Barred from employment? A study of labor market prospects before and after imprisonment

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6 Employment (characteristics) and recidivism risks after release■

Abstract

Employment is believed to function as a "turning point" for released offenders. Several theories state that employment can reduce recidivism, but offer different mechanisms to connect employment and crime. This study examines the effect of employment and employment characteristics on recidivism among Dutch ex-prisoners. Although recidivism risks are high among this group, longitudinal research on the effect of employment on recidivism risks is scarce. We based our analyses on longitudinal data of the Prison Project (n = 842) and found that job stability reduces the risk of recidivism. The results indicate that not the guidance to a job, or to a high-quality job, but the guidance to stable employment could help to reduce crime rates among this high-risk offender group.

Key words: reintegration, imprisonment, employment, recidivism, longitudinal research.

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6.1 Introduction

Dutch prisons release approximately 40,000 prisoners each year.[1] Half of these ex-prisoners are convicted for a new crime within two years, and one-third return to prison within that period (Linckens & De Looff, 2013). The recidivism risk is highest in the first months following release (Wartna et al., 2011). Arguably, the dramatic change in circumstances and uncertainty that accompany release offer an explanation for this high recidivism rate. Many ex-prisoners report problems on one or more life domains, such as housing, health and income (Dirkzwager et al., 2009; Noordhuizen & Weijters, 2012).

Both ex-prisoners and professionals view a (quick) transition to employment as an important requirement for a successful reintegration (e.g., Graffam et al., 2008; Visher & Travis, 2011). The protective role of employment is also underscored in various criminological theories. To start, the informal social control theory states that involvement and ties to the workplace can prevent employees from committing crimes (Sampson & Laub, 1993). Employment also ensures a monthly income, which makes it, according to economic theories and strain theory (Becker, 1968; Merton, 1938; Agnew, 1992), less necessary to commit crimes. Moreover, routine activity theory expects that employment will restrict individuals in their daily activities and opportunity structure to commit crimes (Cohen & Felson, 1979; Miller, 2012).

Ex-prisoners are expected to face several barriers to employment. Their low levels of human capital (educational level and work experience) and the further erosion of this capital during imprisonment, offer a first important barrier. In addition, their criminal record can lead to rejection in hiring decisions (Pager, 2003). Moreover, this record can legally exclude them from working in certain sectors of employment (Boone, 2011).

On top of this, it is expected that those who do succeed in finding employment, end up in low quality jobs. By way of example, Western (2006) showed that ex-prisoners often work in temporary and low-wage jobs. Theoretical notions do, however, point out the relevance of job stability and job quality for the protective effect of employment among offenders (e.g., Sampson & Laub, 1990).

It remains, thus far, uncertain *whether* the kind of jobs ex-prisoners find can protect them from crime. Systematic research among this high-risk group is very scarce; administrative datasets include few information on employment (characteristics) and longitudinal surveys among ex-prisoners are costly (see also Skardhamer & Telle, 2012).

In addition, it remains unknown *which* employment characteristics are responsible for the protective effect of employment on crime, that was found by earlier scholars (see also Uggen, 1999). Theories that emphasize the importance of job quality for the protective effect of employment ascribe this

1 Some of these ex-prisoners were released multiple times. There were 39,617 releases in 2012, this involved 32,937 persons.

effect through different theoretical mechanisms to different job characteristics (e.g., stability, work intensity, earnings).

The current study aims to advance on the existing body of knowledge by examining the effect of employment and employment characteristics on recidivism among a large group of Dutch ex-prisoners (n = 842). These ex-prisoners were interviewed in a longitudinal data collection – the Prison Project – shortly after entering pretrial detention as well as six months after release. Detailed measures of the employment situation, and various other life events, in the period prior, during and after imprisonment, enable us to examine the relationship between employment and crime rigorously. A long list of covariates is relevant for quantifying the impact of employment on criminal behavior adequately. To illustrate, if employed ex-prisoners are found to have a lower recidivism risk than a comparison group of unemployed ex-prisoners, this difference can be caused by employment but can also be the result of pre-existing differences between the two groups. By way of example, those who found employment might be more motivated to find a job (and deter from crime) than their unemployed counterparts, and this difference in motivation might have caused employed prisoners to commit fewer crimes. While most previous studies lack detailed information on pre-existing differences, we deal with the non-random selection of ex-prisoners into employment (and kind of job) by including a wide range of confounding variables. An additional advantage of this study is that we base the recidivism risk on two data sources: official registered crimes and self-reported crimes.

Our research question reads as follows: *To what extent do employment, and characteristics of this employment, affect ex-prisoners' recidivism risk in the first six months following release?* In other words, are ex-prisoners who find employment immediately after release more likely to deter from crime than those who do not find employment or at a later point in time? And, to what extent does this relationship rely on the kind of job these individuals find?

6.2 Theory and previous research

6.2.1 The effect of employment on recidivism

Various theories relate employment (characteristics) to criminal behavior. The relatively short follow-up period in the current study leads us to address those theories in which employment is expected to lead to an immediate reduction in criminal behavior.

Merton's strain theory (1938) and Agnew's (1992) general strain theory interpret criminal behavior as an adaptive solution to frustrations that individuals feel when the legal means are insufficient to reach the desired material and immaterial goals. Employment assures individuals from an income and a certain status and therefore makes crimes (for financial gain) less necessary. Economic theories portray a similar rational way of thinking. Criminal behavior is expected to decline when the potential costs for this behavior, for instance

job loss, are higher than its potential returns (Becker, 1968). Routine activity theory emphasizes that if, and to what extent, individuals commit crimes relies on the opportunities to commit crimes. More specifically, the presence of motivated offenders is not enough, criminal behavior is dependent of the availability of suitable targets as well as the absence of guardians (Cohen & Felson, 1979; Miller, 2012). Employment is then expected to reduce criminal behavior because it limits the opportunity structure for such behavior.

The following general hypothesis can be derived from the aforementioned theories: *employed ex-prisoners have a lower recidivism risk than unemployed ex-prisoners*.[2, 3]

Reviews of longitudinal research on the work-crime relationship suggest that employment is indeed related to a significant reduction in criminal behavior (Lageson & Uggen, 2013; Uggen & Wakefield, 2008). Longitudinal studies are, however, scarce among ex-prisoners; we could find only five studies. Berg and Huebner (2011) and Piquero and colleagues (2002) used administrative data to examine, respectively, the effect of employment (n = 401) and the effect of "stake in conformity" (combination measure of employment and marital status) (n = 524) on recidivism among American ex-prisoners. Both studies found a significant negative relationship. Notably, Piquero et al. (2002) concluded that this crime-reduction was mostly attributable to the marital status of ex-prisoners. Skardhamer and Telle (2012) based their analyses on a large administrative Norwegian dataset (n = 7,476) and concluded that employment also generates a protective effect among Norwegian ex-prisoners.

Two studies used survey data about ex-prisoners and found less convincing evidence for the protective influence of employment. Horney, Osgood, and Marshall (1995) found that employment can increase the likelihood that ex-prisoners report property crimes (n = 658). Visher et al. (2008) concluded that employed ex-prisoners were as likely to report a crime in the first eight months following release as their unemployed counterparts (n = 740).

6.2.2 The effect of employment characteristics on recidivism

The abovementioned theories presume that the protective effect of employment depends on certain characteristics of that employment. Until now, few

2 Since we are interested in the immediate effects of employment on crime we only address dynamic theories. The static self-control theory of Gottfredson and Hirschi (1990) states that life transitions are merely the result of pre-existing differences that determine both the risk of experiencing this transition and the risk of committing crimes. Hence, they believe that life events, such as employment, cannot influence criminal behavior. To be sure, employment can also increase specific types of criminal behavior, such as fraud and embezzlement, because of the access and liberties that come with certain jobs. While this is plausible, this hypothesis seems more valuable to research that distinguishes between different types of crime.

3 In this study "unemployment" refers to all jobless ex-prisoners and is thus not limited to those ex-prisoners who are actively searching but cannot find a job.

longitudinal studies paid attention to the relationship between employment *characteristics* and recidivism, and even fewer scholars studied this relationship among ex-prisoners. As far as we know, Uggen's study (1999) forms the only exception. He found that ex-prisoners who worked in a higher quality job were relatively less likely to recidivate. Below, we, therefore, supplement the theoretical expectations with longitudinal research on the effect of job characteristics on crime among other high-risk groups and community samples. Specific attention is paid to the five job characteristics under investigation in the current study: job duration, returning to pre-prison employer, employee versus self-employed, working hours, and occupational level.

Job duration & returning to pre-prison employer. Based on Hirschi's social control theory (1969), Sampson and Laub (1993) stated that employment can lead to a reduction in criminal behavior through the accumulation of conventional ties that accompany steady employment. In other words, not so much employment in itself but stable employment is expected to deter offenders from crime. In this study we examine two indicators for job stability, namely the job duration of a new post-release job and returning to the pre-prison job after release.

When ex-prisoners are able to retain a new post-release job during the six-month follow-up they are able to accumulate bonds with their new employer and co-workers (conventional others). Based on notions of social control theories we therefore expect: *ex-prisoners who are able to retain the post-release job during the six-month follow-up have a lower recidivism risk than ex-prisoners who lose this job*.

Empirical studies are ambiguous concerning the effect of job stability. Sampson and Laub (1990, 1993) found that job stability (combination of employment situation, stability of most recent job and work performances) reduced both the registered and reported crime risk. Most recent studies based their measure of job stability on the duration of employment. Uggen (1999) did not find evidence for a crime-reducing effect of job duration (see also Wadsworth, 2006). Dutch longitudinal research among a young high-risk male offender population also did not find evidence for the protective effect of job stability (Van der Geest et al., 2011). Another study on partly the same dataset (including women) Verbruggen and colleagues (2012) performed different analyses and did find that a longer job duration decreased the likelihood of recidivism.

It can be argued that returning to the pre-prison employer after release – the second measure for job stability in this study – assures that the pre-prison ties to the workplace remain, at least partly, intact. We therefore also expect that *ex-prisoners who return to their pre-prison employer after release have a lower recidivism risk than ex-prisoners who work in a new job*.

A contrary view is that returning to the pre-prison employer will increase the recidivism risk as this job apparently did not prevent the individual from committing a crime before imprisonment. Especially when this job facilitated the crime that led to the imprisonment (crime was committed on the job), returning to the pre-prison employer is more likely to *increase*

than decrease the recidivism risk. However, in that case it is unlikely that the employer will rehire the ex-prisoner. We expect that returning to the pre-prison employer will reduce recidivism risks because of the stability in social control that accompanies this job. Especially in combination with improved circumstances in other domains (e.g., housing, health), returning to a previous job is expected to help ex-prisoners to reintegrate into society.

Several studies imply that previous employers are important sources of employment for ex-prisoners (Martin & Webster, 1971; Soothill, 1974, Visher, Debus-Sherril, & Yahner, 2011). Using a recent and large sample of released prisoners, Visher, Debus, and Yahner (2008) concluded that prisoners who contacted a previous employer were most successful in finding employment (see also Nelson, Dees, & Allen, 1999). While these scholars believe in the relevance of job return for successful reentry none of these studies was able to examine the influence of job return on recidivism risks.

Employee versus self-employed. Routine activity theory emphasizes that the amount of daily activities and free time determines the risk of reoffending (Cohen & Felson, 1979; Miller, 2012). The self-employed are less restricted in their opportunities to commit crimes by job tasks than employees, as self-employed individuals create their own daily schedule. This line of thinking connects to the power-control theory in which the presence of autonomy and absence of control in supervising functions are expected to increase criminal behavior (Hagan, Gillis, & Simpson, 1985). Following these theories we expect that *ex-prisoners who work as employees have a lower recidivism risk than self-employed ex-prisoners*.

Longitudinal studies among community samples of youngsters and adolescents have shown that jobs in which employees experience more autonomy, individuals are less likely to report lower recidivism rates, even after taking into account various other characteristics of that employment (Huiras, Uggen, & McMorris, 2000; Staff & Uggen, 2003).

Full-time employment versus part-time employment. Recall that routine activity theory emphasizes that whether, or how many, crimes individuals commit depends on the opportunity structure of their daily activities. Following this theory we can also derive a hypothesis concerning the effect of work intensity on crime. We expect that *ex-prisoners with a full-time job have a lower recidivism rate than ex-prisoners who have a part-time job*.

A substantial line of research investigated the effect of work hours on recidivism among community samples of young and adolescent individuals. Most of these studies suggest that youngsters who work more hours (>20 hours per week) report more recidivism (e.g., Bachman & Schuleberg, 1993). This finding contrasts our expectation about the role of work intensity among the adult offenders in the current study, but connects to the idea that the effect of life events, such as employment, can depend on an individual's stage in the life course (Sampson & Laub, 1993). Recent studies argue that these former studies presented a spurious relationship and could not adequately control for the non-random selection of more crime-prone individuals into more intensive jobs. For instance, Apel et al. (2007) found no overall

effect of work hours on the criminal behavior of a large youth sample when controlling for pre-existing differences between workers and non-workers.

Occupational level. Finally, we use economic theories to derive a hypothesis about the effect of job quality on recidivism. Jobs that generate a higher income, such as jobs of a higher occupational level, are difficult to replace. Following economic theories, the risk of losing this quality job would tip the balance in favor of being a law-abiding citizen. Strain theory also emphasizes the importance of job quality. Arguably, a higher quality job will make it easier to satisfy an individual's needs and desires through legitimate means. Following these economic theories we expect that *ex-prisoners with a job of a high occupational level will have a lower recidivism risk than ex-prisoners with a job of a low occupational level*.

In the only study on the effects of job characteristics on criminal behavior among ex-prisoners, Uggen (1999) studied a sector-dependent job quality measure, and showed that a job-shift from the food industry to skilled manual labor reduced the chance on recidivism with 11 percent. According to Uggen this measure of job quality represents "the overall desirability of occupations rather than the respondents' individual characteristics" (p.133). Previous studies measured job quality by means of income (e.g., Visher et al., 2008), job satisfaction (e.g., Huiras et al., 2000), employment arrangement (e.g., Van der Geest et al., 2011) and job certainty (e.g., Wadsworth, 2006). These studies also concluded that job quality reduced the risk of (re) offending.

6.2.3 Limitations of previous studies

Empirical work seems to confirm the expectation that certain employment characteristics reduce the likelihood of reoffending. The existing body of knowledge is, however, characterized by a number of limitations. To start, recall that only one study examined the role of employment characteristics for the development of criminal behavior among ex-prisoners. Moreover, the majority of studies used (dated) American datasets pertaining to youngsters and adolescents (Sampson & Laub, 1990, 1993; Uggen, 1999, 2000). Second, previous work pays little attention to the influence of life events during and after release from prison. Recidivism research could however benefit from such a broader research approach, as finding a job presents only one of the many barriers most ex-prisoners face after release. Third, earlier studies provided limited insight into the underlying mechanisms of theories that ascribe the employment-effect to different job characteristics. Finally, the majority of studies based their conclusions on only one source of information with respect to recidivism (official data or self-report data). We aim to progress on previous work by using a detailed longitudinal dataset, that enables a study of the effect of employment and employment characteristics on recidivism risks among a substantial group of Dutch ex-prisoners.

6.3 Data

6.3.1 The Prison Project

This study uses data of the Prison Project: a longitudinal research project among Dutch prisoners. The general aim of this project is to study the intended and unintended effects of imprisonment on several life domains of prisoners and their families. Data were collected in the beginning of pretrial detention, during confinement as well as six months after release from prison. The project targeted 2,945 male prisoners who entered a Dutch detention facility between October 2010 and March 2011, were born in the Netherlands, between 18 and 65 years old and did not suffer from severe psychological problems.

The first in-prison interview (P1) was held approximately two weeks after the beginning of pretrial detention and consisted of many retrospective questions. A response rate of 65 percent resulted in dataset of 1,909 participants. Difference tests showed that this sample was representative for the larger sample of prisoners on a wide range of background characteristics. Nonetheless, the participants did have a slightly less severe criminal history as the non-participants (3.4 versus 5.0 previous prison spells; 7.7 versus 9.8 previous convictions). In addition, a higher percentage of the participants reported to be employed at the time of arrest (45.7% versus 38.7%).

The analyses in the current study pertain to the 842 ex-prisoners who participated in this in-prison interview (P1) as well as in the first reentry wave (R1), which took place six months after release. The current study includes the reentry interviews that were held with prisoners who were released for a minimum of six months in January 2013. The hectic period after release made it a difficult task to find and contact participants. Nevertheless, we managed to contact 76 percent of them, and more than half of the released ex-prisoners (52%) eventually participated in the reentry interview. The detailed background measures collected in the P1-interview revealed that P1- and R1-participants were similar in many ways. Official records on the criminal behavior during the follow-up period was available for the larger P1-sample. We could therefore also compare the registered recidivism risk for both groups. Importantly, the groups showed a similar likelihood of reoffending within the first six months after release (P1: 30.9%; R1: 34.4%).

6.3.2 Recidivism

Recidivism during the six months post-release is measured in two distinct ways. First, the *registered* recidivism rate is based on the General Documentation Files of the Dutch Ministry of Security and Justice, which contain

information on all registered crimes and convictions until July 11, 2012.[4] Hence, the registered recidivism risk is therefore available for the 754 R1-participants who were released for a minimum of six months at that time.[5] Based on these data, 34.4 percent of the prisoners recidivated within the first half year following release.

The second measure – *self reported* recidivism – is based on a life event calendar, in which respondents reported on their criminal behavior (among other information) during each month since their release from prison. These data result in a lower recidivism rate; approximately 22 percent of the ex-prisoners reported at least one crime within the six months post-release (n = 773).[6, 7] Table 6.1 offers a descriptive overview of these dependent variables as well as the employment variables.

6.3.3 Employment and employment characteristics

Employed are those individuals who reported to work at least twelve hours at a weekly basis in the first month after release (30.4%).[8]

We know whether those employed ex-prisoners worked as *employee* (68.4%) or were self-employed. In addition, we know whether these employed ex-prisoners were able to retain the same job during the follow-up. The measure *job retention* thus refers to the six months following release, whereas the other employment variables pertain to the situation in the immediate month after release. R1-data showed that 45.0 percent of the ex-prisoners who were employed in that first month were able to retain that job, at least until the sixth month after release.

Additional job information is available for ex-prisoners who worked as employees after release. First, we are able to measure whether these individuals *returned to their pre-prison employer* after release (38.8%). The second additional job characteristic refers to work intensity. We distinguish between individuals who worked fulltime (>32 hours per week) (69.4%) and part time (12-32 hours per week). Third, following the Standard for Classification

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4 Instead of looking into *reconvictions*, we look into whether or not *charges* were registered after release. In the current study, reconvictions are underestimated because not all charges that have been registered at the Prosecutor's Office will lead to a conviction within the follow-up period. This means that not all charges will necessarily result in a conviction. Given that, in 2011, approximately 90 percent of the charged suspects in the Netherlands are found guilty, this problem may be a minor concern (Van Rosmalen, Kalidien, & Heer-de Lange, 2012).

5 A few respondents could not be found in the General Documentation Files of the Dutch Ministry of Security and Justice.

6 For some respondents reliable life event calendar data were missing (n = 69).

7 There is overlap between the two recidivism outcomes; 87.4 percent of those who are not registered for a new crime also do not report to have committed a crime. In contrast, only 41.9 percent of those who are registered for a new crime, reported a crime (we find an overlap of 63.0 percent the other way around).

8 Following Statistics Netherlands those who work twelve or more hours are considered to be employed.

of Occupations (SBC) of Statistics Netherlands (Westerman, 2010), information about the job title, type of business, and (executive) tasks was used to classify self-employed and salaried workers into one of five occupational levels: elementary, low, middle, high, or scientific. Individuals who were classified in one of the higher occupational levels are seen as workers with a higher occupational level (17.4%).

Table 6.1 Recidivism and employment (characteristics)

	N	%
All	*842*	
Dependent variables		
Registered recidivism	754	34.4
Self-reported recidivism	773	22.3
Independent variables		
Employed in first month after release	824	30.3
Employed in first month after release	*250*	
Employee (vs. self-employed)	234	68.4
Retained job during six-month follow-up	249	45.0
Employee in first month after release	*160*	
Returned to pre-prison employer	160	38.8
Fulltime job	160	69.4
Higher occupational level	155	17.4

6.3.4 Control variables

In order to estimate the effect of employment on recidivism, we control for a range of background variables that pertain to the period prior, during or after release and are widely thought to influence both employment and criminal outcomes. Table 6.2 offers an overview of all 33 covariates.

We start by discussing the covariates that refer to the period prior to imprisonment. The data include information about sociodemographic characteristics, social ties, employment situation at the time of arrest, general measures on employment history and life style. In addition, we control for prisoners' motivation to work, based on nine items pertaining to motivation (e.g., "everyone who can work, should work", Cronbach's alpha=0.67). Moreover, we include detailed measures on the index offense and the criminal history as registered in the General Documentation Files of the Ministry of Security and Justice.

Two covariates pertain to the period during imprisonment. Imprisonment length refers to the actual time prisoners spent in detention. We also include whether or not the prisoners participated in an educational or vocational training during their imprisonment.

The aforementioned life event calendar was used to measure several post-release circumstances. We know whether the prisoners had a romantic partner or housing during the first half year following release (for at least

one month). In addition, this calendar enables us to measure whether or not ex-prisoners reported substance abuse in at least one of the six months (i.e., use drugs each day of the week/drink at least five glasses of alcohol each day of the week). Finally, we know whether the prisoners were in contact with the probation office during release, possessed a valid identification or debts, and whether they received benefits.

Table 6.2 Descriptives covariates prior, during and after imprisonment

	N	Mean	Median	SD	Min.	Max.
Covariates prior to imprisonment						
Age	842	31.07	31.07	10.93	18	65
Non-ethnic Dutch	842	0.33			0	1
Higher level of education[a]	842	0.39			0	1
Partner	842	0.45			0	1
Child(ren)	842	0.37			0	1
Employment before imprisonment	841					
Non-participant		0.23			0	1
Unemployed		0.38			0	1
Employed		0.27			0	1
Self-employed		0.12			0	1
Wage (€)	842	1,228.5	0.00	5,734.6	0	100,000
Duration longest job (years)	766	4.40	2.92	5.46	0	45
Duration unemployment (years)	837	3.90	1.00	6.80	0	47
Excessive drinking (almost every day > 5 glasses)	839	0.12			0	1
Excessive consumption of drugs (almost every day)	839	0.30			0	1
Homeless	842	0.09			0	1
Motivation to work[b]	776	3.51	3.44	0.51	1.00	4.89
Number of previous convictions	841	7.61	4.00	8.94	0	92
Number of previous prison sentences	841	3.39	1.00	6.65	0	81
Age of onset	840	19.61	17.14	7.90	11.74	65.30
Type of crime	818				1	3
Violent		44.50			0	1
Property		33.25			0	1
Other		22.25			0	1
Covariates pertaining to imprisonment						
Length of imprisonment	842	155.62	114.5	129.1	1	661
Followed training/course	841	0.24			0	1
Covariates after imprisonment						
Partner	767	0.25			0	1
Excessive drinking (almost every day > 5 glasses)	776	0.10			0	1
Excessive consumption of drugs (almost every day)	775	0.23			0	1

Table 6.2 continued

	N	Mean	Median	SD	Min.	Max.
Contact with probation officer	834	2.55	3.00	1.34	1	4
Valid identification	829	0.86			0	1
Debts	831	0.60			0	1
Homeless	770	0.12			0	1
Received benefits	842	0.42			0	1

[a] Higher educated are those with a higher level of secondary schooling (HAVO/ VWO).
[b] Average score on nine items (1 = completely disagree – 5 = completely agree).

6.4 Methods

This study offers an insight into the relationship between employment, job characteristics and recidivism. We first present odds ratios to describe the bivariate associations between the independent and dependent variables (Table 6.3). Thereafter, we examine whether these associations remain after controlling for individual differences in the aforementioned covariates. The relatively small sample size, especially when we focus on the employed ex-prisoners (n = 250) or ex-prisoners who work as employee (n = 160), limits the appropriate number of covariates that can be included in the analyses. In order to reduce the number of covariates we performed three separate regression analyses, one for each time period (prior, during and after imprisonment). This inclusion in "blocks" takes the confounding of covariates into account (see for instance Mustaine & Tewksbury, 1998). Each block of variables was regressed against the two dependent variables (registered crime risk, self-reported crime risk) separately, and we kept the covariates with moderately significant explanatory powers (α<0.10). Covariates that were not associated with the recidivism outcome (α>0.10) were removed from the final model (see Appendix 6.A).

6.5 Results

6.5.1 Bivariate association

Table 6.3 offers insight into the bivariate associations between employment and recidivism. Based on the registered recidivism risk 27.6 percent of the employed ex-prisoners commits a new crime in the six months following release (OR=0.69). This risk is significantly higher for unemployed ex-prisoners (37.0%). The difference in reported recidivism risk is smaller but also reveals a significantly lower recidivism risk among employed ex-prisoners (OR=0.71).

The risk of recidivism seems to be related to the kind of job that ex-prisoners find. Table 6.3 shows that those who are able to retain the same job

during the follow-up have a significantly lower risk of getting registered for a new crime (17.6% vs. 35.2%; OR=0.39) or reporting a new crime (10.5% vs. 25.0%; OR=0.35). Being self-employed or being employed as a salary worker does not seem to affect the registered recidivism risk. However, in contrast to our expectation, employees report a new crime more often than self-employed ex-prisoners (OR=2.48).

Ex-prisoners who return to their pre-prison employer are significantly less likely to get registered for a new crime (OR=0.30) or report a new crime (OR=0.33) than ex-prisoners who find a new job following release. Another notable finding is that jobs of a higher occupational level are related a lower registered recidivism risk than jobs of a lower occupational level (12.0% vs. 28.4%). Finally, work intensity does not seem to be related to recidivism risk.

Table 6.3 Odds ratios employment (characteristics) and recidivism

	N	Category	Registered recidivism		Self-reported recidivism	
			%	OR	%	OR
All (n = 842)						
Employed in first month after release	824			0.69*		0.71†
		No	37.0		24.2	
		Yes	27.6		18.4	
Employed in first mont after release (n = 250)						
Type of employment	234			0.87		2.48*
		Self-employed	28.4		10.1	
		Employee	25.5		21.9	
Retained job during six-month follow-up	249			0.39**		0.35**
		No	35.2		25.0	
		Yes	17.6		10.5	
Employee in first month after release (n = 160)						
Retained job during six-month follow-up	160			0.32*		0.34**
		No	33.30		28.30	
		Yes	13.80		11.90	
Returned to pre-prison employer	160			0.30**		0.33*
		No	34.1		28.6	
		Yes	13.3		11.7	
Fulltime job	160			0.74		1.27
		No	29.5		19.0	
		Yes	23.8		22.9	
Higher occupational level	155			0.34†		0.39
		No	28.4		25.0	
		Yes	12.0		11.5	

†$p<0.10$; *$p<0.05$; **$p<0.01$

6.5.2 *Multivariate association*

Table 6.4 shows the results of the six final models with respect to (a) the effect of employment, (b) the effect of employment characteristics and, (c) the effect of employment characteristics for salary workers on registered and self-reported recidivism risk.

After controlling for the selection of covariates that were associated with the recidivism outcome (α<0.10) (see Appendix 6.A), employment no longer seems to affect either of the recidivism measures. Employed and unemployed ex-prisoners have a similar chance of being *registered* for a new crime. Moreover, contrary to our expectation, we find that employed ex-prisoners *report* a new crime more often than unemployed ex-prisoners (OR=1.51).

The next step is to examine whether any of the employment characteristics have a crime-reducing effect. The multivariate analyses show that type of employment (salary worker or self-employed) is not significantly related to recidivism risk. Job retention, however, seems to reduce the risk of getting registered for a new crime, even after controlling for various confounding covariates (OR=0.46).

Shifting the focus to the models for salary workers exclusively, Table 6.4 shows that the likelihood of registered recidivism is relatively lower for workers who returned to their pre-prison employer after release (OR=0.26). Work intensity, occupational level and job retention are not related to lower recidivism risks.

Table 6.4 Odds ratios employment(characteristics and recidivism controlled for covariates before, during and after imprisonment

	Registered recidivism [a]		Self-reported recidivism [b]	
	OR	Exp(SE)	OR	Exp(SE)
All (n = 842)				
Employed in first month after release	1.06	1.22	1.51†	1.28
Employed in first month after release (n = 250)				
Type of employment (employee vs. self-employed)	0.52	1.53	2.26	1.88
Retained job during six-month follow-up	0.46†	1.50	0.86	1.65
Employee in first month after release (n = 160)				
Retained job during six-month follow-up	0.97	1.77	1.02	1.95
Returned to pre-prison employer	0.26*	1.81	0.78	2.21
Fulltime job	0.69	1.65	1.79	1.79
Higher occupational level	0.27	2.25	0.48	2.21

†p<0.10; *p<0.05; **p<0.01

[a] We controlled for partner, duration of unemployment, number of previous convictions, number of previous prison sentences, type of crime, imprisonment length, followed training/course, excessive consumption of drugs after release, homeless (see Appendix 6.A)

[b] We controlled for age, ethnicity, partner, employment before imprisonment, excessive drinking before release, number of previous convictions, number of previous prison sentences, type of crime, imprisonment length, excessive consumption of drugs after release (see Appendix 6.A)

6.5.3 Sensitivity analyses

Sensitivity analyses (not shown) were performed in order to inspect the robustness of our findings.[9] Recall that employment is not a random event. To the extent that employment is influenced by individual self-selection, the work-crime relationship is potentially spurious. And, the same is true for self-selection into employment characteristics. Only an experimental design, in which individuals are randomly assigned to employment would ensure that all possible confounders (including unobservables) are controlled. However, any bias caused by observable pre-existing covariates can be eliminated by conditioning on a propensity score (Rosenbaum, 2002; Rosenbaum & Rubin, 1983). This approach allowed us to control for a longer list of covariates and pay more specific attention to the non-random selection in employment (characteristics) than in the analyses discussed above.

We estimated individuals' propensity of employment by regressing all 33 covariates on the dichotomous measurement of employment. This propensity score was subsequently used to weigh the data and assure that ex-prisoners with a similar propensity of finding employment, but different employment status (employed or unemployed), are compared in recidivism risk. A similar approach was applied to all employment characteristics.

These sensitivity analyses confirmed the results of the main analytical strategy. Employment in itself did not affect the likelihood of reoffending but the two job stability measures seemed to decrease recidivism risks.

6.6 Discussion

The current study examined whether a quick transition to employment could be a "turning point" for a high-risk offender group. Using longitudinal data from the Netherlands, we examined the protective role of employment and employment characteristics for a large group of ex-prisoners (n = 842) and during the hectic aftermath of imprisonment. We were able to control for the influence of a wide range of confounding factors – pertaining to the period prior to, during or after release from prison – on the work-crime relationship. In addition, this study offered a current insight into this relationship outside the Anglo-Saxon context. Moreover, recidivism risk was not only based on official data, but supplemented with self-reported recidivism data.

The first finding was that the mere presence or absence of a job did not reduce ex-prisoners' recidivism risks after we controlled for confounding factors. Employment did not lower the risk of getting registered for a new

9 These findings are omitted for reasons of space, but are available upon request.

crime and, in contrast to our expectation, employed ex-prisoners were *more* likely to report a new crime than unemployed ex-prisoners.

Although this finding might seem unexpected, surprisingly little prior research exists on whether employment can deter high-risk adult offenders, such as ex-prisoners, from criminal behavior. And, the handful of studies that are based on prisoner data showed ambiguous findings. Research based on administrative data seems to confirm the crime-reducing effect of employment (Berg & Huebner, 2005; Piquero et al., 2002; Skardhamer & Telle, 2012), while survey-based research was less conclusive (Horney et al., 1995; Visher et al., 2011). In the current survey-based study, employment data were based on ex-prisoners' reports and as such include all economic activity (e.g., self-employment, off-the-books employment, out-of-state employment). In contrast, administrative data only capture formal employment as reported by employers. This difference in the measurement of employment might offer an explanation for the lack of strong evidence for the protective effect of employment in survey-based studies. In the latter studies, employment could represent a wider range of (lower quality) jobs than the formal employment arrangements portrayed in administrative studies. Future research could test the validity of this explanation by using both survey and administrative data to measure the employment patterns of ex-prisoners.

In finding that employment increases the self-reported crime risk we connect to a study of Horney and colleagues (1995). They argued that this effect was caused by offenders who committed a property crime at the workplace (employment as facilitator). An alternative explanation could be that unemployed and employed ex-prisoners differ in how they report on their criminal behavior. Perhaps, unemployed ex-prisoners possess relatively more characteristics that correlate highly with underreporting such behavior. A comparison between employed and unemployed ex-prisoners on the two recidivism risks shows indeed somewhat smaller differences between employed (official data=28%, self-report data=18%) and unemployed ex-prisoners (official data=37%, self-report data=24%). Future research is warranted to better investigate these and other potential explanations.

A second important finding was that certain job characteristics *reduced* ex-prisoners' recidivism risks. Retaining a job in the six-month follow-up decreased this risk among employed ex-prisoners. A further analysis of the employment data pertaining to salary workers exclusively, indicated that especially those ex-prisoners who returned to a pre-prison employer after release were less likely to be registered for a new crime. We found similar, though non-significant, relationships between these job stability indicators and the reported recidivism risk. These findings connect to the work of Sampson and Laub (1990, 1993, 2005). They showed that a self-reported measure of job stability decreased offenders chances of getting registered for a new crime or reporting a crime. Recent Dutch research also confirmed the

crime-reducing effect of job duration, but among a high-risk group of adolescent offenders (Verbruggen et al., 2012).

Our study confirms the assumptions of the informal social control theory of Sampson and Laub (1993). They concluded that "…the stronger the adult ties to work and family, the less crime and deviance among both delinquents and nondelinquent controls" (2005, p.13). Social ties to co-workers and employers seem to decrease ex-prisoners' criminal involvement.

Future research could advance on the current work by looking not only into objective job stability indicators (the duration of a job, returning to pre-prison employer), but examining more precisely the perceived *quality* of the ties to the workplace. In addition, the finding that returning to a previous employer reduces recidivism risks after release warrants further research on this "new" indicator of job stability. Our results show that a job which previously did not protect an individual from committing a crime (for this individual was imprisoned in spite of being employed), can reduce recidivism risks after release. Future research should focus on examining how this pre-prison job is able to lower recidivism risks at a later time. Arguably, one important condition is that the crime that led to the imprisonment is unrelated to the job. A potential explanation for the protective effect of a pre-prison job after release is that this effect depends on the circumstances in other life domains after release (housing, social network, health). Also, ex-prisoners might be more willing to commit to a conventional lifestyle when they receive a second chance and renewed trust from a good employer.

A third notable finding was that the two recidivism outcomes led to somewhat different conclusions. Employment does not affect the chance of getting officially *registered* for a new crime, but seems to increase the risk of *self-reported* recidivism. And, while certain job characteristics seem to reduce ex-prisoners' chances on getting *registered* for a crime significantly, a similar but non-significant pattern of findings was found for *self-reported* recidivism risk. According to Hindelange, Hirschi, and Weis (1979) this difference in findings could potentially be explained by the difference in domain of criminal behavior that are tapped by these two different recidivism measures. They argued that self-report data are more likely to include less severe crimes (see also Thornberry & Krohn, 2000). This study did not distinguish between different types of crime. In order to test the validity of the aforementioned explanation and provide more insight into the similarities and differences between the two recidivism measures, future research should distinguish between different types of crime. Importantly, the difference in findings across recidivism measures implies that future researchers should strive to measure recidivism outcomes by using both official and self-reported data.

Some limitations of this study deserve attention in future research as well. To start, recall that observational data can only imperfectly approximate an experimental design, which would effectively rule out all potential confounders of the relationship between employment and recidivism outcomes. Our multivariate analyses only account for observable covariates

(measurable differences between unemployed and employed ex-prisoners) (see also Bushway, Johnson, & Slocum, 2007). Nonetheless, we are confident that our models severely reduce selection bias by accounting for many more potential confounders than most previous studies. Moreover, sensitivity analyses confirmed the robustness of findings. And, the analyses were based on fine-grained (monthly) units of time and therefore appropriate for a study of the temporal order of processes.

A second shortcoming is that we focused on the effect of the employment situation in the *immediate* month after release. Certain types of employment, such as return jobs or assigned jobs (as part of a reentry program), are arguably overrepresented due to our measurement of employment. Although a similar design was used in previous work (Berg & Huebner, 2011; Visher et al., 2008), we encourage future research to examine the robustness of our findings using a more dynamic measurement of employment outcomes.

Finally, the six-month follow-up period used in the current study is relatively short and limits a long-term investigation of ex-prisoners' employment and recidivism patterns. Future research will have to show to what extent our findings, specifically with respect to job stability, hold when a longer follow-up period is used. Nonetheless, it is encouraging to find that even a relatively short period of job retention can decrease the likelihood of reoffending.

Reviews on employment programs for ex-prisoners and other offender groups consistently reveal that these efforts have few to no impact on the criminal behavior of participants (Visher et al., 2005). Often, this null-effect is ascribed to the low quality and temporary nature of jobs to which ex-prisoners are guided (Uggen, 1999, 2000). This study indicates that not the guidance to *a* job, or a *high-quality* job, but guidance to *stable* employment could help to reduce crime rates among this high-risk offender group.

Appendix 6.A Logistic regressions on recidivism outcomes

	Registered recidivism		Self-reported recdivism	
	OR	Exp(SE)	OR	Exp(SE)
Covariates prior to imprisonment				
Age	0.98	1.02	0.93***	1.02
Non-ethnic Dutch	1.29	1.21	0.68†	1.24
Higher level of education	1.09	1.20	1.30	1.23
Partner	0.67*	1.20	0.58**	1.23
Child(ren)	0.82	1.23	1.23	1.26
Employment before imprisonment				
Non-participant *(ref.)*				
Unemployed	0.78	1.26	1.06	1.27
Employed	0.82	1.30	0.48**	1.37
Self-employed	0.94	1.43	0.64	1.60
Wage (€)	1.00	1.00	1.00	1.00
Duration longest job (years)	1.00	1.03	0.98	1.04
Duration unemployment (years)	1.02**	1.01	1.01	1.01
Excessive drinking (almost every day > 5 glasses)	1.49	1.31	2.10**	1.32
Excessive consumption of drugs (almost every day)	1.04	1.21	1.50†	1.23
Homeless	1.59	1.34	0.74	1.36
Motivation to work	0.86	1.18	0.88	1.19
Number of previous convictions	1.05***	1.02	1.03*	1.02
Number of previous prison sentences	2.19***	1.25	2.1***	1.28
Age of onset	0.98	1.02	1.02	1.02
Type of crime				
Violent *(ref.)*				
Property	1.53*	1.23	1.90**	1.26
Other	1.04	1.27	1.32	1.30
Covariates pertaining to imprisoment				
Length of imprisonment	1.00*	1.00	1.00†	1.00
Followed training/course	0.67†	1.23	0.96	1.24
Covariates after imprisonment				
Partner	0.86	1.21	0.86	1.25
Excessive drinking (almost every day > 5 glasses)	2.17***	1.30	2.70***	1.31
Excessive consumption of drugs (almost every day)	1.14	1.22	2.93***	1.22
Homeless	2.03**	1.29	2.21***	1.29
Missing value calendar	1.59	1.33	1.15	2.20
Contact with probation officer	1.00	1.18	0.99	1.22
Valid identification	0.78	1.25	0.93	1.30
Debts	0.91	1.18	1.16	1.21
Income from benefits	1.02	1.18	0.80	1.21

†$p<0.10$; *$p<0.05$; **$p<0.01$