>-1.774</td>
<td>3.593</td>
</tr>
<tr>
<td>Disadvantage without unemployment (zip code level)</td>
<td>-.016</td>
<td>1.000</td>
<td>-1.751</td>
<td>3.235</td>
</tr>
<tr>
<td>Disadvantage without unemployment (county level)</td>
<td>.007</td>
<td>1.026</td>
<td>-3.868</td>
<td>2.933</td>
</tr>
<tr>
<td>Disadvantage with unemployment (census tract level)</td>
<td>-.007</td>
<td>1.011</td>
<td>-1.458</td>
<td>4.969</td>
</tr>
<tr>
<td>Disadvantage with unemployment (zip code level)</td>
<td>-.021</td>
<td>.996</td>
<td>-1.376</td>
<td>3.912</td>
</tr>
<tr>
<td>Disadvantage with unemployment (county level)</td>
<td>-.004</td>
<td>1.034</td>
<td>-2.541</td>
<td>4.582</td>
</tr>
<tr>
<td>Percent unemployed (census tract level)</td>
<td>10.466</td>
<td>7.505</td>
<td>0</td>
<td>50.196</td>
</tr>
<tr>
<td>Percent unemployed (zip code level)</td>
<td>9.016</td>
<td>5.954</td>
<td>1.136</td>
<td>37.901</td>
</tr>
<tr>
<td>Percent unemployed (county level)</td>
<td>5.227</td>
<td>1.122</td>
<td>2.271</td>
<td>11.094</td>
</tr>
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</table>

Descriptive statistics for contextual measures are weighted.
### One Year Follow-Up

<table>
<thead>
<tr>
<th>Contextual Measures</th>
<th>Census Tract</th>
<th>Zip Code</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantage without unemployment</td>
<td>.106</td>
<td>.094</td>
<td>.060</td>
</tr>
<tr>
<td></td>
<td>(.071)</td>
<td>(.073)</td>
<td>(.077)</td>
</tr>
<tr>
<td>Disadvantage with unemployment</td>
<td>.174**</td>
<td>.123</td>
<td>.081</td>
</tr>
<tr>
<td></td>
<td>(.066)</td>
<td>(.068)</td>
<td>(.074)</td>
</tr>
<tr>
<td>Percent unemployed</td>
<td>.024**</td>
<td>.015</td>
<td>.057</td>
</tr>
<tr>
<td></td>
<td>(.008)</td>
<td>(.012)</td>
<td>(.066)</td>
</tr>
</tbody>
</table>

### Two Year Follow-Up

<table>
<thead>
<tr>
<th>Contextual Measures</th>
<th>Census Tract</th>
<th>Zip Code</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantage without unemployment</td>
<td>.048</td>
<td>.018</td>
<td>.016</td>
</tr>
<tr>
<td></td>
<td>(.059)</td>
<td>(.061)</td>
<td>(.048)</td>
</tr>
<tr>
<td>Disadvantage with unemployment</td>
<td>.111*</td>
<td>.052</td>
<td>.059</td>
</tr>
<tr>
<td></td>
<td>(.052)</td>
<td>(.056)</td>
<td>(.041)</td>
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<tr>
<td>Percent unemployed</td>
<td>.016*</td>
<td>.007</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>(.006)</td>
<td>(.008)</td>
<td>(.036)</td>
</tr>
</tbody>
</table>

*p ≤ .05, **p ≤ .01, ***p ≤ .001 (two-tailed). Standard errors in parentheses. Each model controls for individual-level characteristics (not presented). These variables are: age, gender, race, education, age of onset, criminal history, and post-release supervision level.

Table 2.3. Cox Proportional Hazards Models Predicting the Risk of Overall Reincarceration During One Year and Two Years After Release.
### One Year Follow-Up

<table>
<thead>
<tr>
<th>Contextual Measures</th>
<th>Census Tract (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>Zip Code (5)</th>
<th>(6)</th>
<th>County (7)</th>
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<th>(9)</th>
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</thead>
<tbody>
<tr>
<td>Disadvantage without unemployment</td>
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<td>.287*</td>
<td>.281</td>
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<tr>
<td></td>
<td>(.115)</td>
<td>(.114)</td>
<td>(.177)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Disadvantage with unemployment</td>
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<td>.314***</td>
<td>.353**</td>
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<td></td>
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<tr>
<td></td>
<td>(.097)</td>
<td>(.096)</td>
<td>(.116)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Percent unemployed</td>
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<td>.036*</td>
<td>.255**</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>(.097)</td>
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</table>

### Two Year Follow-Up

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantage without unemployment</td>
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<tr>
<td></td>
<td>(.081)</td>
<td>(.078)</td>
<td>(.081)</td>
<td></td>
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<td>.009</td>
<td>.137*</td>
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<tr>
<td></td>
<td>(.010)</td>
<td>(.011)</td>
<td>(.069)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*p ≤ .05, **p ≤ .01, ***p ≤ .001 (two-tailed). Standard errors in parentheses. Each model controls for individual-level characteristics (not presented). These variables are: age, gender, race, education, age of onset, criminal history, and post-release supervision level.

Table 2.4. Cox Proportional Hazards Models Predicting the Risk of Reincarceration for a New Felony Offense During One Year and Two Years After Release.
### One Year Follow-Up

<table>
<thead>
<tr>
<th>Contextual Measures</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantage without unemployment</td>
<td>.048</td>
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<td>-.060</td>
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<td></td>
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<td>(.091)</td>
<td>(.083)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantage with unemployment</td>
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<td>-.010</td>
<td>-.103</td>
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<td></td>
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<td>(.092)</td>
<td>(.087)</td>
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<td>-.080</td>
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</tr>
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<td>(.016)</td>
<td>(.080)</td>
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<td></td>
</tr>
</tbody>
</table>

* \( p \leq .05 \), ** \( p \leq .01 \), *** \( p \leq .001 \) (two-tailed). Standard errors in parentheses. Each model controls for individual-level characteristics (not presented). These variables are: age, gender, race, education, age of onset, criminal history, and post-release supervision level.

### Two Year Follow-Up

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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</thead>
<tbody>
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<td>Disadvantage without unemployment</td>
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<td></td>
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<td>(.090)</td>
<td>(.082)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>(.090)</td>
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<td>(.014)</td>
<td>(.079)</td>
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<td></td>
</tr>
</tbody>
</table>

*p \leq .05, **p \leq .01, ***p \leq .001 (two-tailed). Standard errors in parentheses. Each model controls for individual-level characteristics (not presented). These variables are: age, gender, race, education, age of onset, criminal history, and post-release supervision level.

**Table 2.5.** Cox Proportional Hazards Models Predicting the Risk of Reincarceration for a Technical Violation During One Year and Two Years After Release.
CHAPTER 3

EXPLAINING RACIAL DIFFERENCE IN SERIOUS BEHAVIOR ON POST-RELEASE SUPERVISION

INTRODUCTION

Prior studies, official crime statistics, and self-report data have consistently found racial difference when observing juvenile and adult offending. African Americans have much higher rates of serious violence and victimization than whites (LaFree, 1995; Piquero and Brame, 2008; Sampson and Lauritsen, 1997; Samson, Morenoff, and Raudenbush, 2005). In addition, the likelihood of being arrested (Keen and Jacobs, 2009; Western, 2006), convicted (Chambliss, 1994), and imprisoned (Bonczar and Beck, 1997; Petersilia, 2003; Pettit and Western, 2004) is also much more common for African Americans as compared to whites (for a review, see Piquero and Brame, 2008). Not surprisingly, other scholars have noted that “race is a critical dimension of the reentry discussion” as well with the percentage of racial and ethnic minorities being released from prison onto community supervision being “approximately three times the percentage of minorities in the general population of the United States” (Petersilia, 2003:26).

Proponents of structural theories contend that racial difference in these various outcomes stems from the overrepresentation of African Americans residing in
disadvantaged areas (Sampson and Wilson, 1995). These disadvantaged communities are socially isolated from more mainstream communities and even “from areas in which poor urban whites tend to reside” (Wilson, 1987:60). The local residents of these particular communities face a host of maladaptive conditions including concentrated poverty, family disruption, disorder, poor labor market opportunities, less conventional role models, and a lack of stabilizing institutions (Elliott et al., 1996; Krivo and Peterson, 1996; Sampson and Wilson, 1995; Wilson, 1996, 1987). Krivo and Peterson (1996:620) describe these areas by noting that the “distinct features of the social environment lead to unusually high levels of crime.” Whites, in general, do not live in areas with comparable levels of disadvantage suggesting that the link between offending and race is spurious and confounded with community measures of disadvantage (Sampson and Wilson, 1995; Wilson, 1987; see also McNulty and Bellair, 2003b). Further, this perspective suggests that “if whites were embedded in similar structural contexts, they would exhibit comparable rates of violence” (McNulty and Bellair, 2003b:5; see also Krivo and Peterson, 1996). Several recent studies support these arguments finding that the effect of race on adolescent violence is not significant (or considerably reduced) when neighborhood disadvantage is included in analytic models (McNulty and Bellair, 2003a, 2003b; Sampson, Morenoff, and Raudenbush, 2005).

Some more contemporary research has started analyzing the impact of community contextual factors on the post-release outcomes of ex-prisoners (Kirk, 2009; Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). These studies have provided a new direction for the reentry and recidivism literature as the majority of prior work up to this point focuses on individual-level predictors. Indeed, the outcomes of these studies
have already produced some influential results. Neighborhood disadvantage (Kubrin and Stewart, 2006), resource deprivation (Mears et al., 2008), racial inequality (Reisig et al., 2007), and residential migration (Kirk, 2009) all impact the likelihood of recidivism.

Prior work consistently demonstrates that African Americans are more likely to recidivate after release from prison (Kubrin and Stewart, 2006; Petersilia, 2003; Spohn and Holleran, 2002; Ulmer, 2001; Visher and Travis, 2003), but despite the inclusion and significance of contextual factors in more contemporary recidivism studies, these various analyses typically do not explain racial difference in recidivism. A significant race effect still persists even after including community variables into the models (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). This emergent literature has begun to establish that communities are an important factor in the reentry process, but perhaps less is known about the “community-level processes that matter most” (Kubrin and Stewart, 2006:188).

This chapter explores and develops several contextual models to explain racial difference in serious behavior on post-release supervision among ex-prisoners in Ohio. This chapter supplements the well-established literature on race and ethnicity group differences by moving away from a “relatively heavy reliance on broadly based samples of adolescents” (Piquero and Brame, 2008:399) to an equally important sample of adult, at-risk ex-prisoners. In doing so, this particular study provides a more developed theoretical explanation of why communities especially matter to ex-prisoners, provides contextual models that assess the impact of several measures based in community-level disadvantages on the explanation of racial difference in recidivism, and provides a unique
recidivism dependent measure based on parole officer field notes that capture various
dynamics of post-release supervision.

First, the theoretical development of why communities matter to ex-prisoners is
somewhat underdeveloped given the small number of studies examining community
context and recidivism in multivariate models. The main purpose of this recent body of
work is to advance the literature by actually analyzing some form of contextual
measurement in relation to recidivism. The rationale for including community factors is
generally based on a well-established standing within criminological theory and a
consistent relationship with crime among particular contextual variables. As such, these
empirical studies offer little thought to why communities are especially relevant to the
post-release outcomes of ex-prisoners beyond some brief concluding remarks within the
discussion sections of these scholarly articles. The significant obstacles that ex-
prisoners face after release is widely noted throughout discussions of reentry (Clear,
2007; Petersilia, 2003; Visher and Travis, 2003; Western, Pattillo, and Weiman, 2004).
These individuals are a uniquely disadvantaged population, and as such, may reside in
and may be more susceptible to adverse community conditions. The current chapter
explores this possibility and explains why communities are exceptionally relevant to ex-
prisoners as they attempt to reintegrate post-release.

Next, this chapter provides several contextual models that assess the impact of
various measures based in community-level disadvantages on the explanation of racial
difference in recidivism. In particular, the analysis focuses on residential instability,
disadvantage, and labor market opportunity after including important individual-level
controls. The results indicate that variation in some of these contextual measures help explain racial difference in recidivism.

Finally, the current chapter incorporates a unique measure of recidivism within the PRC/Parole Behavior study. The majority of prior studies rely upon “official” measures to construct the dependent variable often because of convenience and data availability. The current dependent variable comprises the most serious behavior on post-release supervision stemming from information located in parole officer field notes. Studies of recidivism rarely capture behavioral measures, and the current chapter provides a more careful look at what corrections agencies consider to be the most troubling activity on post-release supervision. The next section further develops why communities of release are particularly consequential for ex-prisoners.

**WHY CONTEXT ESPECIALLY MATTERS TO EX-PRISONERS**

The findings of several recent studies examining community effects have provided valuable results in the reentry and recidivism literature (Kirk, 2009; Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). This research typically notes the dearth of recidivism studies that capture community factors, highlights the need to move beyond the individual-level predictors that are characteristic of prior research, and incorporates some form of contextual measurement. These studies generally reference the large contextual effects literature that “has been shown to be an important predictor in shaping a variety of individual-level outcomes” as a rationale for introducing community variables into analyses of recidivism (Kubrin and Stewart, 2006:186; for a good review of the contextual effects literature, see Sampson, Morenoff, and Gannon-Rowley, 2002).
As these studies are just beginning to utilize contextual models, the theoretical development of why communities are especially important to ex-prisoners is much less developed. It is well-established that released prisoners face many challenges after incarceration. Housing and living arrangements, employment searches, family reconnections, post-release supervision, addiction, disability, and illness are just some of the issues that immediately face these individuals as they transition back into the community (Petersilia, 2003; Visher and Travis, 2003; Western, Pattillo, and Weiman, 2004). Despite this widespread attention, less theoretical and empirical attention has been given to these challenges that face ex-prisoners in particular and how specific community conditions may be more influential for this uniquely disadvantaged population. For instance, the availability low-skill employment opportunity may be particularly consequential for the post-release outcomes of ex-offenders given the low levels of education and lack of job skills among many of these individuals. Instead, the inclusion of contextual variables that are the focus of prior recidivism studies, such as resource deprivation and racial segregation (see Mears et al., 2008), is typically based on a well-established standing within criminological theory and a consistent relationship with crime in general.3

MORE TRADITIONAL COMMUNITY DISADVANTAGES

The social disorganization perspective provides a good starting point to develop the relationship between community context and ex-prisoners. The original concepts of social disorganization theory were pioneered by Shaw and McKay (1942) who noted that specific urban areas had higher rates of crime, along with other factors such as infant deaths, rented housing units, and families on public assistance, despite the fact that these
areas were inhabited by individuals of different racial and ethnic backgrounds over time. The original argument is that poverty, racial and ethnic heterogeneity, and population turnover led to social disorganization which then led to crime (Shaw and McKay, 1942). After some criticism aimed at the original formulation of the theory, Kornhauser (1978) clarified the relationship between social disorganization and crime by defining social disorganization as the inability of local communities to realize the common values of its residents and maintain effective social controls (see also Bursik, 1988).

More contemporary proponents of the social disorganization model have drawn from the systemic model of social organization (see Kasarda and Janowitz, 1974) to highlight the importance of various social controls. In particular, social control is achieved through “the prevalence and strength of systems of social relationships (e.g., private, parochial, and public) within communities and between communities and extra-local decision makers” (McNulty and Bellair, 2003b:4; see also Bursik and Grasmick, 1993). Structural disadvantage leads to crime and other maladaptive conditions through its effect on these levels of social control. Disadvantaged areas generally have lower levels of informal social control because of the withdrawal of community residents stemming from rising levels of fear and mistrust (Skogan, 1990). Further, residents of disadvantaged communities are less likely to communicate with each other and less likely to engage in the supervision of the neighborhood, while these areas are also less likely to maintain beneficial local institutions (Elliot et al., 1996; Morenoff, Sampson, and Raudenbush, 2001; Sampson and Groves, 1989).

Prior research finds that traditional community disadvantage measures, such as poverty, female headed households (e.g., family disruption), and high school dropouts,
attenuate social networks and destabilize local institutions leading to an increased likelihood of crime and violence for adolescents (McNulty and Bellair, 2003a, 2003b; Sampson, Morenoff, and Raudenbush, 2005). However, it seems likely that these disadvantaged communities are clearly influential for released prisoners as well. These contexts can particularly influence ex-prisoners in several ways. First off, disadvantaged communities with high levels of incarcerated residents have high rates of residential instability as prisoners are leaving the area for their sentences and ex-prisoners are re-entering the area after serving their time (Clear, 2007; see also Rose and Clear, 1998). This constant movement further impedes social networks and destabilizes the community damaging prospects for informal control, supervision of the area, and effective community involvement. If residents in these areas withdraw from the community and are unlikely to communicate due to fear and mistrust (Skogan, 1990), individuals post-release will not be integrated into positive social networks leaving them vulnerable to reforming relationships with peers and acquaintances that may have contributed to their prior criminal activity in the first place (Travis, Solomon, and Waul, 2001). Further, it is also possible that ex-prisoners themselves withdraw from relationships within the community due to the stigma of their incarceration (see Rose and Clear, 1998).

The political isolation of these areas can lead to a mistrust in police and parole officers working community supervision caseloads (Clear, 2007; see also Tyler, 2000; 1990) resulting in hostile encounters between officers and ex-offenders. Less visibility to legitimate role models provides less socialization to more conventional norms and support of conventional institutions, such as schools or churches (Wilson, 1996, 1987). Broken down families prevalent in these areas offer less encouragement for pro-social
life changes (Clear, 2007). Disadvantaged areas are also less likely to maintain and support beneficial local institutions (Wilson, 1996, 1987). Ex-prisoners clearly depend on the resources of local social service agencies to help ease the transition back into the community stemming from the challenges they face after release (see also Kubrin and Stewart, 2006). The availability of substance abuse treatment, educational classes or vocational training, and other social service programs may be lessened in these disadvantaged contexts.

The implication is that African American ex-prisoners exhibit higher rates of recidivism because they are more likely to reside in communities with higher levels of residential instability and disadvantage. It is clear that the characteristics of disadvantaged areas can negatively influence the reintegration process of ex-prisoners in common and unique ways. However, another specific form of community disadvantage sometimes neglected in the literature may be especially important to ex-prisoners as well.

THE IMPORTANCE OF FINDING MEANINGFUL WORK

Labor market opportunity is an additional form of community disadvantage that may play a salient role in the reentry process given the generally fractured work histories, limited skills, and low levels of education of ex-prisoners. In fact, some scholars have argued that changes in labor market structure “was the catalyst for the concentration of disadvantage and violence found in urban areas since the 1970s” (Parker, 2004:620; see also Bellair and Roscigno, 2000). Foremost, the urban sociology literature and a wide variety of research has documented the transformation of the U.S. economy and the relocation of jobs to the suburbs or out of the country (Kasarda, 1995, 1988; Wilson, 1996; see also Gobillon, Selod, and Zenou, 2007). In particular, low-skill jobs offering
decent wages and benefits, typical of the manufacturing industry, have been drastically reduced being replaced by professional jobs needing advanced skills and specific requirements (e.g., college degrees) and service jobs needing no skills or requirements, but offering low wages and sometimes little room for advancement (Anderson, 2008; Kasarda, 1988; Wilson, 1996). The disadvantaged populations that reside in these areas lack the necessary skills and education to participate in the new post-industrial economy, and as such, are constrained to these remaining low-skill and low-wage jobs.

A large group of studies have examined potential employment and crime linkages with the majority of these studies conceptualizing job opportunity as the unemployment rate (Chiricos, 1987; Gould, Weinberg, and Mustard, 2002; Raphael and Winter-Ebmer, 2001) including some research focusing on ex-offenders (Raphael and Weiman, 2007; Uggen, 1999). Some of the prior studies examining the unemployment rate and crime have yielded inconsistent results (Chiricos, 1987; see also Crutchfield and Pitchford, 1997) often dependent on the level of analysis (e.g., state, county, census tract) and type of outcome (e.g., violent crime, property crime, drug crime). While the unemployment rate is useful as a broad benchmark for job opportunity, labor market opportunity for particular working populations, especially disadvantaged workers (e.g., high school drop-outs, welfare recipients, immigrants, ex-offenders, see also Holzer, Raphael, and Stoll, 2007), may be more narrow.

Building off these observations and using insights from prior studies measuring labor market structure (Bloomquist and Summers, 1982; Kaufman, Hodson, and Fligstein, 1981; Snipp and Bloomquist, 1989), criminology scholars have incorporated more specific labor market opportunity variables into analyses of crime and delinquency.
An influential group of studies examining labor market structure and crime are advanced by Crutchfield (1989) and colleagues (Crutchfield, Glusker, and Bridges, 1999; Crutchfield and Pitchford, 1997). They describe low-skill, low-wage service jobs as part of the secondary labor market distinguished by low wages, instability, and turnover, and find a positive relationship between the concentration of secondary labor market workers and violent crime (Crutchfield, 1989; Crutchfield, Glusker, and Bridges, 1999). They argue that workers in the secondary labor market have “diminished stakes in conformity” (Crutchfield and Pitchford, 1997:96), so these employees do not necessarily value their job and do not have strong attachments to coworkers. In areas with large amounts of secondary sector jobs, these workers are juxtaposed with individuals in similar employment situations increasing the exposure to “circumstances that are likely to lead to crime” (Crutchfield and Pitchford, 1997:97). Other research has found similar results.

The majority of the results in the aforementioned literature suggest that living in areas containing large amounts of low-skill, low-wage jobs will have adverse effects on workers and other residents of the area. However, some individuals after release from prison are motivated to find work. Consistent self-report data indicate that ex-prisoners feel that locating employment is the “single most important factor” leading to post-release success, but many ex-prisoners also reveal that they anticipate difficulty finding a job after release (Visher and Kachnowski, 2007:80; see also La Vigne, Visher, and Castro, 2004; Visher, Baer, and Naser, 2006). Although labor market opportunity relative to ex-offenders is often constrained to low-skill, low-wage jobs and the overall
eagerness to hire releasees is limited (Pager, 2007, 2003), certain businesses are willing to hire and actually do employ ex-prisoners (Holzer, Raphael, and Stoll, 2007; see also Pettit and Lyons, 2007). In particular, Holzer and colleagues (2007) find that employers in the manufacturing, retail, and service sectors of the labor market are the most willing to hire individuals with felony records.\footnote{Holzer and colleagues (2007) find that employers in the manufacturing, retail, and service sectors of the labor market are the most willing to hire individuals with felony records.}

Earnings and potential earnings may not always be the sole criteria under deliberation by ex-prisoners as they calculate the benefits of work. The opportunity to merely find work may yield positive benefits to ex-prisoners post-release despite the transitory nature of the low-skill, low-wage employment available to them (Petersilia, 2003; Visher and Kachnowski, 2007; Visher and Travis, 2003; see also Uggen, 2000). In fact, interviews from the Urban Institute’s “Returning Home” study in Illinois indicates that released prisoners “who were employed at each interview period expressed satisfaction with their jobs in every area but pay” (Visher and Kachnowski, 2007:102).

The life course perspective provides a useful explanation of why finding meaningful work may be essential to successful reentry transitions (Sampson and Laub, 1993; see also Uggen, 2000). Drawing heavily from social control theory (see Hirschi, 1969), life course theories argue that employment is one of the critical “turning points” that can produce movement away from negative life trajectories such as crime and other maladaptive behaviors (see also Shover, 1996). However, the importance of employment is not necessarily tied to the fact of simply holding a job. Sampson and Laub (1993:140) indicate that “employment coupled with job stability, job commitment, and mutual ties to work (that is, employee-employer interdependence)” increases social control, and as a consequence, decreases criminal behavior. As such, ex-offenders that can find
employment can potentially benefit from being enmeshed in conventional worker networks, and invested in occupational tasks that are based in more legitimate, conventional activity (see also Hirschi, 1969).

Ex-prisoners struggle to find work, but those hired after release may be invested in their position because the employer “gave them a chance.” This particular employer-employee relationship, which is one of mutual benefit, may keep ex-offenders committed to the conventional role of legitimate employment for the sake of the employer that hired them (Sampson and Laub, 1993). Ex-prisoners that find work will be further exposed to more pro-social worker networks (Clear, 2007) making associations with prior negative associates or peers less relevant (see also Warr, 1998). These relationships formed with conventional others set up “systems of obligation and restraint that impose significant costs” for future crime (Sampson and Laub, 1993:141). In essence, individuals become invested in their jobs. The likelihood of illegitimate activity is diminished because of the set of expectations that meaningful work entails, and the possibility of breaking co-worker ties that a job dismissal and subsequent return to prison provides.

In order to obtain the possible advantages of finding work, ex-prisoners must actually find work. As a consequence, African American ex-prisoners may exhibit higher rates of recidivism because they are more likely to be returned to areas with lower levels of employment opportunity, and in particular, lower levels of low-skill job opportunities.

**CONTEXTUAL MODELS ASSESSING RACIAL DIFFERENCE IN RECIDIVISM**

This chapter explores several contextual models based upon the aforementioned theoretical perspectives and empirical research with a more explicit focus and
understanding of the factors that influence the post-release outcomes of ex-offenders. After beginning with a model that examines various, important individual-level characteristics (Gendreau, Little, and Goggin, 1996; Petersilia, 2003), the analysis incorporates three separate models that focus on residential instability, disadvantage, and labor market opportunity. In doing so, this chapter assesses the impact of these measures based in community-level disadvantages on the explanation of racial difference in serious behavior on post-release supervision. The next section provides further description of the unique recidivism measure based on parole officer field notes that is also incorporated into the analysis.

SERIOUS BEHAVIOR ON POST-RELEASE SUPERVISION

Most studies of recidivism rely upon “official” measures to construct the dependent variable. Arrests (Kubrin and Stewart, 2006), convictions (Mears et al., 2008), and reincarcerations (Joo, Ekland-Olson, and Kelly, 1995) are several common outcomes in the literature, and all of these outcomes are supposed to reflect individual offending. Some scholars have made the argument that official measures can be influenced by “the differential attention or responsiveness of law-enforcement, court, and correctional system agencies” (Mears et al., 2008:330; see also Kowalski and Lundman, 2007). Self-report studies and interviews of ex-prisoners are techniques that may avoid these potential biases and more accurately capture actual individual behavior, but these methods pose additional challenges (e.g., follow-up tracking and respondent retention) and are often time and cost-prohibitive. As such, researchers often rely more formal sanctions as outcomes out of convenience and data availability.
One of the purposes of the PRC/Parole Behavior study is to examine the nature and scope of ex-prisoner behavior on post-release supervision. As part of the original data set, detailed information is collected on each ex-prisoner’s adjustment to supervision. Large amounts of data are gathered from parole officer field notes that detail supervision appointments, home visits, field observations (e.g., in the community), violation reports, and other various information related to post-release supervision. These notes are content analyzed and coded by several research assistants, who were all former parole officers of the Adult Parole Authority and were also trained by the Bureau of Research staff at the Ohio Department of Rehabilitation and Correction.

The conceptualization of the dependent variable is based upon the most serious behavior on post-release supervision as captured within the parole officer field notes. The source materials that provide the basis of the field notes for this particular dependent measure include arrests, complaints, warrants, and observations both in the field and during office visits. Serious behavior is defined as felonious behavior and absconding supervision. Felonious behavior captures behavior that is most serious in nature since it potentially involves a return to prison and consists of crimes that are considered the most dangerous by the criminal code (Ohio Criminal Law Handbook, 2004). Absconding behavior details behavior that is extremely serious as well. To be clear, absconding does not entail garden variety reporting violations such as oversleeping and missing an office visit with a supervising officer. In contrast, absconding supervision is an active avoidance of post-release supervision that results in significant time and resource allocation by supervising officers in finding the whereabouts of the ex-offender in question, and may result in prosecution of the ex-offender for the crime of escape under
the Ohio Revised Code (Ohio Criminal Law Handbook, 2004). For instance, the supervising officer needs to check the ex-prisoner’s last known address and employer, reach out to the ex-prisoner’s family, friends, and acquaintances, contact social service agencies, and monitor local law enforcement agencies and other aspects of the criminal justice system (e.g., local jails and holding facilities) in order to search for the absconder (see DRC Policy, 2009). Further, absconding is seen by supervising officials as potentially threatening behavior. Victim notifications (given the potential of public safety risks), fugitive task forces, and felony indictments are all agency responses to absconding supervision. Studies of recidivism rarely capture these types of behavioral measures, and as such, the current study offers a more precise measurement of serious behavior on post-release supervision.

DATA, METHODOLOGY, AND ANALYTIC STRATEGY

DATA SOURCES AND SAMPLE SELECTION

The current chapter also utilizes the PRC/Parole Behavior study. The sample selection, basic demographic and social history information, and post-release behavior information used to construct the dependent variable are utilized from the original data file provided by Bureau of Research at the Ohio Department of Rehabilitation and Correction. The data set is further reinforced by information gathered from other DRC data sources to obtain additional ex-prisoner information including educational attainment, a complete and more comprehensive criminal history, and post-release residence locations. This additional data collection also remedies missing data concerns.
within the original file provided by DRC. Information from the 2000 Decennial Census is attached to the data set in an effort to construct community-level variables.

The sampling frame of the PRC/Parole Behavior study comprises ex-prisoners initially released from their original sentence onto parole or post-release control (PRC) during October through December of 2000. The sampling strategy oversamples for missing data possibilities and disproportionately samples across geography and release type to ensure representativeness. A weight variable is attached to the data file to account for the sampling technique which enables the distribution of the sample to reflect the normal distribution of the actual Ohio population being released on community supervision. The original sample of the PRC/Parole Behavior study consists of 1,171 ex-prisoners. Additional cases are removed due to missing file information (e.g., no social and criminal histories) or a lack of relevant data (e.g., bad address information, moved out of state, released to an immigration detainer with INS) leaving a final sample of 1,036 parole and PRC releases (906 males and 130 females). A more comprehensive description of the PRC/Parole Behavior study, including data sources, data collection processes, and sample selection, is available in Chapter 2.

**VARIABLE MEASUREMENT**

**Dependent Variable**

The recidivism measure in this chapter is time to serious behavior on post-release supervision using continuous time. The event history technique used in the analysis necessitates a particular data structure for the dependent variable (Allison, 1984), so recidivism is conceptualized as serious behavior (1 = yes, 0 = no) and the number of days until failure. The parole officer field notes indicate the exact date when the particular
behaviors in question occurred on post-release supervision. The behavioral portion of the study is only collected for one year after release. As such, the risk of serious behavior on post-release supervision is examined over a one year follow-up time period.

**Individual-Level Variables**

The individual-level characteristics that constitute the initial model and serve as control measures in the contextual models are important predictors of recidivism in prior research (Baumer, 1997; Gendreau, Little, and Goggin, 1996). These variables are also derived from information that can be consistently and reliably coded from the Ohio Department of Rehabilitation and Correction’s electronic and microfiche files. Initially, several demographic variables are included in the analysis. Prior work finds that African Americans are more likely to recidivate after release from prison (Kubrin and Stewart, 2006; Petersilia, 2003; Spohn and Holleran, 2002; Ulmer, 2001; Visher and Travis, 2003). An *African American* dummy variable, with whites as the reference group, is therefore included to reflect race group differences in serious behavior on post-release supervision. The analysis also accounts for *Age* with a continuous measure in years, and gender with a *Male* dummy variable (females are the reference group). Prior studies have found that the likelihood of recidivism is lower as individuals get older and the likelihood of recidivism is higher for males (Baumer, 1997; Gendreau, Little, and Goggin, 1996; see also Petersilia, 2003).

Criminal history variables are perhaps the most important set individual-level characteristics predictive of heightened recidivism. The variables included in the current analysis attempt to capture a more complete picture of ex-prisoner’s entire offending history with the implication that ex-offenders with more extensive criminal backgrounds
will be more likely exhibit serious behavior on post-release supervision. *Age of onset* reflects the age (in years) of first contact with the criminal justice system. *Offenses against persons, Sex offenses, Property offenses,* and *Drug offenses* are the total number of prior convictions for each offense category that lead to community supervision, jail terms, or prison incarcerations. 11 Again, the complete list of all the offenses that comprise each particular offense category are located in Appendix A. The *prior prison terms* variable reflects the total number of prior prison incarcerations.

*Living with partner* (1 = living with spouse or domestic partner, 0 = else) captures ex-prisoners that reside with a spouse or domestic partner after release. Attachment to a spouse or partner is another factor that may lead to more conventional activity (Sampson and Laub, 1993). Although spousal attachment cannot be directly measured, ex-prisoners living with a spouse or domestic partner post-release may benefit just by having immediate contact with a family member (Visher and Travis, 2003). Exposure to this more traditional adult role may provide the necessary support to help ease the reentry transition. Ex-offenders also have generally poor work histories, a limited skill set, and low levels of education. A *High school graduate* dummy variable is also included as direct measure of educational attainment and a proxy for the skills necessary for employment (1 = high school diploma, successful completion of a GED, or higher, 0 = less than high school graduate or equivalency). I expect ex-prisoners with a high school degree or better to be less likely to recidivate.

Another important individual-level characteristic is the level of supervision by the Adult Parole Authority (see also Kubrin and Stewart, 2006). More contact with parole officers may lead to higher levels of recidivism because some ex-offenders “are more
likely to be caught purely by virtue of greater exposure to supervision” (Mears et al., 2008:317). The two supervision dummy variables included in the analysis are: *High supervision*, which consists of intensive supervision and high supervision, and *Moderate supervision*, which consists of medium supervision. The reference group is individuals on low supervision and monitored time.

**Community Variables**

The purpose of this chapter is to assess the impact of several measures based in community-level disadvantages on the explanation of racial difference in serious behavior on post-release supervision. However, the level of analysis for community contextual variables within recidivism studies has been quite varied (for example, see Kubrin and Stewart, 2006 for census tracts; see Mears et al., 2008 for counties). Further, other research operationalizing labor market conditions for ex-prisoners uses county-level unemployment data (Raphael and Weiman, 2007; Sabol, 2007). County level data may be too large of an area for the approximation of contextual effects since counties can contain many neighborhoods likely differing in levels of disadvantage. Additionally, labor market opportunity variables may be more relevant at localized levels (e.g., census tracts or zip codes) for ex-prisoners since the availability of transportation (and the cost and time of public transportation) can create barriers to employment with longer commutes. Indeed, scholars have highlighted the problems disadvantaged workers have actually travelling to the suburbs to find better job opportunities (Anderson, 2008; Wilson, 1987).

For these reasons, the current chapter explores neighborhood effects at the census tract level. The contextual variables are constructed from the 2000 Decennial Census and
reflect the characteristics of disadvantaged areas that can influence the reintegration process of ex-prisoners. *Residential instability* is a principal components factor scale comprising the percentage of occupied housing units that are renter occupied and the percent of individuals living in a different house five years ago. The residential instability scale exhibits a Cronbach’s alpha coefficient of .70. *Disadvantage* is a principal components factor scale comprising the percentage below the poverty line, the percentage of female-headed households, and the percentage of high school dropouts. The reliability of the disadvantage scale produces a Cronbach’s alpha coefficient of .82. In terms of labor market opportunity, unemployment is utilized as a broad measure of job opportunity. Variables comprising the percentage of workers within specific industry sectors of the labor market are also included to approximate job opportunity within particular types of employment such as the low-skill jobs available to ex-prisoners. *Percent unemployed* reflects the percentage of unemployed individuals among the civilian labor force. *Percent construction, Percent manufacturing, Percent retail trade,* and *Percent accommodation and food services* includes the percentage of employed individuals (age 16 years and older) within the respective industrial sectors.

**ANALYTIC STRATEGY**

This chapter employs several Cox proportional hazards models to examine the impact of community-level variables on the explanation of racial difference in serious behavior on post-release supervision. Again, this non-parametric model is ideal for event-based analyses more concerned with the effects of the particular explanatory measures versus the actual shape of the distributional form (see Allison, 1984:35). The Cox proportional hazards model is also a more appropriate technique because its
treatment and inclusion within the analysis of censored cases. A more thorough explanation of event history analysis is undertaken in Chapter 2.

In the PRC/Parole Behavior study, ex-prisoners sometimes return to the same neighborhood causing individual cases to be nested within the same census tract. The clustering of these cases can lead to correlated error terms across observations which underestimate standard errors increasing the odds of significant, but misleading effects (see Guo & Zhao, 2000). I correct for clustering in the analysis by using the cluster command in STATA (Stata Press, 1997).

RESULTS

Table 3.1 provides descriptive statistics for African American and white ex-prisoners in separate columns. In terms of the dependent measure, over 30 percent of African Americans and 21.8 percent of whites in the sample exhibited serious behavior on post-release supervision over the first year after release. Figure 3.1 illustrates the race difference in the dependent measure through a comparison of the cumulative hazard curves disaggregated by race. The race difference becomes consistently larger as the time period persists (in days) with the largest difference appearing at the end of the follow-up.

Table 3.1 indicates that African American ex-prisoners have significantly more prior offenses against persons, prior drug offenses, and prior prison terms compared to the prior criminal records of white ex-prisoners. African Americans in the sample are also significantly more likely to be placed on moderate supervision by the Adult Parole Authority. Table 3.1 also takes a preliminary look at the contextual variables that may
help explain racial difference in serious behavior on post-release supervision. African Americans released onto community supervision are returning to neighborhoods that have significantly higher levels of residential instability, disadvantage, and unemployment as compared to the neighborhoods where white parolees and PRC releases live. Further, African American ex-prisoners are also residing in areas with significantly lower levels of employment opportunity in the construction, manufacturing, and retail trade sectors of the labor market relative to white ex-prisoners.

The descriptive statistics exhibit that African Americans in the sample are returning to more disadvantaged neighborhoods through a variety of community-level indicators. This suggests that racial difference in serious behavior on post-release supervision could be explained by disproportionate residence in these locales. Table 3.2 provides the Cox proportional hazards models assessing this possibility. Model 1 examines various, important individual-level characteristics, while Models 2-4 incorporates the neighborhood-level variables that focus on residential instability (Model 2), disadvantage (Model 3), and labor market opportunity (Model 4). Variance inflation factors indicate that multicollinearity is not a problem in any of the models.

The race effect in a Cox proportional hazards model with no other predictors included is .366 (significant at $p \leq .01$). The initial model indicates that racial difference in serious behavior on post-release supervision is not accounted for by individual-level characteristics. Additionally, Model 1 finds that older ex-prisoners and ex-prisoners with a high school diploma or higher are less likely to exhibit serious behavior on post-release supervision. In contrast, the likelihood of recidivism is higher for individuals in the sample with more prior convictions for offenses against persons, property offenses, and
drug offenses. Ex-offenders with more prior prison incarcerations and ex-offenders placed on high supervision also have an increased likelihood of serious behavior on post-release supervision.

Model 2 introduces the measure of residential instability. Ex-prisoners released into neighborhoods with higher levels of residential instability are more likely to exhibit serious behavior post-release. The race coefficient is reduced with the introduction of residential instability into the model, but the African American dummy variable is still significant. Next, Model 3 includes a more traditional disadvantage measure into the analysis. It is clear that residence in disadvantaged locales explains racial difference in serious behavior on post-release supervision. The disadvantage measure is a significant predictor of recidivism, and the African American coefficient is reduced and nonsignificant with the inclusion of the disadvantage scale into the model. Model 4 includes labor market opportunity variables which constitutes another form of community disadvantage that is less visible in the literature. Residence in neighborhoods with higher levels of unemployment and higher levels of employment in the retail trade sector are associated with serious behavior on post-release supervision. Inclusion of these labor market opportunity variables also explains racial difference in serious behavior on post-release supervision. The African American coefficient is reduced and nonsignificant in Model 4. Age, criminal history variables, and supervision level are also strong predictors of recidivism throughout the models incorporating various measures of neighborhood context.

The findings lend support to the argument that racial difference in recidivism can be attributed to disproportionate residence in disadvantaged locales. A traditional
disadvantage measure, unemployment, and retail trade sector employment opportunity explain racial difference in serious behavior on post-release supervision in the current analysis. In particular, the retail trade effect in Model 4 initially suggests that returning to neighborhoods with a surplus of low-skill, low-wage jobs will have adverse effects for ex-offenders (see also Bellair and Roscigno, 2000; Crutchfield and Pitchford, 1997; Krivo and Peterson, 2004). However, these are exactly the types of jobs that ex-prisoners can obtain (see Holzer, Raphael, and Stoll, 2007). This particular disconnect is revisited in the section below.

DISCUSSION

Prior studies and various types of correctional data indicate that African Americans are more likely to recidivate after being released from prison (Kubrin and Stewart, 2006; Petersilia, 2003; Spohn and Holleran, 2002; Ulmer, 2001; Visher and Travis, 2003). An emergent literature has begun to indicate that contextual variables are important predictors of recidivism, and as a consequence, establish that communities play an important role in the reentry process (Kirk, 2009; Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). However, despite the inclusion and significance of contextual factors included in these studies, these various analyses typically do not explain racial difference in recidivism.

The purpose of this chapter is to explore and construct several contextual models based in community-level disadvantages to help explain racial difference in serious behavior on post-release supervision among ex-prisoners in Ohio. More specifically, the current study analyzes residential instability, disadvantage, and labor market opportunity
after controlling for individual-level characteristics. This chapter also develops a more thorough and focused theoretical explanation of why communities are especially relevant to ex-prisoners after release, and also utilizes a unique behavioral recidivism dependent measure stemming from parole officer field notes. The findings indicate that neighborhood context helps explain the racial disparity in recidivism among African Americans and whites after release from prison. In particular, the analysis indicates that disadvantage, unemployment, and retail trade sector employment opportunity explain racial difference in serious behavior on post-release supervision.

Overall, the findings suggest that returns to disadvantaged neighborhoods, as captured by several contextual measures, are fundamental in explaining elevated participation in serious behavior on post-release supervision by African American ex-prisoners compared to white ex-prisoners. An initial question that emerges from the current results is why significant race effects still persist in previous studies even after including community variables into these models (Kubrin and Stewart, 2006; Mears et al., 2008; Reisig et al., 2007). It is possible that prior failures to explain racial difference in recidivism stem from the measurement options used to create both the dependent variable and the size of the community ex-prisoners return to. Kubrin and Stewart (2006) find disadvantage to be a significant predictor of rearrest after release from prison, but an arrest measure can cover a wide variety of behavior (e.g., public intoxication versus aggravated assault). As a consequence, rearrests fail to distinguish between behaviors that can drastically differ in seriousness possibly accounting for why a race effect still remains.13
Mears and colleagues (2008) provide a more internally consistent dependent variable by using felony conviction measures (resulting in community supervision, jail terms, or prison incarcerations), and find that resource deprivation is associated with higher levels of violent reconvictions. However, a race effect again persists (see also Reisig et al., 2007). Perhaps the use of county-level data for communities is too large of an approximation for contextual effects especially given the social, political, and spatial isolation of some disadvantaged, minority communities (Krivo et al., 1998; Massey and Denton, 1993), and the travel restrictions prevalent among some disadvantaged workers (Anderson, 2008; Wilson, 1987).

Indeed, this may be the case. I reproduce Models 3 and 4 in Table 3.2 using county-level data (models not presented) and find that the effect of disadvantage is positive and significant ($p \leq .05$), but the race effect still remains ($p \leq .05$). Further, the unemployment and labor market industry variables are not significant predictors of serious behavior on post-release supervision at the county-level. Like Chapter 2, the current chapter emphasizes the importance of operationalizing similar behaviors when constructing recidivism dependent variables, and utilizing an appropriate level of geography for community variables.

The current chapter also makes an attempt to refine the theoretical development of the role communities play during the reentry process for ex-prisoners. In doing so, the primary contextual variables of interest within the analysis are residential instability, disadvantage, employment opportunity, and low-skill employment opportunity in particular. Recent research, and the current analysis included, highlights the significance of disadvantage measures for adolescents (McNulty and Bellair, 2003a, 2003b; Sampson,
Morenoff, and Raudenbush, 2005) and ex-prisoners (Kubrin and Stewart, 2006). Further, the inclusion of labor market opportunity variables extends the reentry and recidivism literature by also examining an often overlooked form of community disadvantage that has a significant effect on the post-release outcomes of ex-prisoners. Like more traditional measures of disadvantage, the addition of these labor market variables into the analysis explain racial difference in serious behavior on post-release supervision as well.

However, more discussion is warranted concerning the direction and interpretation of the labor market opportunity effects. First, the unemployment effect is in the expected direction with returns to neighborhoods with higher levels of unemployment being associated with an increased likelihood of serious behavior on post-release supervision. Next, the retail trade effect finds that returning to neighborhoods with a surplus of low-skill, low-wage jobs has unfavorable consequences for ex-prisoners. This effect is in an unexpected direction as I anticipated greater availability of low-skill, low-wage jobs to provide a negative effect on recidivism given the importance ex-prisoners place on finding work after release, and the benefits that commitment to more legitimate pursuits and activities provide (see also Hirschi, 1969). The positive effect of retail trade employment, an industry found to actually hire ex-prisoners, is more consistent with findings from the literature that suggests that living in areas containing large amounts of low-skill, low-wage jobs will have adverse effects on workers and other residents of the area (Bellair and Roscigno, 2000; Crutchfield, 1989; Crutchfield, Glusker, and Bridges, 1999; Crutchfield and Pitchford, 1997; Krivo and Peterson, 2004).

At first glance, ex-prisoners appear to be entrenched in a “no win” situation with the employment opportunities most available to them being associated with negative
post-release outcomes. However, some of the methodological decisions used in the current chapter help assuage definitive conclusions. Initially, the construction of the labor market indicators involve the percentage of workers employed within particular industrial sectors obtained from decennial census materials. The presence of workers within a particular industry supply a useful proxy for worker demand, but in reality does not necessarily represent the most precise definition of job opportunity within these sectors. More sophisticated labor market data would be useful such as the actual number of business establishments within these particular industries. This data is incorporated and analyzed in the next chapter.

The use of census tract boundaries for labor market opportunity variables also needs further scrutiny. Prior work (Mears et al., 2008; Reisig et al., 2007) and the aforementioned additional analyses (not presented) suggest that counties are too large of an approximation for labor market opportunity effects, and census tracts have proven to be a useful option to capture neighborhood effects (see also Kubrin and Stewart, 2006). However, the size of the communities analyzed in the current chapter may also be influencing the retail trade effect in a manner not immediately apparent. An excess of low-skill workers in smaller areas like neighborhoods may be indicative of a highly competitive atmosphere for low-skill jobs. If these smaller areas are filled with an abundance of workers in these particular industries, it is likely that ex-prisoners may be some of the last ones hired as employers generally look to fill positions first with individuals without a criminal record (Holzer, Raphael, and Stoll, 2007; Holzer and Stoll, 2001; see also Pager, 2007, 2003). A more intermediate level of analysis may provide a
less profuse amount of job seekers, and as such, may provide different answers. In particular, zip code-level employment opportunity data is advanced in the next chapter.

Additional data analysis also reveals that the positive and significant effect of retail trade employment is suppressed by the unemployment rate in Model 4. When unemployment is removed from the analysis, the effect of retail trade remains positive, but it is not a significant predictor of serious behavior on post-release supervision (model not presented). In sum, Model 4 takes an important, preliminary step towards incorporating more useful conceptions of labor market opportunity into analyses of recidivism. However, it is clear that more work needs to be done. Chapter 4 takes some of these issues a step further by using a valuable data source that captures the actual number of business establishments within communities across Ohio.
NOTES FOR CHAPTER 3

1. Unfortunately, the data is limited to only African Americans and whites due to the race categories within PRC/Parole Behavior study provided by the Ohio Department of Rehabilitation and Correction (for analyses of race difference among additional racial and ethnic groups, see McNulty and Bellair, 2003a, 2003b; Sampson, Morenoff, and Raudenbush, 2005).

2. In contrast to these particular empirical studies, other scholars have offered a more focused theoretical development of the relationship between community factors and reentry-related issues within several books and edited volumes (Bushway, Stoll, and Weiman, 2007; Clear, 2007; Petersilia, 2003; Western, 2006; Western, Pattillo, and Weiman, 2004). The analyses (e.g., literature reviews, descriptive statistics, large-scale aggregate data sets), outcomes (e.g., ex-offender employment, community measures as outcomes, multiple measurements of recidivism), and substantive focus of this work is quite varied, but provides a good starting point for more useful discussions of community and ex-prisoner linkages.

3. This is not an attempt to downplay the contextual effects literature or linkages between contextual variables and other forms of criminal activity. However, one of the primary goals of this chapter is to offer a more developed understanding of why communities matter for ex-prisoners and to move beyond the association with a large contextual effects literature as the sole rationale for introducing contextual variables into analyses of recidivism.

4. A review of this literature and the ramifications of the restructured economy for returning prisoners are further developed in Chapter 4.
5. As such, jobs in the professional sector that typically need advanced skills and college degrees are located in the primary sector.

6. These studies are reviewed in Chapter 4.

7. However, a portion of the service sector does not hire ex-offenders mostly due to criminal background checks often required by law due to the nature of the position (Holzer, Raphael, and Stoll, 2007; see also Petersilia, 2003).

8. Other scholars have criticized the reentry literature for an overly narrow focus on all types of recidivism outcome measures (Visher and Travis, 2003).

9. The additional information is the result of data collection from primary sources stored in DRC’s inmate information records. These microfiche files consist of paperwork documenting various stages of the criminal justice system. The paperwork includes arrest reports, court records, pre-sentence investigations, institutional classification and behavior, and other miscellaneous information.

10. As a consequence, these ex-prisoners have not been revoked or sanctioned back to prison on their current offense at this time of release.

11. These convictions exclude offenses where the sentencing resulted solely in fines or court fees. In general, the convictions resulting in fines, costs, or fees were relatively minor offenses. The Ohio Revised Code is referenced to help place certain offenses into each particular offense category (see Ohio Criminal Law Handbook, 2004).

12. Individuals on monitored time generally do not have to report to parole officers and the supervision merely consists of random criminal history checks.

13. Further, Kubrin and Stewart (2006) provide a limited assessment of neighborhoods by using census tracts found in only one particular county.
<table>
<thead>
<tr>
<th>Variable</th>
<th>African Americans (n = 579)</th>
<th>Whites (n = 457)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Min</td>
</tr>
<tr>
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</tr>
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</tr>
<tr>
<td>Property offenses</td>
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</tr>
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</tr>
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<td>High supervision</td>
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<tr>
<td>Moderate supervision</td>
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<tr>
<td>Percent accommodation and food services</td>
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<td>0</td>
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</table>

*African Americans are significantly different from whites ($p \leq .05$, two-tailed). Descriptive statistics for African Americans and whites are weighted.

Table 3.1. Descriptive Statistics for Dependent Variable and Independent Variables by Race.
### Individual-Level Variables

<table>
<thead>
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<th>(4)</th>
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<td>(.146)</td>
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<td>(.158)</td>
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<td>-.058</td>
<td>-.058</td>
<td>-.060</td>
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<td></td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>(.010)</td>
<td>(.010)</td>
<td>(.010)</td>
<td>(.010)</td>
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<tr>
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<td>(.262)</td>
<td>(.256)</td>
<td>(.259)</td>
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<td>.000</td>
<td>.000</td>
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<td>(.016)</td>
<td>(.016)</td>
<td>(.016)</td>
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<td>**</td>
</tr>
<tr>
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<td>(.051)</td>
<td>(.050)</td>
<td>(.052)</td>
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<td>(.188)</td>
<td>(.190)</td>
<td>(.189)</td>
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<td>Property offenses</td>
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<td>.064</td>
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<td>(.029)</td>
<td>(.029)</td>
<td>(.028)</td>
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<tr>
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<td>.074</td>
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<td>*</td>
<td>*</td>
<td>*</td>
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<td>(.036)</td>
<td>(.038)</td>
<td>(.036)</td>
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<td>.193</td>
<td>.189</td>
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<td></td>
<td>(.063)</td>
<td>(.064)</td>
<td>(.064)</td>
<td>(.063)</td>
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<td>(.212)</td>
<td>(.212)</td>
<td>(.218)</td>
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<tr>
<td>High school graduate</td>
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<td>-.226</td>
<td>-.234</td>
<td>-.216</td>
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<td>(.129)</td>
<td>(.130)</td>
<td>(.128)</td>
<td>(.129)</td>
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<td>High supervision</td>
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<td>.954</td>
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<td></td>
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<td>(.245)</td>
<td>(.241)</td>
<td>(.244)</td>
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<td>Moderate supervision</td>
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### Community Variables

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<td>Residential instability</td>
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<td>Disadvantage</td>
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</tr>
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</tr>
<tr>
<td>Percent unemployed</td>
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<tr>
<td></td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>(.009)</td>
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<tr>
<td>Percent construction</td>
<td>.007</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent manufacturing</td>
<td>-.006</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Percent retail trade</td>
<td>.035</td>
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<tr>
<td></td>
<td>*</td>
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<td></td>
<td>(.017)</td>
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**Wald chi-square**

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<tr>
<td>137.64</td>
<td>141.41</td>
<td>148.53</td>
<td>162.95</td>
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</table>

*p ≤ .05, **p ≤ .01, ***p ≤ .001 (two-tailed). Standard errors in parentheses.

Table 3.2. Cox Proportional Hazards Models of Racial Difference in Serious Behavior on Post-Release Supervision.
Figure 3.1. Nelson-Aalen Cumulative Hazard Estimates by Race.
CHAPTER 4

AN ANALYSIS OF LABOR MARKET OPPORTUNITY AMONG PAROLE AND PRC RELEASES

INTRODUCTION

It is well known that ex-offenders face significant obstacles after being released from prison. Many of these challenges are rooted in a variety of negative characteristics and circumstances that are indicative of former prisoners including low levels of education and job skills, unstable prior work experiences, drug and alcohol abuse, mental health problems, and physical health problems (Clear, 2007; Petersilia, 2003; Visher and Travis, 2003; Western, Pattillo, and Weiman, 2004). As a consequence, large amounts of funding has been allocated in order to develop programs to help ex-prisoners overcome these barriers and successfully transition back into their communities after release (Visher and Travis, 2003; Wilkinson, Rhine, and Henderson-Hurley, 2005). However, as Kubrin and Stewart (2006:189) conclude, these programs and support systems are positive efforts to help ex-prisoners, but they “matter little if the communities to which ex-offenders return offer few jobs or opportunities.”

One of the most critical aspects to a positive reentry transition is finding a job. Survey data indicates that ex-prisoners feel that employment is essential to post-release success and “would be an important factor to staying out of prison” (Visher, Baer, and
Naser, 2006:4; see also La Vigne, Visher, and Castro, 2004). Further sentiments regarding the need and benefits of securing viable employment options for ex-prisoners has also been found in focus groups of the general public (Immerwahr and Johnson, 2002). Although the linkage of employment to reentry success is clearly recognized by ex-prisoners and to some extent by the general public, the reality of actually finding a job after release is sometimes a formidable pursuit. Ex-prisoners can struggle to find work because they lack the necessary skills and education to effectively complete certain job-specific tasks (Western, Kling, and Weiman, 2001), they face the stigma and label of prior incarcerations and a criminal record (Pager, 2003; Petersilia, 1999), or they are released into contexts where suitable employment opportunities are limited (Sabol, 2007). Indeed, ex-prisoners disclose that they anticipate some difficulty finding a post-release job as well (Visher and Kachnowski, 2007). Additional survey information capturing the experiences of two samples of ex-prisoners returning to the Cleveland and Chicago areas reveal that the vast majority (89 percent and 92 percent respectively) would prefer at least some help locating employment after release (La Vigne, Visher, and Castro, 2004; Visher, Baer, and Naser, 2006).

The analysis of labor market opportunity for ex-prisoners is a newly expanding area of study (see Western, 2007) given the recent resurgence of reentry and recidivism research. A group of contemporary studies find that the overall eagerness to hire former offenders is limited as employers are more likely to seek out individuals without a criminal record (Holzer, Raphael, and Stoll, 2007; Holzer and Stoll, 2001; see also Pager, 2007, 2003). This data further reveals that ex-prisoners face difficult odds in acquiring employment even in comparison to other disadvantaged worker groups (e.g., individuals
receiving welfare benefits, individuals that have been unemployed for a year or longer). It is therefore not surprising that the body of work depicting the labor market options for ex-prisoners has a generally pessimistic tone.

However, the employment outlook for ex-prisoners is not as bleak as it may seem. Although the overall eagerness of employers to hire ex-prisoners is somewhat small, it does appear that several types of industries offering primarily low-skill jobs are willing to hire individuals with prior records and actually do hire ex-prisoners (Holzer, Raphael, and Stoll, 2007; Pettit and Lyons, 2007). Most prior research examining job opportunity among ex-offenders often overlooks employment options within these particular industries and utilizes broader conceptions of opportunity such as the unemployment rate (Raphael and Weiman, 2007; Sabol, 2007). As a consequence, these studies fail to account for the specific industries that matter most. Returns to communities rich in low-skill employment opportunity may reduce the likelihood of recidivism for ex-prisoners motivated to find work.

This chapter investigates whether various measures of labor market opportunity influence serious behavior on post-release supervision for a sample on parole and post-release control in Ohio. Employment is an essential component to reentry success. As such, more precise differences in labor market structure need to be examined in relation to the post-release outcomes ex-prisoners. This chapter further extends and develops the reentry and recidivism literature by linking the current employment seeking experiences of ex-prisoners to the large scale macrostructural changes in the overall economy beginning in last several decades, by moving beyond the unemployment rate to more precise formations labor market opportunity in the industries most willing to hire ex-
prisoners, and by utilizing a valuable data source that captures the actual number of business establishments within communities across Ohio.

A large body of work has documented the transformation of the U.S. economy and the relocation, and sometimes removal, of jobs. Low-skill employment offering good wages and benefits have been drastically reduced, and often times moved to the suburbs or out of the country (Kasarda, 1995, 1988; Wilson, 1996; see also Gobillon, Selod, and Zenou, 2007). These jobs have been replaced by professional-sector jobs needing advanced skills and college degrees or service-sector jobs needing no skills or requirements, but offering low wages and sometimes poor prospects for advancement or promotion (Anderson, 2008; Kasarda, 1988; Wilson, 1996). The current chapter discusses how these larger macrostructural economic changes have implications for the growing number of former prisoners upon release. Ex-prisoners generally lack the necessary skills and education to participate in the new post-industrial economy. As such, one of the significant repercussions of broader economic restructuring is that ex-prisoners are constrained to low-skill and low-wage jobs.

Scholars are just beginning to analyze the employment prospects of ex-prisoners in greater detail. Many of these studies focus on local labor market conditions and their influence on outcomes such as post-release employment and wages (Pettit and Lyons, 2007; Sabol, 2007) and recidivism (Raphael and Weiman, 2007, Uggen, 1999). One commonality within this research is the treatment of local labor market conditions as the unemployment rate at large levels of geography (e.g., county-level or city-level data). The unemployment rate is a useful measure to capture a broad metric of employment opportunity. However, the unemployment rate has produced inconsistent results in prior
work (see Crutchfield and Pitchford, 1997). A more useful approximation of the employment opportunity available to ex-prisoners may be to operationalize the low-skill industries that are actually most likely to hire them. The current findings indicate that both this broad metric of employment opportunity and more precise employment opportunity variables play an important role in the reentry process for ex-prisoners.

This chapter also incorporates a useful data source consisting of business establishment information within communities across Ohio. The Zip Code Business Patterns data set is produced by the U.S. Census Bureau and differentiates between particular types of employers utilizing the North American Industry Classification System. This particular data provides a more direct measure of employment opportunity for ex-prisoners by including the actual number of business establishments by industry type within particular zip codes. This next section links the employment opportunities available to ex-prisoners upon release to broader economic changes within the United States over the last several decades.

LABOR MARKET OPPORTUNITY AND BROADER ECONOMIC CHANGE

THE TRANSFORMATION OF THE U.S. ECONOMY

Within the urban sociology literature, a wide variety of research has examined the changing nature of urban areas, and in particular, the transformation of the U.S. economy and the relocation of jobs. Beginning as far back as the Industrial Revolution, the growth and expansion of urban centers in America created enormous numbers of beneficial, low-skill employment opportunities and provided social mobility for migrant and immigrant workers giving “them a foothold in the urban economy” (Kasarda, 1988:60; see also
Anderson, 2008; Kasarda, 1995; Wilson, 1996, 1987). These entry-level jobs were abundant and characterized by few pre-employment requirements or needs for advanced skills (Wilson, 1996). During this period of urban expansion, large cities had distinct advantages over other locations and became centers for industrial manufacturing and transportation (Kasarda, 1988).

As technology improved in the transportation and communication fields coupled with changing modes of production in the U.S. economy, these better paying, low-skill jobs, typical of the manufacturing industry, began to decline often moving away to the suburbs or out of the country entirely (Kasarda, 1995, 1988; Wilson, 1996). As a result, urban areas have attempted to rebuild with postindustrial growth industries such as finance, professional, and business-sector employment. This restructuring can lead to an economic revitalization within these locales, but these shifts in labor market structure have dire consequences for the urban underclass (Massey and Denton, 1993; Wilson, 1996) and low-skilled workers such as ex-prisoners. The focus on shifts in the labor market has gained considerable attention among scholars as these urban areas exhibit both restructured economic bases and increased suburbanization of residents with adequate social mobility (Kasarda, 1988; Wilson, 1996). “These simultaneous, yet conflicting, transformations of the employment and residential bases of the cities have contributed to a number of serious problems, including a widening gap between urban job opportunity structures and skill levels of disadvantaged residents (with corresponding high rates of structural unemployment), spatial isolation of low-income minorities, and rising levels of urban poverty and welfare dependency” (Kasarda, 1988:57). As these better paying, low-skill, and entry-level employment opportunities have disappeared,
individuals with social mobility have left these locales leaving behind a disadvantaged population and working class constrained to employment options within low-skill, low-wage portions of the labor market (Massey and Denton, 1993; Kasarda, 1998; Wilson, 1996).

The aforementioned working population that remains in these urban areas lack the necessary skills and education to participate in the new post-industrial economy. The changing structure of the economy has created a spatial “mismatch” between the potential workers and the employment base in these particular locations. This mismatch is defined as “a discordant distribution of labor qualifications vis-à-vis qualifications required for available jobs at a point in time” (Kasarda, 1988:77; see also Wilson, 1996, 1987). Economic marginalization and residential segregation has further worsened the situation as many of the remaining residents of these areas lack the necessary resources and mobility to move to the suburbs or even other local communities with greater labor market opportunity (see also Massey and Denton, 1993).

THE IMPLICATIONS FOR FORMER PRISONERS

These large scale macrostructural changes in the overall economy have profound consequences for the growing number ex-prisoners. It is well known that individuals released from prison generally possess low levels of education and other formal training (Petersilia, 2003; Western, Pattillo, and Weiman, 2004). The situation is further worsened as spending time in prison interrupts patterns of employment (Uggen, 2000) virtually prohibiting the acquisition of additional on-the-job training, work experience, or other vocational skills (see also Western, 2006). Released populations today do not have the advantage of well-paid, entry level positions prevalent in the past to help ease the
reentry transition. The lack of education, experience, and skills coupled with the stigma of a felony record has further blocked former prisoners from making “an effective adjustment to the new economic realities” restricting ex-offenders to low-skill, low-wage employment options (Anderson, 2008:6).

A large literature focusing on the interplay between employment and crime has explored the effects low-skill, low-wage employment options. The implications from this body of work suggest that returning to communities with large amounts of low-skill, low-wage jobs will be detrimental for ex-prisoners. For instance, Crutchfield (1989) and colleagues (Crutchfield, Glusker, and Bridges, 1999; Crutchfield and Pitchford, 1997) place low-skill, low-wage jobs in the secondary labor market. They describe these jobs as unstable with few benefits and high employee turnover, and argue that these workers place little value in their job and lack strong attachments to their coworkers (Crutchfield and Pitchford, 1997). Communities with large amounts of secondary sector jobs, and as a result large amounts of secondary sector workers, are more vulnerable to “circumstances that are likely to lead to crime” (Crutchfield and Pitchford, 1997:97). They find a positive relationship between the concentration of secondary labor market workers and violent crime (Crutchfield, 1989; Crutchfield, Glusker, and Bridges, 1999). Other scholars have provided similar findings. Bellair and Roscigno (2000) find that the concentration of secondary labor market workers and unemployment have a positive relationship with adolescent fighting and drug use by impacting family income and family structure. Krivo and Peterson (2004) indicate that the joblessness rate and the percentage of low-wage jobs have a positive relationship with arrests for violent crime.
for young adults (age 20-24), and the joblessness rate has a similar positive effect for older adults (age 25 and older).

The general conclusions of this literature suggest a negative outlook towards low-skill, low-wage jobs. These studies direct attention to the low wages, lack of benefits, and little room for promotional advancement that secondary sector jobs provide as the impetus for assessing the possible benefits (or lack thereof) of such employment. These judgments seem to be based in economic motives fitting well into a rational choice framework (see Hollis, 1987) that highlights the interplay between ordered preferences, action, and consequences (Fagan and Freeman, 1999; see also Becker, 1968). In the case of ex-prisoners, legitimate income, illegal income, and the likelihood of possible criminal consequences would all be considered when determining the potential value of low-skill, low-wage employment options after release (Fagan and Freeman, 1999).

Although clearly an important part of the process, purely economic incentives do not seem to be the only driving force behind ex-prisoners’ calculations determining the actual value of low-skill, low-wage work. In contrast to the aforementioned literature, the opportunity to simply acquire a job may be advantageous to ex-prisoners post-release despite the sometimes transitory nature of the employment available to them (Petersilia, 2003; Visher and Kachnowski, 2007; Visher and Travis, 2003; see also Uggen, 2000). First off, interview data indicates that a large number of ex-prisoners are motivated to obtain employment because they feel a job is an essential component to a positive reentry transition (La Vigne, Visher, and Castro, 2004; Visher, Baer, and Naser, 2006; Visher and Kachnowski, 2007). The merit of obtaining and maintaining employment is further demonstrated to former prisoners through reentry-related program participation before
(and sometimes after) release (Wilkinson, Rhine, and Henderson-Hurley, 2005). As a consequence, ex-offenders may place more value in low-skill, low-wage work because they are acutely aware of the negative consequences of not working. In more simple terms, work can offer daily structure “keeping the parolee off the streets and probabilistically reducing the likelihood that the ex-offender encounters high-risk situations” (Raphael and Weiman, 2007:308). However, the motivation to find and keep a job may be even more practical as obtaining and maintaining employment is often a specific stipulation of the conditions of community supervision upon release (see Petersilia, 2003).

Giordano and colleagues (2002) argue that research must consider not only the job (and job availability) itself, but also “its meaning, salience, or importance for the individual” for positive change to occur (Giordano, Cernkovich, and Rudolph, 2002:1001). Ex-prisoners are very conscious of the reality that finding a job may not be easy (see Visher and Kachnowski, 2007). The introduction of a job may have special meaning to ex-offenders given the overall struggle to find work and offer a starting point to a more conventional lifestyle. The life course perspective finds employment to be a critical turning point away from more negative behaviors as individuals become drawn into positive employee networks, and commit to occupational tasks that are based in more legitimate, conventional activity (see Sampson and Laub, 1993). Ex-prisoners may form an especially strong bond with an employer that took a chance on hiring an individual with a criminal record amid a tough labor market. A job provides sets of meaningful expectations and social controls, and maladaptive behavior runs the risk of being excluded from important, pro-social networks (Sampson and Laub, 1993; Uggen, 2000).
As more pro-social relationships and networks are formed, former negative relationships also become less relevant (Warr, 1998).

Ex-prisoners returning to communities with greater amounts of low-skill employment opportunities may attain more favorable post-release outcomes such as finding a job, avoiding negative behavior on supervision, and avoiding returns to prison. However, prior research that documents labor market opportunity for ex-prisoners fails to account for the specific industries that matter most. The next section describes this literature and highlights the need to move beyond the unemployment rate to more precise formations labor market opportunity in the industries most willing to hire ex-prisoners.

LABOR MARKET PROSPECTS FOR EX-PRISONERS UPON RELEASE

The analysis of labor market opportunity for ex-prisoners is a newly expanding area of research (see Western, 2007). A group of recent, influential audit studies (Pager, 2007, 2003) and employer surveys (Holzer, Raphael, and Stoll, 2007; Holzer and Stoll, 2001) initially reveal that employers are more likely to seek out individuals without a criminal record for a variety of reasons. In addition to negative characteristics related to education, skill sets, and prior work experiences (Western, Pattillo, and Weiman, 2004), some employers look to avoid hiring ex-prisoners because they fear potential liability from crime (Holzer, Raphael, and Stoll, 2007), view ex-offenders as untrustworthy (Pager, 2008; Sabol, 2007), or simply have a better pool of applicants (Anderson, 2008). Findings from recent audit studies further describe a much tougher path to employment for African Americans (Pager, 2007, 2003). In particular, African American ex-prisoners have an especially difficult challenge seeking employment as the intersection of race and
a felony record provides effects “above and beyond the simple additive effects of either characteristic alone” (Pager, 2007). Further, some businesses are prohibited by law to hire ex-offenders for particular employee positions (e.g., child care, government positions, see Petersilia, 2003).

Holzer and colleagues (2007) provide a useful illustration. Using a survey of business establishments in Los Angeles in 2001, they report that 21 percent of the solicited employers “definitely” or “probably” would consider hiring an individual with a criminal record (Holzer, Raphael, and Stoll, 2007:123). In comparison, a much higher percentage of business establishments “definitely” or “probably” would consider hiring individuals receiving welfare benefits (93%), individuals with a GED and no high school diploma (97%), individuals with irregular prior job histories (66%), and individuals that have been unemployed for a year or longer (80%, see Holzer, Raphael, and Stoll, 2007:123). Similar unskilled worker groups, like immigrant groups, can provide competition in low-skill labor market, and appear “less threatening” and “clean-cut, hard-working, and willing to work for less” to employers (Anderson, 2008:3; see also Jaynes, 2008). Overall, this data exhibits that ex-prisoners face difficulty finding employment even compared to a variety of disadvantaged worker groups.

It is clear that the overall eagerness to hire ex-prisoners is limited (Petersilia, 2003; Western, 2007), and perhaps even more so for African American ex-prisoners (Pager, 2007). However, some recent data indicates that some types of employers are willing to hire and actually do employ ex-prisoners. In particular, employer data indicates that that jobs in the manufacturing, retail, and service industries are the most conducive to hiring ex-offenders (Holzer, Raphael, and Stoll, 2007; Pettit and Lyons,
Further, several scholars have found that levels of employment and earnings are actually higher in the first year after release from prison compared with the time period immediately before admission to prison (Pettit and Lyons, 2007; Sabol, 2007). In their 2001 study of business establishments in the Los Angeles area, Holzer, Raphael, and Stoll (2007) surveyed employer’s self-reported willingness to hire and actual hiring practices of ex-offenders. They found that employers in the low-skill industries, particularly the service, manufacturing, and retail industries, are the “most willing to accept” ex-offenders, and these categories are further bolstered if employers that answered “depends on crime” are included (Holzer, Raphael, and Stoll, 2007:126). In terms of actual hiring practices, the data indicate that the service, manufacturing, and retail industries also display the greatest incidence of businesses hiring ex-offenders within the last year.

Pettit and Lyons (2007) examine the effect incarceration has on employment and wages after release for several different groups (e.g., race, class, offender types). In particular, they examine over 10,000 male ex-prisoners from Washington state facilities during over a 10 year span in the 1990s. The data contains two years of post-release wage and employment information. Although not the focus of their investigation, Pettit and Lyons (2007) include several dummy variables for industrial sectors to account for differences in the first job ex-offenders receive after release. The data indicate that the three most common types of jobs these ex-prisoners obtained post-release are located in the service (32.6%), retail (23.7%), and manufacturing (17.7%) sectors of the labor market. These are precisely the same types of jobs that other research has found to hire ex-prisoners (see Holzer, Raphael, and Stoll, 2007).
However, most prior research that examines job opportunity or local labor market conditions in relation to ex-offenders overlooks employment options within these particular industries and utilizes broader conceptions of opportunity such as the unemployment rate (Raphael and Weiman, 2007; Sabol, 2007; see also Uggen, 1999). Sabol (2007) investigates how local labor market conditions influence the employment opportunities of Ohio ex-offenders in 1999 and 2000 using county-level unemployment rates stemming from ex-prisoners’ original counties of sentencing. Sabol (2007) allows the unemployment measure to vary over time to simulate changing labor market conditions and finds that as unemployment increases the likelihood of finding a job for Ohio ex-offenders decreases. Raphael and Weiman (2007) examine how labor market characteristics affect the likelihood of a parole violation leading to a return to prison among California parolees over 10 years (1990 to 1999) using the average monthly unemployment rate from the offender’s controlling county for the six-month period. They find a significant positive relationship with unemployment and returning to prison at 12 month, 24 month, and 36 month follow-ups. Additionally, Raphael and Weiman (2007:305) indicate that lower risk ex-prisoners are more sensitive to economic characteristics, and that “the post-release criminal activity of the most problematic parolees is least impacted by local labor-market conditions” (2007:305).

Two problems emerge with a sole reliance on the unemployment rate to approximate local labor market conditions. First, several studies exploring the relationship between unemployment and crime produce inconsistent results (see Chiricos, 1987; Crutchfield and Pitchford, 1997) when using different levels of analysis (e.g., state, county, census tract) and different outcomes (e.g., violent crime, property crime, drug
crime). Next, the aforementioned data reveals that certain industries offer some hope for employment options among ex-prisoners upon release, but the effects of these particular industries are lost within broader measures of job opportunity that include multiple industries that may not be relevant or even applicable to ex-prisoners. As such, the current chapter moves beyond the unemployment rate to more precise formations labor market opportunity in the industries most willing to hire ex-prisoners. Next, I describe additional data that captures these more specific labor market designations.

**BUSINESS ESTABLISHMENT DATA**

This chapter utilizes a valuable data source consisting of actual business establishment information in communities across Ohio. The Zip Code Business Patterns is a national data set produced by the U.S. Census Bureau with additional information provided by the Internal Revenue Service (e.g., business address information to identify the local community). The data differentiates between particular types of employers using the North American Industry Classification System and identifies the location of these businesses within zip code boundaries. This particular information is an upgrade over decennial census indicators that rely on the presence of individual workers within specific industrial sectors to account for labor market opportunity. As such, the labor market variables utilized here provide a more direct measure of employment opportunity for ex-prisoners by including the actual number of business establishments by industry type within particular zip codes.

Jobs are an important component of the reentry transition. Despite a difficult employment landscape overall, it does appear that some employers in low-skill industries
are willing to take a chance on ex-prisoners, and the opportunity to acquire a job may lead to positive post-release outcomes. In Chicago, a sample of ex-prisoners indicate that “those who reported living in neighborhoods that were good places to find a job worked significantly more weeks” (La Vigne, Visher, and Castro, 2004:11). Similarly, I expect the likelihood of serious behavior on post-release supervision to be greater for ex-prisoners in the current sample released into communities with higher levels of unemployment, and I expect the likelihood of serious behavior to be less for ex-prisoners released into communities with higher levels of industries that are likely to hire ex-offenders (retail trade and manufacturing industries).

DATA, METHODOLOGY, AND ANALYTIC STRATEGY

DATA SOURCES AND SAMPLE SELECTION

This analysis of post-release labor market opportunity for ex-prisoners uses the PRC/Parole Behavior study originally constructed by the Bureau of Research at the Ohio Department of Rehabilitation and Correction. Additional data collection from primary sources is also utilized to attend to missing data problems within the original data file and to expand the original data file to include other individual-level characteristics. The sampling frame includes ex-prisoners released on parole or post-release control (PRC) during October through December of 2000. These ex-prisoners have not been revoked or sanctioned back to prison for this period of community supervision at the time of release. The sampling strategy oversamples for missing data possibilities and disproportionately samples across geography and release type to ensure representativeness. A weight variable is attached to the data file to account for this sampling technique, and to ensure
the sample is representative of the population being released on parole and PRC in Ohio. The sample utilized in the analysis that follows includes 1,036 parole and PRC releases.7 A more comprehensive description of the PRC/Parole Behavior study, including data sources, data collection processes, and sample selection, is provided in Chapter 2.

VARIABLE MEASUREMENT

Dependent Measure

The recidivism measure is time to serious behavior on post-release supervision using continuous time (e.g., days). More specifically, the dependent measure construction is serious behavior (1 = yes, 0 = no) and the number of days until failure (see also Allison, 1984). The content analysis of parole officer field notes spans one year after release, so the risk of serious behavior on post-release supervision is examined over a one year follow-up time period.8

Individual-Level Characteristics

The individual-level characteristics included in the analysis constitute some of the most consistent and strongest predictors of recidivism in prior studies (Baumer, 1997; Petersilia, 2003; see especially Gendreau, Little, and Goggin, 1996). These variables also stem from information that can be consistently and reliably coded from the Department of Rehabilitation and Correction’s electronic and microfiche files. Previous research has found that the likelihood of recidivism is lower as individuals get older, and the likelihood of recidivism is higher for males and African Americans (Gendreau, Little, and Goggin, 1996; Petersilia, 2003). Age is captured as a continuous measure in years. A Male dummy variable controls for gender (females are the reference group) and an African American dummy variable controls for race (whites are the reference group).
Several important criminal history variables that traverse the entire offending history of ex-prisoners are also included in the analysis. *Age of onset* is a continuous measure in years that represents the age of first contact with the criminal justice system. *Offenses against persons, Sex offenses, Property offenses,* and *Drug offenses* are the total number of prior convictions for each offense category that result in sentences of community supervision, jail terms, or prison incarcerations.\(^9\) *Prior prison terms* accounts for the total number of prior prison incarcerations. Ex-prisoners with more extensive criminal background are more likely to recidivate post-release (see Gendreau, Little, and Goggin, 1996).

*Living with partner* (1 = living with spouse or domestic partner, 0 = else) captures ex-prisoners that live with a spouse or domestic partner after release. Residing with a spouse or domestic partner may yield positive benefits by reconnecting with family in a more supportive environment (Visher and Travis, 2003; see also Sampson and Laub, 1993). Educational attainment is included with *High school graduate* (1 = high school diploma, successful completion of a GED, or higher, 0 = less than high school graduate or equivalency). Ex-prisoners as a group exhibit poor work histories, limited employment skills, and low levels of education. The analysis uses educational attainment as a proxy for employment skills and job readiness with the expectation that ex-prisoners with a high school degree or better will be less likely to recidivate.

The level of supervision by the Adult Parole Authority is a necessary control because ex-prisoners are likely to be differentially exposed to supervision and surveillance based on supervision type (see also Kubrin and Stewart, 2006; Mears et al., 2008). *High supervision,* which consists of intensive supervision and high supervision,
and Moderate supervision, which consists of medium supervision are the dummy variables included in the analysis. The reference group is ex-prisoners on low supervision and monitored time, which consists of non-reporting supervision and random criminal history checks.

**Labor Market Opportunity Characteristics**

The purpose of this chapter is to examine the role labor market opportunity plays in the reentry process through its influence on serious behavior on post-release supervision. Prior studies that have measured labor market conditions for ex-prisoners use county-level unemployment data (Raphael and Weiman, 2007; Sabol, 2007) and city-level unemployment data (Uggen, 1999). County and city data may be too large to construct opportunity measures as these contexts likely contain areas with divergent levels of labor market opportunity especially in terms of low-skill opportunity. Further, localized contexts (e.g., census tracts or zip codes) are more useful levels of analysis for ex-prisoners since the availability of transportation, coupled with the cost and time commitment of public transportation, can create potential barriers to jobs that feature longer commutes. Several scholars have documented the problems disadvantaged workers have commuting to the suburbs to find better job opportunities (Anderson, 2008; Wilson, 1987). These particular contextual variables reflect information at the zip code level of analysis.

Labor market opportunity variables are constructed using information from both the 2000 Decennial Census and Zip Code Business Patterns Data (from the Census Bureau and the Internal Revenue Service). Percent immigration comprises the percentage of the foreign-born population. This variable is introduced into the analysis to
account for competition in the low-skill labor market (Anderson, 2008; Jaynes, 2008).

*Percent unemployed* reflects the percentage of unemployed individuals among the civilian labor force, and provides a broad measure of overall employment prevalent in prior work (Raphael and Weiman, 2007; Sabol, 2007; Uggen, 1999). The current chapter moves beyond the unemployment rate by including the industries most willing to hire ex-prisoners. *Percent retail trade* is the percentage of business establishments in the retail trade industry in 2001. Similarly, *percent manufacturing* is the percentage of business establishments in the manufacturing industry in 2001.

**ANALYTIC STRATEGY**

Cox proportional hazards models are used to assess the influence of labor market opportunity on serious behavior post-release. These non-parametric Cox models provide a valuable technique for analyses of event-based data more concerned with the effects of the explanatory measures, rather than the actual shape of the distributional form (see Allison, 1984:35). Another benefit of Cox models is the inclusion of the censored cases within the analysis (see Cleves, Gould, and Gutierrez, 2004). Please see Chapter 2 for a more sophisticated explanation of the advantages of event history methods for analyses of recidivism. Additionally, some ex-prisoners in the sample are returning to the same communities leading to individual cases being nested within certain zip codes. The clustering of these cases can lead to correlated error terms across observations which underestimate standard errors increasing the odds of significant, but misleading effects (see Guo & Zhao, 2000). Clustering is accounted for in the analysis by using the cluster command in STATA (Stata Press, 1997).
RESULTS

Table 4.1 lists the descriptive statistics for both the individual-level characteristics and the labor market opportunity characteristics (descriptive statistics in Table 4.1 are weighted). The mean value of the retail trade employment opportunity measure is larger than the mean of the manufacturing employment opportunity variable perhaps reflecting the overall trend of diminished businesses and jobs within manufacturing sector over the last several decades (see also Wilson, 1996). In terms of recidivism, slightly over 26 percent of the entire sample exhibits serious behavior on community supervision during the first year after release.

Table 4.2 and Table 4.3 supply Cox proportional hazards models determining the influence of various indicators of labor market opportunity during the reentry process. Model 1 provides an initial model of individual-level characteristics that prior work has found to be meaningful predictors of recidivism (Baumer, 1997; Gendreau, Little, and Goggin, 1996; Petersilia, 2003). Model 2 in Table 4.2 introduces an immigration variable as a proxy for competition in the low-skill labor market (Anderson, 2008; Jaynes, 2008). Models 3 and 4 in Table 4.2 and Model 5 in Table 4.3 incorporate the labor market opportunity variables using a broad metric of employment opportunity most prevalent in prior research, and more precise employment opportunity variables focused on the industries likely to hire ex-prisoners. Model 6 in Table 4.3 examines potential interaction effects between race and the labor market opportunity characteristics. Variance inflation factors indicate that multicollinearity is not a problem in these models.

Looking first at the individual-level characteristics, Model 1 reveals that older ex-prisoners and ex-prisoners with a high school diploma or higher are less likely to exhibit
serious behavior on post-release supervision, while males (significant \( p \leq .10 \)), African Americans, and ex-prisoners placed on high supervision are more likely to exhibit serious behavior on post-release supervision. The likelihood of recidivism is also higher for individuals in the sample with more prior convictions for offenses against persons, property offenses, and drug offenses (significant \( p \leq .10 \)), and ex-offenders with more prior prison terms. With the exception of the race effect, which is sometimes reduced with the introduction of labor market variables, the effects of the individual-level characteristics are consistent across all six models.

Model 2 initially probes possible competition in the low-skill labor market. However, the percent immigration measure is not a significant predictor of serious post-release behavior. Model 3 includes the broad metric of employment opportunity most prevalent in prior research (Raphael and Weiman, 2007; Sabol, 2007; see also Uggen, 1999), and the current chapter also finds that returning to communities with higher levels of unemployment are associated with serious behavior on post-release supervision. Model 4 introduces percent retail trade and percent manufacturing to capture the industries most willing to hire ex-prisoners. As expected, ex-prisoners residing in communities with greater numbers of retail trade businesses are less likely to exhibit serious behavior on post-release supervision. Model 5 in Table 4.3 incorporates the percent unemployed, percent retail trade, and percent manufacturing measures together into the same model. The positive and significant effect of percent unemployed remains the same, but percent retail trade, although in the expected direction, is no longer significant.
Model 6 assesses possible interaction effects between race and percent unemployed, race and percent retail trade, and race and percent manufacturing, and reveals that a significant interaction exists between race and percent retail trade. Figure 4.1 illustrates the effect by using the simple slope of the interaction spanning two standard deviations below the mean (5.164% retail trade) to three standard deviations above the mean (31.764% retail trade). Figure 4.1 clearly indicates that the hazard rate for serious behavior on post-release supervision increases for African American ex-prisoners in communities with greater amounts of retail trade business establishments compared to white ex-prisoners.

The overall findings support the idea that labor market opportunity influences the post-release outcomes of ex-prisoners. The results suggest that both a broad measure of employment opportunity, and more precise low-skill employment opportunity measures play an important role in the reentry process. While Model 4 and Model 5 (effect in the expected direction, but not significant) suggest cautious optimism for positive post-release outcomes among ex-prisoners in contexts of increased retail trade businesses, the inclusion of the interaction effects in Model 6 uncovers that these favorable outcomes do not extend to African Americans in the sample. This particular observation is developed more fully below.

DISCUSSION

The analysis of the employment landscape for ex-prisoners upon release is a growing area of study within the reentry and recidivism literature (Western, 2007). The idea that employment can help foster a positive reentry transition is advocated by
corrections departments (Wilkinson, Rhine, and Henderson-Hurley, 2005), the general public (Immerwahr and Johnson, 2002), and especially by former prisoners themselves (La Vigne, Visher, and Castro, 2004; Visher, Baer, and Naser, 2006; Visher and Kachnowski, 2007). In general, prior research suggests a negative outlook towards the employment circumstances surrounding ex-offenders. These studies indicate that employers are more likely to hire individuals without a criminal record for a variety of reasons (Holzer, Raphael, and Stoll, 2007; Holzer and Stoll, 2001; Pager 2007, 2003), and highlight the low levels of experience, skills, and education prevalent among ex-prisoner populations (Petersilia, 2003; Western, Pattillo, and Weiman, 2004). However, some contemporary data reveal some room for optimism. It is clear that ex-prisoners generally have trouble finding employment (Petersilia, 2003; Visher and Kachnowski, 2007), but several recent studies indicate that certain types of employers are willing to hire and actually do hire former prisoners after release (Holzer, Raphael, and Stoll, 2007; Pettit and Lyons, 2007).

The main goal of this chapter is to further explore the role of employment during the reentry process by investigating the influence of several conceptions of labor market opportunity on serious behavior on post-release supervision for ex-prisoners released to parole and post-release control in Ohio. In particular, this analysis evaluates a proxy for potential competition in the low-skill labor market (e.g., percent immigration), a measure of overall employment opportunity popular in prior research (e.g., percent unemployed), two measures of low-skill employment opportunity in the industries likely to hire ex-prisoners (e.g., percent retail trade and percent manufacturing), and several interaction effects including race and percent unemployed, race and percent retail trade, and race and
percent manufacturing. This chapter connects the current employment options for ex-prisoners after release to larger scale macrostructural changes in the overall economy during the last several decades, and incorporates a valuable data source that provides zip-code business establishment data within several low-skill industries. The findings suggest that both the broader levels of employment opportunity and more precise low-skill employment opportunity variables influence recidivism for ex-prisoners. Further, interpretation of the interaction effects indicate that the effects low-skill employment options on recidivism may differ for African American and white ex-prisoners.

The majority of studies analyzing employment opportunity or local labor market effects on the post-release outcomes of ex-prisoners strictly utilize the unemployment rate as a broad measure tapping employment opportunity in the overall labor market (Raphael and Weiman, 2007; Sabol, 2007; see also Uggen, 1999). The unemployment rate proves to be a considerable appraisal of the employment opportunity available to ex-prisoners in the current study as well (see also Raphael and Weiman, 2007; Sabol, 2007). Both Model 3 and Model 5 reveal a greater likelihood of serious behavior on post-release supervision with returns to communities with higher levels of unemployment. Still, the current chapter makes an important contribution by drawing attention to data that show some employers are actually hiring ex-prisoners in some of the low-skill industries (Holzer, Raphael, and Stoll, 2007; Pettit and Lyons, 2007), and suggesting that even low-skill employment has the potential to provide a favorable influence on former prisoners. This positive influence is portrayed by Model 4, which finds that ex-prisoners residing in communities with greater numbers of retail trade businesses are less likely to exhibit
serious behavior on post-release supervision. In comparison to the retail trade effect in Chapter 3, it appears that a more sophisticated variable construction for low-skill employment opportunity (e.g., actual business establishments versus actual workers) within a more intermediate level of analysis (e.g., zip codes versus census tracts) does provide different answers. A surplus of low-skill jobs within mid-sized communities seem to be advantageous to the post-release outcomes of ex-prisoners.

However, future research needs to include different measures of low-skill employment opportunity. The service industry is another particular area that will employ former prisoners, but this particular sector includes a wide range of jobs and the Zip Code Business Patterns did not offer a useful service sector option. A percent administrative, support, waste management, and remediation services variable could be considered for approximating the service industry, but a closer look at the employment descriptions indicates jobs ranging from janitorial services to office jobs and support services reflective of more customer contact. Employers are less likely to choose ex-offenders for jobs that involve customer service (Holzer, Raphael, and Stoll, 2007). Although service sector employers were among the industries most willing to hire former prisoners, businesses within this same industry are also the most likely to be unwilling to hire possibly stemming from the wide job variation within the sector. As such, percent retail trade and percent manufacturing are specifically chosen because they reflect employer types that are most willing to hire ex-prisoners, and also because they are less likely to include involvement with customers or the general public (Holzer, Raphael, and Stoll, 2007; Pettit and Lyons, 2007). Nonetheless, research needs to consider the service industry with more compatible employment options that are relevant to ex-prisoners.
Despite the cautious optimism towards the benefits of low-skill employment options after release, the particular findings of this chapter also provide a mixed message. A large body of empirical work discussing the potential advantages and disadvantages of low-skill employment suggest a much more pessimistic outlook. This research finds that the presence of large amounts of low-skill jobs will have adverse effects on workers and other residents of the area (Bellair and Roscigno, 2000; Crutchfield, 1989; Crutchfield, Glusker, and Bridges, 1999; Crutchfield and Pitchford, 1997; Krivo and Peterson, 2004). Model 6 provides a similar observation for African American ex-prisoners in the current sample. The hazard rate for serious behavior on post-release supervision for African American ex-prisoners increases with each standard deviation increase in percentage retail trade business establishments compared to white ex-prisoners. This finding is consistent with results from recent audit studies that document the struggles of African Americans, and African American ex-prisoners in particular, to find work. In fact, Pager (2008) indicates that while African Americans with a criminal record are by far the least likely to receive a call back after applying for a job, African Americans without a criminal record are even slightly less likely to get a call back from potential employers than whites with a criminal record.

However, it is also possible that percent business establishments is still too generic of a measure to capture all the necessary dimensions of employment opportunity. Although the low-skill opportunity measures in this chapter provide an upgrade over measures relying on the decennial census, the actual size and composition of local businesses may prove to be important as well, and are likely to vary across communities. In simple terms, smaller sized firms allow for less employment opportunity by the limited
number of vacancies they could potentially fill. African Americans released to communities with large numbers of smaller, retail trade establishments may be unlikely to find work due to a lack of openings. The aforementioned Los Angeles employer survey finds that minority-owned establishments are more willing to accept individuals with a criminal record than non-profit organizations and primarily union-based businesses (Holzer, Raphael, and Stoll, 2007). Further, criminal history checks by employers offer another potential obstacle to employment, and Holzer and colleagues (2007:134) report that “manufacturing, smaller or minority-owned firms, or those with a larger percentage of unskilled jobs are overrepresented among firms that never check.” It appears that even within the industries that are most likely to hire ex-prisoners different circumstances within particular businesses may affect ex-prisoners in favorable and unfavorable ways. Further developed labor market opportunity measures need to be created to assess these implications for ex-prisoners in general, and African American prisoners in particular.

Overall, the demand for ex-prisoners is “more flexible than previously believed” (Holzer, Raphael, and Stoll, 2007:128). The current chapter tests this idea by looking at business establishment data in the low-skill industries that are actually most likely to hire former prisoners. While some of the results are inconsistent, it is clear that employment opportunity does play a critical role in the reentry process. Next, the final chapter reviews the last three chapters, discusses the limitations of this dissertation in greater detail, and offers directions for future research.
NOTES FOR CHAPTER 4

1. Alternatively, Shihadeh and Ousey (1998) find that lower levels of service sector employment contributes to economic deprivation leading to greater criminal activity.

2. However, these employment increases decline as more time elapses post-release.

3. In this particular case, an ex-offender is “an applicant with a criminal record” (Holzer, Raphael, and Stoll, 2007:120).

4. Parole violations account for the majority of incarcerations in California during this time period. The overall number of prison admissions (1,056,278) overshadows the number of commitments for new offenses (471,877; see Raphael and Weiman, 2007).

5. These are the labor market opportunity variables used in Chapter 3.

6. These primary sources consist of microfiche copies of paperwork including arrest reports, court records, pre-sentence investigations, institutional classification and behavior, and other miscellaneous information.

7. The original sample of the PRC/Parole Behavior study consists of 1,171 ex-prisoners. Additional cases are removed due to missing file information (e.g., no social and criminal histories) or a lack of relevant data (e.g., bad address information, moved out of state, released to an immigration detainer with INS). Further, only 25 offenders (or less than 2 percent of the original sample) in the PRC/Parole Behavior study comprise the other racial categories. These particular offenders have also been removed from the analysis.

8. Serious behavior is defined as felonious behavior and absconding supervision. Please see Chapter 3 for a more thorough description of this dependent measure.

9. Appendix A displays the complete list of all the offenses that comprise each particular offense category. These categories also exclude offenses where the sentencing resulted
solely in fines or court fees. The Ohio Revised Code is referenced to help place certain offenses into each particular offense category (see Ohio Criminal Law Handbook, 2004).
<table>
<thead>
<tr>
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<th>SD</th>
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<th>Max</th>
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<td>0</td>
<td>1</td>
</tr>
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<td>6</td>
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<td>.534</td>
<td>0</td>
<td>9</td>
</tr>
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<td>Property offenses</td>
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<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Drug offenses</td>
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<td>1.652</td>
<td>0</td>
<td>11</td>
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<td>Prior prison terms</td>
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<td>0</td>
<td>8</td>
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<tr>
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<td>.310</td>
<td>0</td>
<td>1</td>
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<td>1</td>
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</tr>
<tr>
<td>Percent retail trade</td>
</tr>
<tr>
<td>Percent manufacturing</td>
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Descriptive statistics for individual-level characteristics and labor market opportunity characteristics are weighted.

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<td>-.057 ***</td>
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<td>(.010)</td>
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<td>(.239)</td>
<td>(.244)</td>
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<td>(.236)</td>
<td>(.234)</td>
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<td><strong>Opportunity Characteristics</strong></td>
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</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Percent unemployed</td>
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</tr>
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<td>Percent manufacturing</td>
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<td>141.35</td>
<td>139.42</td>
<td>172.38</td>
<td>146.49</td>
</tr>
</tbody>
</table>

† $p \leq .10$, *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$ (two-tailed). Standard errors in parentheses.

Table 4.2. Cox Proportional Hazards Models Predicting the Risk of Serious Behavior on Post-Release Supervision.
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<td>-.059 ***</td>
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<td>(.243)</td>
<td>(.241)</td>
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<td>-.456</td>
</tr>
<tr>
<td></td>
<td>(.144)</td>
<td>(.544)</td>
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<td>(.019)</td>
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<td>(.052)</td>
</tr>
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</tr>
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<td></td>
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<td>(.186)</td>
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<td>.067 *</td>
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<td>(.028)</td>
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<td>High supervision</td>
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<td>(.268)</td>
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<td><strong>Labor Market Opportunity Characteristics</strong></td>
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<td>Percent unemployed x African American</td>
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Wald chi-square 177.15 *** 187.92 ***

† $p \leq .10$, *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$ (two-tailed). Standard errors in parentheses.

Table 4.3. Cox Proportional Hazards Models with Interaction Terms Predicting the Risk of Serious Behavior on Post-Release Supervision.
Figure 4.1. Simple Slope of the Interaction Between Race and Percent Retail Establishments Spanning Two Standard Deviations Below to Three Standard Deviations Above the Mean.
CHAPTER 5

DISCUSSION AND DIRECTIONS FOR FUTURE RESEARCH

INTRODUCTION

The primary goal of this dissertation is to provide a multifaceted examination of reentry and recidivism that addresses the limitations of an emerging literature and offers a more complete and thorough understanding of the role communities play during the reentry process for ex-prisoners. The current project renders three separate research studies with a data set based in Ohio and designed to improve the quality and integrity of post-release address data. First off, Chapter 2 examines the influence of several contextual factors on the likelihood of reincarceration for a sample of ex-prisoners released on parole and post-release control supervision. Next, Chapter 3 explores and develops several contextual models to explain racial difference in serious behavior on post-release supervision among ex-prisoners. Lastly, Chapter 4 focuses on the role employment plays during the reentry process, and investigates whether various measures of labor market opportunity influence serious behavior for ex-prisoners released on parole and post-release control.
The current project makes several important contributions to the reentry and recidivism literature. Foremost, this dissertation offers distinct data and methodological advantages that allow the overall project to evaluate a wide range of important individual-level predictors, multiple measurement options and levels of analysis for contextual variables, and multiple measurement options for recidivism outcomes. A versatile data set may prove to be a necessary component for future recidivism studies. As such, the current study indicates that community effects are varied depending on the particular type of recidivism outcome, the level of geography for the community variables, the length of the follow-up time period, and the particular type of contextual measures. Next, the overall project also provides a more developed theoretical understanding of why communities of release are linked to reentry success or failure. Often times, prior studies do not take into account the unique circumstances and characteristics of former prisoners.

This dissertation also adds to the reentry and recidivism literature and a well-established body of work on race and ethnicity group differences. Race effects persist in previous studies even after including various community-level variables into analyses of recidivism. The current project constructs several contextual models based in community-level disadvantages that explain increased levels of serious behavior on post-release supervision by African American ex-prisoners compared to white ex-prisoners. Finally, this dissertation contributes to the study of the post-release employment landscape for ex-prisoners by incorporating a valuable business establishment data set that conceptualizes the types of employers that actually hire former prisoners after
release. Most prior work tends to overlook low-skill employment opportunity as a potential predictor of recidivism.

However, this dissertation, like all research projects, is not without its limitations. The next section details these limitations and offers avenues for future research in this emerging field of study. I conclude with some thoughts on how better resource allocation may help improve the post-release outcomes of an ever-increasing population of former prisoners.

**DIRECTIONS FOR FUTURE RESEARCH**

This dissertation relies on a sample of released offenders placed on community supervision (both parole and post-release control supervision). However, not all individuals are being supervised after release from prison. For instance, just over 48 percent of all offenders leaving prisons in Ohio during 2008 are unsupervised upon release (Dassanayaka, 2009). Research that does use entire release populations (e.g., both supervised and unsupervised ex-prisoners, see Mears et al., 2008; Reisig et al., 2007) is restricted to the county-level contextual data because post-release address information that can be geocoded to create more localized communities of release is only available for supervised populations where residence reporting is a mandatory condition of supervision. In Ohio, a departmental tracking form has been created to start collecting the residence of release for ex-prisoners that are not placed on community supervision. However, this effort is relatively new and providing this information is voluntary for these unsupervised ex-prisoners. It is clear that future recidivism and reentry studies should direct attention to this understudied portion of former prisoners.
One particular method to obtain information regarding unsupervised individuals after release would be through surveys. Interview and survey methodology would also be advantageous techniques to further develop many of the themes investigated in the current project. Ex-prisoner background information could be supplemented with self-reported criminal activity, and other new information could be gathered such as possible physical and mental health problems. It would also prove extremely useful to gauge ex-prisoners’ perceptions of the quality of their community of release, their willingness and motivation to work, and their outlook on the feasibility to actually obtain meaningful employment. In terms of more complete contextual models for analytical purposes, interviews can also tap a wide array of potential intervening mechanisms between exogenous variables and outcomes such as attachments to conventional activities and institutions, disorder, fear of crime and victimization, quality of community resources and services, and various social networks (Bellair, 1997; Bursik and Grasmick, 1993; Clear, 2007; Sampson and Groves, 1989; Skogan, 1990). Interview and survey methodology are sometimes time and cost-prohibitive, but offer a wealth of potential information for the reentry and recidivism literature.

The contextual information utilized by the current project is based on the latitude and longitude location coordinates of a singular home address for each observation in the sample. As a consequence, these studies cannot account for residential movement among ex-prisoners. This can be problematic as contextual variables can possibly change depending on the areas that ex-offenders move to. However, a recent study examining post-release residential change finds that the majority of ex-prisoners did not move after three interviews (72.4%) and those that did move relocated to areas that are “neutral in
terms of community well-being” (La Vigne and Parthasarathy, 2005). Nonetheless, research should account for residential change in future analyses.

One of the advantages of the current project is the wide array of significant individual-level characteristics. In particular, the inclusion of a more complete prior criminal history and initial onset with the criminal justice system is a marked improvement over prior work. However, another important static indicator that is not included in the PRC/Parole Behavior study is prior employment. This particular measure could indicate a willingness and motivation to work, or could possibly provide an easier path to employment through pre-existing employer-employee relationships. Sabol’s (2007) work supports this premise, and indicates that pre-prison employment is the most critical factor in determining post-release employment.

Each specific analytical model in this dissertation utilizes event history techniques to predict the various recidivism measures. In each case, the treatment of the dependent variable is considered as a single, non-repeating event. However, one useful advantage of Cox proportional hazards models is the ability to examine multiple failures (e.g., multiple reincarcerations) within a particular follow-up time period. This may prove to be a critical direction for future studies especially considering the constant movement in and out of communities by “churners,” or ex-prisoners that continually return to prison (or reoffend) after release from their first incarceration (Lynch and Sabol, 2001; see also Clear, 2007; see also Rose and Clear, 1998).

Along the same lines, the Cox models also allow for the inclusion of time-varying explanatory measures. This offers the potential for extremely sophisticated analyses that can examine a host of situations such as changes in post-prison employment, changes in
contextual variables stemming from residential movement, or completion of a training or vocational program. In terms of an illustration, Raphael and Weiman (2007) captured changing labor market conditions by taking the average unemployment rate over six months (e.g., one static value), whereas this particular advantage of Cox models would allow the unemployment rate to actually vary across particular units of time.

This dissertation provides a variety of recidivism outcome measures. Future research also needs to consider more diverse reentry outcomes. Indeed, some scholars are critical of the literature’s rigid attention to recidivism outcomes (Visher and Travis, 2003). Recidivism is a critical dimension of reentry studies given the negative impact future prison incarcerations have on individual and community well-being. Post-release employment and wages have garnered recent research attention as well (Pettit and Lyons, 2007; Sabol, 2007). However, a host of other potential post-release outcomes warrant further examination including reconnecting with family members (Visher and Travis, 2003), obtaining adequate housing (Mears et al., 2008), obtaining treatment and counseling services (La Vigne et al., 2003), drug and alcohol usage and abuse, and less serious behaviors on post-release supervision.

Attention to the aforementioned issues offers many avenues for future research in this emerging field of study. Overall, the unparalleled number of individuals entering and exiting prisons today make prisoner reentry one of America’s most unique and complex social issues. The findings from each of these chapters suggest that communities are one of the important determinants of whether former prisoners will have a positive or negative post-release experience.
Prisoner reentry programs and policies were conceptualized to help increase the likelihood of a positive post-release experience as well, and as such, at least represent a small shift away from more punitive correctional philosophies. However, with such large prison admission and release populations each year (see Sabol and Couture, 2008), resources need to be funneled away from prison expenditures, and directed more towards community-based sentencing options for future offenders. Further, even if ex-prisoners are motivated to find work they still need opportunity. Perhaps programs should focus less on training and job readiness, and place more attention on creating direct linkages to employers and jobs within the community. However, it is abundantly clear that the unprecedented number of ex-prisoners that are being released into the community after serving their sentences is unlikely to diminish unless a sustained effort is undertaken to address the “economic and political conditions that produced mass incarceration” (Western, 2007:354) in the first place.
APPENDIX A

CRIMINAL HISTORY OFFENSE CATEGORIZATION

**Offenses against persons:**
- Abduction
- Aggravated Armed Robbery
- Aggravated Arson (and attempted)
- Aggravated Assault
- Aggravated Menacing
- Aggravated Murder (and attempted)
- Aggravated Riot (and attempted)
- Aggravated Robbery (and attempted)
- Aggravated Vehicular Assault
- Aggravated Vehicular Homicide
- Armed Robbery
- Assault (and attempted)
- Assault on a Patient
- Assault on a Police Officer (and attempted)
- Battery
- Child Endangering (and attempted)
- Contributing to the Delinquency of a Minor
- Corruption of a Minor (and attempted)
- Domestic Violence
- Extortion
- Felonious Assault (and attempted)
- Felony Violence
- Harassment
- Harassment by Inmate
- Inducing Panic
- Intimidation
- Involuntary Manslaughter
- Kidnapping (and attempted)
- Menacing
- Murder (and attempted Murder)
- Negligent Assault
- Retaliation
- Robbery (and attempted)
- Shoot to Wound
- Stalking
- Unlawful Restraint
- Vehicular Assault
- Violation of a Protection Order
- Violation of a Temporary Protection Order
- Voluntary Manslaughter

**Sex offenses:**
- Aggravated Sexual Assault
- Child Molestation
- Corruption of a Minor with Sex
- Forced Sexual Penetration
- Gross Sexual Imposition (and attempted)
- Illegal Use of a Minor (Nudity)
- Lewd Acts to Minors
- Miscellaneous Sex Offense
- Obscene Materials to Minors
- Prostitution
- Public Indecency
- Rape (and attempted)
- Sexual Battery
- Sexual Imposition
- Solicitation
- Voyeurism
**Property offenses:**
Aggravated Burglary (and attempted)
Arson
Auto Larceny
Auto Theft
Bank Larceny
Breaking & Entering (and attempted)
Burglary (and attempted)
Criminal Damaging
Grand Larceny
Grand Theft (and attempted)
Grand Theft Auto
Larceny
Motor Vehicle Theft (and attempted)
Operating a Chop Shop

Petty Larceny
Petty Theft
Possession of Stolen Mail
Possession of Stolen Money
Receiving Stolen Property (and attempted)
Safecracking
Shoplifting
Theft (and attempted)
Transporting Stolen Property
Unauthorized Use of a Motor Vehicle
Unauthorized Use of Property
Vandalism (and attempted)
Vehicle Trespass

**Drug offenses:**
Aggravated Drug Trafficking
Corruption of a Minor with Drugs
Drug Abuse
Drug Trafficking
DUI
OMVI

Open Container
Possession of Counterfeit Drugs
Possession of Drugs
Trafficking in Counterfeit Drugs
Underage Consumption of Alcohol
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