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Chapter 3

Rule-violating behaviour in white-collar offenders: A control-group comparison

Abstract [27]

This study aims at enhancing our understanding of criminogenic individual-level factors in white-collar crime by examining cross-contextual rule-violating behaviour in a sample of white-collar offenders ($N = 637$) and comparing it to a matched population-based control group ($N = 1,809$), controlling for sociodemographic, crime and organizational characteristics. Results show that white-collar offenders, including those offenders with no prior criminal justice contact and those offenders holding high-trust positions in organizations, engaged in regulatory income tax violations and regulatory traffic violations at significantly higher levels compared to controls. This article concludes that individual characteristics are likely to underlie the identified cross-contextual consistency in rule-violating behaviour and debates the relevance of the present findings for the study of crime in organizations.

3.1 Introduction

A popular view in white-collar criminology is that individual involvement in white-collar crime results primarily from differential exposure to criminogenic corporate cultural values and occupational businesses practices (e.g., Clinard & Yeager, 1980; Sutherland, 1949), organizational opportunity structures (e.g., Benson & Simpson, 2009) or strains (e.g., Agnew et al., 2009). The personal and social background of white-collar offenders (traits, states, cognitions) has traditionally been considered to be relatively unimportant or even irrelevant for understanding white-collar crime involvement (Braithwaite, 1984; Coleman, 2002; Sutherland, 1949). Although purely situational explanations are contested on several theoretical and empirical grounds (e.g., the inability to account for between-individual differences leading up to differential outcomes in similar criminogenic conditions; Apel & Paternoster, 2009; Hirschi & Gottfredson, 1987, 1989) and a growing body of literature has brought "the offender back in" (Benson, 2013, p. 324), research has struggled to disentangle the influence of

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criminogenic contextual forces and criminogenic individual-level factors (but see e.g., Jones & Kavanagh, 1996; Kish-Gephart et al., 2010).

One way of separating both factors is by examining consistency in white-collar offenders' rule-violating behaviour across different contexts outside the occupational and organizational context (Bem & Allen, 1974; Gottfredson & Hirschi, 1990; Junger, West, & Timman, 2001) and comparing the level of rule-violating behaviour to a control group of individuals with similar sociodemographic backgrounds and organizational positions (Gottfredson & Hirschi, 1990; Herbert et al., 1998; Hirschi & Gottfredson, 1989). If white-collar offenders are overrepresented in rule-violating behaviour in different contexts outside their organizational setting, this would point towards a criminogenic propensity and contest a purely situational approach.

In the present study, we, first, examine to what extent white-collar offenders exhibit rule-violating behaviour compared to control individuals with matched sociodemographic backgrounds, selected from the general population. The analysis proceeded based on two independent types of rule-violating behaviour outside an occupational or organizational context: regulatory income tax violations and regulatory traffic violations. In a next step, we investigate rule-violating behaviour in those white-collar offenders from the sample who only had a single offence registered to their name, allowing us to explore whether these 'one-shot' offenders are otherwise law-abiding citizens, as has been suggested in literature (e.g., Benson & Kerley, 2001; Wheeler et al., 1988). Finally, we examine whether a tendency for rule-violating behaviour is also present in those offenders who occupy high-trust organizational positions, such as director, partner or company owner. Because of the assumed criminogenic nature, these positions play a central role in the study of white-collar crime (e.g., Cressey, 1953; Sutherland, 1949). However, little attention has been given to (a) possible criminogenic characteristics, such a tendency to bend or break rules, that select individuals into such high-trust positions, and (b) to differences between individuals holding these positions, making some more than others willing or prone to take advantage of criminal opportunities (Apel & Paternoster, 2009; Gottfredson & Hirschi, 1990).

This study contributes to the literature in a number of ways. It is the first study to use a non-criminal outcome measure as a proxy for a criminogenic propensity in white-collar offenders, including those offenders that occupy potentially criminogenic high-trust positions. Also, by examining outcome measures in settings that are characterized by different and typically unrelated contextual influences, the present study helps to disentangle criminogenic contextual and criminogenic individual-level forces. Finally, this is the first study that compares white-collar offenders to a sample of matched controls

(as suggested by scholars: Gottfredson & Hirschi, 1990; Herbert et al., 1998), rather than comparing white-collar offenders to street criminals as has been done in previous studies (e.g., Benson & Kerley, 2001; Weisburd et al., 1991; Wheeler et al., 1988).

3.1.1 Consistency in criminal and deviant behaviour

In order to differentiate between contextual and individual factors, scholars have argued that consistency of criminal and deviant behaviour either over time or across contexts points towards the presence of criminogenic individual-level factors (e.g., Bem & Allen, 1974; Caspi & Bem, 1990; Gottfredson & Hirschi, 1990). To date, only a few white-collar crime studies have been able to shed light on such behavioural consistency among white-collar offenders by following their criminal careers over an extensive period of time. These life-course studies reveal that only a minority shows consistency in criminal behaviour, and that most white-collar offenders are characterized by low-frequency offending (Benson & Kerley, 2001; Piquero & Weisburd, 2009; Weisburd & Waring, 2001; see also Chapter 2). However, these studies also indicate that, once criminally active, white-collar offenders show less specialization than what is typically thought (Benson & Moore, 1992; see also Chapter 2).

A limitation of assessing criminal histories as a proxy for a criminogenic propensity is that, according to many researchers, officially detected and registered offences portray only a part of true misconduct by white-collar offenders (Clinard & Yeager, 1980; Reed & Yeager, 1996; Sutherland, 1940). Self-report studies indicate that 'true' misconduct in white-collar offenders, both in- and outside the workplace, may be higher than what their criminal record indicates (Menard et al., 2011; Morris & El Sayed, 2013).

To get a fuller understanding of white-collar offenders' level of misconduct, scholars have urged for the inclusion of measures of *non-criminal* rule breaking, such as regulatory violations, in the analysis of white-collar offenders' behaviour (e.g., Weisburd & Waring, 2001). Importantly, relatively minor forms of misconduct are hypothesized to provide a better proxy for individuals' criminogenic propensity than criminal behaviour that is typically more rare (Gottfredson & Hirschi, 1990; Hirschi, 1969; Hirschi & Gottfredson, 1994).

Rule-violating behaviour across contexts

The key assumption in the present paper is that heightened rule-violating behaviour across different contexts - outside an occupational or organizational setting - may signal an underlying criminogenic individual-level factor (Bem & Allen, 1974; Gottfredson & Hirschi, 1990; Junger et al., 2001). Conversely, a lack of such a consistency would support the commonly held view in white-collar criminology

that: "It would be erroneous to assert that people who engaged in 'reckless' activities at work and in certain conditions will do so always and at every phase of their daily life" (Passas, 1990, p.160; see also Braithwaite, 1984; Coleman, 2002).

In order to examine this assumption, we delineated two types of regulatory rule violation: regulatory income tax violations and regulatory traffic violations. We chose these two outcome measures for the following reasons. First, personal income tax violations represent acts of financial-economic misconduct, but these acts are not carried out in an occupational or organizational capacity or setting (thus not "reckless activities at work"). As such, personal income tax violations fall outside the narrow definition of white-collar crime that confines it to criminal or regulatory violations that are "committed in the course of the occupation" (Sutherland, 1949, p. 9; see also e.g., Simpson, 2013). Moreover, the filing of personal income tax is typically not directly influenced by criminogenic organizational cultural values, opportunity structures and strains in organizations or industries that are assumed to underlie individuals' involvement in white-collar crime (see e.g., Agnew et al., 2009; Benson & Simpson, 2009; Clinard & Yeager, 1980; Sutherland, 1949).

Second, in order to investigate whether a tendency for rule-violating behaviour extends outside the realm of financial-economic behaviour, we also examine acts of rule-violating behavior in traffic. We chose traffic violations because they entail a completely different type of rule-violating behavior. This approach follows earlier research that suggests that rule-violating behaviour in traffic and crime may both be outcomes of an underlying individual-level factor, such as low self-control or a tendency for risk-taking (Gottfredson & Hirschi, 1990, p. 92; Junger et al., 2001; Keane, Maxim, & Teevan, 1993). Lastly, an important, more practical, advantage of including these two types of regulatory violations is that individuals, independent of their occupation, have similar opportunities to violate such rules. Almost all individuals are liable to pay income tax and almost all individuals (can) own and drive cars (e.g., 84 percent of Dutch adults have a driving license; Kennisinsituut voor Mobiliteitsbeleid, 2012).

3.1.2 White-collar offenders: Distinct approaches

Since Sutherland coined the term white-collar crime almost 80 years ago, the question how to characterize white-collar offenders has been at the centre of much debate. The controversy centres largely on whether the term should be used based on the nature of the fraudulent offence (e.g., Benson & Moore, 1992; Edelhertz, 1970; Weisburd & Waring, 2001), or on the characteristics of the person who commits the offence (e.g., Sutherland, 1949).

Studies that have taken the fraudulent offence as a starting point typically identify a heterogeneous sample of offenders in terms of types of fraudulent offences and social and criminal background characteristics (Benson & Kerley, 2001; Benson & Moore, 1992; Piquero & Weisburd, 2009; Weisburd & Waring, 2001; see also Chapter 2). In contrast, studies using the so-called offender-based approach take a narrower focus, concentrating on offenders that occupy high-end positions in organizations, such as business owners, directors, or treasurers, that bring with them power, responsibility and above all trust (Coleman, 2005; Geis, 2007; Sutherland, 1940, 1949). Given the narrower focus, scholars have argued that the two approaches to white-collar crime not only reflect different offenders in sociodemographic terms or offences types, but also that the respective white-collar offenders may differ considerably in individual characteristics (Braithwaite, 1985; Geis, 2000; Steffensmeier, 1989; but see Ben-David, 1991).

In the present study, both approaches can be identified. The overall sample is based on a selection of individuals that were involved in serious white-collar crime cases, meaning cases in which large amounts of money were defrauded, where offences were complex or organized in nature, or where the offences were committed over an extensive period. Offenders were, however, selected without taking into account their organizational position. The overall sample can thus be considered an offence-based sample. In addition, we also selected a subsample of white-collar offenders that occupy high-trust positions, such as director or business owner, allowing us to investigate whether a tendency to violate rules is present in individuals who occupy potentially criminogenic positions in organizations.

White-collar offenders in high-trust positions
A substantial body of research contends that people may be attracted to and selected into high-trust organizational positions that are compatible to their personal traits (see Apel & Paternoster, 2009). An intriguing possibility brought forward by white-collar scholars is that personal characteristics that promote occupational success may also stimulate rule-violating behaviour and even criminal involvement. For example, individuals with a tendency for risk-taking, a characteristic associated with both legitimate and illegitimate success, may be more motivated to occupy high-trust positions and may also be preferred by organizations (Coleman, 2005; Friedrichs, 2010; Wheeler, 1992). Similarly, Gross (1978, p. 67) argued that those who make it to the top of (large-scale) organizations have "distinctive personal characteristics such as ambitiousness, shrewdness and moral flexibility". From this perspective, individuals in high-trust positions may be expected to have a heightened tendency for rule-violating

behaviour. However, a heightened tendency for rule-violating at the top of organizations may also be the *result* of occupying a high-trust position. Holding an high-trust position that provides power and influence may, for example, make (some) individuals feel they are less dependent on others, increasing the likelihood of rule-violating behaviour, both inside or outside the work environment (Box, 1983, p. 38). In contrast, Hirschi and Gottfredson (1987) suggest that selection mechanisms hold back individuals with a criminal propensity because they do not have the level of self-control necessary to advance upward through the organizational hierarchy and reach high-trust organizational positions, making a tendency for rule-violating behaviour among individual in in such positions less likely (Hirschi & Gottfredson, 1987; Gottfredson & Hirschi, 1990; Herbert et al., 1998).

Over and above a possible selection or contextual effect, criminologists who focus on individual-level explanations of crime, expect individual differences in rule-violating behavior among individuals in high-trust positions. For example, Gottfredson and Hirschi (1990, see also Hirschi & Gottfredson, 1987, 1989) expect that the level of self-control is relatively high among individuals that reach high-trust positions, but also that white-collar offenders have relatively low self-control compared to their business peers. Alternatively, white-collar offenders may have a relatively high tendency for risk-taking or posses above average 'moral flexibility' (Gross 1978, p. 67) or 'moral insensibility' (Ross, 1977, p. 31), compared to other businessmen in high-trust positions. The few studies that have directly contrasted white-collar offenders to businessmen in similar organizational positions have identified several personal differences that may be associated with a heightened tendency for rule-violating behaviour, such as low self-control and a greater tendency to disregard rules and social norms (Blickle et al., 2006; Collins & Schmidt, 1993).

3.1.3 Current study and hypotheses
Rule-violating behaviour in white-collar offenders and controls
To date, no study has compared rule-violating behavior among white-collar offenders across different contexts to controls with comparable sociodemographic backgrounds and who occupy similar organizational positions. Previous comparative studies have contrasted white-collar offenders to (non-violent) street-crime offenders. These studies showed that white-collar offenders are less criminally active and exhibit less problematic and deviant behaviour compared to street-crime offenders (e.g., Benson & Kerley, 2001; Weisburd et al., 1991; Wheeler et al., 1988). However, these studies shed little light on the matter of whether white-collar offenders have a heightened tendency to violate rules. A comparison between white-collar offenders and their *peers* is called for to

establish this (Gottfredson & Hirschi, 1990; Herbert et al., 1989). As white-collar offenders are often described as conventional or ordinary members of the general population, individuals from the general population are arguably a qualified comparison group for white-collar offenders (see Coleman, 2002; Friedrichs & Schwartz, 2008; Wheeler et al., 1988).

We therefore compare a sample of white-collar offenders to a control group of individuals from the general population. In order to rule out the influence of confounding background characteristics, we matched offenders and controls on sociodemographic backgrounds (age, sex, region of residence, business ownership and income). Taking these factors into account, we hypothesize that white-collar offenders show greater involvement in *both* types of rule-violating behaviour compared to their peers, but we also expect that they are relatively more frequently involved in income tax violations than in traffic violations (*Hypothesis 1*).

Rule-violating behaviour in 'one-shot' offenders
In order to control for differences in criminal history and to understand whether even 'one-shot' white-collar offenders have a tendency for rule violation, we contrast offenders who had one single white-collar offence registered to their name to their matched peers, and to white-collar offenders who had multiple offences registered to their name. We expect that the 'one-shot' offenders commit less rule violations across contexts than the offenders with multiple offences registered to their name, but that they commit more rule violations than matched controls *(Hypothesis 2)*.

Rule-violating behaviour and high-trust positions
We also examine whether individuals in high-trust positions, such as company owner or director, demonstrate a heightened level of rule-violating behaviour compared to individuals who do not hold such positions. Given the contradictory theoretical expectations and empirical evidence regarding the (direction of) potential selection and context effects, we do not formulate a specific hypothesis (*Hypothesis 3*).

In a final analysis, we compare white-collar offenders in high-trust positions to business peers in similar positions, allowing us to control for individual characteristics that may be confounded with holding a high-trust position, and for contextual forces prompting or limiting rule-violating behaviour. We hypothesize that white-collar offenders in high-trust positions show higher levels of rule violation across contexts, compared to controls in similar high-trust positions (*Hypothesis 4*).

3.2 Method

3.2.1 Sample
3.2.1.1White-collar offender samples
Overall white-collar offender sample
The sample consists of 637 individuals who were prosecuted by the Netherlands Public Prosecution Service for white-collar crime cases between 2008 and 2012 (see Chapter 1 and 2). The sample was not stratified on offence categories but the types of selection offences broadly fit the offence-based definition of white-collar crime used in prior white-collar crime research (Benson & Kerley, 2001; Benson & Moore, 1992; Weisburd et al., 1991; Weisburd & Waring, 2001; Wheeler et al., 1988). While the selection offences include a wide range of offences such as 'contrepreneural' crimes (e.g., swindles against companies; see also Friedrich, 2010) and intra-organizational 'occupational' crimes (e.g., large-scale embezzlements; see Clinard & Quinney, 1973), almost half of all selection offences (44.9 percent) involve violations of the criminal tax code. Closer examination showed that these tax offences are predominantly *corporate-tax crimes* and *turn-over tax crimes* (see also Functioneel Parket, 2012). It is important to bear in mind that, in contrast to regulatory income tax violations, these violations of the criminal tax code are carried out in an occupational or organizational capacity by owners or directors.

The selection offences were selected by the Netherlands Public Prosecution Service for the seriousness of the crime, meaning cases in which large amounts of money were defrauded, where offences were complex or organized in nature, or where the offences were committed over an extensive period (for a more detailed description of the selection offences, see Chapter 2 and Functioneel Parket, 2012). Table 3.1 shows crime and sociodemographic characteristics of the sample.[28]

Sample of 'one-shot' white-collar offenders
To identify offenders that only have one offence registered to their name, we used historical offending information registered in the Judicial Documentation System (JDS) of the Netherlands Ministry of Security and Justice (comparable with 'rap sheets'). The subsample of offenders with one offence registered to their name ($N = 109$; 17.1 percent) is considerably smaller than those offenders with multiple offences registered to their name ($N = 528$; 82.9 percent). As the white-collar crime cases for which the offenders were prosecuted (selection

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28   In order to provide a comprehensive overview we reduced the twelve income groups (used in the sampling) to five income groups and do not depict residency characteristics in Table 3.1.

criterion for the present study) typically consist of serious crimes, many offenders were prosecuted for more than one offence. A white-collar offender that has not had a justice contact before the white-collar crime case (selection criterion for the present study) but was prosecuted for several offences in that case, is categorized as an offender with multiple offences.[29]

Sample of white-collar offenders in high-trust positions
We selected those offenders from the overall sample that were registered as holding a high-trust white-collar position (between 2010 and 2012) according to the Netherlands Tax and Customs Administration (Chamber of Commerce Register). The most prevalent positions in this register are: director, company owner, sole shareholder, partner, and authorized representative. These positions are held in a private liability company, public company, foundation or other legal entity that is obligated by Dutch law to be registered. The sample consists of 468 white-collar offenders in high-trust positions (73.5 percent of the overall offender sample).

3.2.1.2 Control samples
Overall control group sample
The control group (N = 1,809) was drawn from the central database of the Netherlands Tax and Customs Administration that holds all registered individuals and legal entities in the Netherlands. For each white-collar offender, we pair-wise drew three control individuals who matched each offender on five sociodemographic characteristics: age, sex, region of residence in the Netherlands (13 geographically regions), income group (12 groups) and whether they had a company registered to his/her name.[30] The income of offenders was established using the mean reported income to the Netherlands Tax and Customs Administration over the years 2008-2010. Subsequently, twelve income groups

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29 Our categorization of 'one-shot' offenders is more restrictive than the categorization used in prior research. In those studies offenders with no prior arrests before the selection crime case were labeled "one-shot" offenders, despite the fact that they may have been prosecuted for more than one offence in the criterion crime case (e.g., Weisburd & Waring, 2001).

30 We used geographic region in the selection because regions differ in level of urbanization, which – in our reasoning - may have influenced the outcome measure, for example via the chance of being detected in traffic. However, analysis showed that geographic region was not significantly associated with rule-violating behaviour, and therefore we did not include region as a control variable in additional analyses.

were established, each consisting of at least twenty individuals ($N = 20$).[31] These five characteristics were then used to form a key for each offender. For example: a male, born in 1961, living in the north of the Netherlands, income group 40,000 - 49,999 euros, with a company registered to his name. This key was then used to randomly select individuals that matched these five characteristics from the central database.[32]

Control group for 'one-shot' white-collar offenders
The pair-wise sampling also allowed us to establish a matched control group (with the same five sociodemographic characteristics) for the "one-shot" white-collar offender subgroup ($N = 321$; 17.7 percent) and the multiple-record offender subgroup ($N = 1,488$; 82.3 percent).

Control group for offenders in high-trust positions
We selected from the overall control group those individuals that were registered as holding a high-trust white-collar position (between 2010 and 2012) according to the Netherlands Tax and Customs Administration (Chamber of Commerce Register). The number of control individuals occupying high-trust positions is 744 (41.1 percent of the overall control group sample).

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31 For technical limitations in the sampling procedure, we used data on *reported* income to establish income. According to Netherlands tax law, not all individuals are obligated to report income. In these instances, the income is absent in the database. Reported income can be negative, for example, when losses in a company are declared or when too much income was received in the previous year.

32 We constructed the control sample by pair-wise drawing three control individuals in 2014. At that time the offender sample consisted of 644 offenders (see Chapter 2). The original control sample was therefore 1931 (one offender could only be matched with 2 other individuals). Since then 7 offenders have died. These individuals were removed, resulting in a final sample size of 637. In the control sample, we removed the matched controls and those controls that died any time during the observation period. The control sample in the present study therefore consists of 1,809 individuals.

Table 3.1 Crime and Sociodemographic Characteristics of White-collar Offender Sample ($N = 637$)

	Total Population ($N = 637$)	One-shot Offenders ($N = 109$)	Multiple-record Offenders ($N = 528$)	High-trust Position ($N = 468$)	Not in High-trust Position ($N = 169$)
Crime Characteristics					
Number of (all) Criminal Offences	8.7	1	10.3	8.0	10.8
Number of White-collar Crime Offences	3.8	1	4.4	4.0	3.3
Crime Mix (1 - 8 Offence Categories)[33]	2.9	1	3.3	2.9	3.1
Sociodemographic Characteristics					
Male (%)	84.8	69.7	87.9	87.8	76.3
Age in 2016	50.0	52.3	49.6	51.4	46.1
Business Owner in 2014 (%) [34]	16.0	15.6	16.1	21.2	1.8
Income Category in Euro (%):					
50,000 and up	13.1	23.9	10.8	16.4	3.6
20,000-49,999	15.9	25.7	13.8	15.7	16.6
1 – 19,999	33.2	33.9	35.7	32.8	41.9
0 or Negative Income	35.8	16.5	39.8	35.1	37.9

33   Crime mix is the sum of criminal offence types. For classification we used the standard classification for offences in the Netherlands (Centraal Bureau voor de Statistiek, 2000). Criminal offences were subdivided in eight categories: five types of non-white-collar crime offences (property offences, violent offences, traffic offences, drug offences, and other offences) and three types of white-collar crime offences (tax code offences, other financial-economic offences, and white-collar offences punishable under the Dutch penal code).

34   In the sampling procedure, a specific category of legal entities was selected to establish whether an individual was a business owner. This category and the observation period differ from those used to establish whether an offender occupied a high-trust position.

3.2.2 Dependent variables

Regulatory income tax violations

Data on regulatory income tax violations were gathered from the Netherlands Tax and Customs Administration for a seven-year period (2006-2012). We used the aggregated data of two types of regulatory violations for income tax that are registered by the Netherlands Tax and Customs Administration: *omission violations* for less serious tax violations where the Netherlands Tax and Customs Administration does not assume intent, and *transgression violations* for serious, deliberate tax violations.[35]

Regulatory traffic violations

Data on traffic violations were obtained from the Netherlands Central Fine Collection Agency (CJIB) that registers all traffic violations in the Netherlands. For this study, we used the regulatory traffic violations for an eleven-year period (2003-2013) that were registered in the central register (in 2013).[36] The most common traffic violations are: driving with an expired test certificate, speeding, using a cell phone while driving, and driving through a red light.

3.2.3 Analytic plan

The analytic plan consisted of two steps. In the first step, we conducted an analysis of variance (MANOVA) on income tax violation and traffic violation, with a 2 (offender - control group) by 2 ('one-shot' offenders [and controls] – multiple-record offenders [and controls]) by 2 (high-trust positions - no position) with a full factorial design. The results give an overview of the effects of the three independent variables and their interactions on rule-violating behavior.

In the second step, we conducted analyses of variance to separately test the four hypotheses: offenders are overinvolved in rule-violating behavior compared to controls (*Hypothesis 1)*; 'one-shot' offenders commit less rule violations than the offenders with multiple criminal offences registered to their name, but commit more rule violations than matched controls (*Hypothesis 2)*; individuals in high-trust positions differ from individuals who do not hold such positions in rule-violating behavior (*Hypothesis 3)*; and, offenders in high-trust

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35 We carried out a MANOVA to examine whether white-collar offenders and controls differed on omission and transgression violations. Consistent with the combined measure, results show that offenders were statistically overinvolved in both types of income tax violation compared to controls.

36 Violations are deleted from the database after a certain time period after the Netherlands Central Fine Collection Agency has received payment for the fine or the fine is canceled or revoked. Consequently, traffic violations are not evenly distributed over the observed years: the more recent the year, the more traffic violations are in the central register.

positions show higher levels of rule violation compared to controls in similar high-trust positions (*Hypothesis 4*). As the assumption of homogeneity of the covariances for the analyses of variance was not met (BOX M-tests, p's $< .001$), we report the bootstrapped confidence intervals for all analyses to provide a more robust estimate of the effect ($N = 1,000$; 95 percent).

3.3 Results

The results from the full factorial analysis of variance are presented in the first section (§ 3.3.1) and the results for Hypotheses 1 to 4 are detailed in the second section (§ 3.3.2).

3.3.1 Full factorial analysis
The effects of the analysis of variance with a full factorial design are reported in Table 3.2. The results show strong multivariate and univariate main effects and some multivariate and univariate interaction effects. However, not all effects met the bootstrap criteria in the full factorial model, suggesting that the distribution of rule-violating behavior may have caused some of the effects. The main effect regarding the first and central hypothesis of this study met the criteria, i.e. that offenders differ from matched controls in rule-violating behavior.[37]

3.3.2 Hypotheses
Below, we report the results of the separate analyses to test the four hypotheses. Figure 3.1 and 3.2 visually depict the main results regarding the hypotheses.

Rule-violating behaviour in white-collar offenders and controls
The full factorial analysis of variance shows that rule-violating behavior differed between offenders and controls. A separate analysis of variance testing

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37   To examine if the finding that offenders committed more income tax violations than controls was caused by those who were prosecuted for a tax crime (and who may therefore be particularly inclined to engage in this type of rule violation), we repeated the full factorial analysis with a dummy variable (tax crime offender = 1) as covariate. The results show that after controlling for the influence of 'tax crime offenders', the difference between offenders' and controls' income tax violations remains large, $F(1, 2437) = 26,78$, $p < .001$, suggesting that offenders, regardless of the type of offence that led to the prosecution, committed more income tax violations than controls. Nonetheless, offenders who were prosecuted for tax-offences do appear to explain some of the difference between offenders' and controls' income tax-violations. After adding the covariate to the analysis, the F value decreased with 14.71 compared to the original analysis.

Table 3.2 Statistics for the Analysis of Variance with full Factorial Design ($N = 2,446$)

|	Multivariate			Univariate		
	Wilks' λ	F Values			F Values	CI
Main Effects						
Offender	.978	27.49	***	Income tax	41.49 ***	[-.112; -.001]
				Traffic	22.34 ***	[-.455; -.043]
One-shot Offender	.988	14.72	***	Income tax	23.96 ***	[-.040; .083]
				Traffic	9.91 **	[.007; .550]
High-trust Position	.982	22.01	***	Income tax	30.45 ***	[-.048; .076]
				Traffic	20.95 ***	[-.110; .467]
Two-way Interaction Effects						
Offender X One-shot Offender	.997	3.82	*	Income tax	5.78 *	[-.073; .054]
				Traffic	3.08	[-.511; .035]
Offender X High-trust Position	.999	1.68		Income tax	1.13	[-.054; .086]
				Traffic	1.67	[-.207; .440]
High-trust Position X One-shot Offender	.996	4.46	*	Income tax	8.93 **	[.025; .170]
				Traffic	0.26	[-.355; .385]
Three-way Interaction Effect						
Offender X High-trust Position X One-shot Offender	.999	1.73		Income tax	3.06	[-.158; .008]
				Traffic	0.10	[-.333; .469]

Note: The factor *Offender* compares the overall sample of white-collar offenders to the sample of matched controls, the factor *One-shot Offender* compares the subsample of 'one-shot' offenders and matched controls to the subsample of multiple-record offenders and matched controls, and the factor *High-trust Position* compares the subsample of individuals in high-trust position to the subsample of individuals not in high-trust position.

* p < .05, ** p < .01, *** p < .001

Hypothesis 1 confirms this result, Wilks' λ = .896; F (2, 2443) = 142.49, p < .001. Figure 3.1 depicts the average number of traffic violations and income tax violations per year in white-collar offenders and control individuals with similar sociodemographic backgrounds. It shows (univariate results) that white-collar offenders were overinvolved in traffic violations (M = 0.80, SD = 1.32), F (1, 2,444) = 106.71, p < .001; CI = [-.550; -.335], and income tax violations (M = 0.15, SD = 0.21), F (1, 2,444) = 230.77, p < .001; CI = [-.128; -.093], compared to controls (M = 0.36, SD = 0.74; M = 0.04, SD = 0.13, respectively).

Results thus confirm *Hypothesis 1*: white-collar offenders were overinvolved in both types of rule violation, but were relatively more frequently involved in income tax violations.

Figure 3.1 Average Number of Traffic Violations and Income Tax Violations per Year for White-collar Offenders and Controls (N = 2,446)
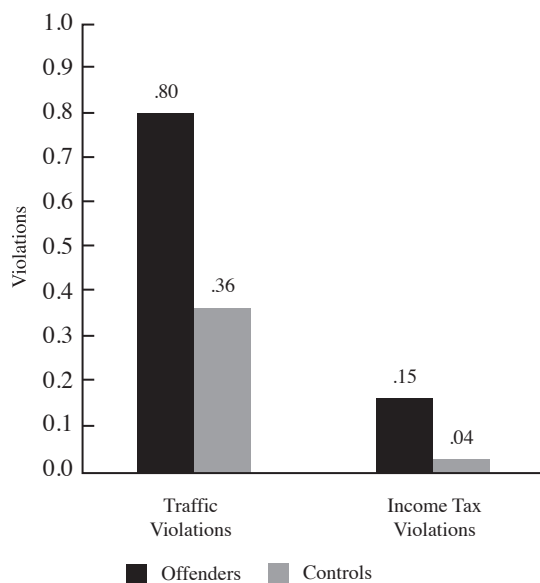
Rule-violating behaviour in 'one-shot' offenders
In order to test the differences between (1) 'one-shot' offenders and multiple-record offenders, and between (2) 'one-shot' offenders and matched controls, we performed two additional MANOVA's. The first analysis shows that 'one-

shot' offenders differed in rule-violating behaviour compared to offenders with multiple offences registered to their names, Wilks' λ = .966; F (2, 634) = 11,16, p < .001.[38] In support of the first part of the second hypothesis, univariate results show that 'one-shot' offenders were less involved in traffic violations (M = 0.55, SD = 0.88), F (1, 635) = 4.89, p < .05; CI = [.082; .517], and in income tax violations (M = 0.07; SD = 0.15), F (1, 635) = 19.85, p < .001; CI = [.063; .131], than white-collar offenders with multiple offences registered to their name (M = 0.86, SD = 1.38; M = 0.17, SD = 0.21, respectively).

Regarding the second part of this hypothesis, the results show that 'one-shot' offenders differed in rule-violating behaviour from matched controls, Wilks' λ = .945; F (2,427) = 12.35, p < .001. In line with the hypothesis, univariate findings show that matched controls were under involved in traffic violations (M = 0.30, SD = 0.55), F (1, 428) = 12.28, p < .01; CI = [-.439; -.061], and income tax violations (M = 0.02, SD = 0.10), F (1, 428) = 14.48, p < .001; CI = [-.078; -.019], compared to 'one-shot' offenders.

Taken together, the results confirm *Hypothesis 2*: 'one-shot' offenders committed less rule violations than white-collar offenders who had multiple offences registered to their name, but they committed more rule violations than matched controls with comparable sociodemographic backgrounds.

Rule-violating behaviour in high-trust positions
The full factorial analysis of variance (Table 3.2) shows inconclusive results regarding the relationship between high-trust position and rule-violating behavior (*Hypothesis 3*). A separate analysis of variance shows, however, that individuals in high-trust positions differed from individuals not occupying such positions in rule-violating behaviour, Wilks' λ = .903; F (2, 2443) = 130.49, p < .001.[39] Univariate results show that individuals in high-trust positions showed higher levels of traffic violation (M = 0.69, SD = 1.18), F (1, 2444) = 133.99, p < .001; CI = [.358; .510], and income tax violation (M = 0.11, SD = 0.20), F (1, 2444) = 179.67, p < .001; CI = [.074; .100], than individuals who do not occupy a high-trust position (M = 0.27, SD = 0.57; M = 0.03, SD = 0.10, respectively).
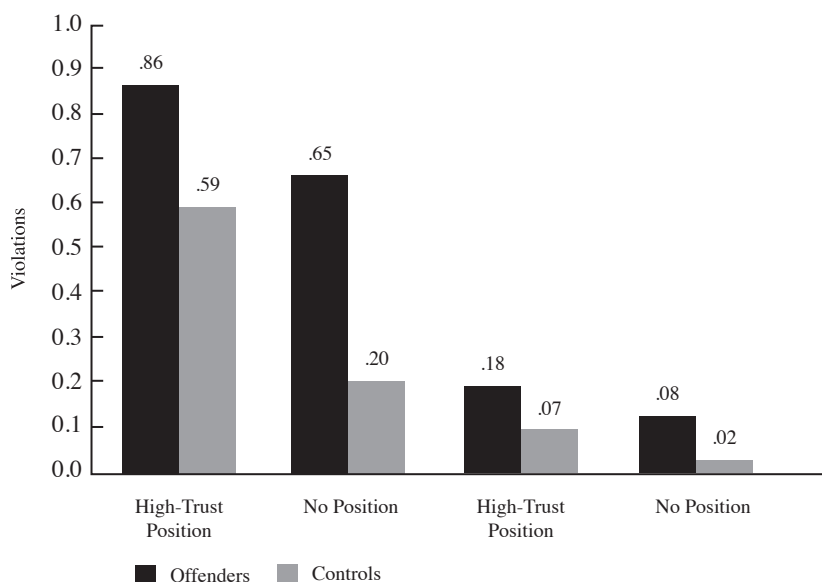
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38 As the offender subgroups differed in sociodemographic profile, we included the sociodemographic variables as covariates to control for these factors. The multivariate effect remained significant, F (2,630) = 3.19; p < .05.

39 As the high-trust position sample and non-high-trust position sample were not matched on the sociodemographic variables, we included the sociodemographic variables as covariates to control for these factors. The multivariate effect remained significant, F (2, 2439) = 123.82 ; p < .001.

To test *Hypothesis 4* we performed a MANOVA. Results, depicted in Figure 3.2, show that white-collar offenders in high-trust positions were overinvolved in rule-violating behaviour compared to their business controls, Wilks' λ = .931; F (2,1209) = 44.64, p < .001.[40] Univariate results show that white-collar offenders in high-trust positions committed significantly more traffic violations, F (1,1210) = 15.00, p < .001; CI = [-.414; -.128], and more income tax violations, F (1,1210) = 84.03, p < .001; CI = [-.127; -.080].

Taken as a whole, although the results of the full factorial model are inconclusive about the relationship between high-trust position and rule violation, the findings of the separate analysis show that high-trust positions were associated with increased levels of rule-violating behaviour (*Hypothesis 3*). Moreover, results show that white-collar offenders in high-trust positions were overinvolved in rule-violating behaviour, compared to matched controls, confirming *Hypothesis 4*.

Figure 3.2 Average Number of Traffic Violations and Income Tax violations per Year for White-collar Offenders and Controls in High-trust Positions and not in High-trust Positions (*N* = 2,446)

40   As the high-trust subsamples were not matched on the sociodemographic variables, we included the sociodemographic variables as covariates to control for these factors. The multivariate effect remained significant, F (2, 1205) = 45.48; p < .001.

3.4 Discussion

This paper started out with the commonly held notion in white-collar criminology that criminogenic individual differences have relatively little importance or even relevance for understanding white-collar crime involvement. The present study examined this notion by exploring whether white-collar offenders exhibited rule-violating behaviour in different, unrelated contexts outside an occupational and organizational setting, as a proxy for a criminogenic propensity, and compared these outcomes to a matched control sample selected from the general population, controlling for sociodemographic, crime and organizational characteristics. Several key findings emerge from this study.

Results clearly show that white-collar offenders exhibited a heightened tendency for rule-violating behaviour. Controlling for differences in sociodemographic background, our results show that white-collar offenders were overinvolved in income tax violations and traffic violations compared to controls selected from the general population. Contrary to what is suggested in earlier research, even 'one-shot' offenders showed an elevated tendency for rule-violating behaviour (e.g., Benson & Kerley, 2001; Weisburd & Waring, 2001; Wheeler et al., 1988). These results suggest that the stereotypical image of white-collar offenders as otherwise law-abiding members of society may need adjustment.

We also find that white-collar offenders in high-trust positions, such as director and partner, exhibited significantly higher levels of cross-contextual rule-violating behaviour than controls in these positions. This finding is consistent with theory and research that suggests that meaningful personal differences exist between white-collar offenders and business peers in similar organizational positions (Blickle et al., 2006; Collins & Schmidt, 1993; Gottfredson & Hirschi, 1990; Herbert et al., 1998).

Importantly, the analyses pertained to two different and unrelated types of rule-violating behaviour. The results regarding income tax violations showed that white-collar offenders were more likely to engage in rule-violating behavior that is related to the financial-economic realm. The analyses for traffic violations showed that white-collar offenders were also more likely to display rule-violating behaviour that reflects a completely different type of misconduct. This behavioural consistency indicates that factors that remain stable across different contexts, such as offender characteristics, are important in explaining the identified rule-violating behavior (Bem & Allen, 1974; Gottfredson & Hirschi, 1990).

In sum, our findings support the idea that personal characteristics underlie the identified rule-violating behaviour in white-collar offenders, including 'one-shot' offenders and those holding high-trust positions in organizations. This

finding is in line with a growing body of research in white-collar criminology that suggests that individual-level factors are highly relevant for understanding white-collar crime involvement (e.g., Alalehto, 2003; Benson & Manchak, 2014; Eaton & Korach, 2016; Elliot, 2010; Levi, 2013; Perri, 2011; Ragatz & Fremouw, 2010; Walters & Geyer, 2004). Although rule-violating behaviour examined in this study is restricted to regulatory violations outside the occupational and organizational context, a tendency of individuals to break rules is likely to be important in deviant and criminal behaviour in a work-related context as well. For example, offenders who have a tendency to break rules may be more willing to take advantage of opportunity structures (Benson & Simpson, 2009), be more receptive to unethical business cultures (Kish-Gephart et al., 2010) or align their personal goals more easily with criminogenic corporate goals (Gross, 1978). Also, individuals at the top of organizations with such a tendency may not only directly affect the executive and managerial decision-making process, but also contribute to an unethical business climate in the organization (Apel & Paternoster, 2009; Schwartz et al., 2005). Empirical support for the association between transgressions outside the business environment and work-related deviance and crime, comes from recent studies that found a positive relation between executives' rule violation outside the business environment (e.g., driving under the influence, speeding, domestic violence) and the propensity to exploit and trade on insight information (Davidson, Dey, & Smith, 2015), and between CEO's and CFO's 'off-the-job' misconduct and the propensity to misreport financial statements (Davidson, Dey, & Smith, 2016).

In closing, we address a number of potential limitations of the present study and outline our future research plans. First, even though the matched control-group design allowed us to rule out several confounding variables, we cannot fully exclude the possibility that unobserved contextual factors may have contributed to the identified elevated rule-violating behaviour in white-collar offenders. One such a factor is the chance of being audited or sanctioned by the Netherlands Tax and Customs Administration, which may differ between offenders and controls (or, for that matter, between individuals in high-trust positions and individuals who do not occupy these positions). However, this potential bias cannot account for the identified consistency with elevated traffic violations, a consistency that is in line with individual-level explanations of deviance and crime. Second, some measurements we used, such as officially registered reported income, may be incomplete. We also were not able to access certain possibly important conditions, such as the size of the organizations the high-trust position were held in. Third, white-collar offenders in our sample may not be representative of the population of white-collar offenders in the Netherlands for two reasons: the sample consisted of detected and prosecuted

offenders (who may be not representative of undetected offenders), and these offenders were involved in serious white-collar crime cases. The sample may not be representative of offenders who are involved in minor white-collar offences. Lastly, as the control samples are linked through sociodemographic profiles to the offender sample, the controls are not necessarily representative of the general population in the Netherlands, or of the population of individuals who occupy high-trust positions. However, despite these potential weaknesses, we believe that the study, with its rarely used comparative research design and unique data, has several desirable characteristics not often encountered in white-collar crime studies, and we have no grounds to assume that the limitations influenced our conclusions in a meaningful way.

We believe the findings in this study warrant further research into the nature and role of criminogenic individual-level factors in the process of white-collar crime involvement. In future research, we plan to focus on an individual-level factor that has largely been neglected in the study of white-collar crime: weakened social bonds (Hirschi, 1969; Sampson & Laub, 1993). We feel this research can advance our understanding of the complex role of individual-level factors in white-collar crime involvement in important ways.