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1 | GENERAL INTRODUCTION

It is January 1995 when four young people are discharged from a juvenile justice institution in the eastern part of the Netherlands. James is 18 years old, Ray 17, and Regina and Ellen are aged 16, and at their young age, they have already experienced problems in multiple domains. They all grew up in a problematic family environment, experienced difficulties in school, suffered from psychological and behavioral problems, and engaged in delinquent behavior. As the gate behind them closes, they walk to the train station. Then they all go their separate ways. How will each of them fare on the road to adulthood?

1.1 | INTRODUCTION

In the Netherlands, over 4,000 youths are institutionalized in juvenile justice or youth care institutions every year because there are serious concerns about their behavior and development (Jeugdzorg Nederland, 2011; 2013; CBS Statline, 2013). In general, these youths are characterized by troubled backgrounds: they grew up in adverse family situations, show poor school performance, suffer from psychological problems, and exhibit serious behavioral problems and more often than not (serious) delinquency. When previously institutionalized youths begin to make the transition into adulthood, they may find that because of their vulnerable background, they face difficulties adapting to conventional adult social roles (Osgood, Foster, Flanagan & Ruth, 2005).

One of the most important adult roles is employment. Work not only generates income and therefore contributes to financial independence and security, it also provides structure to everyday life, feelings of usefulness and purpose, social contacts, and status (Jahoda, 1982). Employment is thus of great importance for one's identity, well-being, and psychological health (Hulin, 2002; Paul & Batinic, 2010). Although work is important for all young adults, it is especially important for vulnerable youths, as it helps them transition into adulthood successfully. Having a job gives these youths the opportunity to learn and develop new skills and take on adult responsibilities. It provides them with social status, which helps them form a conventional identity and adopt a non-criminal lifestyle (Chung, Little & Steinberg, 2005; Hulin, 2002). However, especially in making the transition to the labor market, these youths face considerable hurdles and need to overcome obstacles in multiple domains.

To begin with, previously institutionalized youths generally are more likely to attain lower levels of education or drop out of school, diminishing their opportunities of getting a job, especially the more stable and higher-qualified types of employment. In addition, because these youths usually grew up in adverse or disadvantaged family environments, they tend to have few social and economic resources and often have no legitimate job networks at their disposal to help them achieve educational and occupational milestones. Moreover, they often suffer from behavioral, psychological, or psychiatric problems, which might make it more difficult for them to function in a work setting. Finally, the stigma resulting from their delinquency and institutionalization during adolescence might limit their legitimate adult employment opportunities (Uggen & Wakefield, 2005). These youths thus experience a multitude of problems, which makes a successful transition into the labor market difficult (Chung et al., 2005). This, in turn, can exacerbate their problem behaviors and contribute to the development of persistent criminal behavior and other adverse adult outcomes.

Little is known about the actual adult outcomes of previously institutionalized youths. How are they faring on the road to adulthood? To what extent do they engage in criminal behavior in adulthood? Are they able to make a successful transition into one of the most important adult life domains: the labor market? And how many of them end up living conventional lives? To answer these questions, the central aim of this thesis is to provide insight into the role of employment and crime in the adult lives of these vulnerable youths. Therefore, this dissertation aims to examine (1) the effect of employment on offending, (2) the effects of conviction and incarceration on employment chances, and (3) the extent to which employment and crime influence adult life adjustment.

To shed light on the adult outcomes of previously institutionalized youths and provide insight into the relationship between their employment careers and their criminal careers, this dissertation focuses on the lives and crimes of a sample of formerly institutionalized youths as they transition into adulthood. The sample consists of boys and girls who, when they were 15 years old on average, were institutionalized in a Dutch juvenile justice institution in the 1990s and were followed into their thirties. Using both officially registered longitudinal data on their employment and criminal careers and self-report data on adult life outcomes, this dissertation examines different aspects of the relationship between employment and crime, as well as adult life outcomes in this at-risk group. Since this is considered to be a high-risk sample, all empirical chapters focus on *serious* offending, as will be described in more detail below in the data paragraph (1.5).

By studying this sample of previously institutionalized youths, this study builds upon prior research on the work-crime relationship. Namely, the nature of the data enables me to test a number of theories addressing the work-crime relationship using longitudinal data, for both men and women, and in the Dutch context. These important contributions to the existing body of literature are discussed in more detail in the next paragraphs.

The organization of the remainder of this introduction chapter is as follows. First, the theoretical framework is outlined, followed by a short overview of

previous research on the work-crime relationship. Then, the research questions and hypotheses that are addressed in this thesis are outlined, and the expected theoretical and empirical contribution of this study to the existing body of literature is discussed. Subsequently, the data that are used for this thesis are described. The chapter concludes with a description of the structure of the dissertation.

1.2 THEORETICAL FRAMEWORK

1.2.1 *Effects of employment on crime*

There are several theories that assume that employment has an independent causal effect on offending and therefore that work can help vulnerable youths desist from crime. To begin with, there are theories that focus on the monetary aspect of work. These theories argue that individuals who experience poverty, either absolute or relative, are more likely to be engaged in crime, and that, because being employed means receiving a steady income, work decreases the motivation for crime (Becker, 1968; Ehrlich, 1973; Merton, 1938, 1968). According to strain theory, for instance, people experience strain or frustration when they, due to blocked legitimate opportunities, are unable to achieve the level of monetary success that they desire. Resorting to criminal activities in an attempt to fulfill financial needs is viewed as an innovative way of alleviating feelings of strain (Cloward & Ohlin, 1960; Merton, 1968). Since employment generates income, employed individuals are less likely to experience strain and are therefore thought to be less motivated to engage in (acquisitive) crime than those who are unemployed. A critique of strain theory is that, by focusing on the financial motivation for crime, the theory is less well suited to explain non-acquisitive crime.

Other theories assume that crime is not merely financially motivated, and therefore that relieving financial strain alone is not sufficient to reduce criminal behavior, but emphasize other non-monetary aspects of work that can prevent people from committing crimes. According to these theories, employment provides structure to everyday life, leaving less time for unstructured activities that are associated with engaging in criminal behavior. Moreover, people who work often experience direct social control from their boss or co-workers, which limits time and opportunities for deviant behavior (Laub & Sampson, 2003; Shover, 1996). However, the workplace can also provide opportunities for criminal behavior, especially when a job is characterized by high autonomy and little supervision (e.g., Felson, 2006; Mars, 1982).

In addition, Sampson and Laub (1993) emphasize that bonds to conventional social institutions, such as employment, also provide a source of indirect or informal social control, which more gradually contributes to desistance. Attachment to a high-quality, stable job provides people with feelings of responsibility, usefulness, and competence. Over time, these aspects result in investments in social capital – a growing stake in conformity – and increased identification

with a conventional, non-criminal lifestyle. The employed individual thus has more at stake by committing crimes than just losing the monetary benefits of work and therefore is increasingly less likely to engage in crime (Laub & Sampson, 2003; Sampson & Laub, 1993).

1.2.2 *Employment prospects of vulnerable youths*

Employment is thus thought of as having the potential to beneficially influence the criminal behavior of high-risk youths and to help them in adopting a conventional lifestyle. In general, however, the employment prospects of vulnerable youths are limited for at least two important reasons. First, due to their troubled backgrounds and limited academic success, vulnerable youths are at risk of failing to make a successful transition to the labor market and experiencing spells of unemployment early in their employment careers. Experiencing a period of unemployment has detrimental effects on subsequent employment outcomes (Arulampalam, Gregg & Gregory, 2001; Luijkx & Wolbers 2009). According to signaling theory (Spence, 1973), an employer is less likely to hire a job applicant with a gap in his or her employment history, because this is viewed as signaling negative worker characteristics, such as low productivity, inferior worker quality, and bad job performance. Work experience, on the contrary is taken as a positive signal. In addition, spells of unemployment negatively affect personal skills and experience. Human capital theory states that employment offers the opportunity to invest in human capital, and to generate general work experience, as well as specific skills and knowledge. Investments in human capital (including education, work experience, and on-the-job training) increase one's market value and thus the chance of being employed (Becker, 1964). Unemployment leads to human capital depreciation, since it not only undermines the accumulation of human capital, but also because existing skills can deteriorate as they go unused, thereby decreasing an individual's employability.

Second, vulnerable youths are also likely to experience difficulties in the labor market due to their delinquent behavior in adolescence, their institutionalization, and, possibly, criminal behavior and a criminal record in adulthood. For example, engaging in antisocial or criminal behavior at work can make it difficult to maintain a job. Furthermore, formal sanctions following crime can have detrimental effects on employment outcomes as well. Classic labeling theories argue that people who engage in crime and have had contact with the criminal justice system are publicly labeled as deviant (Becker, 1963; Lemert, 1967). According to these theories, individuals with a criminal history are viewed by others as different and assumed to have undesirable characteristics such as untrustworthiness or aggressiveness. Employers may view labeled individuals as undesirable job candidates and might therefore be less willing to hire ex-offenders. A criminal label thus can block access to conventional employment opportunities (Holzer, Raphael & Stoll, 2003; Pager, 2003). In addition, labeled individuals might also anticipate that employers are not likely to hire them, so they adjust their expectations and job-seeking behavior and are more likely to accept unstable, low-quality jobs or totally withdraw themselves from

the (formal) labor market. In sum, according to labeling theory, conviction and incarceration have negative effects on the individual's employment career due to the stigma constituted by a criminal background.

Incarceration spells are likely to have additional negative effects on the employment prospects of vulnerable youths through the process of human capital deterioration. As with unemployment, human capital accumulation is interrupted when an individual is incarcerated. The opportunity to gain work experience on the job is terminated, and the longer the incarceration spell, the more likely existing general skills will erode (Holzer et al., 2003; Kling, 2006). Yet, as inmates can have the opportunity to participate in education and work programs while in prison, incarceration may also contribute to an increase rather than a decrease in human capital.

In sum, while employment is thought to be of potentially great importance for formerly institutionalized youths, for them to participate in the conventional society and help them refrain from a criminal lifestyle, in reality these youths can find that conventional employment opportunities are diminished or even totally 'knifed off' because of their troubled background, earlier criminal behavior, and history of institutionalization (Moffitt, 1993; Sampson & Laub, 1997). As a result, they are left with little opportunity to create a bond to conventional society and to invest in social capital and are therefore more likely to continue their criminal behavior. They are thus at risk of becoming trapped in a downward spiral, making it increasingly difficult to make positive life changes, a process referred to as cumulative disadvantage (Sampson & Laub, 1997). Thus, previously institutionalized youths who continue to engage in criminal behavior are at risk of increasing marginalization, while those who do manage to find employment may break out of the vicious circle and start increasing their chances to become established in adult life domains.

1.2.3 *A causal relationship between (un)employment and crime?*

The aforementioned theories assume that a causal relationship between (un)employment and crime (and its consequences) exists. However, this theoretical stance has not been uncontested. Some have argued that the relationship between employment and crime results from selection effects. Gottfredson and Hirschi (1990), for example, state that people differ in their level of self-control and that individuals with low levels of self-control are not only more likely to engage in criminal behavior but also likely to be unsuccessful in other life domains, such as the labor market. Traits like impulsiveness, aggressiveness, self-centeredness, and a strong here-and-now orientation while conducive to crime may not be good worker characteristics. Due to these stable individual characteristics, certain people tend to self-select into both unemployment and criminal behavior. According to Gottfredson and Hirschi, any observed relationship between (un)employment and crime is therefore spurious rather than causal, and the 'effects' of employment on crime, or of formal reactions to crime on employment chances, will disappear as selection effects are taken into account.

For institutionalized youths, this raises the question to what extent they will ever end up leading conventional lives, in a sense that they are able to desist from crime and successfully adapt to adult social roles such as employment. According to Moffitt (1993; 1994), some individuals, the 'life-course persisters', will engage in antisocial behavior throughout their lives. These individuals are characterized by neuropsychological deficits that, in interaction with a dysfunctional family environment, shape a persistent pattern of problematic behavior. However, the manifestation of this problematic behavior differs as the social circumstances and opportunities change over the life course. To illustrate, according to Moffitt, while life-course persisters are able to make the transition to work, it is difficult for them to benefit from the positive aspects that employment offers, and they might even use the opportunities that the workplace provides to engage in deviant behavior (Moffitt, 1994).

Theories that focus on individual differences thus argue against any causal effect of employment on crime and state that for most – if not all – offenders, the link between (un)employment and crime is due to selection rather than causation. These static or trait theories are generally less optimistic about the adult life prospects of high-risk youths than dynamic theories and expect long-term difficulties in different adult life domains. However, dynamic theories also caution that even if criminal development is susceptible to outside influence, if left unaddressed, a cumulative pattern of disadvantage may very well yield equally grim results.

1.2.4 *Gender differences in the relationship between employment and crime?*

The theories on effects of employment on crime and crime on employment discussed above were mostly developed based on males; thus, it is still unclear whether to expect gender differences in the work-crime relationship. To begin with, it is unknown whether unemployment affects financial motivation for crime in the same way for men and women. It can be argued that unemployed men are more financially motivated to commit crimes than unemployed women. For example, since men are still more often the primary earner than women (De Beer, 2005), men will have a stronger financial motivation to commit (acquisitive) crime when they become unemployed. In addition, unemployed men and women might respond differently to strain. Males, who are generally more concerned with material success, are more likely to resort to crime and commit serious offenses. Females, on the other hand, more often respond to strain not only with anger but also with depression and therefore may be less likely to commit crime, but instead more likely to exhibit self-destructive forms of behavior (Broidy & Agnew, 1997).

However, it might also be that the financial motivation to engage in crime is stronger for unemployed women than for unemployed men. Particularly, when unemployed women single-handedly have to take care of their children without any financial support of the father, a situation which may not be uncommon, in particular in vulnerable groups, these women might experience more difficulties providing for their family and might therefore be more motivated

than unemployed men to engage in income-generating crime (Broidy & Agnew, 1997).

Furthermore, men and women might differ in the extent to which they experience social control both in the workplace environment and outside of it. For one, employed women might experience less (informal) social control than employed men, because women more often work part-time (De Beer, 2005), and might therefore have less opportunity to create and strengthen the bond with work. Yet, when women do develop meaningful relationships with their co-workers, they might be less willing to risk losing their job by committing crimes, because women are generally more concerned with maintaining social relationships than men (Giordano, Cernkovich & Rudolph, 2002; Uggen & Kruttschnitt, 1998). On the other hand, it can be reasoned that because men attach more psychosocial meaning to work and derive status and a sense of identity from their jobs to a larger extent than women do (Jahoda, 1982; McFayden, 1995), they are less likely than women to put their job at stake by committing crime. Outside the workplace environment, unemployed women more so than unemployed men might have access to alternative conventional adult social roles, such as the role of mother, which – like work – provide both social control and structure in everyday life (Paul & Moser, 2009), diminishing the effects of work for women.

Also, with regard to the hypothesized detrimental effects of unemployment, conviction, and incarceration on employment chances, it is unclear whether to expect gender differences. Women in general have weaker labor market attachment than men, because they are more often employed in part-time and lower-quality jobs. Women also interrupt their employment careers more often than men, especially when they have children. As a result, women have fewer opportunities to invest in work-related human capital (Luijckx & Wolbers, 2009; Mooi-Reçi, 2008). However, employers are usually aware of these gender differences, which means that, for women, their relative lack of human capital may play a less important role in the hiring decision, especially for low-skilled, low-paid, or temporary jobs (Barron, Black, & Loewenstein, 1993; Blau & Kahn, 2000).

There are also indications however that women are more negatively affected by the stigma attached to involvement in criminal behavior than are men. Overall, women are less involved in crime than men, but the women that do engage in criminal behavior might be judged more harshly, because crime is perceived as more problematic for women than for men (Bartusch & Matsueda, 1996; Davies & Tanner, 2003; Hagan, McCarthy & Foster, 2002). A criminal record may therefore yield a greater stigma for women compared to men. In addition, low-skilled women usually work in service or retail, and for these jobs certain personality traits such as being friendly are generally deemed more important, for example, because they involve direct contact with customers. Since a criminal label is thought to signal negative personal characteristics and perhaps even more so for women than for men, women with a criminal history are less likely to be hired for these kinds of jobs. Low-skilled men in general apply for jobs without a service or public function, such as jobs in construction, where these assumed negative characteristics matter less (Davies & Tanner, 2003; Holzer et al., 2003;

Tanner, Davies & O'Grady, 1999). Although a stereotypical distinction between typical male and female professions is thought to have declined over the past decades, this is particularly true for higher-qualified employment, while occupational segregation by gender still holds for low-skilled jobs (Blau, Brummund & Liu, 2013; Dolado, Felgueroso & Jimeno, 2001).

1.2.5 *The relationship between employment and crime in the Netherlands*

Besides being based largely on males, theories on the work-crime relationship were mostly developed to explain the work-crime relationship observed in Anglo-Saxon countries. The societal context of these countries, however, differs greatly from the context that exists in Western European countries such as the Netherlands. As a result, it is largely unknown to what extent these theories are applicable to the relationship between employment and crime in the Netherlands.

The Dutch welfare state

Esping-Andersen (1990) developed a typology in which welfare state regimes are classified by their degree of 'decommodification'. This refers to the extent to which the state offers its citizens social security because it is thought to be a social right, rather than them being (solely) dependent on the market. This typology can be used to understand the position of the Dutch welfare state compared to other countries. Social democratic regimes, characteristic of Scandinavian countries, have highly decommodified policies providing universal entitlements with relatively generous levels of social security. Conservative regimes, which include many countries in continental Western Europe, provide for comparatively strong entitlements but make benefit levels dependent on contributions. Liberal regimes, such as those found in Anglo-Saxon nations, have relatively highly commodified policies that impose strict eligibility criteria and provide for minimal benefits (see also De Mooij, 2006).

In the foregoing typology, the Netherlands tends to share elements of both conservative and social democratic regimes (De Mooij, 2006). The Dutch welfare state took shape in the post-war period when many social security laws were passed and developed into a sufficient system of social security. The Dutch social security system consists of two main parts¹ (De Gier & Ooijens, 2004; De Mooij, 2006). The first part includes several social insurance schemes, such as unemployment insurance and disability insurance, which are meant to replace the income lost to employees who lose their job or become unable to work, either due to physical or mental health problems. Employed people are obliged to contribute to these insurances by paying a percentage of their wages. The second

1 The Dutch systems of social security also includes for example pensions and health care insurance, but given the scope of this dissertation, these are not discussed here.

part consists of different types of social assistance, the most important being welfare services, which are meant to assure people with a minimum income.² During the 1970s and the 1980s, the Dutch economy, just as the Western economy in general, faced serious economic crises. Unemployment rates increased considerably, as well as the number of benefit claimants. As a result, the Dutch welfare state became financially unsustainable, and the Dutch government had to reform its labor market policy and system of social security (De Mooij, 2006; Van Ours, 2003). In the course of the 1980s and the 1990s, various policies were implemented to reduce the expenditures of the welfare state by trying to reduce the number, level, and duration of benefits, and by raising employment participation (De Mooij, 2006). Although over the years employment participation increased and unemployment rates decreased, reform of the Dutch welfare state is still ongoing in an effort to keep the system affordable and to account for demographic trends such as the aging of the population (De Gier & Ooijens, 2004). Despite these reforms, the Dutch welfare state still provides those unemployed with a minimum income. With its extensive social redistribution system, the Dutch welfare state remains one of the most highly developed systems in the world (Van Oorschot, 1998).

With its system of social security, the Dutch welfare state aims to provide a relatively strong social safety net for those most vulnerable in society, which might influence the hypothesized relationship between (un)employment and crime. Because the unemployed are entitled to benefits and therefore assured of a minimum income, unemployment might not necessarily become a strong source of financial strain. The assumed detrimental effects of unemployment therefore are expected to be less present in the Netherlands compared to, for example, the US (see also Savolainen, 2009).

Furthermore, it is important to note that the observation period studied in this dissertation, as will be discussed in more detail below, covers the years from 1990 to 2010. During this period, the Dutch economy was recovering from the crises of the 1970s and 1980s. Employment participation steadily increased, and although the unemployment rate peaked to 7.5 percent in 1994 due to economic slowdown (De Gier & Ooijens, 2004; The Netherlands Institute for Social Research, 2005), the unemployment rate showed a downward trend thereafter and fluctuated between 4 and 6 percent during most of the years in which the relationship between employment and crime is examined in this thesis. Studying a vulnerable sample in a timeframe in which the Dutch economy performed relatively well means that the conditions and prospects in the labor market were relatively positive for people with a disadvantaged background. In times of high unemployment rates and tightness in the labor market, especially those low skilled and those with a criminal record, such as the vulnerable youths studied in this dissertation, are less likely to be hired, as employers can easily hire job applicants with better resumes (e.g., Freeman & Rodgers, 1999; Nilsson, Bäckman & Estrada, 2013). The hypothesized effects of a criminal history on

2 Minimum income is 70 percent of statutory minimum wage, which in turn is 70 percent of modal wage.

employment chances might thus be less detrimental in this specific time frame under study.

The Dutch penal climate

Besides the different labor market and welfare regimes, the penal climate in the Netherlands differs greatly from that in Anglo-Saxon countries, and especially the US, as well. Whereas the penal climate in the US, with a high incarceration rate and long prison sentences, is very punitive, the Netherlands is characterized by a milder penal climate with relatively short prison spells and a focus on rehabilitation rather than punishment.

On the one hand, because prison sentences in the Netherlands are relatively short in comparison to the US, a spell of incarceration might have a less detrimental effect on the human capital of inmates. In addition, for those inmates serving a longer prison sentence, there are usually opportunities to participate in work programs that enable them to invest in human capital. As a result, a spell of incarceration might therefore affect employment outcomes in the Netherlands to a lesser extent than in the US. On the other hand, since prison sentences are less often imposed in the Netherlands, the stigma might be larger for those individuals that do serve a prison sentence, and as a result, they might experience more difficulties in the labor market.

Furthermore, in the Netherlands, employers cannot access criminal history information because background screening is regulated by the government, while in the US, employers can turn to private companies for criminal history information (Bushway, Briggs, Taxman, Thanner & Van Brakle, 2007; Raphael, 2010). Therefore, Dutch ex-offenders might be less likely to experience difficulties due to their criminal record when applying for a job.

In sum, large differences between societal context, in terms of the decommodification of the welfare regime as well as in terms of the penal climate, may influence the way employment careers and criminal careers are intertwined in the Netherlands and may offer different prospects for vulnerable youths to achieve conventional adult life outcomes.

1.3 PRIOR EMPIRICAL RESEARCH

1.3.1 *Studies on the effects of employment on crime*

In the past decades, a steadily growing body of research has emerged on the relationship between (un)employment and crime (see for extensive reviews Bushway & Reuter, 2002; Uggen & Wakefield, 2008). However, a large number of studies examining the effects of unemployment on crime are conducted using macro-level data. These studies often show that crime rates are higher in areas characterized by poverty and high unemployment rates, although there seems to be a stronger association between unemployment and property crimes than between unemployment and non-instrumental crime (e.g., Carmichael & Ward, 2001; Chiricos, 1987; Elliot & Ellingworth, 1996; Raphael & Winter-Ebmer, 2001).

Still, based on these studies, no conclusions about the potential causal effects of (un)employment on offending on the individual level can be drawn.

Studies using individual-level longitudinal data have also established an empirical relation between employment and crime, yet this relation appears to be a complex one. Some studies have demonstrated that young adults committed more crimes during periods of unemployment than when employed (Farrington, Gallagher, Morley, St Ledger & West, 1986; Fergusson, Horwood & Woodward, 2001). Research also showed that being employed was correlated with reduced recidivism rates in samples of ex-offenders (MacKenzie & De Li, 2002; Savolainen, 2009). However, Horney, Osgood, and Marshall (1995) found that work was only weakly related to offending for ex-convicts and even found that the men in their sample committed more property crimes during the months that they were working, perhaps because the workplace provided opportunities for theft. Furthermore, research by Uggen (2000) indicates that the beneficial effects of work may be limited to older offenders, as he found a negative effect of work on crime only for those aged 27 or above.

Finally, other studies suggest that it is not employment per se, but only good, stable employment that can contribute to a decrease in criminal behavior. To illustrate, studies by Uggen (1999) and Wadsworth (2006) have demonstrated that only being employed in higher-quality jobs lowers the chances of offending, whereas being employed in lower-quality jobs did not. Moreover, job stability seems important for desistance from crime (Crutchfield & Pitchford, 1997; Sampson & Laub, 1993; but see Giordano et al., 2002). Although several studies suggest that employment can foster a non-criminal lifestyle, findings from experimental studies evaluating employment programs for ex-offenders generally show rather discouraging results, indicating that employment is not, or only under certain conditions, associated with lower levels of criminal behavior (Bushway & Reuter, 2002; Visher, Winterfield & Coggeshall, 2005).

1.3.2 *Studies on the effects of income support on crime*

Since the Dutch welfare state is characterized by a relatively strong social support system, the question can be raised to what extent income support provided to the unemployed affects their engagement in criminal behavior. Although there is research examining the relationship between income support and crime on the macro level, in general showing lower crime rates in areas with more generous income support policies (Baumer & Gustafson, 2007; Burek, 2006; Savage, Bennett & Danner 2008; Savolainen, 2000), there is, besides from a handful of – dated – US studies, hardly any individual-level research conducted in this area. The few available studies, which evaluated transitional aid programs for released prisoners, demonstrated a lower recidivism risk among ex-offenders who received benefits (e.g., Berk & Rauma, 1983; Berk, Lenihan, & Rossi, 1980; Mallar & Thornton, 1978).

1.3.3 *Studies on the effects of conviction and incarceration on employment*

Previous research examining the effects of criminal history on employment outcomes points to the negative effects of criminal behavior and the subsequent official reactions, such as a conviction or incarceration, on several occupational outcomes. In general, these studies indicate that crime and its consequences decrease an individual's chance to find work, to experience job stability, and to have good earnings (e.g., Bernburg & Krohn, 2003; Bushway, 1998; Fagan & Freeman, 1999; Pager, 2003; Sampson & Laub, 1993).

Experimental studies, for example, showed that employers are reluctant to employ convicted offenders (Boshier & Johnson, 1974; Schwartz & Skolnick, 1962) and applicants who report a history of incarceration (Pager, 2003; Pager, Western & Sugie, 2009). Furthermore, longitudinal studies have shown that convicted offenders are more likely to experience unemployment (Bernburg & Krohn, 2003) and job instability (Nagin & Waldfogel, 1995). In addition, a spell of incarceration is found to have negative effects on employment probability, job stability, and earnings after release (Fagan & Freeman, 1999; Freeman, 1991; Pettit & Lyons, 2009; Sampson & Laub, 1993; Western & Beckett, 1999; but see Kling, 2006). While most studies thus indicate that conviction and incarceration are associated with difficulties in the labor market, prior research is inconclusive about the extent to which selection effects are at play and whether the negative effects of criminal history found in prior studies are caused by the stigma attached to previously being convicted or incarcerated or by human capital deterioration as a consequence of a spell of confinement.

1.3.4 *Studies on adult outcomes of at-risk youths*

Longitudinal studies following at-risk youths well into adulthood are scarce, and existing studies usually focus on outcomes regarding criminal behavior in adulthood (e.g., Piquero, Brame, Mazerolle & Haapanen, 2002; Wartna, Kalidien, Tollenaar & Essers, 2006), while little attention has been paid to outcomes in conventional adult life domains, such as in the labor market (e.g., Bullis & Yovanoff, 2006; Nagin & Waldfogel, 1995; Osgood et al., 2005; Tanner et al., 1999). The few studies that have examined adult outcomes of at-risk youths show that, in general, people with a history of serious behavioral problems or delinquency are more likely to experience difficulties in conventional life domains and that this is especially true for those with a more extensive criminal history (Farrington et al., 2006; Nilsson & Estrada, 2009; Sampson & Laub, 1993). For example, reanalyzing data of one of the key longitudinal studies conducted by Glueck and Glueck (1950; 1968), Sampson and Laub (1993) showed that boys who engaged in juvenile delinquency experienced negative outcomes in conventional domains in adulthood. Juvenile delinquents were more likely than non-delinquent boys to experience job instability in the adult years and at age 32 were less likely to be economically independent.

1.3.5 *Gender differences in the relationship between employment and crime?*

Prior studies have almost exclusively focused on the work-crime relationship for males. The few studies that did include women in their samples showed mixed results. To illustrate, studying effects of employment on crime for both men and women using US data, Uggen and Kruttschnitt (1998) demonstrated that employment was associated with a reduction of re-arrest rates for both men and women, while Giordano et al. (2002) found no effect of employment on crime for men nor women.

In addition, research examining the effects of formal reactions to crime on labor market outcomes shows no consensus about whether formal sanctions negatively affect women's employment outcomes (Davies & Tanner, 2003; LaLonde & Cho, 2008; Lanctôt, Cernkovich & Giordano, 2007). Moreover, very little is known about the existence of gender differences in long-term outcomes of men and women with a vulnerable background, but there are indications that convicted women end up in a poorer welfare situation in adulthood than convicted men (Nilsson & Estrada, 2009; Nilsson et al., 2013).

In sum, as of yet, too few studies have compared men and women to draw final conclusions about possible gender differences in the relationship between employment and crime. Moreover, hardly any research followed at-risk men as well as women long enough to study possible gender differences in outcomes in adult life domains.

1.3.6 *The relationship between employment and crime in the Netherlands*

The field of research examining the relationship between (un)employment and crime is dominated by studies carried out in Anglo-Saxon countries. It is unknown to what extent results from studies using Anglo-Saxon data can be generalized to Western-European countries such as the Netherlands (see also Savolainen, 2009). In the Netherlands, the association between (un)employment and crime received attention from the 1970s onward, with studies examining aspects of the work-crime relationship using macro-level, cross-sectional, experimental, and qualitative data (e.g., Jongman, 1982; Jongman, Weerman & Kroes, 1993; Miedema, 1997; Van Tulder, 1985). Overall, Dutch studies point to beneficial effects of employment on crime and detrimental effects of criminal history on employment outcomes. For example, using cross-sectional data, Jongman (1982) demonstrated that among unemployed men, there was a considerable higher proportion having an arrest record than among employed men. Moreover, this difference became larger as the unemployment rate increased during the crisis years, indicating that unemployment might motivate people to engage in criminal behavior (Jongman et al., 1993). In addition, the negative effects of a criminal history were demonstrated by a Dutch experiment, showing that application letters in which a conviction was mentioned received significantly less positive responses from employers than applications without a reference to a criminal record (Buikhuisen & Dijksterhuis, 1971).

One of the few Dutch individual-level longitudinal studies addressing the work-crime relationship was conducted by Van der Geest (2011). Studying a sample of high-risk men – the male subjects from the sample that is studied in this thesis – the study demonstrated, distinguishing between offender groups using trajectory analysis, an instantaneous negative effect of work on crime, over and above a selection effect, in the different groups (Van der Geest, Bijleveld & Blokland, 2011). In addition, he studied the effects of incarceration for these high-risk men based on their level of employment participation. Only a short-term negative effect of incarceration on employment participation was found in the group that showed normative levels of employment, as opposed to groups showing low or no employment participation (Van der Geest, Bijleveld, Blokland & Nagin, forthcoming). However, as Van der Geest studied a male sample, his study does not provide insight into the work-crime relationship at the individual level for women. Moreover, by also looking at the role of income support on offending, as well as the role of employment and crime in shaping outcomes in other adult life domains, the current study builds upon the research by Van der Geest (2011).

1.3.7 Limitations of previous studies

Although there is a growing body of research on different aspects of the relationship between crime and employment, the existing research still has its limitations. To begin with, studies using cross-sectional data or research examining the relationship between (un)employment and crime on the macro level does not allow us to draw conclusions about time order and the causality of the relationship between employment and crime on the individual level. For this, we need individual-level longitudinal studies. However, individual-level longitudinal studies are very expensive to conduct, and, given that respondents age at the same pace as their researchers, it takes years to collect data spanning the adolescent to the adult years. As a result, the existing longitudinal studies either include a relatively short follow-up period (e.g., Horney et al., 1995; Uggen, 2000) or study relatively 'old' cohorts that have been under continued study for an extended period of time, or have otherwise previously been subject to research, and who came of age in a very different historical context (e.g., West & Farrington, 1973; Glueck & Glueck, 1950; 1968; Sampson & Laub, 1993).

In addition, prior research is inconclusive about the mechanisms that are at play in the work-crime relationship. It is therefore unclear whether theories that assume that the financial benefits associated with being employed or theories focusing on the control aspect of employment are better suited to explain the effects of employment on crime. Furthermore, it is largely unknown to what extent labeling or human capital explanations are responsible for the observed relationship between criminal history and negative employment outcomes. Moreover, given that there are both theoretical and empirical indications that at least part of the relationship between employment and crime is spurious (e.g., Paternoster et al., 2003), an important shortcoming of prior research is that these studies were not always able to very well account for selection effects.

Finally, previous individual-level studies have only rarely included women in their samples (Giordano et al., 2002; Uggen & Kruttschnitt, 1998) and were almost exclusively carried out in Anglo-Saxon countries, potentially limiting the generality of their findings. In sum, although prior research greatly enhanced our understanding of the work-crime relationship, several important theoretical issues remain unresolved, and available results have been too inconclusive to draw general conclusions about the work-crime relationship, especially with regard to women, and in sociocultural contexts outside Anglo-Saxon countries.

1.4 THE CURRENT STUDY

1.4.1 *Research questions and hypotheses*

As outlined above, prior research on the relationship between employment and crime has its limitations. This study is an effort to contribute to the existing body of literature by addressing several shortcomings that plagued previous studies. This thesis provides insight into the role of employment and crime in the (adult) lives of previously institutionalized youths. The aim of this thesis is threefold: (1) to examine the effect of employment on offending, (2) to examine the effects of conviction and incarceration on employment chances, and (3) to examine the extent to which employment and crime influence adult life adjustment. To do so, a sample of previously institutionalized males and females who were followed into their thirties is studied. The research questions that are addressed and the hypotheses that are tested in the four empirical chapters are described in more detail below.

Chapters 2 and 3 focus on the effects of employment on crime, and also address the role of income support. The first two research questions of chapter 2 are descriptive: (1) *How does the criminal career of high-risk young adults develop?* (2) *How does the employment career of high-risk young adults develop?* After describing the development of the criminal careers and the employment careers of high-risk men and women, the effects of employment and unemployment on offending are tested, guided by the following research questions: (3) *To what extent does employment affect the criminal career?* Based on theories that assume employment to have a causal, direct effect on offending, it is expected that, over and above the effects of stable personal and background characteristics, being employed decreases the number of convictions. (4) *To what extent is there an additional effect of employment duration?* Following Sampson and Laub's theory of informal social control, it is expected that, when high-risk young adults are employed for multiple consecutive years, their conviction frequency further decreases. An additional negative effect of employment duration on offending would provide support for the importance of informal social control, which takes time to establish, in altering the criminal career. (5) *What is the effect of unemployment duration on the criminal career development of high-risk young adults?* Based on research showing detrimental psychosocial consequences of unemployment, it is expected that, as high-risk young adults are unemployed several

consecutive years, their conviction frequency increases. Answers to these research questions provide insight in whether a causal relationship, rather than a spurious relationship, between employment and offending exists.

Chapter 3 takes a different approach to study the relationship between employment and crime by examining the effects of both employment and income support on offending. By looking at both effects of employment and income support on crime, the extent to which it is the income, or the non-monetary aspects of employment that contribute to reduced offending, is examined. The research questions that are answered in chapter 3 are as follows: (1) *What are the effects of employment and income support on serious offending?* Two hypotheses are tested with this research question. On the one hand, based on strain theories that emphasize the financial motivation for crime, both employment and income support are expected to reduce offending, since they are both a source of legitimate income. On the other hand, following theories which emphasize the importance of the informal social control associated with being employed, employment should reduce offending more so than income support. (2) *Are there different effects of income support on serious offending, depending on the source of support?* Three types of income support are distinguished: unemployment insurance, public assistance, and disability benefits. Following theories that stress the importance of financial motivation for crime, and given that of these three types of income support public assistance yields the lowest monetary benefits, the effects of unemployment insurance and disability benefits on crime are expected to be the most pronounced. (3) *Do the effects of employment and income support differ for property crime versus violent crime?* This research question tests two competing hypotheses. Based on strain theories, employment and income support should have stronger effects on property than on violent offending. However, in line with control theories, it is assumed that employment and income support would have an equally strong effect on both property and violent offending but that since employment provides control and income support does not, the effect of employment compared to income support on both types of crimes is stronger. Since existing theory does not give rise to clear predictions about the existence of gender differences in the effects of employment and income support on crime, the last research question of chapter 3 is more exploratory in nature: (4) *Do the effects of employment and income support differ for vulnerable young men versus vulnerable young women?*

After examining the potential effects of work on crime, chapter 4 takes the opposite perspective and focuses on the effects of crime on employment, thereby addressing the second aim of this dissertation. The following research questions were addressed separately for at-risk men and women: (1) *What is the effect of a history of unemployment on the probability of employment?* Two hypotheses are tested with the first research question. To begin with, following signaling theory, unemployment and the number of unemployment spells in particular are thought to decrease the likelihood of future employment. In addition, following human capital theory, it is expected that the duration of unemployment further decreases employment probability, since it is assumed that it takes some time for human capital to deteriorate. (2) *What is the effect of a conviction on the*

probability of employment? Convictions are assumed to reduce the probability of employment due to labeling effects, because of which a convicted person is less likely to be hired. (3) *What is the effect of incarceration, over and above the effect of a conviction, on the probability of employment?* Similar as to conviction, incarceration is assumed to bring about labeling effects, which however may surpass those generated by a mere conviction in strength. Incarceration is therefore assumed to reduce the chance of employment over and above the potentially negative effects of a conviction. In addition, as prison stays increase in length, employment chances are expected to further diminish due to human capital deterioration. (4) *What is the effect of a conviction and incarceration, over and above the effect of prior unemployment on the probability of employment?* The final research question addressed in chapter 4 examines the relative importance of unemployment history and criminal history for the employment chances of at-risk youths who, due to their vulnerable background, may have limited prospects on the labor market to begin with.

Following the third aim of this thesis, the final empirical chapter focuses on the adult outcomes of formerly institutionalized youths and the extent to which employment and crime influence their level of adult life adjustment. The first research question addressed in chapter 5 is descriptive: (1) *What is the level of adjustment in conventional adult life domains of men and women formerly institutionalized in a juvenile justice facility?* After describing how formerly institutionalized youths are faring in adult life domains, predictors for adult life adjustment are examined, following three research questions: (2) *To what extent do personal and childhood characteristics of formerly institutionalized men and women predict their level of adult life adjustment?* (3) *To what extent does criminal behavior of formerly institutionalized men and women, over and above personal and childhood characteristics, predict their level of adult life adjustment?* And (4) *To what extent does employment history of formerly institutionalized men and women predict their level of adult life adjustment, when personal and childhood characteristics and criminal history are taken into account?* Answers to these questions can shed light on the degree to which adult life adjustment is explained by stable individual characteristics, as stated by Gottfredson and Hirschi (1990), or whether events in young adulthood, namely, criminal behavior and employment, influence adult outcomes as well, as is assumed by Sampson and Laub (1993).

1.4.2 Contributions of the current study

By addressing the research questions outlined above, this study contributes to the existing body of literature in the following ways. First, central to this dissertation is the study of a vulnerable group of previously institutionalized youths. Research on at-risk groups is much needed. Due to their background, characterized by an adverse family environment, psychological and behavioral problems, delinquency, institutionalization, and a criminal record, vulnerable youths can face serious challenges on the road to adulthood. Failing to make a successful transition into adulthood and adapt to adult social roles, such as employment, can seriously compromise their adult life success and contribute

to a persistent pattern of criminal behavior. However, focusing on the work-crime relationship in a high-risk sample means that one must bear in mind that caution is warranted when generalizing the findings to other groups.

Second, this study uses individual-level longitudinal data on a sample of high-risk youths followed into their thirties. Although the number of individual-level longitudinal studies examining the work-crime relationship is increasing, existing studies usually have short-term follow-up periods. Studying the long-term development of at-risk youths, covering the years in which they transition into adulthood, is crucial for understanding the ways in which their criminal career and employment career progress, and to what extent these careers shape – and are shaped by – important events and transitions in either of them. By including statistical controls for possible selection effects in the analyses of the individual longitudinal data, this dissertation takes the possibility into account that the relationship between employment and crime is spurious rather than causal, as argued by Gottfredson and Hirschi (1990). Previous research was not always able to control for selection effects, sometimes because of insufficient data but also because statistical techniques that are able to adequately account for (unobserved) heterogeneity were unavailable until recently.

Third, the sample for this study comprises both males and females. Since prior research mostly focuses on males and theories on the relationship between employment and crime seem by default fitted to explain the mutual influences of employment and crime in males only, it is unclear to what extent these theories also apply to women and to what extent there are gender differences in the relationship between employment and crime.

Fourth, whereas important prior longitudinal research on the work-crime relationship, such as the Unraveling Juvenile Delinquency study by Glueck and Glueck (1950; 1968) and the Cambridge Study in Delinquent Development by West and Farrington (1973), studied older cohorts, the sample under study is a contemporaneous sample. In recent decades, the labor market has undergone substantial changes, most notably a decreasing demand of unskilled labor and increasing employment participation among women (De Beer, 2005). By studying a contemporary sample of men and women, this dissertation tests the generalizability of the mechanisms theorized to be governing the work-crime relationship to the current era.

Fifth, this study was carried out in the Dutch context, while most research on the relationship between (un)employment and crime was carried out in Anglo-Saxon countries, mainly in the US. Anglo-Saxon countries are characterized by a very different labor market and system of social security, as well as a different penal climate. Results from the current study will speak on the extent to which results from prior empirical studies, and the theories developed to explain those findings, can be generalized to Western European countries such as the Netherlands.

In sum, this study contributes to the existing body of literature, by examining the relationship between crime and employment on the individual level in a Dutch contemporaneous sample of high-risk men and women, who were followed well into their thirties. This study does not only have theoretical and

empirical relevance, but its results can also yield important implications for policy and practice. More knowledge about the relationship between employment and crime in vulnerable groups, and on the ways we can prevent vulnerable youths from failing to make a successful transition to adulthood, is of great importance, for at least three reasons. First, it is because young people with a vulnerable background are at risk of experiencing adverse outcomes in multiple domains, which can have serious consequences for their well-being later in life. Second, because when vulnerable youths fail to make a successful transition to adulthood, they can impose major costs on society, not only in terms of the costs of their criminal behavior but also in terms of unemployment, social security, and health-care services (Caspi & Moffitt, 1995; Piquero et al., 2013). And third, as opposed to other important life domains, employment is relatively easy to manipulate (e.g., via work programs for at-risk groups or offenders) and therefore a suitable starting point for intervention and reintegration programs.

1.5 DATASET: THE 17UP STUDY

This dissertation uses data from the NSCR 17Up study, a longitudinal study following vulnerable youths well into adulthood. The 17Up study was realized in multiple stages. The male subjects of the 17Up study were originally sampled to serve as a control group for a sample of juvenile sex offenders that were institutionalized and received treatment in a juvenile justice institution in the Netherlands. In order to compare outcomes of juvenile sex offenders with high-risk, non-sex offenders, a sample of boys from the same juvenile justice institution was selected. Later, to be able to compare high-risk boys with high-risk girls, a sample of female subjects from that same institution was selected.

For conducting the 17Up study, formal consent was obtained from the Dutch Ministry of Security and Justice. Ethical approval was obtained from the Ethics Committee of the Faculty of Law ('Commissie Ethiek van Rechtswetenschappelijk en Criminologisch Onderzoek', CERCO) of VU University.

The 17-up study consists of two parts. Data from part 1 of the study are used in chapters 2, 3, and 4, and data of part 2 of the study are used in chapter 5 (see Figure 1.1 for an overview of the data used in this dissertation). Information about the two parts of the study, the sample, the data collection, and the data used in this dissertation is described in detail below.

1.5.1 *Sample of the 17Up study: Part I*

The sample of the first part of the 17Up study comprises of 270 boys and 270 girls who were institutionalized in a Dutch judicial treatment institution for juveniles in the 1990s. All boys that had been discharged from the institution between January 1989 and June 1996 were selected. Given that each year less girls were institutionalized in the treatment center, to achieve a similar

sample size, all girls discharged between January 1990 and March 1999 were sampled.³

These boys and girls were institutionalized because they showed serious behavioral problems, such as aggression, truancy, running away from home, and delinquency, for which they needed treatment. In the Netherlands, until recently, treatment in a judicial treatment institution could be imposed by a juvenile court magistrate either on a civil-law measure or a criminal-law measure. A civil-law measure could be imposed when a child was under 18 years old and it was impossible for a child to remain at home, for example, because of behavioral problems and an adverse family situation. A criminal-law measure can be imposed when a juvenile has committed an offense and is aged between 12 and 18.

In this sample, the majority of boys and girls received treatment in the institution based on a civil-law measure; 56 boys (19.6%) and seven girls (2.6%) were treated based on a criminal-law measure. As opposed to juveniles institutionalized based on a criminal-law measure, those institutionalized based on a civil-law measure were not (necessarily) convicted of a crime. However, the latter were more often than not engaged in delinquency. Nevertheless, because delinquent behavior was usually only one of the problematic behaviors, juvenile court magistrates could decide to impose treatment on a civil-law rather than a criminal-law measure. Furthermore, youths institutionalized based on a civil-law and criminal-law measure are very similar in terms of personal and background characteristics and psychological and behavioral problems (Boendermaker, 1999; Hamerlynck et al., 2009; Wijkman, Van der Geest & Bijleveld, 2006). Due to the nature of their problem behavior, these youths were all considered to benefit from treatment in a closed setting. The sample of the 17Up study consists thus of a relatively homogenous group of fairly seriously troubled juveniles and can be considered to be comparable to other contemporaneous samples of incarcerated juveniles outside of the Netherlands (e.g., Giordano, Cernkovich, & Rudolph, 2002). The majority of this sample is ethnically Dutch (59.3%). A minority is of Surinamese, Moroccan, Turkish, or Antillean descent (together 15%) or of other (10%) or mixed decent (15%).

During their stay in the institution, all youths received treatment, which was aimed at reducing the juveniles' problematic and delinquent behavior, as well as providing them with education. The boys stayed in the institution for 20 months on average (SD 12 months, median 20 months) and were 17 years and four months old on average (SD 15 months) when they were discharged. The girls stayed in the institution for 13 months on average (SD eight months, median 12 months) and were 16 years and seven months old on average (SD 15 months)

3 Sampling of the female subjects was conducted in two stages: first 148 girls were sampled, and later an additional 122 girls were sampled. The author coordinated the sampling procedure and the data collection of the second part of the female sample. The data collection was carried out with the assistance of students, and the author was involved in the coding of the treatment files, and collecting the data on criminal convictions and incarceration, as well as on employment and income support.

when they were discharged. For chapters 2, 3 and 4, using official registers, the criminal and employment careers of these 540 boys and girls were reconstructed from ages 18 up to age 32, which comes down to a follow-up period of 15 years.

1.5.2 Data of the 17Up study: Part I

In part I of the 17Up study, data on the following domains were collected and thus are available for all 540 men and women in the original 17Up sample.

Personal and background characteristics. During the juveniles' stay in the institution, treatment files were constructed by a multi-disciplinary team. These files contain, for example, psychological and psychiatric reports, reports from the Dutch Child Protection Board, and treatment evaluations. Standardized and validated instruments, such as the Wechsler Intelligence Scale for Children-Revised, Child Behavior Checklist, Amsterdam Biographical Questionnaire for Children, Adolescent Temperament Questionnaire and Dutch Personality Questionnaire-Junior, were used to construct reports about respondents. The treatment files contain a wealth of information on the juveniles' personal and background characteristics. A structured coding instrument, developed by Hendriks and Bijleveld (2004), was used to score information from the treatment files. Information on the following personal and background characteristics is used in different chapters of this dissertation: intelligence, level of education before treatment in the institution, aggression, impulsiveness, problems with authority, social skills, victimization of neglect, physical or sexual abuse, alcohol abuse in the family, substance abuse in the family, a parent with psychopathology, the presence of criminal family members, and unemployment in the family.

Conviction. Information on offending is based on convictions registered in the judicial documentation abstracts of the Netherlands Ministry of Security and Justice. These abstracts contain information on every case that is registered at the public prosecutor's office and the ensuing verdict. Information about the type of offense and offense date is available. These abstracts contain information on all offenses that are registered at the public prosecutor's office, as well as information on whether the case resulted in a conviction. Information about the type of offense, offense date, and conviction date is available. Because the offense date was not registered before 1995, missing offense dates were imputed with estimates based on the date of the conviction.

Offenses are classified according to the standard classification for offenses in the Netherlands (Statistics Netherlands, 2000). Following Van der Geest (2011), this dissertation focuses on *serious* offending, given that a high-risk sample is central to this thesis, and minor offenses such as traffic offenses are not uncommon in the general population. Serious offending consists of violent offenses, property offenses, serious public offenses, drug offenses, and weapon-related offenses (Loeber, Farrington & Waschbusch, 1998).

Incarceration. Information on incarceration was acquired differently for men and women, as a result of different types of permission to access data sources

in different phases of the data collection. For the men, information on incarceration was retrieved from the Judicial Penitentiary files of the Ministry of Security and Justice. These files contain information on a person's incarceration history, including dates of entry and release. When the penitentiary file could not be accessed, incarceration information was complemented with information on imposed unconditional prison sentences as registered on the judicial documentation abstracts.

For the women, information on incarceration was obtained via the department of the Ministry of Security and Justice ('Dienst Justitiële Inrichtingen') that manages the Dutch prison registration system ('TULP'). This system contains information on dates of entry and release from all penitentiaries in the Netherlands. Although different data sources were used to gather information on incarceration for men and women, both sources provide accurate information about when and for how long a person was incarcerated.

Employment and income support. Employment and income support data were collected from Suwinet, the national database of the Ministry of Social Affairs and Employment in the Netherlands. The Suwinet database contains information about (official labor market) employment and social security benefits at the individual level from 1992 onward. In this database, the start date and end date of a job, as well as of all types of income support, are registered. In addition to Suwinet, the trade register managed by the Netherlands Chamber of Commerce was accessed. This trade register contains historical information about business ownership. The period someone had a business of their own was coded as being employed.

Although in the Suwinet database all official employment contracts are registered, we lack information on informal work, as well as on the type of job and whether someone was part-time or full-time employed. As the database became fully computerized from 1998 onward, employment participation rates before that time may underestimate actual employment levels; however, this underestimation is non-systematic.

Marriage and parenthood. Besides (un)employment, marriage and parenthood are two other important 'social institutions' that are thought to influence the criminal career (Sampson & Laub 1993; for a review, see Blokland & Nieuwbeerta 2010). Therefore, control variables for marriage and parenthood are included in the analyses in chapters 2 and 3, to examine effects of (un)employment and income support over and above the effects of marriage and parenthood. Information about marriage and parenthood was collected from the Dutch Municipal Population Register ('Gemeentelijke Basisadministratie Persoonsgegevens').

1.5.3 *Sample of the 17Up study: Part II*

In the second phase of the 17Up study, face-to-face interviews were conducted with a subsample of the original sample of 540 boys and girls (see also

Van der Geest, Bijleveld & Verbuggen, 2013).⁴ At the start of the interview phase of the study, 22 subjects (4.1%) from the original 540 boys and girls had died. This death rate is, given that subjects are only in their thirties, relatively high. In addition, 14 subjects had emigrated, and five subjects were living in institutions, such as a psychiatric institution or a forensic clinic, that refused to collaborate with the study. Therefore, another 19 subjects could not be approached by the research team. This left 499 men and women that could be approached for the interview. Out of these 499 respondents, 118 men and 133 women participated in the interview study, resulting in a 50.3 percent response rate.

A response analysis was conducted, to compare those who participated in the study with those who could not be approached or refused to participate. Groups were compared on a number of personal and background characteristics, living situation, employment, marital status, and criminal behavior. Besides subjects without regular dwelling or place of stay being under-represented in the subsample, responders and non-responders did not differ significantly on the other characteristics (Van der Geest, Bijleveld & Verbruggen, 2013). We therefore consider the subsample under study representative of the original sample.

The face-to-face interviews were conducted between July 2010 and January 2012. At the time of the interview, men were 36.8 years old (SD 2.4) on average, and women were 32.9 (SD 2.5) years old. On average, respondents were interviewed over 17 years after they left the institution (17.7 years, SD 2.8). The average follow-up period is 19.4 years (SD 2.3) for men and 16.3 years (SD 2.3) for women. The boys left the institution somewhat earlier in the 1990s than the girls; therefore, the follow-up period for men is longer than it is for women. This subsample of 251 men and women is studied in chapter 5 of this dissertation.

1.5.4 Data of the 17Up study: Part II

In addition to the data mentioned above, which were collected for all 540 subjects of the original sample, additional data for the subsample comprising 251 subjects were collected in part II of the 17Up study. In this second part of the study, face-to-face interviews were conducted, in which questions were asked on a wide array of topics using structured and semi-structured questionnaires. Respondents were also asked to fill in a life history calendar. Information gathered during these interviews on employment history and adult outcomes in multiple life domains is used for this dissertation.

Employment history. Information about employment history was collected during the interviews using a life history calendar. This is a structured instrument for gathering more reliable retrospective information about the occurrence and timing of important life events over the life course. By visualizing the life course, and by relating different life events to one another, the life history calendar facilitates recall of the occurrence and timing of events and transitions in

⁴ The author was involved in the follow-up interview study, as part of the research team that designed and conducted the interview study.

different life-course domains (Freedman, Thornton, Camburn, Alwin & Young-DeMarco, 1988; Roberts & Horney, 2010). Respondents reported on the life history calendar for each age year whether they were employed. For this study, using information on formal employment (temporary work, regular work, or business ownership) in the years from age 18 to one year prior to the interview, an average measure of employment was constructed.

Adult life domains. In the face-to-face interviews, information was collected about the following life domains: housing situation, employment, intimate relationships, children, health, alcohol use, drug use, and self-reported crime. For this dissertation, the following information, pertaining to the situation in the 12 months prior to the interview, is used. With regard to accommodation situation, subjects were asked whether they lived in a regular house, as opposed to being homeless or living in an institution or detention center. In addition, subjects reported on whether they had a job and whether they were in an intimate relationship. Furthermore, subjects were asked whether they had children and, if so, how often they had contact with their child(ren). Questions derived from the Dutch Health Monitor (GGD, 2005) were used to ask respondents about their physical and mental health and use of health-care services. Items derived from the Composite International Diagnostic Interview (CIDI) were used to ask subjects about alcohol and drug (ab)use. Finally, using items from the International Self-Report Delinquency scale (ISRDI), respondents reported on whether they had committed one or more offenses in the past 12 months. With information on these life domains, an average measure of 'adult life adjustment' at the time of the follow-up interview was constructed.

1.6 STRUCTURE OF THE DISSERTATION

This dissertation focuses on the role of employment and crime in the adult lives of previously institutionalized youths. It examines the relationship between the criminal career and employment career in a sample of previously institutionalized adults characterized by a vulnerable background rendering them at high risk of both failure to successfully transition into adult roles and of developing persistent patterns of criminal behavior. In addition, adjustment in adult life domains when these adults are well into their thirties is studied. The goal of this research is threefold: (1) to examine the effect of employment on offending, (2) to examine the effects of conviction and incarceration on employment chances, and (3) to examine the extent to which employment and crime influence adult life adjustment. The organization of this dissertation is as follows.

Chapter 2 describes the criminal careers and employment careers of high-risk men and women. Furthermore, effects of employment, employment duration, and unemployment duration on serious offending are examined while controlling for stable and dynamic control variables.

Chapter 3 investigates effects of employment and different types of income support on serious offending, property offending, and violent offending. By looking at both effects of employment and income support and by distinguishing

between different types of offending, the extent to which income or other non-monetary aspects of employment are important in reducing offending can be examined.

Whereas chapters 2 and 3 focus on effects of employment on crime, chapter 4 examines effects of formal sanctions to crime, conviction, and incarceration, on employment. Since the employment prospects of vulnerable youths are already limited, this chapter examines to what extent conviction and incarceration, in addition to unemployment history, affect their employment prospects.

Chapter 5 describes the adult outcomes of formerly institutionalized youths when they are well into their thirties, in the labor market, but also in other important adult life domains such as family formation and health. Furthermore, this chapter examines the extent to which adult life adjustment is predicted by individual characteristics, criminal behavior, and employment history.

In chapter 6, the results of the different chapters are summarized, and implications for theory are discussed. This dissertation closes with implications for policy and practice and directions for future research.

Figure 1.1 Overview of the data used in this dissertation

