SHORT RUNNING TITLE: The double-edged character of coercive power

The double-edged relationship between coercive power and compliance with public authority:

Evidence from a representative sample of Austrian self-employed taxpayers

Katharina Gangl, Eva Hofmann, Barbara Hartl & Erich Kirchler

University of Vienna

**Corresponding Author:**

Katharina Gangl

Department of Applied Psychology: Work, Education, Economy

Faculty of Psychology

University of Vienna

Universitaetsstrasse 7

A-1010 Vienna

Austria

[k.gangl@univie.ac.at](mailto:k.gangl@univie.ac.at); T 0043-1427747368

The double-edged relationship between coercive power and compliance with public authority:

Evidence from a representative sample of Austrian self-employed taxpayers

**Abstract**

Empirical evidence on the impact of public authorities’ coercive power on compliance of citizens is inconsistent. In some studies, coercive power had a positive effect and in other studies it had a weak or negative effect on compliance. This inconsistency may be related to the double-edged nature of coercive power. Cluster analysis of data from a representative sample of self-employed taxpayers confirmed that some citizens perceive coercive power as illegitimate and do not trust public authority whereas others perceive coercive power as legitimate and do trust public authority. This perceptual difference may determine whether citizens’ interactions with public authority is characterized by antagonism and lack of compliance or synergism and compliance. Results also indicate that perceiving coercive power as a targeted way to safeguard citizens in contrast to as a random threat to citizens reinforces the double-edged perception of coercive power. Theoretical and practical conclusions as to how coercive power can enhance interaction climates and cooperation are drawn.

**APA Keywords**: control, law enforcement, legitimacy, tax compliance, trust

Public authorities such as tax authorities or courts typically use coercive power to control and punish citizens to enforce compliance with the law (Allingham & Sandmo 1972; Alm & Torgler, 2011; Becker, 1968). However, empirical studies do not consistently show that coercion increases compliance. Some studies have found a positive association between coercion and compliance whereas others have found small or negative associations (Andreoni et al. 1998; Balliet et al. 2011; Gneezy & Rustichini 2000). It is assumed that these different effects of coercive power on compliance depend on whether coercive power is perceived as applied by legitimate or illegitimate authorities.

Empirical pedagogical research (e.g. Kowal et al. 2002; Ripski & Gregory 2009) and leadership research (e.g. Ball et al. 1994; Huo et al. 1996) provide some evidence for the double-edged character and effect of coercive power in the form of control and punishment. There is also experimental evidence relevant to the double-edged character of public authorities’ coercive power (Hartl et al. 2015; Hofmann et al. 2014; Mulder et al. 2009; Verboon & van Dijke 2011). There is, however, a lack of field-based research on representative samples of citizens analyzing double-edged perceptions about the coercive power of public authorities. Hence, it is not clear whether the double-edged nature of coercive power is only an experimental artefact or a perception that really exists in the field and whether it is affecting the perceived interaction climate between authorities and citizens. There is also limited empirical evidence on what determines whether coercive power is perceived as legitimate or not such as the perception that coercive power is a targeted way to safeguard citizens or a random instrument to threaten citizens. Such empirical research would provide public authorities with insights that could be used to improve public perceptions of coercive power, increase public confidence in the authorities that wield it, improve the public’s relationships with such authorities and most importantly increase compliance with the law (Gangl et al. 2015; Gangl et al. 2012; Putnam 1995).

This paper used the slippery slope framework (Kirchler et al. 2008), which describes cooperation with public authorities in terms of the perceived power of authorities and trust in authorities, to examine whether the double-edged perception of coercive power can be found in the field and to analyze assumptions about possible determinants of the double-edged character of coercive power. Perceptions of how coercive power is used ‑ against rule-breakers to safeguard the cooperative majority or randomly to threaten the community in general ‑ may be related to beliefs about the regulating authorities applying such power (Gangl et al. 2015).

The purpose of this study was to examine empirically whether both views of public authorities’ coercive power are perceived in a representative sample of citizens and whether perceptions of the use of coercive power influence the context of citizens’ interactions with public authorities and their cooperation with public authorities. We also aimed to investigate factors which might determine perceptions of coercive power. A representative sample of self-employed taxpayers was analyzed to assess the tone and context of citizens’ interactions with public authority. Self-employed taxpayers represent a particularly interesting group of citizens for researchers interested in the double-edged character of coercive power because they interact frequently with the tax authorities, a public authority which typically uses coercive power in the form of audits and fines to enforce the law. One of the aims of this study was to use cluster analysis of taxpayers’ perceptions – collected via a survey ‑ to show that in the tax context coercive power has a double-edged character and that this explains differences in patterns of interaction with the tax authorities and compliance with relevant laws. We also analyzed possible determinants of perceptions of coercive power, such as whether coercive power is thought to be used randomly or in a targeted way and whether it is used to threaten or to safeguard.

The paper proceeds as follows. The role of coercive power in compliance is outlined in the first section on theoretical background. In the second section we discuss coercive power’s double-edged character and how this affects citizens’ interactions and cooperation with public authorities which wield coercive power. In the third section of the theoretical background some possible determinants of perceptions of coercive power are presented. After a summary of research objectives, the method and results are detailed. We conclude by outlining some of the implications of our findings for research and public policy.

# Theoretical Background

## Coercive Power and Compliance

Coercive power is defined as use of control and punishment to enforce or deter. It is one of the most important means of public authorities to regulate public life and to enforce the law (Allingham & Sandmo 1972; Becker 1968; Parker 2000; Srinivasan 1973). Control and punishment are assumed to change the utility function governing the rational citizen’s behavior and hence to affect citizens’ cooperative behavior (Becker 1968). In the context of the power to control and punishment, the utility of defection decreases and the utility of cooperation increases, because detected and punished non-cooperation has a lower payoff than cooperation (Becker 1968). Survey studies as well as laboratory and field experiments show that high coercive power in the form of severe controls and punishments is indeed an effective method of increasing cooperation with public authorities, including compliance with the tax law (Alm et al. 1992; Blackwell 2010; Hasseldine et al. 2007; Kleven et al. 2011), labor regulations (Ronconi 2010) and conservation laws (Floeter et al. 2006; Hilborn et al. 2006).

However, control and sanctions are not always as effective as expected in ensuring compliance and sometimes backfire (Andreoni et al. 1998; Ariel 2012; Gangl et al. 2014; Gneezy & Rustichini 2000; Kleven et al. 2011; Slemrod et al. 2001). A field experiment, in which coercive power was manipulated by sending deterrent letters to taxpayers, found that coercion had no effect on compliance with tax regulations (Ariel 2012). In this study, a randomly selected group of taxpayers received a letter stating that the tax authorities were using new methods of auditing and that punishments for tax evasion would be harsh. Receiving this letter did not increase tax compliance relative to a control condition in which no letters were sent (Ariel 2012). A similar field experiment indicated that deterrent letters actually reduced compliance in high income taxpayers (Slemrod et al. 2001). Field experiments on duty avoidance have indicated that enforcement only leads individuals to switch to alternative duty avoidance schemes which are less likely to result in enforcement action (Yang 2008). A scheme under which parents who were late in collecting their children from day care were fined backfired, leading to an increase in the number of parents who were late (Gneezy & Rustichini 2000). These instances where coercive power has a weak or inconsistent effect on cooperation could be accounted to the double-edged nature of coercive power.

## The Double-edged Nature of Coercive Power

There is an assumption that citizens differ in how they perceive the coercive power of public authority (Ball et al. 1994; Gangl et al. 2015). Coercive power might be rejected and disliked or, in contrast, might be approved and endorsed. Thus, some citizens might think that coercive power is used by an illegitimate public authority which they do not trust whereas other citizens consider that the public authority using coercive power is legitimate and trustworthy. From this it follows that some citizens might view their interactions with public administration from a more synergistic perspective and therefore be more compliant than others with a different perception of public administration (Gangl et al. 2015; Hofmann et al. 2014; Molm 1994; Verboon & van Dijke 2011).

Coercive power is based on authorities’ ability to control and punish. In contrast, legitimate power is defined as wielded by an authority whose leadership is accepted and which is appreciated for its work, and perceived to employ skilled staff, provide information and assist citizens in complying with the law (French & Raven 1959; Gangl et al. 2015; Raven et al. 1998; Tyler, 2006a). The definition of trust includes both rational and implicit trust (Castelfranchi & Falcone 2010). Trust in public authority is rational if it is deliberately perceived as working for an important goal, benevolent, motivated and competent; over time positive experiences with an administration which has these characteristics also fosters implicit and automatic trust in that public administration (Gangl et al. 2015).

In combination with legitimate power and trust in public authorities coercive power might play a crucial role in determining the context and tone of interactions between authorities and citizens, and the likelihood that citizens will cooperate with authorities (Kirchler et al. 2008). The double-edged nature of coercive power might thus be one factor that explains the inconsistent effects of coercive power on compliance. In studies where coercive power had a weak or negative effect on compliance with the law (Andreoni et al. 1998; Ariel 2012; Slemrod et al. 2001) this may have been because it was wielded by an authority which was not trusted and was perceived as illegitimate. Correspondingly, where coercive power had strong positive impact on compliance (Alm et al. 1992; Hasseldine et al. 2007) this may have been because it was wielded by an authority which was viewed as legitimate and trustworthy.

It has frequently been argued that the perceived legitimacy of power is an important determinant of cooperation with public administration such as tax authorities (Gangl et al. 2013; Hofmann et al. 2014; Kastlunger et al. 2013; Levi et al. 2009), the police force (Jackson et al. 2013) or the courts (Tyler 2006b; Tyler & Jackson 2014). Trust in public authority, which closely mirrors the perceived legitimacy of their power (Kastlunger et al. 2013; Levi et al. 2009), is also seen as an important driver of cooperation with public authority (Feld & Frey 2002; Kirchler et al. 2014; Wahl et al. 2010). Thus, it seems reasonable to assume that the context of interactions and the extent of cooperation is determined by a combination of perceptions of coercive power and the perceived legitimacy of and trust in the authority wielding power (Alm & Torgler 2011; Gangl et al. 2015; Waeraas 2010). Coercive power wielded by untrusted authorities lacking legitimacy is probably associated with generally antagonistic interactions and low compliance (Verboon & van Dijke 2011. In this antagonistic interaction, authorities and citizens exhibit mutual distrust and interact “like cops and robbers” (Kirchler et al. 2008). The authorities are perceived as hostile and authoritarian and more interested in catching citizen out than helping them to comply with the law; this fosters hostility and resistance towards compliance among the citizens (Kirchler 2007; Kirchler et al. 2008). In contrast, when coercive power is wielded by legitimate and trusted public authorities it tends to generate a psychological contract between citizens and authority which is based on positive reciprocity (Fehr & Gaechter 2000; Feld & Frey 2007); in other words a context in which interactions are synergistic and citizens cooperate willingly because they feel supported (Gangl et al. 2015; Kirchler et al. 2014).

Experiments have provided evidence for the double-edged nature of public administration’s coercive power and its divergent impact on interaction contexts and compliance (Hartl et al. 2015; Hofmann et al. 2014). In two tax experiments participants were asked to imagine earning income and paying taxes in a fictitious country in which tax authorities wielded high coercive power and had high or low legitimacy. The results showed that coercive power combined with lack of legitimate authority was associated with lack of trust in tax authorities, an antagonistic context in which citizens feel harried and low compliance. In contrast, coercive power combined with legitimate authority was associated with high trust in authorities, a synergistic context in which citizens felt supported and high compliance (Hartl et al. 2015; Hofmann et al. 2014). Another experiment showed that when a university used coercive power to deal with plagiarism the university’s perceived moral authority and compliance with the rules on plagiarism were related to the fairness of the procedures – a proxy for legitimacy ‑ involved. When used unfairly coercive power was associated with lack of moral authority and low compliance (Verboon & van Dijke 2011) whereas when it was used fairly it was associated with moral authority and high compliance (Verboon & van Dijke 2011).

Similar, experiments indicate that in the context of high trust in the authority wielding it, coercive power increases cooperation more than when it is wielded by an untrusted authority (Kogler et al. 2013; Mulder et al. 2009; Wahl et al. 2010). A meta-analysis of 83 studies on the impact of punishment in 18 different societies showed that in a public good game, the impact of punishment on cooperation was stronger in countries in which general trust, measured by the World Value Survey and the European Value Survey, was rather high than low (Balliet & van Lange 2013). Coercive power exerted by a trusted authority was also reported to lead to stronger moral judgments about rule-breaking behavior than coercive power exerted by an untrusted authority (Mulder et al. 2009).

The existing empirical evidence is only indirectly relevant to the divergent impact of coercive power wield by public authority as it is based on experimental manipulations of student samples. It is not clear whether the double-edged nature of coercive power can be found in a field study in which the real experiences of citizens with the authorities and not fictitious manipulations are analyzed. There is a lack of research in representative samples of citizens who have experience of interacting with public authorities.

## Factors Determining the Impact of Coercive Power

Theoretical assumptions about determinants of the double-edged character of coercive power can be derived from the slippery slope framework of tax compliance (Gangl et al. 2015; Kirchler et al. 2008). It is assumed that the way in which citizens interpret coercive power may determine its impact (Ball et al. 1994). If coercive power is perceived as being applied randomly, and as a threat to cooperative citizens, the authorities using it may be seen as illegitimate and trust in them is low (Gangl et al. 2015). It follows that when there is a perception that coercive power is being used arbitrarily to harry citizens the authority using it is likely to be disregarded. For instance, empirical organizational research has found that employees who are punished regardless of their actual performance perceive the punishing organization as unjust and reduce their cooperation with it (Thau et al. 2008). In contrast, when coercive power is seen to be targeted against those who intentionally break rules and is perceived as safeguarding compliant citizens, the authority exercising that power is more likely to be viewed as legitimate and is trusted (Gangl et al. 2015). Coercive power might be seen as a way of upholding social norms of cooperation and deterring misconduct in members of a social group (Trevino 1992). When coercive power is perceived to be directed against a legitimate social target, i.e. against individuals who intentionally defect it may be perceived as professional intervention to protect the cooperative system (Gangl et al. 2015) and hence as legitimate; in this context coercive power may increase trust in the authority wielding it. The slippery slope framework suggests that the double-edged character of coercive power may be related to perceptions about how it is used: whether it is used randomly or in a targeted way and whether it is perceived as a threat or a safeguard (Gangl et al. 2015). There is, however, a lack of empirical research into possible determinants of perceptions of public authorities’ coercive power.

## Research Objectives

The aim of the present study was to examine the double-edged character of coercive power based on a representative sample of self-employed taxpayers. Self-employed taxpayers, unlike employed taxpayers whose taxes are deducted at source, have to file tax returns themselves and thus have to interact with public authorities, i.e. the tax authorities (Antonides & Robben 1995; Engström & Holmlund 2009). This makes self-employed taxpayers an ideal population in which to analyze cooperation between citizens and public authorities and public administration. In this study, cluster analysis was used to analyze whether perceptions of coercive power in a representative sample would reflect the presumed double-edged nature of coercive power. We examined whether some taxpayers perceive coercive power as wielded by illegitimate and untrusted authorities whereas other taxpayers perceived coercive power as wielded by legitimate and trusted authorities. We also analyzed whether perceptions of coercive power affected perceptions about interactions with the authority wielding it and compliance with that authority’s rules. Finally, we analyzed whether perceptions about how coercive power is used (randomly or in a targeted way) and to what end (to threaten or safeguard citizens) might account for the divergence in perceptions about coercive power.

# Method

## Sample

A market research agency recruited the sample by contacting members of a research panel and randomly selected individuals from the Austrian population. About 4000 individuals were contacted to achieve a final sample of 500 self-employed taxpayers from various different sectors. The sample is representative of the population of Austrian self-employed taxpayers with respect to sex (61.0% male) and age (*M* = 44.46 years, *SD* = 10.55; range: 20-66 years). The participants had on average been self-employed for 12.1 years (*SD* = 11.15;). Most of them reported an annual turnover of less than 25,000 Euros (35.6%; 25,001 Euros – 50,000 Euros: 26.2%; more than 50,000 Euros: 38.2%) and had no employees (75.0%; 1‑5 employees: 20%; more than 5 employees: 5%; range: 0‑1000 employees). The distribution of net monthly income was more even (up to1000 Euros: 34.2%; 1001 Euros ‑ 2000 Euros: 36.8%; more than 2000 Euros: 29%).

## Material and Procedure

Participants were paid 1.50 Euros (roughly equivalent to 2.00 US dollars at the time of data collection) for participation in an online questionnaire. The questionnaire consisted of the following scales which were adapted from Hofmann et al. (2014): perceived coercive power (three items), perceived legitimate power (13 items), trust in tax authorities assessed as implicit trust (three items), perceived antagonistic interaction (three items), and perceived synergistic interaction style assessed as perceived service interaction (three items). Perceptions of the extent to which authorities used their coercive power in a random rather than targeted way and perceptions of the extent to which coercive power was used to threaten rather than safeguard citizens were assessed with four items each. Tax compliance intention was assessed with the following item: “How likely is it that you will pay your taxes for the current year correctly and in full?”. Responses were given on a seven-point Likert scale. Three formats were used: 1 = totally disagree to 7 = totally agree, 1 = not at all to 7 = extreme and 1 = very unlikely to 7 = very likely. Items, reliabilities, means and standard deviations for all scales are presented in the Appendix. Socio-demographic variables such as age, sex, turnover, number of employees and income were also assessed.

# Results

The results section is divided into two parts. In the first part, which is separated into three subsections, the double-edged character of coercive power is assessed by a) cluster analysis of perceived coercive power, legitimate power and trust in authorities, b) comparing the perceived interaction style among the clusters and c) comparing the tax compliance intention among the clusters. The second part examines possible reasons for the double-edged character by comparing perceptions of the use of coercive power (random or targeted; to threaten or to safeguard) among the clusters.

## Divergent Effects of Coercive Power

**Clusters relating to perceptions of the coercive power, legitimacy and trust in tax authorities.**

Cluster analysis was used to identify groups of taxpayers which were homogeneous with respect to their perceptions of coercive power and legitimate power as well as their trust in the tax authorities. The cluster analysis was conducted in two stages (Abu Sharkh & Gough 2010; Brosius 1998). First hierarchical cluster analysis (HCA) was used to identify the number of clusters in the sample and then k-means cluster analysis (KCA) was used to group the self-employed into the appropriate number of clusters.

The HCA used squared Euclidean distance and the Ward method to identify clusters based on responses to scales assessing perceptions of the coercive power and legitimate power and trust in the tax authorities (Brosius 1998). A sequence of distance coefficients indicating similarly small differences between clusters (*C* = 49.01, *C* = 57.64, *C* = 87.76, *C* = 93.03, *C* = 108.89, *C* = 227.39, *C* = 250.78) was followed by an abrupt increase in the distance coefficients separating clusters 4 and 3 (*C* = 340.78) and 3 and 2 (*C* = 1035.87), indicating that a three-cluster solution was the optimal representation of the degree of differentiation among the sample (Brosius, 1998). We therefore conducted KCA specifying a three-cluster solution based on responses to the scales assessing coercive power, legitimate power and trust in tax authorities. Analysis of variance confirmed the results of the KCA as it also showed group effects with respect to perceptions of coercive power (*F*(497, 2) = 258.47, *p* < .001, η2p = .51), legitimate power (*F*(497, 2) = 63.20, *p* < .001, η2p = .20) and trust in tax authorities (*F*(497, 2) = 524.62, *p* < .001, η2p = .68). As Table 1 shows, cluster 1 represents the self-employed who perceived that the tax authorities had a lot of coercive power, little legitimate power and that the authorities cannot be implicitly trusted; cluster 1 accounted for 33.8% of the sample. Cluster 2 represents those who thought the tax authorities had little coercive power and legitimacy and that the authorities also cannot be trusted; cluster 2 accounted for 39.2% of the sample. Finally, cluster 3 accounted for 27.0% of the sample and represented those who thought, like cluster 1, that the tax authorities had a lot of coercive power, but unlike the other clusters, that they were legitimate and that the authorities are trusted implicitly. The socio-demographic profiles of the clusters are presented in Table 2; there were no cluster differences with respect to socio-demographic variables (all *p* > .20) with the exception of age (*F*(497,3) = 4.24, *p* = .02, η2p = .02). Cluster 3 participants were older than those in cluster 2, and marginally older than those in cluster 1. We included age as a covariate in all subsequent analyses; this did not affect the results. Therefore, we present the remaining results without covariates.

Table 1. Means and standard deviations of the three clusters with respect to perceptions of coercive power, legitimate power, and trust in tax authorities

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cluster 1  (*N* = 169)  33.8% | Cluster 2  (*N* = 196)  39.2% | Cluster 3  (*N* = 135)  27.0% |
| Coercive power | 5.66 (1.07)a | 3.66 (0.91)b | 5.76 (0.97)a |
| Legitimate power | 3.42 (0.84)a | 3.86 (0.71)b | 4.48 (0.94)c |
| Implicit trust | 1.77 (0.80)a | 3.79 (1.06)b | 5.36 (1.03)c |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.

Table 2: Socio-demographic characteristics of clusters of self-employed taxpayers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cluster 1 | Cluster 2 | Cluster 3 |
| Female |  | 36.7% | 40.8% | 39.3% |
| Age |  | 44.27 (10.65)a | 43.17 (10.45)a | 46.57 (10.29)b |
| Annual turnover (in Euros) | 0– 25,000 | 33.7% | 38.3% | 34.1% |
|  | 25,001–50,000 | 24.3% | 26.0% | 28.9% |
|  | 50,001–100,000 | 11.8% | 15.8% | 17.8% |
|  | > 100,000 | 30.2% | 19.9% | 19.3% |
| Employees | No employees | 72.2% | 76.5% | 76.3% |
|  | 1–5 employees | 22.5% | 17.3% | 20.7% |
|  | > 5 employees | 5.3% | 6.1% | 3.0% |
| Net monthly income (in Euros) | 0–1000 | 33.7% | 36.2% | 31.9% |
|  | 1001–2000 | 34.9% | 33.7% | 43.7% |
|  | > 2000 | 31.4% | 30.1% | 24.4% |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.

**Comparing clusters with respect to interaction style.** Analysis of variance was used to assess whether differences in perceptions of coercive power, represented by the clusters, were related to differences in perceptions about interaction style. There were differences between the clusters with respect to perceptions about the extent to which interactions with the tax authorities were antagonistic (*F*(497, 2) = 39.98, *p* < .001, η2p = .14) and synergistic (*F*(497, 2) = 38.51, *p* < .001, η2p = .13). Table 3 shows that participants in cluster 3, who thought that the tax authorities had a lot of coercive power but also legitimate power and can be trusted, perceived the interaction as more synergistic than the other clusters (difference to cluster 1: *t*(302) = -7.96, *p* < .001, *Cohens’ d* = .71; difference to cluster 3: *t*(329) = -2.636, *p* = .009, *Cohens’ d* = .92). Cluster 1, who thought that the tax authorities had a lot of coercive power but lacked legitimate power and cannot be trusted consider the interaction style more antagonistic than the other clusters (difference to cluster 2: *t*(363) = 8.51, *p* < .001, *Cohens’ d* = .90; difference to cluster 3: *t*(302) = 6.24, *p* < .001, *Cohens’ d* = .72). In Cluster 2, who thought the tax authorities had relatively little coercive power or legitimate power and cannot be trusted, perceptions about interactions with the tax authorities were intermediate between those of clusters 1 and 3. Cluster 2 thought interactions were less antagonistic and more synergistic than did cluster 1, but did not think the interaction was as synergistic as cluster 3 did.

**Comparing clusters with respect to tax compliance intention.** Analysis of variance was used to assess whether perceptions about coercive power, represented by the identified clusters, were related to differences in tax compliance intention. There were cluster differences in intention to pay taxes on time and in full (*F*(497, 2) = 5.69, *p* = .004, η2p = .02). Table 3 shows that tax compliance intention was higher in cluster 3 (perceive tax authorities as having a lot of coercive power, legitimate power and can be trusted) than the other clusters (difference to cluster 1: *t*(302) = -2.21, *p* = .03, *Cohens’ d* = .26; difference to cluster 2: *t*(329) = -3.48, *p* = .001, *Cohens’ d* = .39). Clusters 1 and 2 were not significantly different with respect to tax compliance intention.

Table 3: Means and standard deviations of the three clusters with respect to perceptions about interactions with and service from the tax authorities, and tax compliance intention

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cluster 1 | Cluster 2 | Cluster 3 |
| Antagonistic interaction |  | 4.91 (1.78)a | 3.51 (1.37)b | 3.68 (1.63)b |
| Synergistic interaction |  | 2.38 (1.34)a | 3.30 (1.25)b | 3.71 (1.55)c |
| Tax compliance intention |  | 6.09 (1.67)a | 5.88 (1.69)a | 6.47 (1.23)b |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.

**Assessing possible reasons for differences in perceptions about the nature of coercive power.** We compared the clusters’ perceptions of how the tax authorities used their coercive power. There were cluster differences in perception about whether coercive power was directed randomly or in a targeted way (*F*(497, 2) = 27.19, *p* < .001, η2p = .10) and whether it was used to threaten or safeguard citizens (*F*(497, 2) = 15.27, *p* < .001, η2p = .06). Table 4 shows that participants in cluster 1 (perceive tax authorities as having a lot of coercive power, but illegitimate and cannot be trusted) felt that the tax authorities used their coercive power in a less targeted way (difference to cluster 2: *t*(363) = -4.22, *p* < .001, *Cohens’ d* = .44; difference to cluster 3: *t*(302) = -6.73, *p* < .001, *Cohens’ d* = .78) and more threatening way (difference to cluster 2: *t*(363) = -3.86, *p* < .001, *Cohens’ d* = .40; difference to cluster 3: *t*(302) = -4.98, *p* < .001, *Cohens’ d* = .58) than did the other clusters. In contrast, cluster 3 (perceive tax authorities as having a lot of coercive power and legitimate power and who trust the tax authorities) thought the tax authorities used their coercive power in a more targeted way than did the other clusters. Cluster 2 (perceive tax authorities as having little coercive power or legitimate power and who do not trust the authorities) once again had a position between that of clusters 1 and 3.

Table 4: Means and standard deviation of the three clusters for evaluations of power

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cluster 1 | Cluster 2 | Cluster 3 |
| Targeted |  | 3.69 (1.64)a | 4.31 (1.17)b | 4.87 (1.36)c |
| Safeguard |  | 4.09 (1.83)a | 4.74 (1.41)b | 5.06 (1.48)b |

# *Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly differently.

# Discussion

This study highlights the prevalence and importance of divergent perceptions of public authorities’ coercive power. In a representative sample we found that a public authority (i.e. the tax authority) wielding coercive power was perceived as illegitimate and is not trusted or is perceived as legitimate and is trusted. These perceptions influenced perceptions of how antagonistic or synergistic the tax authority was in its dealings with taxpayers and how likely people were to comply with laws enforced by the tax authority. This study is also the first to provide insights into why citizens have divergent perceptions about the coercive power of public authorities. As the slippery slope framework predicts, perceptions about how coercive power is used seem to determine perceptions about the public authority wielding it. If there is a perception that coercive power is used randomly rather than targeted against rule-breakers or that it is used to threaten compliant citizens rather than safeguard them the relevant authority is regarded as relatively illegitimate and hence, is not trusted (Gangl et al. 2015). This study indicates that using coercive power randomly or as a threat is likely reducing public confidence and leads to a more antagonistic relationship between the citizen and the authority wielding power. Moreover, such authorities run the risk that this will not lead to any increase in cooperation with the law. This paper therefore has important theoretical and practical implications for public policy and indicates how coercive power should be used to enhance rather than jeopardize trust and cooperation.

These results, which are based on a field study of a representative sample of self-employed Austrians, show that use of coercive power by an authority lacking in legitimacy and public trust is likely leading to a hostile relationship characterized by antagonistic interactions, between that authority and citizens (Kirchler et al. 2008; Kirchler et al. 2014). These data thus corroborate experimental studies which produced similar results (Hofmann et al. 2014). An illegitimate, untrusted authority does not seem to be compatible with the existence of a psychological contract between authorities and citizens based on positive reciprocity (Fehr & Gaechter 2000; Feld & Frey 2007). Under these circumstances citizens feel harried by the tax authorities who feel in turn that they have a right to hide their affairs from them (Kirchler et al., 2008). Citizens who are confronted with authorities they perceive as illegitimate and which they do not trust are likely not cooperating with the authorities and also will refuse to take over responsibility in their community (Muehlbacher et al. 2011; Wahl et al. 2010). It follows that in the context of an antagonistic relationship between citizens and public authority, coercive power destroys public confidence and social capital and may thus hinder social and economic development (Knack & Keefer 1997; Putnam 1995).

These results also show that legitimacy and trust seem to prevent the exercise of coercive power generating antagonism and instead foster a synergistic relationship between citizens and public authority. It may be that a legitimate, trusted public authority wielding coercive power is thought to have high moral standards and work in the interest of the community (Verboon & van Dijke 2011) thus triggering a positive reciprocal relationship which results in greater compliance (Feld & Frey 2002).

The classical economics of crime approach of public authorities assumes that coercive power deters and changes citizens’ utility function which in turn fosters cooperation (Allingham & Sandmo 1972; Becker 1968; Srinivasan 1973). However, similar to other previous published studies (Hofmann et al. 2014; Verboon & van Dijke 2011) and in contrast to the classical economic approach, our results suggest, that the effectiveness of coercive power is not only due to its deterrent value and the effect this has on utility functions (Becker 1968). It seems that coercive power is also effective because the authorities wielding it are perceived as legitimate and are trusted to use it in a targeted way to safeguard the interests of law abiding citizens (Gangl et al. 2015). The present study suggests that heavy use of coercive power might not increase compliance if the authority wielding it is perceived as illegitimate and is not trusted. Only when coercive power is used legitimately by a trusted authority does greater use of coercive power seem to increase compliance. This relationship between perceptions of the authority wielding coercive power and the impact of coercive power on compliance may explain why some empirical studies found that coercive power had weak or no effect on cooperation (Andreoni et al. 1998; Ariel 2012).

These results corroborate and extend current theory and the body of evidence suggesting that coercive power must be strong enough *and* fair if it is to affect behavior (Van Dijk et al. 2014; Verboon & van Dijke 2011). Our data also corroborate the assumption that authorities should make use of a comprehensive range of techniques when interacting with citizens, including taxpayers (Braithwaite, 2003b, Leviner 2008). When coercive power is used fairly by public institutions, in the context of effective service provision and public campaigns highlighting their role, they are likely to be perceived as legitimate and will generate trust which in turn may increase compliance. Our results also suggest that public authorities which fail to use techniques to enhance their legitimacy will find that coercive power has little effect on compliance.

This study is one of the first to provide empirical evidence on the determinants of divergent perceptions of coercive power. Perceptions about how coercive power is used (randomly or in a targeted way; to threaten or to safeguard) seem to explain why some citizens disapprove of public authorities’ having coercive power whilst other citizens endorse it. As the slippery slope framework posits, coercive power which is perceived as a professional protection of law abiding citizens will increase perceived legitimacy of authorities and trust in authorities (Gangl et al., 2015). This study thus provides important theoretical and practical insights into the functioning of coercive power but the cross-sectional design does not permit causal inferences. Future experimental studies are needed to confirm our findings and conclusions.

These data indicate that perceptions about the use of coercive power (targeted or random; to threaten or to safeguard) might play a role in determining how the authority wielding it is perceived. The effect sizes were, however, rather small indicating that other variables not investigated here might also help to explain the double-edged perceptions of coercive power. Future research should investigate this possibility. We suggest that social norms are another important influence on perceptions of coercive power, alongside the legitimacy of the authority and alongside trust in the authority wielding coercive power. Social norms are defined as specific behaviors approved of or executed by the majority of citizens in a given context. It is well-established that, in general, social norms are determinants of cooperation (Cialdini & Goldstein 2004; Cialdini et al. 1991) and tax compliance in particular (Wenzel 2004, 2005). Citizens who perceive that coercive power is wielded by a legitimate and trusted authority may consider that the authority deals effectively with free-riders and rule-breakers. Under these circumstances one would expect the public authorities to be perceived as maintaining or enforcing a fair system and consequently that cooperation with public institutions would be the social norm (Balliet et al. 2011; Coletti et al. 2005). It follows that most citizens would behave according to the social norm and comply with the regulations imposed by the authorities. This argument conflicts with evidence that use of coercive power reduces trust among members of a group (Mulder et al. 2006; Van Dijk et al. 2014). Future empirical research should clarify whether coercive power wielded by a legitimate and trusted authority reduces or increases trust among the population subjected to it and hence weakens or strengthens the social norms for compliance.

It has been argued that in the context of a legitimate and trusted authority sparing use of coercive power should have a positive impact on cooperation and facilitate a synergistic interaction style (Gangl et al. 2015), but we found no evidence that such a configuration existed in this representative sample of self-employed taxpayers. We suggest that there are two possible explanations for this. The first is, that in Austria taxpayers may not perceive a confidence climate in which only trust plays a role and coercive power is not needed. The second is, that taxpayers may not want to admit that they trust the authorities which wield low coercive power. However, trust is often defined as the opposite of power (Luhmann 2000) and it may be that implicit measures of trust and synergism in interactions are needed to reveal citizens’ trust in authorities wielding low coercive power. These results, which indicate that authorities without power are not trusted, contradict theoretical arguments that many citizens are committed and willing to cooperate voluntarily with the state in the absence of effective enforcement mechanisms (Braithwaite 2003a; Gangl et al. 2015).

Our findings suggest strategies for future empirical research on compliance with the law. For instance, future field experiments in which coercive power, legitimacy or trust in authorities are manipulated should take into account that lack of coercive power can be perceived as weakness, and that use of coercive power may be seen as too hostile or random. Neglect of these variables may account for the inconsistent findings of previous research examining the combined effect of coercive power, legitimate power, and trust in authorities on cooperation (Fellner et al. 2013; Gangl et al. 2014). Previous research found that high coercive power with proxies of high legitimate power and high trust did not increase cooperation with public authorities relative to a control condition with no intervention (Fellner et al. 2013; Gangl et al. 2015). It might be that instead of producing a perception of high and targeted coercive power, these interventions produced a perception of low and random coercive power (Fellner et al. 2013). Similar, simply conducting audits in a more friendly way (Gangl et al. 2014) might not be sufficient to generate perceptions that coercive power is effective and used in a targeted way. Future field experiments should place more emphasis on creating credible manipulations of the magnitude of coercive power and the legitimacy and trustworthiness of the authority using it in order to influence perceptions about whether coercive power is used in a targeted way to safeguard citizens’ interests. Pretesting manipulations in the laboratory might be helpful.

This study has some limitations. The robustness of the cluster analysis is open to doubt since to some extent the number of clusters is always a subjective judgment (Abu Sharkh & Gough 2010). Our cluster analysis indicated that in our representative sample of self-employed Austrians only three out of many theoretically possible clusters seemed likely to be represented. Other clusters may exist, but perhaps in numbers too small to be represented in our sample. Another limitation is that our conclusions are based on an Austrian sample, and Austria has comparatively high levels of public confidence and tax compliance (Alm & Torgler 2006; Schneider et al. 2010; Van de Walle et al. 2008). To confirm the generalizability of our results further research should be conducted in countries where there is less trust in public authorities and lower tax compliance.

This study provides important insights into the reasons for and consequences of divergent perceptions of coercive power. The double-edged character of coercive power can be explained within the slippery slope framework (Gangl et al. 2015; Kirchler et al. 2014). The practical implication of our study is that public authorities should try to ensure that citizens perceive that their use of coercive power is targeted against rule-breakers and used to safeguard citizens’ interests. They will then be perceived as legitimate and will gain trust of citizens, which is crucial to promoting a synergistic relationship and compliance with the law.

# References

Abu Sharkh M, Gough I (2010) Global Welfare Regimes: A Cluster Analysis. *Global Social Policy* 10, 27-58.

Allingham MG, Sandmo A (1972) Income Tax evasion: A Theoretical Analysis. *Journal of Public Economics* 1, 323-338.

Alm J, Jackson J, McKee M (1992) Estimating the Determinants of Taxpayer Compliance with Experimental Data. *National Tax Journal* 45, 107-114.

Alm J, Torgler B (2006) Culture Differences and Tax Morale in the United States and in Europe. *Journal of Economic Psychology* 27, 224-246.

Alm J, Torgler B (2011) Do Ethics Matter? Tax Compliance and Morality. *Journal of Business Ethics* 101, 635-651.

Andreoni J, Erard B, Feinstein J (1998) Tax Compliance. *Journal of Economic Literature* 36, 818-860.

Antonides G, Robben H (1995) True Positives and False Alarms in the Detection of Tax Evasion. *Journal of Economic Psychology* 16, 617-640.

Ariel B (2012) Deterrence and Moral Persuasion Effects on Corporate Tax Compliance: Findings from a Randomized Controlled Trial. *Criminology* 50, 27-69.

Ball GA, Trevino LK, Sims Jr HP (1994) Just and Unjust Punishment: Influences on Subordinate Performance and Citizenship. *Academy of Management Journal 37*, 299-322.

Balliet D, Muldern LB, Van Lange PAM (2011) Reward, Punishment, and Cooperation: A Meta-analysis. *Psychological Bulletin* 137, 594-615.

Balliet D, van Lange PAM (2013) Trust, Punishment, and Cooperation across 18 Societies: A Meta-analysis. *Perspectives on Psychological Science* 4, 363-379.

Becker GS (1968) Crime and Punishment: An Economic Approach. *Journal of Political Economy* 76, 169-217.

Blackwell C (2010) A Meta-analysis of Incentive Effects in Tax Compliance Experiments. In: Alm, J, Martinez-Vazquesz M, Torgler B (eds.), *Developing Alternative Frameworks for Explaining Tax Compliance*, pp. 97-112. Routledge, London, UK.

Braithwaite V (2003a). Dancing with Tax Authorities: Motivational Postures and Non-Compliance Actors. In: Braithwaite V (ed.), *Taxing Democracy. Understanding Tax Avoidance and Tax Evasion*, pp. 15-39. Ashgate, Hants, UK.

Braithwaite V (2003b). A New Approach to Tax Compliance. In: Braithwaite V (ed.), *Taxing Democracy. Understanding Tax Avoidance and Tax Evasion*, pp. 1-11. Ashgate, Hants, UK.

Brosius F (1998) *SPSS 8. Professionelle Statistik unter Windows*. [SPSS 8. Professional Statistics with Windows.] International Thomson Publishing, Bonn, GER.

Castelfranchi C, Falcone R (2010) *Trust Theory: A Socio-cognitive and Computational Model*. Wiley, West Sussex, UK.

Cialdini RB, Goldstein NJ (2004) Social Influence: Compliance and Conformity. *Annual Review of Psychology* 55, 591-621.

Cialdini RB, Kallgren CA, Reno RR (1991) A Focus of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior. *Advances in Experimental Social Psychology* 24, 201-234.

Coletti AL, Sedatole KL, Towry KL (2005) The Effect of Control Systems on Trust and Cooperation in Collaborative Environments. *Accounting Review* 80, 477-500.

Engström P, Holmlund B (2009) Tax Evasion and Self-employment in a High-tax Country: Evidence from Sweden. *Applied Economics* 41, 2419-2430.

Fehr E, Gaechter S (2000) Fairness and Retaliation: The Economies of Reciprocity. *American Economic Association* 14, 159-181.

Feld LP, Frey BS (2002) Trust Breeds Trust: How Taxpayers are Treated. *Economics of Governance* 3, 87-99.

Feld LP, Frey BS (2007) Tax Compliance as the Result of a Psychological Tax Contract: The Role of Incentives and Responsive Regulation. *Law & Policy* 29, 102-120.

Fellner G, Sausgruber R, Traxler C (2013) Testing Enforcement Strategies in the Field: Threat, Moral Appeal and Social Information. *Journal of the European Economic Association* 11*,* 634-660.

Floeter SR, Halpern BS, Ferreira CEL (2006) Effects of Fishing and Protection on Brazilian Reef Fishes. *Biological Conservation* 128, 391-402.

French JR, Raven B (1959) The Bases of Social Power. In: Cartwright D (ed.), *Studies in Social Power*, pp. 150-167. University of Michigan, Ann Arbor, MI.

Gangl K, Hofmann E, Kirchler E (2015) Tax Authorities' Interaction with Taxpayers: A Conception of Compliance in Social dilemmas by Power and Trust. *New Ideas in Psychology* 37, 13-23.

Gangl K, Kastlunger B, Kirchler E, Voracek M (2012) Confidence in the Economy in Times of Crisis: Social Representations of Experts and Laypeople. *Journal of Socio-Economics* 41, 603-614.

Gangl K, Muehlbacher S, de Groot M, Goslinga S, Hofmann E, Kogler C, Kirchler E (2013) How Can I Help You? Perceived Service Orientation of Tax Authorities and Tax Compliance. *Public Finance Analysis* 69, 487-510.

Gangl K, Torgler B, Kirchler E, Hofmann E (2014) Effects of Supervision on Tax Compliance: Evidence from a Field Experiment in Austria. *Economic Letters* 123, 378-382.

Gneezy U, Rustichini A (2000) A Fine is a Price. *Journal of Legal Studies* 29, 1-17.

Hartl B, Hofmann E, Gangl K, Hartner-Tiefenthaler M, Kirchler E (2015) Does the Sole Description of a Tax Authority Affect Tax Evasion? The Impact of Described Coercive and Legitimate Power. *PLOS One 10, e0123355.* http://dx.doi.org/ 10.1371/journal.pone.0123355.

Hasseldine J, Hite P, James S, Toumi M (2007) Persuasive Communication: Tax Compliance Enforcement Strategies for Sole Proprietors. *Contemporary Accounting Research* 24, 171-194.

Hilborn R, Arcese P, Borner M, Hando J, Hopcraft G, Loibooki M, Mduma S, Sinclair ARE (2006) Effective Enforcement in a Conservation Area. *Science* 314, 1266.

Hofmann E, Gangl K, Kirchler E, & Stark J (2014) Enhancing Tax Compliance Through Coercive and Legitimate Power of Authorities by Concurrently Diminishing or Facilitating Trust in Tax Authorities. *Law & Policy* 36, 290-313.

Huo YJ, Smith HJ, Tyler TR, Lind A (1996) Superordinate Identification, Subgroup Identification, and Justice Concerns. Psychological Science 7, 40-45.

Jackson J, Huq AZ, Bradford B, Tyler TR (2013) Monopolizing force? Police Legitimacy and Public Attitudes toward the Acceptability of Violence. *Psychology, Public Policy, and Law* 19, 479-497.

Kastlunger B, Lozza E, Kirchler E, Schabmann A (2013) Powerful Authorities and Trusting Citizens: The Slippery Slope Framework and Tax Compliance in Italy. *Journal of Economic Psychology* 34, 36-45.

Kirchler E (2007) The Economic Psychology of Tax Behaviour. University Press, Cambridge, UK.

Kirchler E, Hoelzl E, Wahl I (2008) Enforced Versus Voluntary Tax Compliance: The "Slippery Slope" Framework. *Journal of Economic Psychology* 29, 210-225.

Kirchler E, Kogler C, Muehlbacher S (2014) Cooperative Tax Compliance: From Deterrence to Deference. *Current Directions in Psychological Science, 23*, 87-92.

Kleven HJ, Knudsen MB, Kreiner CT, Pedersen S, Saez E (2011) Unwilling or Unable to Cheat? Evidence from a Tax Audit Experiment in Denmark. *Econometrica* 79, 651-692.

Knack S, Keefer P (1997) Does Social Capital have an Economic Payoff? A Cross-country Investigation. *The Quarterly Journal of Economics* 112, 1251-1288.

Kogler C, Batrancea L, Nichita A, Pantya J, Belianin A, Kirchler E (2013) Trust and Power as Determinants of Tax Compliance: Testing the Assumptions of the Slippery Slope Framework in Austria, Hungary, Romania and Russia. *Journal of Economic Psychology* 34, 169-180.

Kowal A, Kramer L, Krull JL, Crick NR (2002) Children’s Perception of the Fairness of Parental Preferential Treatment and their Socioemotional Well-being. *Journal of Family Psychology* 16, 297-306.

Levi M, Sacks A, Tyler TR (2009) Conceptualizing Legitimacy, Measuring Legitimating Beliefs. *American Behavioral Scientist* 53, 354-375.

Leviner S (2008) An Overview: A New Era of Tax Enforcement – from „Big Stick“ to Responsive Regulation. *Regulation & Governance* 2, 360-380.

Luhmann N (2000). *Vertrauen: Ein Mechanismus der Reduktion sozialer Komplexität*. [Trust: A Mechianism to Reduce Social Complexity.] Lucius & Lucius, Stuttgart, GER.

Molm LD (1994) Is Punishment Effective? Coercive Strategies in Social Exchange. *Social Psychology Quarterly* 57, 75-94.

Muehlbacher S, Kirchler E, Schwarzenberger H (2011) Voluntary Versus Enforced Tax Compliance: Empirical Evidence for the “Slippery Slope” Framework. *European Journal of Law and Economics* 32, 89-97.

Mulder LB, van Dijk E, De Cremer D, Wilke HAM (2006) Undermining Trust and Cooperation: The Paradox of Sanctioning Systems in Social Dilemmas. *Journal of Experimental Social Psychology* 42, 147-162.

Mulder LB, Verboon P, De Cremer D (2009) Sanctions and Moral Judgments: The Moderating Effect of Sanction Severity and Trust in Authorities. *European Journal of Social Psychology* 39, 255-269.

Parker C (2000) Reinventing Regulation Within the Corporation. Compliance-oriented Regulatory Innovation. *Administration & Society* 32, 529-565.

Putnam RD (1995) Bowling Alone: America's Declining Social Capital. *Journal of Democracy* 6, 65-78.

Raven BH, Schwarzwald J, Koslowsky M (1998) Conceptualizing and Measuring a Power/Interaction Model of Interpersonal Influence. *Journal of Applied Social Psychology* 28, 307-332.

Ripski MB, Gregory A (2009) Unfair, Unsafe, and Unwelcome: Do High School Students’ Perceptions of Unfairness, Hostility, and Victimization in School Predict Engagement and Achievement? *Journal of School Violence* 8, 355-375.

Ronconi L (2010) Enforcement and Compliance with Labor Regulations in Argentina. *Industrial and Labor Relations Review* 63, 719-736.

Schneider F, Buehn A, Montenegro CE (2010) New Estimates for the Shadow Economies all Over the World. *International Economic Journal* 24, 443-461.

Slemrod J, Blumenthal M, Christian C (2001) Taxpayer Response to an Increased Probability of Audit: Evidence from a Controlled Experiment in Minnesota. *Journal of Public Economics* 79, 455-483.

Srinivasan TN (1973) Tax Evasion: A Model. *Journal of Public Economics* 2, 339-346.

Thau S, Aquino K, Bommer WH (2008) How Employee Race Moderates the Relationship Between Non-contigent Punishment and Organizational Citizenship Behaviors: A Test of the Negative Adaption Hypothesis. *Social Justice Research* 21, 297-312.

Trevino LK (1992) The Social Effects of Punishment in Organizations: A Justice Perspective. *Academy of Management Review* 17, 647-676.

Tyler TR (2006a) Psychological Perspectives on Legitimacy and Legitimation. *Annual Review of Psychology* 57 375-400.

Tyler TR (2006b). *Why People Obey the Law*. Princeton University Press, Princeton, USA.

Tyler TR & Jackson, J (2014) Popular Legitimacy and the Exercise of Legal Authority: Motivating Compliance, Cooperation, and Engagement. *Psychology, Public Policy, and Law* 20, 78-95.

Van de Walle S, Van Roosbroek S, Bouckaert G (2008) Trust in the Public Sector: Is there any Evidence for a Long-term Decline. *International Review of Administrative Sciences* 74, 47-64.

Van Dijk E, Mulder LB, Kwaadsteniet D (2014) For the Common Good? The Use of Sanctions in Social Dilemmas. In: van Lange PAM, Rockenbach B, Yamagishi T (eds.), *Reward and Punishment in Social dilemmas,* pp.70-84. Oxford University Press, New York, NYC.

Verboon P, van Dijke M (2011) When do Severe Sanctions Enhance Compliance? The Role of Procedural Fairness. *Journal of Economic Psychology* 32, 120-130.

Waeraas A (2010) Communicating Identity: The Use of Core Value Statements in Regulative Institutions. *Administration and Society* 42, 526-549.

Wahl I, Kastlunger B, Kirchler E (2010) Trust in Authorities and Power to Enforce Tax Compliance: An Empirical Analysis of the “Slippery Slope Framework”. *Law & Policy* 32, 383-406.

Wenzel M (2004) An Analysis of Norm Processes in Tax Compliance. *Journal of Economic Psychology* 25, 213-228.

Wenzel M (2005) Motivation or Rationalisation? Causal Relations Between Ethics, Norms and Tax Compliance. *Journal of Economic Psychology* 26, 491-508.

Yang D (2008) Can Enforcement Backfire? Crime Displacement in the Context of Customs Reform in the Philippines. *Review of Economics and Statistics* 90, 1-14.

APPENDIX: Items on the scales used

|  |  |  |
| --- | --- | --- |
|  | Rel. | *M* (*SD*) |
| Perceived coercive power | .85 | 4.90 (1.40) |
| The tax authority punishes severely. |  |  |
| The tax authority enforces its demands through audits and fines. |  |  |
| The tax authority prosecutes taxpayers mainly with audits and fines. |  |  |
| Perceived legitimate power | .83 | 3.88 (0.92) |
| The tax authority has the right to levy taxes from taxpayers because of its significance to the state. |  |  |
| Taxpayers feel obliged to cooperate with the tax authorities, because it provides a good service. |  |  |
| The tax authority depends on taxpayers to fill out their tax forms correctly in order to work efficiently. |  |  |
| Taxpayers whose previous tax return was incomplete or incorrect have a particular duty to complete their tax return carefully. |  |  |
| The tax authority makes it clear to taxpayers which taxes they have to pay and how much they have to pay in each case. |  |  |
| The tax authority informs taxpayers if it thinks they may have made an error in completing their tax return. |  |  |
| The information provided by the tax authority is clear and understandable. |  |  |
| The tax authority knows what each taxpayer’s return should look like. |  |  |
| The tax authority knows what a correctly filled in tax return should look like. |  |  |
| The tax authority is an expert on tax regulations and implementation of tax regulations. |  |  |
| Taxpayers respect the tax authority for its work. |  |  |
| Taxpayers appreciate the service they receive from the tax authority. |  |  |
| Taxpayers recognize that the work the tax authority does is necessary. |  |  |
| Implicit trust | .96 | 3.53 (1.71) |
| I trust the tax authority usually without thinking about it. |  |  |
| I trust the tax authority usually without dealing with it deeply. |  |  |
| I trust the tax authority most of the time automatically. |  |  |
| Perceived antagonistic climate | .93 | 4.03 (1.71) |
| Interactions between the tax authority and taxpayers are generally characterized by lack of consideration. |  |  |
| Interactions between the tax authority and taxpayers are generally characterized by ruthlessness. |  |  |
| The tax authority and taxpayers have a ‘cops and robbers’ relationship. |  |  |
| Perceived service climate | .86 | 3.10 (1.47) |
| The tax authority treats taxpayers as customers. |  |  |
| The relationship between the tax authority and taxpayers is like that between a business and its customers. |  |  |
| The relationship between the tax authority and taxpayers is service-oriented. |  |  |
| Perceptions about the targets of coercive power | .80 | 4.25 (1.47) |
| The tax authority uses audits and fines to target tax evaders. |  |  |
| The tax authority uses audits and fines deliberately against tax evaders. |  |  |
| The tax authority uses audits and fines randomly against all taxpayers (recoded). |  |  |
| The tax authority uses audits and fines indiscriminately against all taxpayers (recoded). |  |  |
| Perceptions about use of coercive power | .86 | 4.61 (1.62) |
| If the tax authority audits and fines tax evaders, I feel… secure. |  |  |
| If the tax authority audits and fines tax evaders, I feel… protected. |  |  |
| If the tax authority audits and fines tax evaders, I feel… threatened (recoded). |  |  |
| If the tax authority audits and fines tax evaders, I feel… harried (recoded). |  |  |

Table 1. Means and standard deviations of the three clusters with respect to perceptions of coercive power, legitimate power, and trust in tax authorities

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cluster 1  (*N* = 169)  33.8% | Cluster 2  (*N* = 196)  39.2% | Cluster 3  (*N* = 135)  27.0% |
| Coercive power | 5.66 (1.07)a | 3.66 (0.91)b | 5.76 (0.97)a |
| Legitimate power | 3.42 (0.84)a | 3.86 (0.71)b | 4.48 (0.94)c |
| Implicit trust | 1.77 (0.80)a | 3.79 (1.06)b | 5.36 (1.03)c |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.

Table 2: Socio-demographic characteristics of clusters of self-employed taxpayers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cluster 1 | Cluster 2 | Cluster 3 |
| Female |  | 36.7% | 40.8% | 39.3% |
| Age |  | 44.27 (10.65)a | 43.17 (10.45)a | 46.57 (10.29)b |
| Annual turnover (in Euros) | 0– 25,000 | 33.7% | 38.3% | 34.1% |
|  | 25,001–50,000 | 24.3% | 26.0% | 28.9% |
|  | 50,001–100,000 | 11.8% | 15.8% | 17.8% |
|  | > 100,000 | 30.2% | 19.9% | 19.3% |
| Employees | No employees | 72.2% | 76.5% | 76.3% |
|  | 1–5 employees | 22.5% | 17.3% | 20.7% |
|  | > 5 employees | 5.3% | 6.1% | 3.0% |
| Net monthly income (in Euros) | 0–1000 | 33.7% | 36.2% | 31.9% |
|  | 1001–2000 | 34.9% | 33.7% | 43.7% |
|  | > 2000 | 31.4% | 30.1% | 24.4% |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.

Table 3: Means and standard deviations of the three clusters with respect to perceptions about interactions with and service from the tax authorities, and tax compliance intention

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cluster 1 | Cluster 2 | Cluster 3 |
| Antagonistic interaction |  | 4.91 (1.78)a | 3.51 (1.37)b | 3.68 (1.63)b |
| Synergistic interaction |  | 2.38 (1.34)a | 3.30 (1.25)b | 3.71 (1.55)c |
| Tax compliance intention |  | 6.09 (1.67)a | 5.88 (1.69)a | 6.47 (1.23)b |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.

Table 4: Means and standard deviation of the three clusters for evaluations of power

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Cluster 1 | Cluster 2 | Cluster 3 |
| Targeted |  | 3.69 (1.64)a | 4.31 (1.17)b | 4.87 (1.36)c |
| Safeguard |  | 4.09 (1.83)a | 4.74 (1.41)b | 5.06 (1.48)b |

*Note:* Superscripts have been used to indicate pairwise group differences at the *p* < .05 level. Groups sharing the same superscript are not significantly different.