



Post-Release Recidivism and Employment among Different Types of Released Offenders: A 5-Year follow-up Study in the United States

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Abstract

The main focus of this 5-year (2005-2009) follow-up study of released offenders was to explore the post-release employment and recidivism among different types of released offenders before, during, and after the economic recession of 2008. The dataset of this study contained a cohort of 6,561 offenders who were released from the Indiana Department of Correction (IDOC), United States, throughout 2005. Results of this study revealed 37.0 percent of violent offenders, 38.2 percent of non-violent offenders, 36.3 percent of sex offenders, and 36.9 percent of drug offenders were never employed since release from prison. The recidivism rate was 46.6 percent among violent offenders, 48.6 percent among non-violent offenders, 54.7 percent among sex offenders, and 45.8 percent among drug offenders, respectively. Most importantly, the results of this study revealed that an offender's education and post-release employment were significantly and statistically correlated with recidivism, regardless of the offender's classification. This study also found a relatively high unemployment rate among released offenders within the first year of release from prison. Accordingly, almost half of the recidivist offenders were re-incarcerated within 12 months of the initial release.

Keywords: Released Offenders, Recidivism, Violent offenders, Non-Violent offenders.

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Introduction

Rarely have researchers examined the patterns of post-release employment and recidivism among ex-offenders before, during, and after the economic recession. A major obstacle was that previous researchers were unable to obtain offenders' post-release employment information. Instead, they relied on the unemployment information of the general population to examine the impact of employment/unemployment on recidivism among ex-offenders. Ex-offenders were usually characterized as economically poor, educationally illiterate, socially inadequate to societal norms, and disproportionately unemployed after release from prison. For example, researchers (Fehr, 2009; Matsuyama & Prell, 2010) found that ex-offenders frequently encountered numerous challenges after release from prison because of deficiencies in education and job skills. Accordingly, uneducated/unskilled offenders were likely to be unemployed after release from prison; and, in turn, they were likely to become recidivist offenders simply because they were unable to be financially sufficient for independent living in the community.

According to the most recent prison release data from the Bureau of Justice Statistics (Guerino, et al., 2012), the United States' imprisonment rate in 2010 was 500 sentenced prisoners per 100,000 (or 1 in 200 residents) and there were 708,677 prisoners released from state and federal correctional institutions during 2010. Results from previous studies identified a variety of factors, such as, educational illiteracy, lack of job skills, lack of interpersonal skills, criminal history, the neighborhood contexts, or employment, that might contribute to a relatively high recidivism rate among ex-offenders (Gendreau et al., 1996; Hemphill et al., 1998; Klimecki et al., 1994; Kubrin & Stewart, 2006; Rossman & Roman, 2003; Uggen, 2000; Vacca, 2004; Visser et al., 2005). Undoubtedly, previous recidivism studies highlighted several profound challenges for incarcerated individuals to successfully reenter the community upon release from prison. Particularly, prisoners who were released during the recessionary period encountered much greater challenges due to job scarcity in labor markets and weak economic conditions. Researchers (Bushway, 2011; Cox, 2010; Fletcher, 1999; Hannon & DeFina, 2010; Mears & Mestre, 2012; Nally, et al., 2012) indicated that unemployment and recidivism were interrelated during the recession; however, there was a need to conduct a longitudinal study of the patterns of post-release employment and recidivism among ex-offenders during the recessionary period. Accordingly, the present researchers conducted a 5-year follow-up study of post-release employment and recidivism among 6,561 released offenders and examined the interrelationship of recidivism and employment among different types of offenders (i.e., violent, non-violent, sex, and drug offenders) before, during, and after the recent economic recession of 2008.

Challenges to Reducing Recidivism among Ex-Offenders

Undoubtedly, ex-offenders had to overcome a variety of challenges in order to successfully reenter the community upon release from prison. Realistically, finding employment was one of the immediate challenges to an ex-offender upon release from prison, and it was increasingly difficult during the recessionary period. Ex-offenders were frequently kept from employment due to criminal background checks (Holzer, et al., 2004; Pettit & Lyons, 2007; Travis, 2005) or deficiencies in education and job skills (Fashey, et al., 2006; Hollin & Palmer, 2009; Rossman & Roman, 2003; Vacca, 2004). During the economic recessionary period, it was extremely difficult for ex-offenders to compete with law-abiding citizens for limited job opportunities in all industrial sectors.

Additionally, employers were generally reluctant to hire ex-offenders due to issues of liabilities or concerns about their customers' discomfort (Albright & Denq, 1996; Backman, 2011; Clear, et al., 2001; Giguere & Dundes, 2002; Gunnison & Helfgott, 2010; Harris & Keller, 2005; Holzer, et al., 2006; Lukies, et al., 2011; Stoll & Bushway, 2008; Varghese, et al., 2010). Particularly, employers would likely access the sex offender registry to keep from hiring a sex offender in order to maintain a safe workplace and to protect customers where children were congregated.

Previous researchers (Finn, 1998; Harrison & Schehr, 2004; Solomom, et al., 2008; Visser, et al., 2008; Uggen, 2000; Uggen & Staff, 2001; Wadsworth, 2006) indicated that post-release employment could serve as an important mechanism to prevent ex-offenders from involvement in criminal activities when reentering the community. Theoretical assumptions on the causal relationship between employment and recidivism were primarily based on the concept that ex-offenders would likely re-offend if they could not obtain legitimate and sustainable employment upon release from prison. A consistent finding was that released offenders were likely to become recidivist offenders after release from prison if they were unemployed (Allen, 1988; Batiuk, 1997; Blomberg, et al., 2012; Burke & Vivian, 2001; Fabelo 2002; Harlow, 2003; Nuttall, et al., 2003; Vacca, 2004; Wilson, et al., 2000).

Another significant challenge to an offender's reentry into the community was his level of formal education. Particularly, those educationally-illiterate ex-offenders were disproportionately unemployed due to their inadequate education and job skills (Aos, et al., 2006; Batiuk, 1997; Chappell, 2002; Erisman & Contardo, 2005; Harlow, 2003; Steurer & Smith, 2003; Vacca, 2004; Winterfield, et al., 2009). A recent study (Nally, et al., 2012) revealed that ex-offenders who had a lower level of education had a higher recidivism rate and a higher unemployment rate. Meanwhile, uneducated (or under-educated) ex-offenders were likely to be re-incarcerated earlier than those offenders who had a higher level of education. Realistically, correctional education programs were educational remedies for a vast majority of offenders to improve their education and job skills during incarceration. Steurer, et al. (2001) conducted a 3-year follow-up study of the impact of correctional education on recidivism and employment among ex-offenders and results showed that correctional education program participants had a lower recidivism rate than those offenders who did not participate in correctional education programs. However, Steurer et al. (2001) found that the effect of correctional education on post-release employment was statistically insignificant because post-release employment among ex-offenders was largely dependent upon economic conditions during the time period of release, regardless of the offender's level of formal education.

Economic conditions (e.g., recession) greatly impacted post-release employment and recidivism among ex-offenders (Bellair & Kowalski, 2011; Bushway, 2011; Cox, 2010; Hannon & DeFina, 2010; Harrison & Schehr, 2004; Wang, et al., 2010). Previous researchers used the unemployment rate of the general population, rather than the population of ex-offenders, as a predictor to estimate post-release recidivism among released offenders. Nonetheless, the unemployment rate in the general population is significantly different from the population of ex-offenders in any given economic condition. For example, the unemployment rate in the general population was about 9.9 percent at the end of December of 2009 (U.S. Department of Labor, 2012). Surprisingly, Nally, et al. (2011) found the unemployment rate among ex-offenders was 65.6 percent during the recent recessionary period of 2008-2009. Across states, ex-offenders

encountered incremental challenges in finding a job during the recent recessionary period and a higher recidivism rate was expected as the unemployment rate increased (see, for examples, Bellair & Kowalski, 2011; Uggen, 2000). Due to limited access to employment-related information among released offenders, previous researchers likely would have insufficient information about an offender's employment status after his release from prison. Consequently, the effect of post-release employment on recidivism among ex-offenders might not be accurately estimated.

Post-release recidivism is regarded as the primary measure of the success of an offender's reentry into the community. Previous studies revealed that post-release recidivism rates were quite different among different types of ex-offenders. For example, Roman, et al. (2003) found the recidivism rate among drug offenders was 16.4 percent within 1 year, but increased to 27.5 percent within 2 years after graduation from drug court supervision. Langan, et al. (2003) revealed the recidivism rate was 43.0 percent among 9,691 sex offenders within 3 years after release from prison. Durose and Mumola (2004), who examined the recidivism rates among 210,886 non-violent offenders (committing property, drug, public-order or other non-violent offenses), found almost 7 in 10 non-violent offenders were re-arrested within 3 years after release from prison, nearly 50 percent of nonviolent offenders were re-convicted, and more than 25 percent of non-violent offenders were re-incarcerated. Undoubtedly, there is a need to further examine the potential distinctive differences of post-release employment and recidivism among different types of ex-offenders.

In an attempt to understand the contributing factors to recidivism, the present researchers conducted a 5-year follow-up study of 6,561 offenders who were released throughout 2005 from the Indiana Department of Correction (IDOC). As part of this, individual offender's employment information was obtained from the Indiana Department of Workforce Development (IDWD) to adequately examine the effect of employment on recidivism. In this study, possible similarities or differences among different types of offenders (i.e., violent offenders, non-violent offenders, sex offenders, and drug offenders), in terms of post-release employment and recidivism, were carefully examined. Furthermore, the present researchers analyzed the impact of the economic recession of 2008 on post-release employment and recidivism among ex-offenders.

Methodology

Data Description

To examine the patterns and interrelationships of post-release employment and recidivism among ex-offenders during the recessionary period, the present researchers conducted a 5-year (2005-2009) follow-up study of 6,561 offenders who were released from Indiana Department of Correction (IDOC) throughout 2005. Specifically, there were 1,755 offenders released in the first quarter of 2005, 1,633 offenders in the second quarter of 2005, 1,659 offenders in the third quarter of 2005, and 1,514 offenders in the fourth quarter of 2005. This cohort of 6,561 released offenders represented more than 43 percent of a total of 15,184 offenders released from IDOC custody in 2005. It is important to note that the economic recession started in December of 2007 and ended in late 2008, but the unemployment rate in 2009 was significantly higher than that in the recession period (U.S. Department of Labor, 2012). The prominent feature of this 5-year follow-up study included detailed information about individual offender's employment during three different time periods (pre-recession, during-recession, and post-recession), which

allowed the present researchers to analyze the potential impact of the recent recession of 2008 (i.e., employment/unemployment) on post-release recidivism among ex-offenders in the State of Indiana.

The dataset in this 5-year follow-up study was collected from three (3) primary sources: (1) the IDOC Division of Research and Planning, (2) the IDOC Education Division, and (3) the Indiana Department of Workforce Development (IDWD). IDOC Division of Research and Planning provided up-to-date information such as the offenders' demographical characteristics or legal information (e.g., recidivism). IDOC Education Division provided information regarding the incarcerated offenders' educational information such as the level of education prior to release from IDOC custody. Based upon information from "employed" offender's W-9 forms, Indiana Department of Workforce Development (IDWD) provided offender's post-release employment information (e.g., job title or income), if employed. IDWD documented offender's employment information quarterly, but there was no employment information among unemployed offenders if they had never been employed since release in a quarter in any given year during the study period. Undoubtedly, IDWD provided the present researchers with crucial employment-related information which was used to analyze the patterns of post-release employment among ex-offenders during the recessionary period and the potential effect of employment on recidivism among this cohort of 6,561 ex-offenders in Indiana.

Outcome Measures and Variables

The major outcome measure in this study focused on post-release recidivism among a cohort of 6,561 released offenders during the study period of 2005–2009. Undoubtedly, measuring recidivism can be difficult because it is defined so differently among a variety of criminal justice agencies (Blumstein & Larson, 1971; Boudouris, 1984; Hoffman & Stone-Meierhoefer, 1980; Latessa & Holsinger, 1998; Maxfield, 2005; Maxwell, 2005; Mears et al., 2008; Vrieze & Grove, 2010). Although five major indicators have been identified as measures of recidivism, including (1) police arrest, (2) a criminal charge for a new offense, (3) a reconviction for a new criminal offense, (4) re-incarceration, and (5) a court-mandated supervision revocation (e.g., a probation or parole violation), the post-release recidivism in the present study was measured by re-incarceration in IDOC.

Through reviewing IDOC files on the offender's release date and return date, the present researchers were able to determine the recidivism status, the survival time (elapsed time between release and return), and legal reasons for re-incarceration. An offender was considered as a recidivist offender in the study period of 2005–2009, if he or she returned to IDOC custody after the initial release in 2005. Previous studies of recidivism usually focused on the prevalence rate among ex-offenders, but with little or no information about the time frame when recidivist offenders returned to prison. By calculating the elapsed time between re-incarceration and the initial release in 2005, the present researchers examined the patterns of re-incarceration and post-release recidivism rates among recidivist offenders in the study period of 2005–2009. In addition, legal reasons for re-incarceration among those recidivist offenders were analyzed.

In order to explore potential distinctions of offender's characteristics relative to post-release recidivism, independent measures in this study included ethnicity, gender, age, and level of formal education (prior to release from IDOC custody). Undoubtedly, an offender's ethnicity was frequently used as an indicative variable or predictor to examine

racial disparities in post-release recidivism (Bales & Piquero, 2012; Wang, et al., 2010; Wehrman, 2010). Additionally, post-release employment among ex-offenders was another important independent measure to recidivism in this study. Researchers (Needels, 1996; Tripodi, et al., 2010; Uggen, 2000; Visher, et al, 2008) consistently indicated that post-release employment was an important predictor of recidivism. However, there was a need to conduct a longitudinal study to further examine the relationship between post-release employment and recidivism among ex-offenders.

In this study, offender classification was treated as a control variable to examine the patterns of post-release employment and recidivism among different types of offenders. Offender classification was based on the most serious offense that an offender had committed. In other words, an offender who committed a “crime against a person” was categorized as a “violent” offender; an offender who committed a “crime against property or misdemeanor” was categorized as a “non-violent” offender; an offender who committed a “sex-related crime” was categorized as a “sex” offender; and an offender who committed a “drug-related crime” was categorized as a “drug” offender. Consequently, the present researchers grouped this cohort of 6,561 ex-offenders into four (4) different subgroups; they were: (1) violent offenders (n=1,201), (2) non-violent offenders (n=3,469), (3) sex offenders (n=369), and (4) drug offenders (n=1,522).

Data Analysis

Data analyses in this study primarily focused on examining the offender’s characteristics (i.e., ethnicity, gender, age, and education) relative to post-release employment and recidivism among different types of ex-offenders (i.e., violent, non-violent, sex, and drug offenders). The effects of the offender’s characteristics on the recidivism rate among different types of offenders would be the primary outcome measures in this study. In other words, offender’s characteristics (i.e., ethnicity, gender, age, and education) and post-release employment were treated as important predictors of recidivism among different types of ex-offenders. Due to the dichotomous nature of dependent measurement (recidivist offenders versus non-recidivist offenders), a logistic multiple regression analysis was used to examine the effect of the offenders’ characteristics and post-release employment on recidivism among the cohort of 6,561 ex-offenders, while controlling for the offender classifications (i.e., violent, non-violent, sex, and drug offenders). Such multiple regression analyses would provide a clear indication of which factor exerted the most influential impact on post-release recidivism among ex-offenders.

Results

As Table 1 illustrates, 18.3 percent (n=1,201) of a total of 6,561 offenders who were released from IDOC custody in 2005 were classified as “violent” offenders, 52.9 percent (n=3,469) were “non-violent” offenders, 5.6 percent (n=369) were “sex” offenders, and 23.2 percent (n=1,522) were “drug” offenders. Results of this study revealed a majority of 1,201 violent offenders were African American males in the age range of 20–40 years old. A majority of 1,201 violent offenders had a high school diploma or GED (n=627), but 35.3 percent (n=424) of violent offenders had an education below high school. 37.0 percent (n=444) of 1,201 violent offenders had never been employed after release from prison. The post-release recidivism rate was 46.6 percent among 1,201 violent offenders in the study period of 2005–2009.

Table 1: Descriptive Statistics of Offender Characteristics (N=6,561)

Variable	Violent Offenders (n=1201)	Non-Violent Offenders (n=3469)	Sex Offenders (n=369)	Drug Offenders (n=1522)
Offender Race				
African American	709 (59.0%)	1871 (53.9%)	154 (41.7%)	1129 (74.2%)
Caucasian	454 (37.8%)	1513 (43.6%)	203 (55.0%)	361 (23.7%)
Hispanic	33 (2.7%)	69 (2.0%)	10 (2.7%)	24 (1.6%)
Asian	4 (0.3%)	11 (0.3%)	2 (0.5%)	4 (0.3%)
Unknown	1 (0.1%)	5 (0.1%)	0 (0.0%)	4 (0.3%)
Offender Gender				
Female	79 (6.6%)	514 (14.8%)	69 (18.7%)	218 (14.3%)
Male	1122 (93.4%)	2955 (85.2%)	300 (81.3%)	1304 (85.7%)
Offender Age				
Under 20 years old	40 (3.3%)	63 (1.8%)	1 (0.3%)	20 (1.3%)
20-29 years old	409 (34.1%)	1176 (33.9%)	120 (32.5%)	666 (43.8%)
30-39 years old	361 (30.1%)	1100 (31.7%)	102 (27.6%)	431 (28.3%)
40-49 years old	297 (24.7%)	889 (25.6%)	105 (28.5%)	295 (19.4%)
50-59 years old	82 (6.8%)	203 (5.9%)	31 (8.4%)	98 (6.4%)
60 years old or above	12 (1.0%)	38 (1.1%)	10 (2.7%)	12 (0.8%)
Offender Education				
Below high school	424 (35.3%)	1161 (33.5%)	154 (41.7%)	582 (38.2%)
High school or GED	627 (52.2%)	1856 (53.5%)	184 (49.9%)	794 (52.2%)
College	91 (7.6%)	146 (4.2%)	23 (6.2%)	46 (3.0%)
Unknown	59 (4.9%)	306 (8.8%)	8 (2.2%)	100 (6.6%)
Employment Status				
Unemployed	444 (37.0%)	1326 (38.2%)	134 (36.3%)	561 (36.9%)
Employed	757 (63.0%)	2143 (61.8%)	235 (63.7%)	961 (63.1%)
Recidivism Status				
Non-recidivist offender	641 (53.4%)	1782 (51.4%)	167 (45.3%)	825 (54.2%)
Recidivist offender	60 (46.6%)	1687 (48.6%)	202 (54.7%)	697 (45.8%)

Note: The released offender was regarded as “employed,” if he or she was employed at least one quarter in any given year in the study period. On the other hand, the released offender was regarded as “unemployed,” if he or she had never been employed since release from IDOC custody in 2005.

Results of this study also revealed that a majority of 3,469 non-violent offenders were African American males in the age range of 20–40 years old. A majority of 3,469 non-violent offenders had a high school diploma or GED (n=1,856), but 33.5 percent (n=1,161) of non-violent offenders had an education below high school. 38.2 percent (n=1,326) of 3,469 non-violent offenders had never been employed after release from prison. The post-release recidivism rate was 48.6 percent among 3,469 non-violent offenders in the study period of 2005–2009.

In regard to characteristics of sex offenders, results of this study revealed that a majority of 369 sex offenders were Caucasian males. Approximately 88.6 percent (n=327) of sex offenders were in the age range of 20-50 years old and the mean age of 369 sex offenders was 36.5 years old. Almost half of 369 sex offenders had a high school diploma or GED, but 41.7 percent (n=154) of sex offenders had an education below high school. 36.3 percent (n=134) of 369 sex offenders had never been employed after release from prison. The post-release recidivism rate was 54.7 percent among 369 sex offenders in the study period of 2005-2009.

This study found that a vast majority of 1,522 drug offenders were African American males in the age range of 20-40 years old. There were 52.2 percent (n=794) of 1,522 drug offenders with a high school diploma or GED, but 38.2 percent (n=582) of drug offenders had an education below high school prior to release from prison. Results of this 5-year follow-up study also revealed that 36.9 percent (n=561) of 1,522 drug offenders had never been employed after release from prison. The post-release recidivism rate was 45.8 percent among 1,522 drug offenders in the study period of 2005-2009.

Table 2: The Unemployment Rate among Offenders after the Initial Release in 2005 (Excluding Offenders Who Were Incarcerated in that Given Time Period)

Time Period	All Offenders	Violent Offenders	Non-Violent Offenders	Sex Offenders	Drug Offenders
2005 1 st Quarter	96.4%	95.5%	96.4%	96.6%	96.5%
2005 2 nd Quarter	95.7%	96.5%	95.5%	96.6%	95.3%
2005 3 rd Quarter	93.5%	92.9%	93.3%	94.3%	94.4%
2005 4 th Quarter	92.7%	91.6%	92.9%	93.5%	93.1%
2006 1 st Quarter	63.1%	61.0%	64.8%	61.6%	61.1%
2006 2 nd Quarter	61.7%	59.2%	63.3%	59.4%	60.7%
2006 3 rd Quarter	62.0%	58.6%	63.5%	56.2%	62.6%
2006 4 th Quarter	63.9%	61.8%	64.7%	59.1%	64.6%
2007 1 st Quarter	69.7%	68.7%	70.8%	64.3%	69.4%
2007 2 nd Quarter	69.1%	65.6%	70.3%	65.0%	70.3%
2007 3 rd Quarter	67.4%	64.7%	68.8%	62.9%	67.6%
2007 4 th Quarter	70.0%	68.3%	70.9%	65.6%	70.1%
2008 1 st Quarter	73.8%	73.7%	74.8%	71.3%	72.3%
2008 2 nd Quarter	73.3%	72.9%	74.2%	69.5%	72.3%
2008 3 rd Quarter	74.3%	73.8%	75.9%	67.4%	72.6%
2008 4 th Quarter	76.6%	75.9%	77.4%	71.0%	76.8%
2009 1 st Quarter	80.7%	79.8%	82.2%	76.3%	79.3%
2009 2 nd Quarter	80.2%	80.4%	80.8%	73.2%	80.4%
2009 3 rd Quarter	81.2%	81.5%	81.9%	78.1%	80.4%
2009 4 th Quarter	78.3%	78.6%	78.9%	77.0%	77.1%

Table 2 illustrates the unemployment rates, based on a quarterly measure in the study period of 2005-2009, among a cohort of 6,561 offenders who were released from IDOC custody throughout 2005. Results of this study clearly showed that ex-offenders had a considerably higher unemployment rate than that of the general population in any given time period during the study period of 2005-2009, regardless of types of offenders and economic conditions (e.g., recession). Most surprisingly, this study's results revealed that

offenders had encountered tremendous difficulties in finding a job within a short period of time upon release from prison. In all 4 quarters of 2005, the unemployment rates were in the range of 92-97 percent for released offenders.

Thereafter, the unemployment rates steadily decreased into the range of 60 percent during the pre-recession period (from 1st quarter of 2006 to 3rd quarter of 2007). In other words, ex-offenders would likely be employed in a variety of industrial sectors during a strong economic condition, but the unemployment rates remained relatively higher than the general population. However, the unemployment rates increased into the range of 70 percent during the recession period (from 4th quarter of 2007 to 4th quarter of 2008) and became even higher during the post-recession period (from 1st quarter of 2009 to 4th quarter of 2009). There was a similar pattern of unemployment rates across different types of ex-offenders (i.e., violent, non-violent, sex, and drug offenders) in the study period of 2005-2009.

Table 3: Elapsed Time between Re-incarceration and the Initial Release

Time Return	All Offenders (n=3144)	Violent Offenders (n=559)	Non-Violent Offenders (n=1687)	Sex Offenders (n=202)	Drug Offenders (n=696)
Within 3 months	204 (6.5%)	27 (4.8%)	126 (7.5%)	10 (5.0%)	41 (5.9%)
Within 3-6 months	404 (12.8%)	65 (11.6%)	203 (12.0%)	36 (17.8%)	100 (14.4%)
Within 6-9 months	449 (14.3%)	64 (11.4%)	249 (14.8%)	31 (15.3%)	105 (15.1%)
Within 9-12 months	413 (13.1%)	75 (13.4%)	245 (14.5%)	25 (12.4%)	68 (9.8%)
Within 12-15 months	346 (11.0%)	59 (10.6%)	182 (10.8%)	23 (11.4%)	82 (11.8%)
Within 15-18 months	301 (9.6%)	49 (8.8%)	163 (9.7%)	17 (8.4%)	72 (10.3%)
Within 18-21 months	243 (7.7%)	54 (9.7%)	125 (7.4%)	17 (8.4%)	47 (6.8%)
Within 21-24 months	187 (5.9%)	36 (6.4%)	101 (6.0%)	9 (4.5%)	41 (5.9%)
Within 24-27 months	154 (4.9%)	38 (6.8%)	67 (4.0%)	11 (5.4%)	38 (5.5%)
Within 27-30 months	89 (2.8%)	13 (2.3%)	39 (2.3%)	7 (3.5%)	30 (4.3%)
Within 30-33 months	46 (1.5%)	11 (2.0%)	24 (1.4%)	2 (1.0%)	9 (1.3%)
Within 33-36 months	11 (0.3%)	2 (0.4%)	6 (0.4%)	1 (0.5%)	2 (0.3%)
Within 36-39 months	11 (0.3%)	3 (0.5%)	8 (0.5%)	0 (0.0%)	0 (0.0%)
Within 39-42 months	31 (1.0%)	5 (0.9%)	20 (1.2%)	0 (0.0%)	6 (0.9%)
Within 42-45 months	60 (1.9%)	12 (2.1%)	33 (2.0%)	1 (0.5%)	14 (2.0%)
Within 45-48 months	59 (1.9%)	17 (3.0%)	31 (1.8%)	2 (1.0%)	9 (1.3%)
Within 48-51 months	65 (2.1%)	15 (2.7%)	32 (1.9%)	4 (2.0%)	14 (2.0%)
Within 51-54 months	44 (1.4%)	10 (1.8%)	19 (1.1%)	5 (2.5%)	10 (1.4%)
Within 54-57 months	22 (0.7%)	3 (0.5%)	11 (0.7%)	1 (0.5%)	7 (1.0%)
Within 57-60 months	5 (0.2%)	1 (0.2%)	3 (0.2%)	0 (0.0%)	1 (0.1%)

Table 3 provides detailed information about the survival time (i.e., elapsed time between release and return) among recidivist offenders. The recidivism rate among 6,561 ex-offenders, within a 5-year (2005-2009) follow-up study period, was 47.9 percent. Regardless of types of offenders, approximately 47 percent of recidivist offenders were re-incarcerated within a year, and 81 percent of recidivist offenders were re-incarcerated within 2 years, after the initial release in 2005. This study's results also indicated that a notable number of ex-offenders were likely to be re-incarcerated within 12 months after

the initial release from prison. Precisely, this study found that the re-incarceration rates (by quarter) among recidivist offenders were: 6.5 percent (n=204) within 3 months, 12.8 percent (n=404) within 3-6 months, 14.3 percent (n=449) within 6-9 months, and 13.1 percent (n=413) within 9-12 months.

Variations in the survival time among different types of ex-offenders were not significant. As Table 3 illustrates, 41.3 percent (n=231) of 559 recidivist violent offenders were re-incarcerated within 12 months (i.e., 1 year), and 76.7 percent (n=429) were re-incarcerated within 24 months (i.e., 2 years), after the initial release in 2005. Additionally, 48.8 percent (n=823) of 1,687 recidivist non-violent offenders were re-incarcerated within 12 months, and 82.6 percent (n=1,394) were re-incarcerated within 24 months, after the initial release in 2005. In regard to 202 recidivist sex offenders, 50.5 percent (n=102) were re-incarcerated within 12 months, and 83.2 percent (n=168) were re-incarcerated within 24 months, after the initial release in 2005. Results of this study also revealed that 45.1 percent (n=314) of 696 recidivist drug offenders were re-incarcerated within 12 months, and 79.9 percent (n=556) were re-incarcerated within 24 months, after the initial release in 2005. In short, this 5-year follow-up study found that ex-offenders were more likely to return to prison within 2 years of the initial release, regardless of types of offenders.

Table 4: Legal Reasons of Re-incarceration among Recidivist Offenders after the Initial Release

Legal Reason	All Offenders (n=2089)	Violent Offenders (n=343)	Non-Violent Offenders (n=1152)	Sex Offenders (n=143)	Drug Offenders (n=451)
committing new crime	684 (32.7%)	87 (25.4%)	432 (37.5%)	39 (27.3%)	126 (27.9%)
technical parole violation	455 (21.8%)	73 (21.3%)	234 (20.3%)	45 (31.5%)	103 (22.8%)
parole violation	250 (12.0%)	58 (16.9%)	130 (11.3%)	13 (9.1%)	49 (10.9%)
technical probation violation	474 (22.7%)	83 (24.2%)	248 (21.5%)	40 (28.0%)	103 (22.8%)
probation violation	49 (2.3%)	16 (4.7%)	25 (2.2%)	0 (0.0%)	8 (1.8%)
other violations	177 (8.5%)	26 (7.6%)	83 (7.2%)	6 (4.2%)	62 (13.7%)

Note #1: The category of “other violations” includes such violations as escape or a violation of *Community Transition Program*.

Note #2: There were 1,055 recidivist offenders (217 recidivist violent offenders, 534 recidivist non-violent offender; 59 recidivist sex offenders, and 245 recidivist drug offenders) in a total of 3,144 recidivist offenders, whose legal reasons for returning to IDOC custody were unknown.

Upon further examination, of the data, it was discovered that 33.5 percent (n=1,055) of a total of 3,144 recidivist offenders had no information regarding the legal reasons for re-incarceration. Based on available legal information, as Table 4 indicates, this study found that 32.7 percent (n=684) of 2,089 recidivist offenders had committed a new crime, 33.8 percent (n=705) had a parole violation or a technical parole violation, 25.0 percent (n=523) had a probation violation or a technical probation violation, and 8.5 percent (n=177) had other violations (e.g., a violation of early-release-related *Community Transition Program*).

This study also revealed some variations in the legal reasons for re-incarceration among different types of ex-offenders. As Table 4 illustrates, major legal reasons for re-incarceration among 342 recidivist violent offenders included committing a new crime (25.4%), having a technical probation violation (24.2%), having a technical parole violation (21.3%), or having a parole violation (16.9%). The most prominent legal reason for re-incarceration among 1,152 recidivist non-violent offenders was committing a new crime (37.5%). Results of this study also showed that a notable number of ex-offenders were re-incarcerated because of either a technical parole or probation violation. Particularly, the primary legal reasons for re-incarceration among 143 recidivist sex offenders were a technical parole violation (31.5%) or a technical probation violation (28.0%). Meanwhile, three (3) main legal reasons for re-incarceration among 451 recidivist drug offenders included committing a new crime (27.9%), having a technical parole violation (22.8%), or having a technical probation violation (22.8%). The results of this study consistently showed that a vast majority of ex-offenders were re-incarcerated because of technical or regular parole or probation violations, regardless of the offender's classification.

Table 5: Logistic Multiple Regression Analyses of Post-Release Recidivism among Different Types of Offenders

Variable	All Offenders (N=6,561)	Violent Offenders (n=1,201)	Non-Violent Offenders (n=3,469)	Sex Offenders (n=369)	Drug Offenders (n=1,522)
Offender Race	-.141*	-.108	-.202**	-.343	-.142
Offender Gender	.187*	.471	-.219*	-.002	.103
Offender Age	-.019***	-.018**	-.015***	-.034**	-.033***
Offender Education	-.380***	-.555***	-.376***	-.453*	-.181
Employment Status	-.374***	-.352**	-.290***	-.505*	-.539***
Constant	.034	-.833	-.057*	1.289	1.003*

Note #1: “*” denotes that coefficient is statistically significant at 0.05 level, “**” at 0.01 level, and “***” at 0.001 level.

Note #2: Due to a relatively small number of Hispanic and Asian offenders in the sample, those offenders were not included in the logistic multiple analyses.

Table 5 illustrates logistic multiple regression analyses of post-release recidivism among a cohort of 6,561 offenders, while controlling for the offender's classification. Specifically, this study examined the effects of the offender's characteristics (i.e., ethnicity, gender, age, and education) and post-release employment on recidivism. Results of logistic multiple regression analysis (the *All Offenders* equation -- Table 5) indicated that the offender's demographical characteristics (i.e., ethnicity, gender, and age), education, and post-release employment were statistically and significantly correlated ($p < .05$) with recidivism. In other words, this study found that African American offenders, male offenders, or younger offenders were likely to become recidivist offenders after their release from prison. Most importantly, this study's results revealed that the offender's education and employment were the most important predictors of recidivism. Specifically, ex-offenders were more likely to be re-incarcerated if they were uneducated (or under-educated) or unemployed.

In regard to 1,201 violent offenders, results of the logistic multiple regression analysis (the *Violent Offenders* equation -- Table 5) showed that an offender's age and education were statistically correlated ($p < .05$) with post-release recidivism. This study's results revealed that recidivist violent offenders were likely to be younger offenders, uneducated (or under-educated), or unemployed. Particularly, this study found that recidivist violent offenders were likely to be under age of 30 and without a high school credential prior to release from prison. Meanwhile, post-release employment was statistically but negatively correlated ($p < .001$) with recidivism among violent offenders. Results of this study clearly showed that violent offenders would likely become recidivists if they were unemployed after release from prison.

Among 3,469 non-violent offenders, results of the logistic multiple regression analysis (the *Non-Violent Offenders* equation -- Table 5) showed that an offender's characteristics (i.e., ethnicity, gender, age, and education) and post-release employment were statistically correlated ($p < .05$) with recidivism. Specifically, this study revealed that recidivist non-violent offenders were likely to be younger, male, and African American offenders who were uneducated (or under-educated) or unemployed after release from prison. Most importantly, post-release employment was an important predictor of recidivism among non-violent offenders. In other words, non-violent offenders would likely become recidivists if they were unemployed after release from prison.

Results of the logistic multiple regression analysis (the *Sex Offenders* equation -- Table 5) showed that an offender's age and education were statistically correlated ($p < .05$) with recidivism among 369 sex offenders. Specifically, this study revealed that recidivist sex offenders were likely to be younger offenders or uneducated (or under-educated). Meanwhile, this study found that post-release employment was also statistically, but negatively, correlated ($p < .05$) with recidivism. In other words, sex offenders would likely become recidivists if they were unemployed after release from prison. However, results of this study showed an offender's race and gender had no effect on recidivism among sex offenders.

In regard to 1,522 drug offenders, results of the logistic multiple regression analysis (the *Drug Offenders* equation -- Table 5) showed only an offender's age and post-release employment were statistically correlated ($p < .001$) with recidivism. Specifically, this study found that younger drug offenders, who were under age of 30, were likely to be recidivist offenders after release from prison. Meanwhile, post-release employment was the most important predictor of recidivism among drug offenders. In other words, drug offenders would likely become recidivists if they were unemployed after release from prison. This

study's results showed that an offender's race, gender and education had no effect on recidivism among drug offenders.

Discussion

Undoubtedly, post-release recidivism has been used frequently as the benchmark to evaluate the success (or failure) of the criminal justice system. If recidivism remains relatively high among ex-offenders, the general public casts doubt on the effectiveness of correctional interventions or behavioral modifications for incarcerated offenders. Even though many studies of ex-offenders have broadened our knowledge about plausible elements contributing to recidivism, there was a need to conduct a longitudinal study and to examine the patterns of the post-release recidivism in different economic conditions.

Consistent with findings from previous studies (see, for examples, Berg & Huebner, 2011; La Vigne, et al., 2008; Matsuyama & Prell, 2010), this 5-year follow-up study found that ex-offenders would likely become recidivists if they were unemployed after release from prison. At its core, post-release employment was the major predictor of recidivism, regardless of an offender's classification (i.e., violent, non-violent, sex, and drug offenders). The most notable finding from this study was, as Table 2 indicates, that virtually all ex-offenders could not find a job and the unemployment rates were in the range of 92-97 percent within 1-3 quarters of release from prison. Among 1,755 offenders released in the 1st quarter of 2005, for example, the unemployment rates were 92.3 percent in the 1st quarter of 2005, 93.9 percent in the 2nd quarter of 2005, 92.7 percent in the 3rd quarter of 2005, and 93.1 percent in the 4th quarter of 2005. Meanwhile, the recidivism rate was 50.6 percent among 1,630 "unemployed" offenders who were released in the 1st quarter of 2005. Undoubtedly, the effect of "unemployment" on recidivism was significant.

Results of this study also indicated that ex-offenders encountered tremendous difficulties finding employment upon release from prison and these difficulties persisted throughout several quarters after release, either during a strong economic condition or in the recessionary period. Obviously, the economic recession had a negative impact on the post-release employment among ex-offenders. The unemployment rates were almost 7 times higher than that among the general population during the period of recession (from 4th quarter of 2007 to 4th quarter of 2008), and it continued to increase during the post-recession period (1st quarter of 2009 to 4th quarter of 2009). In addition to a weak economic condition and competing with the general population for limited job opportunities, previous researchers illustrated a variety of other plausible reasons, such as criminal background checks (see, for examples, Holzer, et al., 2004; Pettit & Lyons, 2007; Travis, 2005), that prevented ex-offenders from being employed in an array of industrial sectors after release from prison.

A further examination of "employed" ex-offenders, who had a job at least 1 quarter during the study period of 2006-2009 (after they were released from prison throughout 2005), revealed the patterns of employment among ex-offenders changed significantly during the recessionary period. There was a 37.5 percent decrease in employment among ex-offenders from 2006 to 2009. (There were 2,620 offenders in 2006, 2,143 offenders in 2007, 2,123 offenders in 2008, and 1,644 offenders in 2009 employed at least 1 quarter in that given year.) Meanwhile, several job sectors, such as construction or manufacturing, that traditionally had provided adequate job opportunities for ex-offenders, steadily declined during the recessionary period. This study found that employment in construction among ex-offenders steadily declined from 13.8 percent in 2006 to 9.0

percent in 2009 and employment in manufacturing decreased from 20.6 percent in 2006 to 13.5 percent in 2009. Furthermore, results of this study also revealed that “temporary help services,” which were primarily temporary-based minimum-wage jobs, had become the major job sources for ex-offenders before, during, and after the economic recession of 2008. Consequently, a vast majority of employed ex-offenders could be classified as “working poor” because more than 87 percent of employed ex-offenders had an annual income below \$20,000 and approximately 66 percent had an annual income below \$10,000.

Another notable finding from this 5-year follow-up study was that an offender’s characteristics (e.g., age or education) had a significant impact on recidivism. Consistent with previous studies (Batiuk, 1997; Burke & Vivian, 2001; Nuttall et al., 2003; Vacca, 2004), this study found that offenders were likely to be recidivist offenders if they were uneducated (or under-educated). Specifically, this study’s results revealed that the recidivism rate was 55.9 percent among offenders without a high school credential, 46.2 percent among offenders who had a high school diploma or GED, but only 31.0 percent among offenders with a college education. A further examination also showed some unique findings in regard to an offender’s characteristics in post-release recidivism, while controlling for an offender’s classification. Among ex-offenders without a high school credential, the recidivism rate was 56.4 percent among violent offenders, 56.8 percent among non-violent offenders, 63.6 percent among sex offenders, and 51.7 percent among drug offenders. Surprisingly, this 5-year follow-up study showed that the recidivism rate climbed to 70.1 percent among unemployed African American males under age of 30 without a high school credential. On the other hand, the recidivism rate was 64.4 percent among unemployed Caucasian males under the age of 30 without a high school credential. Undoubtedly, racial disparities in post-release recidivism, considering a variety of offender’s characteristics, need to be further examined in future research.

Another striking finding was that this study found ex-offenders with multiple times of re-incarceration within a 5-year time span. Regardless of an offender’s classification, 1,064 in a total of 6,561 released offenders returned to prison twice, 269 offenders returned to prison three (3) times, and 39 offenders returned to prison four (4) times since their initial releases in 2005. In other words, this study’s results implicated that a notable number of ex-offenders frequently wandered from prison to the community and back with little stability after their initial releases in 2005. Taking violent offenders as an example, results of this study found that 27.4 percent (n=153) of 560 recidivist violent offenders returned to prison twice, 5.7 percent (n=32) returned to prison three times, and 1.1 percent (n=6) returned to prison four times since their initial releases in 2005. Most importantly, this unique feature of multiple re-incarcerations among ex-offenders, within a short period of time, may invoke future research reconsidering the fundamental elements in defining recidivism.

Conclusion

The lingering hangover of the economic recession likely will persist in the foreseeable future, creating difficulties for offenders looking for jobs upon release from prison. Results of this 5-year follow-up study clearly indicated that post-release employment was as an effective buffer for reducing recidivism among ex-offenders. However, ex-offenders usually lacked the education or professional skills needed to meet the ever-changing job demands from a variety of industrial sectors which might employ them, regardless of their

criminal background. This study found that more than 35 percent of 6,561 ex-offenders did not have a high school credential prior to release from prison and most of these individuals were under the age of 30. Furthermore, results of this study consistently revealed that younger offenders would likely become recidivists if they were unemployed and uneducated (or under-educated), regardless of their classification. A majority of young, unemployed, recidivists were re-incarcerated multiple times after the initial releases in 2005.

Undoubtedly, results of this 5-year follow-up study clearly implicated the need to enhance correctional education for incarcerated inmates in order to increase their employability after release from prison, which, in turn, would decrease recidivism. It is important to mention that the effect of correctional education on post-release employment and recidivism among ex-offenders has been recognized widely (Burke & Vivian, 2001; Mercer, 2009; Nuttall et al., 2003; Rose, et al., 2010; Stevens and Ward, 1997; Vacca, 2004). This study found that educated offenders were less likely than uneducated offenders to become recidivists. Arguably, correctional education could play a crucial role in reducing the cost of incarceration by reducing recidivism. Unfortunately, the funding for correctional education programs across the nation has been reduced due to shrinking state budgets and weak economic conditions. In particular, uneducated offenders would be less likely to reenter the community successfully and more likely to roam in and out of the criminal justice system during the span of their lifetimes. Both the financial and social cost for this may be immeasurable. However, it is anticipated that the present study's findings will extend our understanding of some of the contributing factors to recidivism and provide some insights for future research to continuously study the impact of economic conditions on post-release recidivism among ex-offenders.

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