

# Examining the work–crime association in emerging adulthood: A longitudinal analysis based on a Dutch population sample

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## Abstract

Social control theory links being employed with reduced criminal behaviour. In particular, the indirect social control generated by the perceived benefits of the current job are expected to underlie the work–crime association. Features specific to the emerging adult period, however, call into question the strength of the work–crime association during this new life stage. This study uses data from the Utrecht Study of Adolescent Development (USAD), a longitudinal self-report study among 669 men and women aged 18 to 24 at the start of the study to examine the extent to which working a paid job is associated with reduced levels of delinquency and crime, and the extent to which this association is conditional on individual job perceptions. We also test for gender differences in these associations. Results indicate that for men – but not for women – paid work is associated with lower levels of delinquency and crime, but only from age 24 onwards.

## Keywords

Commitment, delinquency, emerging adulthood, future prospects, work

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## **Introduction**

To many, a negative association between employment and crime may appear almost common sense: as long as people are working a paid job, they will be less in a position to commit crime as well as less motivated. Yet life-course criminological research shows that this folk wisdom is far from a universal truth and that employment is associated with a decline in criminal behaviour only for some people and in some circumstances (Bushway and Reuter, 2002). More specifically, the effects of employment are found to depend on age, and also seem to be conditional on the characteristics of the job in question (for example, Uggen, 2000).

Life-course criminological theory explaining the work–crime association tends to focus on the social control that is generated by employment (for example, Sampson and Laub, 1993). Apart from the associated earnings, working a paid job can provide the working person with a sense of identity and purpose. Unwilling to jeopardize past investments and the current and future benefits of work, employed individuals are expected to be less likely to engage in crime. Work, on the other hand, also provides the working person with the monetary means to engage in a ‘party lifestyle’ that exposes the person to criminogenic settings, consequently making crime more instead of less likely (Blokland, 2014). Especially the young, who have few other financial obligations, may use their wages to hang out with peers and to buy alcohol or other substances, the effects of which may nullify or even offset any beneficial effects working a paid job may have on their criminal behaviour.

For young people during and since the 1980s the transition from adolescence to adulthood is prolonged compared with that of older cohorts (Arnett, 2007). Whereas in older cohorts entering the labour market heralded the onset of other adult responsibilities, such as starting one’s own family, it is argued that today’s young people go through a phase of exploration and experimentation that developmental psychologists have labelled ‘emerging adulthood’, in which adult roles may be flirted with but fully fledged adult responsibilities are postponed (Arnett, 2000a). For today’s emerging adults, then, working a paid job may be experienced not so much as the start of their career but rather only as a necessary means to make money to finance an independent lifestyle, which in turn may have consequences for the way employment is linked to offending.

During the late teens and early twenties, many young people enter the labour market. Based on social control theory, working a paid job is expected to contribute to these youths’ desistance from crime. Yet the development of the emerging adult period during recent decades may have altered the meaning young people attach to their jobs, limiting the level of control generated by being employed, and consequently weakening the work–crime association. Here we use longitudinal data from the Utrecht Study of Adolescent Development (USAD), to examine the association between work and crime in a sample of Dutch 18 to 24 year olds.

## **Theoretical accounts of the work–crime association**

Several criminological theories have been proffered to explain the work–crime association, of which social control theory is arguably the broadest and most researched (Laub

and Sampson, 2003). Other theories include routine activities theory, rational choice theory and explanations focusing on identity (Uggen and Wakefield, 2008). Because the available data specifically allow us to test hypotheses derived from social control theory, we will focus our theoretical discussion on this theory.

### *The work–crime association: A social control explanation*

The basic tenet of control theory is that the individual is deterred from engaging in delinquency and crime by the *direct* control generated by that individual's bond to conventional society but even more so by the *indirect* control. Being employed can constitute such a bond, as can being married or having children (Blokland and Nieuwbeerta, 2010).

Working a paid job generates direct controls on the individual's behaviour, because employees are expected to show up for work on time, are engaged in conventional activities during working hours, and are under the supervision of conventional co-workers and managers while at the workplace. From control theory – as from routine activities theory – it follows that, as a result of these direct controls on individual behaviour, employed people are more likely to refrain from criminal behaviour than are the unemployed. The extent to which someone is bonded to conventional society differs between persons as well as within persons over time, for instance when the individual goes through a spell of unemployment. Furthermore, different jobs may vary in the level of direct control they generate, depending for instance on the level of managerial supervision involved (Detert et al., 2007).

Control theory, however, goes beyond the effect of direct control, and attributes an even greater influence to indirect control in preventing delinquency and crime (Sampson and Laub, 1993). Indirect control is generated when the bond to conventional society represents a certain value to the bonded individual, which he or she is unwilling to sacrifice. Regarding work, subjective measures of the job will influence this perceived value and therefore the level of indirect social control derived from it. Subjective measures are, for example, the level of commitment to and the future possibilities of the job as perceived by the emerging adult. A greater commitment to the job and more perceived possibilities will lead to a stronger bond.

However, the temporal location of this bond can differ, setting indirect control apart from its direct counterpart. Firstly, past investments in a particular bond can act as a current source of indirect control. The more time and effort the person has already invested in reaching a certain goal, the less he or she is assumed to be willing to abandon that goal. Past investments in one's employment career may include one's reputation as a good worker or the level of seniority attained. Secondly, current benefits may also be a reason to forgo offending. Working a paid job yields both monetary and social benefits – for instance in terms of social status – that the working individual may not wish to jeopardize. In this regard, predictions based on control theory mirror those of rational choice theory. Finally, social control may originate from expected future benefits. The current job may be perceived as the first step in a successful career, and anticipated future earnings may help future desires to be viewed more positively. Being employed may thus provide the individual with a sense of goal directedness and purpose. Perceived past, present and future benefits and obligations brought about by being employed strengthen

the employed individual's conventional identity, making him or her more likely to adhere to the responsibilities and expectations embedded in the social role of employee and less likely to engage in delinquency and crime. Because indirect control is largely based on individual perceptions, however, to the extent that these perceptions change, so may the work–crime association.

### *Employment during emerging adulthood*

Since the 1970s Western societies have seen a dramatic increase in the average age at which young people engage in social roles that were long conceived of as demarcating adult life. In the Netherlands for instance, the average age of first marriage for women increased four years from 24 in 1970 to 28 in 1990 (Statistics Netherlands, 2014). The average age of first childbirth showed a similar increase. These demographic changes have contributed to the gradual manifestation of a new life stage between adolescence and adulthood that developmental psychologists have labelled 'emerging adulthood' (Arnett, 2007). The emerging adult period – roughly located in the third decade of life – is different from teenage years in that emerging adults usually enjoy more personal freedom than do their adolescent counterparts. On the other hand, emerging adults are less tied up in adult roles, and consequently have fewer responsibilities than the average adult, leaving more room for exploration and experimentation (Arnett, 2015).

Because Sampson and Laub's social control theory is based on a cohort of young people making the transition to work during the 1940s and 1950s, the meaning attributed to paid work could be different for emerging adults in more recent times than for older cohorts. Emerging adults feel less pressured than their baby-boom predecessors to fend for themselves and start a family. During this new life stage, paid employment is much in service of finding out who you really are and what you want to become, rather than the first step on the career ladder (Arnett, 2004). Consequently, emerging adults tend to work low-paid, temporary jobs that offer little in terms of present or future benefits (Mortimer, 2009). The changed perceptions of paid work during the emerging adult years may have important ramifications for the work–crime association and consequently the ability of social control theory to explain desistance from crime during this life stage. To the extent that emerging adults are still reluctant to commit themselves to adult roles and attach little additional meaning to their jobs apart from being a source of income, the level of indirect social control generated by emerging adult work may be limited, as will be the association between work and crime during this life stage.

### *Possible gender differences*

Finally, the level of indirect social control generated by being employed may be gendered. To the extent men are perceived – or perceive themselves – as the breadwinner, working a paid job may constitute a larger part of men's identity than it does for women (McFadyen, 1995). On the other hand, women, more so than men, can call upon substitute social roles, such as motherhood, to express themselves as adults (Paul and Moser, 2009). Traditional sex roles thus predict the work–crime association

to be stronger for men compared with women. Yet, as with conceptions of the transition to adulthood, conceptions of what it means to be a man or what it means to be a woman may be different in younger cohorts compared with older cohorts. In the Netherlands, men and women enter the labour market at increasingly similar rates, especially during the emerging adult years (Van der Valk and Boelens, 2004). The meaning men and women attach to being employed has also become increasingly similar (Hult, 2008; Nordenmark, 1999). In the present day then, for emerging adults the indirect control generated by being employed, and thus the work–crime association, may be very similar for men and women.

## Previous empirical studies

Whereas research on the association between employment and adult crime suggests that working a paid job decreases crime and deviance (for extensive reviews see Bushway and Reuter, 2002; Uggen and Wakefield, 2008), the results for the protective effects of work during the third decade of life are far less conclusive. Some studies find paid work to have a dampening effect on emerging adult crime (for example, Farrington et al., 1986; Sampson and Laub, 1993; Van der Geest et al., 2011; Wadsworth, 2006; Witte and Tauchen, 1994; Wright and Cullen, 2004). Yet others find no such effect (for example, Uggen, 2000), or even find working a paid job to be associated with increased levels of offending (for example, Blokland, 2014; Lustig and Liem, 2010). It is important to note here that among studies that did find a protective effect of employment on emerging adult crime are those based on older cohorts for whom the transition from adolescence to adulthood was likely to have been swifter than that for modern-day cohorts. Finally, early studies on the effect of employment during adolescence seemed to indicate that work during adolescence increased, rather than decreased, delinquency (Mortimer, 2003). Yet more recent studies applying stricter controls for selection effects have failed to find such effects (for example, Apel et al., 2007; Paternoster et al., 2003; Staff et al., 2010), underlining the importance of controlling for selection effects when studying the impact of work on offending behaviour.

Control theory suggests that it is not just having a job that fosters desistance, but rather the social control that is generated by either past investments, current benefits or future prospects tied to the particular job that makes the employed less likely to engage in delinquency and crime. Previous research, for example, found an effect of job stability – over and above the effect of being employed (for example, Laub et al., 1998; Verbruggen et al., 2012). Yet other studies found no such effect (for example, Giordano et al., 2002; Van der Geest et al., 2011; Wadsworth, 2006). Other studies included indicators of job quality (for example, the amount of wages, legal versus illegal employment, primary versus secondary labour market employment, or formal versus informal jobs) (Apel et al., 2006; Crutchfield and Pitchford, 1997; Fagan and Freeman, 1999; Grogger, 1998; Uggen, 1999; Wadsworth, 2006) or of future prospects (for example, regular versus temporary jobs) (Van der Geest et al., 2011). What these studies have in common is that they used objective rather than subjective measures of job characteristics. In the end however, when it comes to the potential deterrent effect of losing one's job, it is the individual perception that counts.

Finally, a limited number of studies have examined the extent to which the work–crime association is gendered. Exemplifying criminology’s preoccupation with male crime, most of the older studies have data only on males (for example, Farrington et al., 1986; Sampson and Laub, 1993). Whereas working a paid job constituted an important part of masculine identity in the past, for more recent cohorts labour market participation is increasingly equal for men and women, as is the meaning young people of both sexes attach to work (Hult, 2008; Van der Valk and Boelens, 2004). In their study of a contemporary cohort of previously institutionalized youths, Verbruggen et al. (2012) found a dampening effect of employment for both men and women. Another study of modern-day disadvantaged young adults even found the employment effect for women to outstrip that for men (Uggen and Kruttschnitt, 1998).

## **Current study**

In the current study we examine the association between work and crime in a contemporary sample of emerging adults. Using longitudinal data covering the ages 18–28 allows us to examine whether the work–crime association still holds for a generation for whom the transition from adolescence to adulthood differs radically – at least demographically – from that of its predecessors. Furthermore, these data are representative of the entire native Dutch emerging adult population, and not limited to high-risk or previously institutionalized offenders, which allows us to address the generality of the work–crime association, as well as the theories that have been offered to explain it, beyond these particular groups. Being based on self-report data, the current study uses subjective measures of theoretically relevant job characteristics instead of relying on objective measures. Because emerging adulthood is characterized by experimentation and finding out who you are, objective measures of job quality are likely to be less suitable during this period. Finally, the current sample consists of young men and women, allowing us to examine the extent to which the work–crime association is conditional on sex, and whether subjective appraisals of job quality differentially influence delinquency and crime among men and women.

## **Method**

### *Sample*

The current analyses are based on data from the Utrecht Study of Adolescent Development (USAD; Meeus & ‘t Hart, 1993), a three-wave longitudinal self-report study, with measurement waves in 1991, 1994 and 1997. The USAD sample was drawn from an existing panel study of 10,000 households in the Netherlands, and consists of 3393 Dutch adolescents (58 percent girls) and emerging adults aged 12 to 24 at the time of the first measurement wave (‘t Hart et al., 1993). The sample was found to be representative of the Dutch population with respect to age, socioeconomic status, level of education, level of urbanization and religion. Yet, since few respondents were of non-Dutch descent, the sample’s representativeness is limited to native Dutch adolescents and emerging adults (De Goede et al., 1999). Data were collected using self-reports. Respondents were interviewed face-to-face and filled out questionnaires about education, work, delinquent

behaviour, personal characteristics and living circumstances ('t Hart et al., 1993). Since we focus on emerging adults in this paper, we included only those respondents who were between ages 18 and 24 at the time of first measurement, and for whom data were available for all three measurement waves ( $N = 669$ ). Subsequent analyses on selective attrition indicate that boys were more likely to drop out of the study than girls. However, no significant differences were found between emerging adults who were included in the current study and those who were excluded on our key variables: work, work characteristics and delinquency.

### *Dependent variable*

*Delinquency.* A 21-item variation scale of delinquency was used to measure delinquent behaviour (Luijpers, 2000; Meeus et al., 2004). The delinquency measure consists of items on three types of delinquent behaviour: property offences (13 items, for example 'theft of bike'), violent offences (5 items, for example 'physical abuse') and vandalism (3 items, for example 'arson'). For every item, respondents reported whether or not they had committed that particular crime in the past year. The variation scale of delinquent behaviour was computed by summing the dichotomous scores on all 21 delinquency items, which resulted in a one-dimensional scale (Van der Heijden et al., 1997). The use of delinquency variation scales has several advantages over the use of frequency scales, because variation scales are known to have better internal consistency, show higher stability over time and display stronger associations with conceptually related variables (Bendixen et al., 2003). The validity of the current measure was described extensively by Junger-Tas and Kruissink (1990).

Because delinquency was measured as delinquent acts committed during the year prior to the measurement point, delinquency from measurement wave 1 would be the predictor of working a paid job instead of the outcome. Therefore, we use delinquency measured at waves 2 and 3 as the dependent variable.

At the first measurement wave for delinquent behaviour, that is, the second measurement wave in the study, 45.6 percent of the males reported having engaged in at least one delinquent act during the previous year, with an average of 1.7 different types of offences. At the second wave this dropped to 31.7 percent, with an average of 1.5 different offences. Females reported engaging in delinquency in the previous year in 24.8 percent and 19.0 percent of cases for waves 1 and 2 respectively, with an average of 1.6 and 1.2 different types of offences.

### *Independent variables*

*Work.* On each measurement wave, respondents indicated whether they worked a paid job or not (0 = no job; 1 = has a job). Prior studies suggest that the work-crime association may differ across age (Arnett, 2000a; Van Drie and Weijers, 2010). To capture any age-graduation in employment effects, dummy variables were constructed for being employed at a specific age. For instance, the variable 'work 18-19' (0 = no job; 1 = has a job) indicates whether or not respondents worked a paid job when they were 18 or 19. Similar variables were constructed for ages 20-21, 22-23, 24-25 and 26-28.

Using work variables only for waves 1 and 2, while using delinquency measurements from wave 2 and 3, we let work during one wave predict delinquency during the next. Because we have no delinquency measurements after wave 3, wave 3 employment data are dropped from the analyses.

*Job perceptions.* Two job-related perceptions were included in the current analyses: 'commitment to work' and 'future prospects'. Both these job-related perceptions were measured by the Utrecht Groningen Identity Scale (U-GIDS), developed by Meeus (De Goede et al., 1999; Meeus, 1993). *Commitment to work* was measured by an eight-item scale, involving the level of self-confidence and confidence in the future that adolescents obtain from their current job (for example, 'A job provides meaning to life'). Commitment to conventional goals is an important aspect of social control so, based on social control theory, it can be expected that the more committed a person is to his or her current job, the less likely he or she will engage in crime. The *future possibilities* that respondents ascribed to a particular job were measured by a five-item scale concerning the possibilities respondents felt arose from working a particular job (for example, 'my current job provides the opportunity to develop myself'). As with commitment, higher levels of future prospects attributed to a particular job are expected to increase the job's contribution to the individual's stake in conformity, and therefore that job's impact on desistance. Items for both the commitment to work and future prospects scales were measured on a five-point Likert scale, ranging from 1 (not true at all) to 5 (very true). Cronbach's alphas for the two scales were good and ranged from .78 to .90 across all measurement waves. The items on job-related perceptions were answered by respondents who were working a paid job at the time of questioning ( $N = 365$  during the first measurement wave and  $N = 475$  during the second measurement wave).

### *Background characteristics*

*Living situation.* Respondents were asked to indicate whether they lived with one or both parents or on their own (0 = lives with parent(s); 1 = lives alone). During the first measurement wave, 29.6 percent of male respondents reported living on their own. This increased to 49.6 percent during the second measurement wave. For females these percentages were 45.4 percent and 71.5 percent, respectively.

*Level of education.* Level of education was measured by using a four-point scale (1 = low education; 4 = high education) and was based on the highest reported education. Low education refers to elementary school and the lowest level of high school. Educational level subsequently increases from higher levels of high school, through vocational schooling and higher professional education to university schooling. For emerging adults who were still enrolled in school, the educational level of the current school was used. The percentage of male respondents reporting a low level of education dropped from 25.6 percent during the first wave to 16 percent during the second measurement wave. For females this was respectively 21.5 percent and 11.7 percent.

*Participation in education.* Respondents were asked if they currently participated in education (0 = did not participate in education; 1 = participated in education). During the first wave



more than half of the men participated in education; during the second wave participation in education decreased to just over a quarter (51.6 percent and 26.9 percent, respectively). For women these percentages were lower: 41.6 percent and 18.1 percent, respectively.

*Work ethic.* Work ethic was measured by letting respondents report their agreement to 11 different statements on the importance of having a paid job (for example, ‘a stable job is important to make something of your life’). Respondent reactions to these statements were measured on a five-point Likert scale (1 = ‘don’t agree at all’ to 5 = ‘fully agree’). Cronbach’s alphas for this measure ranged from .87 to .89 across measurement waves. Because this measure referred to paid work in general, and not to any job in particular, all respondents regardless of whether or not they were currently working were asked to answer these questions. Work ethic is included as a time-varying background variable in our models.<sup>1</sup>

### *Plan of analyses*

When estimating the association between work and crime, the biasing effects of selection need to be taken into account. That is, respondents working a paid job may differ from respondents not working in ways that also affect the extent to which these groups engage in delinquency and crime. Not taking into account such between-individual variation may lead one to erroneously attribute differences in delinquency to working a paid job. Here we use fixed-effects models to deal with the problem of selection. Fixed-effect models focus only on within-individual change, while controlling for all time-stable individual characteristics, whether measured or unmeasured (Allison, 2005; see Edmark, 2005, for a recent application of this type of model in prior research on the work–crime association). Because fixed-effect models control for all stable characteristics, the main effects of these characteristics can no longer be estimated. However, fixed-effects models do allow interaction effects between time-stable and time-varying variables to be estimated.

To answer our current research questions, we estimate three fixed-effects models, using delinquency variation as the dependent variable and work, work characteristics and background characteristics as independent variables (see Table 3). Because delinquency was measured as delinquent behaviour during the previous year, we use the independent variables at wave 1 and wave 2 to predict delinquency at wave 2 and wave 3, respectively. To examine the association between working a paid job and delinquency at different ages, the first model includes the age-graded employment variables while additionally controlling for the time-varying background characteristics. Model 2 adds the effects of commitment and future prospects. Finally, because previous research suggests that the association between work and crime may be different for males and females, our third and last model includes interactions for all work-related variables and sex.

## **Results**

### *Descriptives*

Tables 1 and 2 provide the descriptives for the current sample separately for men and women, and for the first and second measurement waves. Male and female respondents

**Table 1.** Descriptive statistics: (In)dependent variables for men.

	Wave 1		Wave 2	
	Percent/mean	N	Percent/mean	N
<i>Background variables</i>				
Average age	20.9	250	24.1	268
Involved in education	51.6	129	26.9	72
Living on own	27.6	69	49.6	133
Low level of education	25.6	64	16.0	43
Mean work ethic	3.0	250	3.0	268
<i>Work</i>				
Working	60.0	150	77.2	207
Mean commitment	3.5	106	3.6	170
Mean possibilities	3.9	107	3.9	172
	Wave 2		Wave 3	
<i>Delinquency</i>				
Participation	45.6	114	31.7	85
Mean offence types	1.7	114	1.5	85
Mean offence number	3.7	114	4.0	85

**Table 2.** Descriptive statistics (in)dependent variables for women.

	Wave 1		Wave 2	
	Percent/mean	N	Percent/mean	N
<i>Background variables</i>				
Average age	21.3	339	24.5	375
Involved in education	41.6	141	18.1	68
Living on own	45.4	154	71.5	268
Low level of education	21.5	73	11.7	44
Mean work ethic	2.8	339	2.8	375
<i>Work</i>				
Working	63.4	215	71.5	268
Mean commitment	3.5	158	3.6	242
Mean possibilities	4.1	158	4.0	242
	Wave 2		Wave 3	
<i>Delinquency</i>				
Participation	24.8	84	19.0	71
Mean offence types	1.6	84	1.2	71
Mean offence number	2.7	84	2.7	71

were respectively aged, on average, 20.9 and 21.3 at the beginning of the study. The sample's age distribution is well-balanced (approximately 13 percent respondents per age-bin for the whole sample). That the emerging adult period is a transitional period is evidenced in our data by the increasing number of respondents finishing school and/or moving out of the parental home between measurement waves. On average, men reported a higher work ethic than women ( $t = 4.122, p < .001$ ), and those employed reported a higher work ethic than those unemployed ( $t = -5.204, p < .001$ ). With regard to employment, over 60 percent of the respondents reported they were working a paid job at least once during the period under study. Commitment to and the perceived future prospects of a respondent's job correlated positively with work ethic ( $\rho = 0.348, p < .001$ ;  $\rho = 0.181, p < .001$ ) and with each other ( $\rho = 0.529, p < .001$ ). Finally, approximately one-quarter of respondents reported having engaged in at least one delinquent act during the period under scrutiny. Men showed a higher variety in delinquent behaviour than women ( $t = 6.266, p < .001$ ). A small correlation existed between work ethic and delinquency ( $\rho = -0.066, p < .001$ ).

### *Work and delinquency*

Table 3 provides the results of the fixed-effect analyses. Model 1 estimates the effects of working a paid job at different ages, while controlling for potential time-varying confounders. None of the time-varying confounders have a significant effect on self-reported delinquency. Although only working a paid job at ages 18–19 asserts a significant influence on delinquency, the age–work parameters show a clear downward trend. Model 2 adds individual job perceptions to the model. As in Model 1, the age–work association becomes more negative with age. The level of commitment to the current job has no effect on delinquency, while perceived future perspectives exert an effect opposite to what was expected based on control theory. Our final model included interaction effects with gender for all work-related variables. For men, there was again evidence for an association between employment and delinquency, with those reporting working a paid job at later ages reporting decreased levels of delinquency. Neither men's commitment nor men's perceived future prospects of the current job significantly predicted self-reported delinquency. Although the age-graded association between employment and crime did not differ significantly for men and women, given the direction and size of the interaction effects the age-trend for women does seem less strong. This interpretation is confirmed when we estimate fixed-effects models separately for men and women: whereas for men the work–crime association becomes increasingly negative with age, for women there is no association between work and crime.<sup>2</sup> Although the association between commitment and crime appeared more negative for women, this difference did not reach significance by conventional standards.

### **Discussion**

This study set out to test predictions based on control theory regarding the association between employment and crime in the emerging adult period. Whereas control theory

**Table 3.** Effects of work and work-related factors on delinquent behaviour.

	Model 1		Model 2		Model 3	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Constant	1.253**	0.523	1.677	1.090	1.257	1.094
Age	-0.028	0.022	-0.066	0.045	-0.046	0.045
Level of education	0.020	0.051	0.004	0.062	-0.004	0.063
Living on own	-0.001	0.100	0.099	0.130	0.085	0.128
Involved in education	0.052	0.093	-0.078	0.263	-0.097	0.263
Work ethic	-0.091	0.064	-0.085	0.090	-0.093	0.093
Work 18–19	0.355**	0.142	0.300	0.230	0.701*	0.376
Work 20–21	0.098	0.102	-0.313	0.220	-0.189	0.281
Work 22–23	0.070	0.096	-0.260	0.181	-0.389	0.238
	Model 1		Model 2		Model 3	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Work 24–25	-0.060	0.114	-0.314*	0.187	-0.535**	0.242
Work 26–28	-0.188	0.145	-0.397*	0.237	-0.651**	0.295
Work 18–19*Gender					-0.493	0.474
Work 20–21*Gender					0.078	0.395
Work 22–23*Gender					0.448	0.369
Work 24–25*Gender					0.560	0.369
Work 26–28*Gender					0.559	0.379
Commitment			0.016	0.082	0.161	0.117
Future possibilities			0.170**	0.073	0.984	0.100
Commitment*Gender					-0.296*	0.162
Future possibilities*Gender					0.128	0.147
N	651		484		484	
Likelihood ratio test (LR $\chi^2$ )	15.84***		19.80***		39.16***	

Notes: a. Compared with a model based on the same 484 respondents in which commitment and future perspectives are not included.

\* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ .

predicts a negative association between work and crime based on the level of direct, but even more so on the level of indirect, control generated by engaging in paid work, specific features of the emerging adult period challenge this prediction. Our results show that work is indeed negatively associated with variation in self-reported delinquency, but only at older ages. For those aged 18–19, working a paid job seems to increase levels of delinquency and crime. Yet, for those aged 24 and over, those employed typically report less offending. These results are in line with Blokland (2014), who also reports a positive rather than a negative association between work and delinquency in a contemporary sample of Dutch emerging adults aged 18–22. This latter research also suggests that for native Dutch emerging adults – as in the current sample – the positive association between work and delinquency is mediated by those employed more often engaging in

excessive alcohol use. Increased opportunity in the absence of social control generated by other adult responsibilities may therefore explain the positive work–crime association around these ages. Unlike the predictions of social control theory, indicators of indirect social control – here, commitment and future possibilities – did not unequivocally predict self-reported variation in delinquency.

The negative association between working a paid job and delinquency, however, seems limited to male emerging adults only. For women, our data show no clear trend in the effects work has on crime. These results run counter to a recent Dutch study using a sample of emerging adults at high risk of committing crimes that found work to be related to a decrease in crime for both men and women (Verbruggen *et al.*, 2012). Although the latter study did not find an additional effect of indirect social control measured by work duration for high-risk women, if anything, the current study found young women’s commitment to the current job to decrease delinquency. Clearly, to be able to assess the generalizability of life-course interpretations derived from social control theory across gender, more research is needed on how exactly work and subjective perceptions of work are related to delinquency and crime among girls and women. The absence of an effect of work on women’s delinquency in the current study could – in part – reflect that women, in general, attach less importance to having a job than do men (De Goede *et al.*, 1999) and derive their identities more from other sources, such as relationships (Meeus, 1993) and family (Cinamon and Rich, 2002). However, the lack of a relationship between having a job and delinquency for female respondents might also – in part – be explained by the low delinquency rates of the women in the current sample. Whereas the USAD study is a general population study, the study by (Verbruggen *et al.*, 2012) was based on women who had spent part of their youth detained in a juvenile justice institution.

Although subjective evaluations of the current job are important to the social control explanation of the work–crime association, commitment and future possibilities in the current data did not show a strong association with self-reported delinquency variety. The deterrent effect of conventional bonds lies in the fear of losing something that is valued. Emerging adults are generally optimistic about their future (Arnett, 2000b). It is possible that emerging adults estimate their chances of finding a job that is comparable to their current job (too) high and therefore perceive the potential damage of losing their current position to their future prospects as negligible. To the extent that this is true, a better operationalization of indirect social control generated by conventional social bonds among emerging adults may lie in the intensity and duration of their own investments in that particular bond, rather than in its current commitment or future possibilities. Previous work indeed found the duration of the conventional bond to predict desistance from offending (Laub *et al.*, 1998). Unfortunately, the structure of the longitudinal data used in the current study does not allow for such an operationalization. Although we have information on whether respondents were working at each measurement wave, we do not know whether this related to the same job or an entirely different job, precluding a measurement of work stability.

The present study has several advantages, such as the age span and recency of the sample. Little criminological research has yet been done specifically on the emerging adult period, even though this life stage is becoming increasingly prominent in developmental psychology. Furthermore, the data pertain to a nationally representative sample

consisting of both males and females. Finally, for each wave we were able to include measures of perceived job characteristics. Nevertheless, when interpreting the results of this study, some limitations also have to be considered. First of all, although the current study uses longitudinal data, the time lapse between the measurement waves was quite long – three years. Especially during the demographically dense and unstable period of emerging adulthood a lot can change in three years. Young people can change job many times in three years, showing varying levels of commitment to different jobs. To be able to more accurately estimate the extent to which working a paid job and the indirect social control generated by a particular job affect delinquency and crime in an emerging adult population, a more fine-grained research design is to be preferred. A second limitation is the use of non-experimental data to estimate the association between work and crime. Although the fixed-effect models used in this study control for time-stable differences between respondents – both observed and unobserved – it still remains possible that the association found between work and crime in part stems from unobserved dynamic variables that simultaneously affect the likelihood of both work and delinquency (Bjerk, 2009). The current study thus outperforms previous cross-sectional studies on the work–crime association, but caution is still warranted when making causal inferences from these data.

Compared with previous generations, emerging adults nowadays increasingly postpone transitions to adult social roles to a later age. As a result, the emerging adult period has become one of rather uncommitted exploration and experimentation. Only at later ages does the meaning attributed to work live up to the picture sketched by control theories (Piquero et al., 2002). Critics, however, state that this supposed period of self-exploration mainly applies to highly educated young people (Bynner, 2005; Heinz, 2009). Lower-educated young people would to a large extent still be forced to make the transition to adulthood directly after adolescence. The association between work and delinquency, and especially the age-dependency of this association, could therefore vary between young people of different social backgrounds or educational levels. In the current dataset, the number of respondents from lower educational backgrounds is relatively small, but exploratory analyses that include interactions between work and educational level do not show any significant differences between respondents with a high educational level and respondents with a low level. To gain a better insight into the work–crime association, future studies into the effect of labour market transitions during the emerging adult period should specifically aim to include young people from different educational levels and/or social class.

Finally, to be able to test if the manifestation of emerging adulthood as new life stage led to work no longer having the crime-reducing effect that it had in earlier generations, it would be necessary to exclude the possibility that in this day and age the effect of work on crime is reduced for everybody, regardless of the individual's age. Paid work may have become a less important source of indirect social control across the board. To test for such a period effect, the data would also need to include data on respondents who are already in their adult years.

Within the limits set by the data's strengths and weaknesses, this study found that, for emerging adult men but not for women, the work–crime association is influenced by age, with work having a dampening effect on delinquency and crime only from the

mid-twenties onwards. One possible explanation for the absence of a crime-reducing effect of paid work in the late teens and early twenties lies in the exploratory and experimental character of this new life stage, which prevents the powers of indirect social control from gaining momentum.

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## Notes

1. To ascertain that commitment, future prospects and work ethic all referred to related but nevertheless distinct concepts, a factor analysis on the 24 items of the combined commitment to work, future perspectives and work ethic scale was performed. Results from this analysis shows commitment to work, future prospects and work ethic to load on three different subscales (factor loadings for these subscales vary from .66 to .88 across measurement waves and Cronbach's alpha's for the subscales vary from .78 to .90 across measurement waves).
2. To check the robustness of our results we also estimated models 1 and 2 separately for males and females (not shown) and then tested the difference between the work coefficients for the male and female models (Paternoster et al 1998). In these comparisons all work coefficients were not significantly different for males and females except the work 18-19 coefficient in model 1 ( $Z=1.764$ ;  $p = 0.04$ ) indicating a higher impact of work on delinquency reported by males at these ages. Like the models presented in table 3, the gender-specific models did show a clear downward trend in the size of the work coefficients with age for males, that was absent for females. We therefore conclude that results from these models are in line with the ones presented here. Results from the gender-specific models are available upon request from the first author.

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