



Intention to pay taxes or to avoid them: The impact of social value orientation

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ABSTRACT

Economic factors such as audit rates and fines have shown inconsistent effects on tax payments, suggesting that they are not sufficient to explain tax compliance. Moreover, the tax compliance rate is surprisingly higher than what the standard economic model would predict. In the last fifteen years, literature aimed at solving this so called “puzzle of compliance” has increased and pointed out several factors that could possibly explain tax compliance processes, e.g., knowledge of the tax laws, trust toward the political system, as well as personal or social norms. The studies presented here examined the impact of social value orientation on tax morale and intention to avoid/evade taxes. Social value orientation was examined both as a chronic personal orientation (Studies 1 and 2) and as a contextual factor made salient by experimental manipulations (Study 3). The results are supportive of a relationship between social value orientation and measures of tax compliance. Furthermore, results of Study 3 provided evidence for a causal effect of social value orientation on intended tax non-compliance. The effect of social value orientation on intended tax non-compliance was mediated by tax morale (Studies 2 and 3). Results are discussed with reference to their potential practical applications.

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1. Introduction

From the standard economical point of view, taxpayers are assumed to be rational decision makers who try to maximize their personal utility (Allingham & Sandmo, 1972). According to this approach, tax compliance could only be achieved by means of a compulsory system based on fines and audits as coercive instruments. However, past literature showed that audit rates and fines produce inconsistent effects on tax payments (e.g., Alm, Sanchez, & de Juan, 1995; Andreoni, Erard, & Feinstein, 1998), suggesting that they are not sufficient to explain tax compliance. Moreover, the tax compliance rate is surprisingly higher than what the standard economic model would predict (Alm, 1991; Cullis, Jones, & Savoia, 2012; Elffers, Weigel & Hessing, 1987).

In order to solve this so called “puzzle of compliance” (Lubian & Zarri, 2011), the number of publications examining potential determinants of tax compliance has increased considerably in the last fifteen years. The three studies to be presented here aimed at contributing to the solution of this “puzzle of compliance” by examining the impact of a broad

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and general motivational factor – social value orientation (SVO) – that is, the preference about the allocation of resources between the self and others. Before presenting the studies, we will briefly summarize research literature concerning tax compliance, in which there was a significant two-step shift from the original exclusive focus on economic factors, toward individual psychological factors, and more recently, toward social and societal factors (Alm, 2013; Alm et al., 2012). Consequently we will illustrate the literature concerning SVO and, finally, discuss the hypotheses of the present paper.

1.1. From “rational” to “social” tax payers

One of the earliest explanations for the high tax compliance rate has been to assume some kind of “intrinsic motivation” to pay taxes (Erard & Feinstein, 1994; Gordon, 1989; Posner, 2000; Traxler, 2010). This intrinsic motivation has been called “tax morale” and has been defined as a moral obligation to pay taxes (Torgler & Schneider, 2007). For example, Torgler and Schaffner (2007) found a significant correlation between tax evasion and tax morale.

This leads to the question of why individuals differ in tax morale and which factors are involved in the shaping of an individual’s tax morale. Along the same lines, Torgler and Schaffner (2007) pointed out that “in the tax compliance literature tax morale is rarely discussed and mostly as a residual explanation without referring to factors that shape tax morale” (p. 22). Initial evidence, showed that positive attitudes toward tax authorities and the tax system, as well as trust in public officials promoted an effect on tax morale (Torgler & Schaffner, 2007). One could further surmise that a sense of civic duty (Frey, 1997a, 1997b) would impact tax morale. In line with this theorizing, Orviska and Hudson (2002) showed that both civic duty and law abidance were important factors in deterring tax evasion. Civic duty impacted taxpayers’ perception of whether tax evasion was right or wrong and consequently the likelihood of tax evasion (Orviska & Hudson, 2002).

Tax morale has also been conceived as a social norm linked to the perception of normative and moral behaviors related to tax payment in one’s own country or region. An important contribution to the study of the influence of social norms on tax compliance has been provided by Wenzel (2004, 2005), who pointed out the important role of social identification processes as defined by *Social Identity Theory* (Turner, 1991; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Wenzel (2004) studied the impact of social injunctive norms concerning taxes, namely what individuals believed other people (of the same group, region, state) thought should be done. Those norms impacted tax compliance only for people who identified strongly with the group, but not for people who did not identify with the group. Social identification, according to Wenzel (2004, 2005), allows for a process of internalization of the social norms as personal norms, and the latter mediate the impact of social norms on tax compliance.

The recent research on psychological and social factors promoting tax compliance, however, does not suggest that audits and fines are not useful. Instead, economic and social psychological determinants of tax compliance can be seen as complementary. To this end, Kirchler and his colleagues proposed the “slippery slope” framework (Kirchler, 2007; Kirchler, Hoelzl, & Wahl, 2008). According to this framework, the tax climate in a given society can vary on a continuum between a hostile, antagonistic and a more friendly cooperative, synergistic state. In an antagonistic climate, tax authorities have to enforce tax compliance via audits and fines. In a synergistic climate, however, taxpayers perceive tax authorities as part of the same community and hence, show voluntary tax compliance. Although considerable efforts have been devoted to understanding social psychological factors affecting tax morale and hence tax compliance, much has yet to be known about the antecedents of intrinsic and voluntary motivation to pay taxes. Here we focused on a fundamental interpersonal motivational stance called social value orientation.

1.2. Social value orientation, tax morale and tax compliance

Social value orientation can be conceived as a very broad interpersonal motivational orientation that is not a priori associated with a specific behavioral domain. It rather defines preferences about the distribution of an unspecified outcome (e.g., money, time, water) between the self and another person (Van Lange, 1999). Consistently, social value orientation has been shown to affect a wide array of preferences and behavior including, social dilemmas (Bogaert, Boone, & Declerck, 2008), negotiations (De Dreu, Beersma, Steinel, & Van Kleef, 2007), energy conservation (Sütterlin, Brunner, & Siegrist, 2013), the use of public transportation (Van Lange, Van Vugt, Meertens, & Ruiters, 1998), political ideologies (Van Lange, Bekkers, Chirumbolo, & Leone, 2012), etc. Social value orientation can be manipulated by subtle interventions such as framing (e.g., Cubitt, Drouvelis, & Gächter, 2008) and priming (e.g., Drouvelis, Metcalfe, & Powdthavee, 2010; Hertel & Fiedler, 1998), but it is usually conceived of, and measured, as a stable personal orientation toward cooperation vs. competition. In most studies, social value orientation was measured by means of the Decomposed Games Measure developed by Kuhlman and Marshello (1975). This measure consists of nine items requiring participants to choose among three different outcome combinations for themselves and a (hypothetical) other. According to this model, individuals can be categorized as altruistic, cooperative, competitive or individualistic. Often, researchers compare prosocial (altruistic and cooperative) with proself (individualistic and competitive) oriented individuals.

The proself orientation is associated with maximizing one’s individual gains. In contrast, individuals with a prosocial orientation also show concern for others’ gains and losses. Thus, the prosocial orientation is characterized by the intention to maximize joint and equal outcomes (e.g. Van Lange, De Cremer, Van Dijk, & Van Vugt, 2007), and a high sense of cooperation regarding the public goods (De Cremer & Van Lange, 2001). In general, prosocials assume others to be either proself or prosocial. In contrast, proself individuals believe that most other people are also proself oriented (Kelley & Stahelski, 1970;

Kuhlman & Wimberley, 1976). Furthermore, prosocial individuals tend to construe social dilemma situations as a moral problem, whereas proself individuals construe these situations more in terms of power (Liebrand, Jansen, Rijken, & Suhre, 1986).

There are several studies showing that a prosocial orientation is related to attitudes as well as to behaviors concerning the public good. For example, McClintock and Allison (1989) asked university students how much time they were willing to spend helping others. Prosocials were willing to contribute more time than proself oriented individuals. Furthermore, prosocials showed a greater willingness to engage in pro-environmental behaviors such as contributing money to environmental organizations or signing petitions against environmental harm (Joireman, Lasane, Bennett, Richards, & Solaimani, 2001).

Likewise, prosocial individuals adopt more cooperative strategies in negotiations, place lower demands, and make more concessions compared to proself oriented individuals. In addition, prosocial individuals are more willing to change their strategy to improve the outcome for a negotiation partner (De Dreu & Boles, 1998; Nauta, De Dreu, & Van Der Vaart, 2002).

In summary, the above mentioned studies attest to the breadth of the influence of social value orientation on various kinds of social dilemma situations, in which individuals and collective rationality are in conflict. Consistent with other authors, we also think that the decision to pay taxes can be construed as a “social contribution dilemma, in which individual gain runs contrary to the collective good” (Alm, 2013, p. 7). Given this conceptualization, we expect that social value orientation would have an influence on tax compliance as well.

More specifically, as we already pointed out, proself oriented individuals should perceive others to also be concerned with maximizing their own gains. Therefore, we expect that proself oriented individuals' perceived social norm would be to pay as few taxes as possible. In accordance to this, we hypothesized that proself oriented individuals would show less tax compliance compared to prosocial oriented individuals. Likewise, we expected more tax avoidance and tax evasion among proself oriented individuals compared to prosocial oriented individuals.

As outlined in Section 2, little is known about what actually shapes tax morale (see Torgler & Schaffner, 2007). We hypothesized that social value orientation would be an important factor influencing tax morale.

We predict that the impact of social value orientation on intended tax compliance would be mediated by an individual's tax morale. In other words, we theorized that social value orientation would influence whether paying taxes is considered the right thing to do, which in turn, would influence tax compliance. As prosocial individuals are also concerned for others' gains and losses, we expect them to have a higher tax morale and, hence, a higher intention to pay taxes. Moreover, we expect this compliance to be voluntary as prosocial individuals are also concerned about maximizing others' gains and losses, and therefore, are intrinsically motivated to contribute. In contrast, we expect proself oriented individuals to have lower tax morale and voluntary tax compliance as they are only concerned about maximizing their own gains. Consequently, they would show lower tax compliance and more tax avoidance and tax evasion.

On the basis of previous literature showing that tax compliance can be profitably framed as a public good dilemma, and that prosocial value orientation promotes cooperation in such dilemmas, we planned three studies in order to assess whether intended tax compliance can be increased (decreased) by a broad social motivation to maximize joint (individual) gains, through changes in tax morale. We operationalized tax morale as the motivational posture of commitment according to Braithwaite and Ahmed (2005), (Study 1) and as voluntary and enforced tax compliance according to Kirchler and Wahl (2010), (Studies 2 and 3). In the first study, we examined the relationship between chronic social value orientation, on one side, and tax morale and intended tax compliance on the other side. In the second study, in addition to testing the same relation, we assessed whether the impact of social value orientation on intended tax compliance is mediated by individual tax morale. In other words, we wanted to test whether prosocial individuals had a higher intrinsic motivation to pay taxes and, as a consequence, a higher intention to comply. Finally, in our third study, we primed social value orientation (either prosocial or competitive) in order to provide evidence of a causal link between social value orientation and intended tax compliance - mediated by internal motivation to pay taxes. To provide robust evidence in establishing whether social value orientation could promote tax morale and compliance, we also examined whether the hypothesized pattern of relationship remained stable across different sets of research participants, different measures of the same variables, and different strategies of research.

2. Study 1

2.1. Method

2.1.1. Design and participants

Fifty-eight students from “Sapienza”, University of Rome, completed the questionnaire (55% women). Their mean age was 25.2 ($SD = 3.38$). Participants were not selected to be representative of a larger population.

2.1.2. Material and procedure

Initially participants completed the Decomposed Games Measure (Kuhlman & Marshello, 1975). It consists of nine items requiring participant to choose among three different outcomes combinations. Participants choose between options that offer points to the self and another (hypothetical) person. Each combination corresponds to one particular orientation. For example, in a typical item, participants are asked to choose among the following distributions: Option 1: 480 points for self and 80 points for the other; Option 2: 540 points for self and 280 points for the other; Option 3: 480 points for self and 480 points for the other.

Option 1 represents the competitive option, because it maximizes the difference between own and other outcome ($480 - 80 = 400$) when compared with the other options ($540 - 280 = 160$; $480 - 480 = 0$, Options 2 and 3 respectively). Option 2 represents the individualistic choice because one's own outcomes are larger (540 points) than those in Options 1 and 3 (480 points). Option 3 corresponds to the prosocial choice and it provides larger joint outcomes and smallest differences in outcomes for the self and others ($480 + 480 = 960$) than either Option 1 ($480 + 80 = 560$) or Option 2 ($540 + 280 = 820$).

Based on previous work (e.g., De Dreu & Van Lange, 1995; Parks, 1994) we classified individuals as prosocial when they made at least six prosocial choices ($N = 15$; 26%), and as proself when they made at least six competitive or individualistic choices ($N = 33$, 57%). Ten (17%) participants were inconsistent in their choices and were excluded from the analyses.

Participants filled out a tax morale scale consisting of 8 items from Braithwaite and Ahmed (2005). The scale measures the extent to which individuals express commitment to the tax system and the belief that taxpaying is socially responsible (e.g., "Citizenship carries with it a duty to pay tax", "I believe paying tax is good for our society, and therefore it is good for each of us"). Participants' responses were recorded on a six-point scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Reliability was very good ($\alpha = .88$).

We used a scenario developed by Holler, Hoelzl, Kirchler, Leder, and Mannetti (2008) to measure the intended tax compliance. In this scenario participants had to assume the role of a taxpayer who wants to buy a new car and who earned an extra € 4500. This extra money was subject to income tax. Participants had to decide whether to declare the extra income on their tax file and pay taxes or not. They were given the exact figures of how much social insurance and income tax they would have to pay. It was also mentioned in the scenario that fines would be imposed on taxpayers convicted of cheating. After reading the scenario participants were requested to indicate how likely it was that they would indicate their extra income on their tax file and pay taxes honestly (0 = *definitely sure not to declare the extra income*; 10 = *definitely sure to declare the extra income*).

Finally, participants reported socio-demographic data including their age, gender and education level. After completing the questionnaire, participants were thanked and debriefed.

2.2. Results

2.2.1. Socio-demographic

In the present study, age, gender and instruction level did not affect our dependent variables.

2.2.2. Tax morale

A one-way ANOVA with Social Value Orientation (prosocial vs. proself) as factor and tax morale as dependent variable revealed that tax compliance was higher among prosocial participants ($M = 4.18$, $SD = .90$) compared to proself ones ($M = 3.40$, $SD = .82$), $F(1, 47) = 8.84$ $p < .01$, $\eta^2 = .16$. The effect remained significant when controlling for socio-demographic variables.

2.2.3. Intended tax compliance

A similar result emerged for intended tax compliance. The intention to pay taxes was higher among prosocial participants ($M = 6.20$, $SD = 3.03$) than among proself ones ($M = 4.61$, $SD = 2.38$), $F(1, 47) = 3.88$ $p < .05$, $\eta^2 = .08$. The effect remained significant when controlling for socio-demographic variables.

2.3. Discussion

Results of Study 1 provide first empirical evidence for a relationship between social value orientation and both tax morale and intended tax compliance. Participants classified as prosocial had higher tax morale compared to participants classified as proself. Thus, a prosocial value orientation goes along with a stronger commitment to the tax system as well as the belief that paying taxes and, hence, contributing to the public welfare, is the duty of a socially responsible citizen.

In a similar vein, a prosocial value orientation was associated with higher intention to pay taxes. Tax compliance was measured by participants having to indicate whether they would pay taxes or not in a scenario, which could very well be encountered in real life. In line with our expectations, participants classified having a prosocial value orientation, showed higher intentions payoff paying taxes on the extra income, instead of spending the money for a new car.

In short, we demonstrated in Study 1 that social value orientation is related to tax morale as well as to actual behavioral intentions to pay taxes in a near to real life scenario. Although Study 1 was well suited to test for relationships between constructs, one possible limitation could be that participants were undergraduate students with most of them not being actual taxpayers. Thus, we cannot assume confidently that the relationship between social value orientation and tax morale and tax compliance also exist among taxpayers. To address this possible limitation of external validity, in Study 2 we recruited participants from a population of actual taxpayers.

3. Study 2

The second study was conducted to strengthen and extend previous findings. First, we changed the population by choosing taxpayers and, second, we used different measures of tax morale and tax compliance in order to increase generalizability

of our results across different measures of the same variables. More precisely, we decided to use the Tax compliance inventory (TAX-I) developed by Kirchler and Wahl (2010), since this inventory had recently been used on the Italian population (Kastlunger, Lozza, Kirchler, and Schabmann (2013). TAX-I provides four scales: Voluntary tax compliance (VTC), Enforced tax compliance (ETC), intended Tax Avoidance (TA) and intended Tax Evasion (TE). We used the voluntary and enforced tax compliance scales as a more fine-grained measure of tax morale since these scales not only tap into perception of moral duty and personal responsibility to pay taxes (as in the Study 1), but also into perception of constraints imposed by authorities (i.e., enforced tax compliance). The two scales of intended tax avoidance and evasion were used to provide a combined index of non-compliance intention. We hypothesized that prosocial participants would show higher voluntary compliance (tax morale) and lower tax non-compliance than proself participants. Furthermore, we wanted to test whether the impact of a general normative orientation such as cooperation vs. competition on tax non-compliance is partially or totally mediated by tax morale. Finally the scale of enforced tax compliance was used only to assess whether prosocial and proself taxpayers also differ on this dimension.

3.1. Method

3.1.1. Design and participants

One hundred and twenty-one taxpayers participated on a voluntary basis (44% women). Their mean age was $M = 34.35$ ($SD = 3.38$). They were recruited among citizens who were queuing at administrative offices of the city of Rome, and were not selected to be representative of a larger population.

3.1.2. Material and procedures

Initially, participants completed the Decomposed Games Measure (Kuhlman & Marshello, 1975) as described before. We had 33 (28%) prosocial participants and 74 (61%) proself participants. Fourteen participants (11%) were not classified in any orientations.

Then, they completed the scale of Voluntary tax compliance (VTC) and Enforced tax compliance (ETC) (Kirchler & Wahl, 2010). The scale has been validated in Italian by Kastlunger et al. (2013).

The first sub-scale was composed of ten items formulated to assess voluntary compliance focusing on taxpayers' perceived obligation to cooperate with the nation state (e.g. "When I pay my taxes as required by the regulations, I do so because I am sure I am doing the right thing"; "When I pay my taxes as required by regulations, I do so because I pay my taxes voluntarily). Reliability was very good ($\alpha = .89$). The second scale, measuring Enforced tax compliance (ETC) was composed of eight items (e.g., "When I pay my taxes as required by the regulations, I do so because I feel forced to pay my taxes", "When I pay my taxes as required by the regulations, I do so because I know that I will be audited). Reliability was very good ($\alpha = .83$).

Intended tax non-compliance was measured using the tax avoidance scale (TA) and the tax evasion scale (TE) developed by Kirchler and Wahl (2010). The first scale was composed of eight items each presenting a fictitious case scenario (e.g., "You could work less next year, so as to fall into a lower income group and consequently pay less in taxes. How likely is it that you would work less next year?"; "You could attend a course which informs you about the current possibilities for making claims against taxes. How likely would you be to attend such a course?"). The tax evasion scale was composed of nine fictitious scenarios describing concrete ways of evading taxes. Participants were asked how likely they would be to engage in each behavior (e.g., "You could intentionally declare restaurant bills for meals you had with your friends as business meals. How likely would you be to declare those restaurant bills as business meals?"; "You bought some of your goods privately. You could resell those goods later to established customers and omit the profit from this sale on your income tax return. How likely would you be to omit the profit from this sale on your income tax return?"). For both scales, participants responded on a 7-point scale ranging from 1 = not likely at all, to 7 = very likely. Given the high correlation between the two scales ($r = .41$, $p < .001$). We decided to combined them in a a unique index of tax non-compliance. Such index had a very good reliability ($\alpha = .86$).¹

3.2. Results

3.2.1. Socio-demographic

The dependent variables of the present study were regressed on age and gender. Age had a negative significant impact on voluntary tax compliance, $\beta = -.22$, $t = 2.11$, $p = .04$, but did not affect intended tax non-compliance. Gender did not affect any of the dependent variables.

3.2.2. Tax morale (voluntary and enforced compliance)

A one-way ANOVA with Social Value Orientation as factor and Voluntary Tax Compliance (VTC) as dependent variable revealed that voluntary tax compliance was significantly higher among prosocial participants ($M = 5.41$, $SD = 1.74$) than

¹ We conducted an exploratory factor analysis on the TAX-I combining the samples from Study 2 and Study 3. We replicated the 4-factor structure found by Kirchler and Wahl (2010). However, factors loadings were also consistent with conflating the tax evasion and avoidance scales, as we did for the subsequent analyses reported in the manuscript.

among proself ones ($M = 4.72$, $SD = 1.64$), $F(1, 106) = 3.91$, $p < .05$, $\eta^2 = .04$. As voluntary tax compliance was affected by age, we ran an ANCOVA on VTC in which social value orientation was entered as an independent variable and age as a covariate. The analysis showed that, when controlling for age, social value orientation had a marginal effect, $F(1, 94) = 3.33$, $p = .07$, $\eta^2 = .04$. A one-way ANOVA conducted on Enforced Tax Compliance (ETC) did not show any significant difference, $F(1, 127) = .17$, $p = .68$, between prosocial ($M = 5.06$, $SD = 1.63$) and proself participants ($M = 5.20$, $SD = 1.65$).

3.2.3. Intended tax non-compliance

We conducted a one-way ANOVA with Social Value Orientation as factor and the index of intended tax noncompliance as dependent variable. The results revealed that intended tax noncompliance was significantly higher among proself participants ($M = 4.69$, $SD = 1.21$) than among prosocial ones ($M = 3.84$, $SD = 1.35$), $F(1, 106) = 10.66$, $p < .01$, $\eta^2 = .09$. The effect remained significant when controlling for socio-demographic variables.

3.2.4. Mediation analysis

Voluntary tax compliance was negatively associated with intended tax non-compliance ($r = -.31$, $p < .001$). Building on this association we wanted to test whether voluntary tax compliance could mediate the association between social value orientation and intended tax non-compliance. In other words, according to our reasoning, a prosocial orientation should reduce intention of non-compliance by increasing voluntary tax compliance. Consistently, the direct effect of social value orientation on intended tax non-compliance, $\beta = .30$, $t = 3.27$, $p = .001$, decreased when controlling for the effect of voluntary tax compliance, $\beta = .26$, $t = 2.80$, $p < .01$. To test whether the indirect effect of social value orientation through voluntary tax compliance was significant, we performed bootstrap mediation analysis (Hayes, 2013). The 95% bias-corrected confidence interval for the indirect effect of the interaction did not include zero (Lower = .01; Upper = .35). This suggests that the voluntary tax compliance was in part responsible for the association between social value orientation and intended tax non-compliance.

3.3. Discussion

Social value orientation was related to higher voluntary tax compliance, essentially replicating the relationship we found in Study 1. Participants classified having a prosocial value orientation showed higher voluntary tax compliance compared to participants with a proself value orientation. Thus, we were also able to find evidence for the relationship established in Study 1 in a population of actual taxpayers. Additionally, we used a scale to measure tax compliance that has been validated and successfully used in Italian populations. Taken together, this attests that the relationship between social value orientation, tax morale and tax compliance is not limited to a population of university students, but also holds among adult tax payers.

Furthermore, we measured intended tax avoidance and intended tax evasion by presenting participants with fictitious scenarios and assessing their intended tax compliance. Our combined measure of intended tax non-compliance was significantly higher for participants with a proself orientation compared to participants with a prosocial orientation. Thus, we were not only able to measure differences in tax morale (voluntary tax compliance) for different levels of social value orientations among actual taxpayers but were also able to find differences in the actual intentions to pay taxes. As discussed in Kirchler and Wahl (2010), the use of a fictitious case scenario is well suited to overcome social desirability concerns, since deviant behavior is only indirectly addressed (Suhling, Löbmann, & Greve, 2005). Therefore, we are confident that our results reflect actual taxpayers' intentions of compliance, and, respectively, non-compliance.

Further analysis revealed that tax morale mediated the relationship between social value orientation and intended tax non-compliance. Next, we aimed at finding evidence for a causal relationship between social value orientation and tax compliance in Study 3 by implementing an experimental design.

4. Study 3

The first two studies have consistently shown that chronic social value orientation is associated with tax morale and with intended tax compliance. However, we cannot conclude that the general social value orientation causes the differences at the level of tax morale and intended tax behavior. In order to get supporting evidence of a causal link, we decided to experimentally manipulate social value orientation.

Finally, we aimed to increase the external validity of our findings by using another sample. Participants in Study 1 and 2 were from Italy which has the second highest ratings for shadow economy and tax evasion in Western countries according to the statistics of Organization for Economic Co-operation and Development (Feld & Schneider, 2010). Thus, in order to increase external validity of our results, we collected data for Study 3 in Asian countries.

4.1. Method

4.1.1. Design and participants

One hundred and twenty-eight participants (59 female; $M = 30.54$ years, $SD = 8.49$) completed a brief questionnaire on Amazon.com's Mechanical Turk online survey program. Mechanical Turk (MTurk) allows researchers to post questionnaires that are completed by users who participate in exchange for small contributions towards an Amazon.com gift voucher. The

platform records participants' IP address to prevent them from completing the same questionnaire more than once. According to [Buhrmester, Kwang, and Gosling \(2011\)](#), MTurk participants are significantly more diverse than typical American college samples; realistic compensation rates do not affect data quality; and the data obtained are at least as reliable as those obtained via traditional methods. The same authors conclude that overall, MTurk can be used to obtain high-quality data inexpensively and rapidly. Participants were randomly assigned to one of two experimental conditions (prosocial vs. proself orientation).

4.1.2. Procedure and materials

Participants completed a questionnaire including questions on socio-demographic data, the manipulation of social motivation, the scales of Voluntary Tax Compliance ($\alpha = .88$) and Enforced Tax Compliance ($\alpha = .88$), the scales measuring tax evasion and tax avoidance ([Kirchler et al., 2010](#)), which, as in Study 2, were highly correlated ($r = .78, p < .001$). Therefore we combined the two scale into an overall index of intended tax non-compliance ($\alpha = .94$).

4.1.3. Manipulation of the independent variable

Social motivation was induced using a supraliminal priming procedure modeled after the one developed by [Hertel and Fiedler \(1994, 1998\)](#). More specifically, at the beginning of the questionnaire, participants were presented with a verbal memory task and asked to examine 30 adjectives randomly scattered on sheet for 3 min. Participants were also told that, in order to facilitate memorization, adjectives could have been grouped in two separate categories. One third of the adjectives pertained spatial categories (e.g., triangular, thin, curve), 10 stimuli were filler adjectives (e.g., humid, healthy and bright), and another 10 adjectives varied depending on the experimental condition. In the prosocial priming condition, the following adjectives were presented: *constructive, honest, supportive, reliable, attentive, interested, helpful, tolerant, fair and flexible*. In the proself priming condition, participants read the following adjectives: *determined, independent, assertive, autonomous, strong-minded, dynamic, self-confident, purposeful, self-assured, courageous* (see [Hertel & Fiedler, 1998](#)). At the end of the questionnaire, participants were asked to recall as many adjectives as possible. This priming procedure; that is very common in contemporary social psychology (see inter alia, [Higgins, Bargh, & Lombardi, 1985](#); [Johnston & Dark, 1986](#); [Neely, 1990](#)) is assumed to increase the cognitive accessibility of a normative concept (either cooperation or competition) that, in turn, impacts participants' judgments and behavioral intentions. Since participants are assigned randomly to the experimental conditions (e.g. accessibility of cooperation vs. competition) we can claim that it is the situational greater accessibility of the cooperation vs. the competition norm that causes participants responses. Even though, experimental priming procedures are not assumed to change inherent social value orientation of the survey respondents permanently, they depict how environmental factors might intentionally be changed (e.g. by public institutions) in order to create contexts that "nudge" citizens toward appropriate behaviors ([Sunstein & Thaler, 2008](#)).

4.2. Results

4.2.1. Socio-demographic

In the present study, age and gender did not affect our dependent variables.

4.2.2. Tax morale (voluntary and enforced compliance)

We conducted a one-way ANOVA with social value orientation as a factor and Voluntary Tax Compliance (VTC) as the dependent variable revealing that the average mean of voluntary tax compliance was not significantly different under the prosocial ($M = 6.60, SD = 1.20$) or proself condition ($M = 6.84, SD = 1.10$), $F(1, 127) = 1.56, p < .215$. A second one-way ANOVA revealed a significant effect of the priming on Enforced Tax Compliance (ETC). ETC was higher under proself ($M = 6.16, SD = 1.43$) rather than prosocial condition ($M = 5.63, SD = 1.38$), $F(1, 127) = 4.45, p < .05, \eta^2 = .03$. The effect remained significant after controlling for age and gender.

4.2.3. Intended tax non-compliance

We conducted a one-way ANOVA with social value orientation as a factor and intended tax non-compliance as a dependent variable. The results revealed that intended tax non-compliance was significantly higher in the proself condition ($M = 5.68, SD = 1.44$) compared to the prosocial condition ($M = 5.04, SD = 1.56$), $F(1, 127) = 5.70, p < .05, \eta^2 = .04$. The effect remained significant after controlling for age and gender.

4.2.4. Mediation analysis

Similarly to Study 2, we wanted to test whether the association between value orientation and intention to refrain from paying taxes could be mediated by motivational stances underlying enforced tax compliance. More specifically, consistent with the analyses reported above, we expect that manipulation of prosocial orientation would decrease intentions to non-comply by reducing perception of enforced tax compliance. In support of this reasoning, we found the expected positive correlation between enforced tax compliance and intended tax non-compliance ($r = .35, p < .001$). The direct effect of social value orientation on intended tax non-compliance, $\beta = .21, t = 2.39, p = .02$, decreased when controlling for the effect of enforced tax compliance, $\beta = .14, t = 1.73, p = .09$. To test whether the indirect effect of social value orientation through enforced tax compliance was significant, we performed bootstrap mediation analysis ([Hayes, 2013](#)). The 95%

bias-corrected confidence interval for the indirect effect of the interaction did not include zero (Lower = .01; Upper = .35). This suggests that the enforced tax compliance was in part responsible for the association between social value orientation and intended tax non-compliance.

4.3. Discussion

With Study 3, we found evidence for a causal relationship of social value orientation on tax compliance. More specifically, priming prosocial vs. proself value orientation led to differences in intended tax non-compliance. Participants in the prosocial condition showed less intended tax non-compliance compared to participants in the proself priming condition. The effect was mediated by enforced tax compliance. In Study 3, the differences in enforced (but not voluntary) tax compliance were significant for different levels of social value orientation. We assume this might be due to a stronger effect of the proself priming procedure. However, result of mediation analyses confirmed that the effect of social value orientation on intended tax non-compliance was mediated by enforced tax compliance. Thus, we conceptually replicated the results of Study 2, finding further evidence for a mediating role of tax morale.

Moreover, as we recruited participants from various Asian countries, results of Study 3 attest to the generalizability of our findings outside of the Italian population. Future research could even address the question of how country-specific tax laws or cultural contexts might shape the relation of social value orientation and tax compliance. For example, is an attempt to enhance enforced tax compliance (e.g., by emphasizing negative consequences on non-compliance like fines or sentences) likely to lead to more tax compliance in tight vs. loose cultures (Gelfand et al., 2011)?

5. General discussion

In the three studies we found evidence of a relationship between social value orientation and measures of tax compliance. In Study 1, we first established the relationship between social value orientation and both tax morale and intended tax compliance. In Study 2, we conceptually replicated findings of Study 1 in a population of actual taxpayers. Additionally, we found the expected differences on our measure for intended tax non-compliance, i.e., individuals with a prosocial value orientation had lower values on intended non-compliance compared to individuals with a proself orientation. Finally, in Study 3, we were able to find causal evidence for the relationship between social value orientation and intended tax non-compliance. Mediation analyses in both Study 2 and Study 3 revealed that the effect of social value orientation on intended tax non-compliance was mediated by tax morale.

It thus seems that prosocial orientation could lead to more compliance either by increasing voluntary motivation (Study 2) or by decreasing perceptions of constraints by social authorities (Study 3). One might then wonder why in Study 2 there was no effect of social value orientation on enforced compliance and why in Study 3 social value orientation did not affect voluntary compliance. One possible explanation is that social value orientation was measured in the second study but manipulated by priming in the third study. Priming could have activated slightly different facets than those that are detected by the measure of social value orientation. Thus, although the general outline of results is similar and consistent across the two studies, some asymmetries of pattern emerged. Another plausible explanation resides in the characteristics of the samples which was composed either by European (Study 2) or Asian (Study 3) participants. Psychological variables associated with cultural differences may be responsible for the different emphasis placed on voluntary and enforced compliance.

All in all, the present work contributes to our understanding of the factors involved in tax compliance, by underlying the important role of a rather abstract motivational orientation. This orientation refers to a rather decontextualized preference about how resources should be distributed, and, because of its abstractness, it is capable to predict choices and behaviors in a multitude of domains including, for example, close relationship (Van Lange, Agnew, Harinck, & Steemers, 1997) or commuting behavior (Van Lange et al., 1998). This motivational orientation is also conceptually more distant than the specific tax compliance norms considered in previous studies and, hence, it is very likely to be one of the possible root causes in the causal chain that ultimately leads to tax compliance. Mediation analyses are consistent with this reasoning.

Our results do not only represent theoretical forthcoming but also add to the body of knowledge so crucial for the applied contexts. The method used in our third study, in particular, could be very informative in this sense. Indeed motivational orientation and tax compliance were affected in a rather subtle fashion. It is worth reminding that subtle cues are not restricted to the lab, but are very common in our everyday environments and may be already guiding and changing our behavior (see for example the work from DeVoe, House, & Zhong, 2013). As an example of the usage of subtle cues to increase tax compliance is worth mentioning results of two recent studies (Holler et al., 2008; Leder, Mannetti, Holz, & Kirchler, 2009) showing that the experience of fit between recipients' regulatory focus (promotion vs. prevention, Higgins, 1998, 2000) and the framing of written information emphasizing either positive consequences of tax compliance or negative consequences of tax evasion can increase recipients' intended tax compliance. Results of these studies suggest that tax agencies may increase average tax compliance by adopting communications strategies that first try to influence recipient's situational regulatory orientation and then deliver a message that fits the specific orientation induced.

In a similar vein, campaigns to increase tax morale among citizens could be tailored according to our findings. Embedding of cooperative cues in persuasive appeals would probably increase intended tax compliance which in turn might guide actual tax paying behavior. Likewise, it would be advisable to not include any competitive cues. Future studies could test whether

the wording of the questions in the actual document used to file one's tax report might also influence tax compliance. The latter would allow for a more proximal influence on taxpayers' compliance.

Our findings attest to the influential power that environmental cues in real life settings might very well exert on people. For example, one would surmise to find different cues associated with a prosocial or competitive value orientation, for example, in different cultural contexts. Thus, the strategy for modulating taxpayers' compliance might to be adapted respectively.

An interesting avenue for future research would be to explore the potential interaction between individual social value orientation and the general culture's climate, for instance following the individualism vs. collectivism distinction (Hofstede, 1980). On one side, it is possible to hypothesize that culture's climate has a stronger and pervasive impact irrespective of individual differences, with collectivist countries, with higher cooperative climate, obtaining higher tax compliance. On the other side, it is also possible to anticipate that tax compliance is higher when culture's climate fits with citizens' social value orientation, that is among cooperative people living in collectivistic countries and among competitive people living in individualist countries (see Fulmer et al., 2010 for a similar reasoning).

The present studies also have some limits, mostly related to their external validity. In fact since they were not intended to make inferences concerning actual average tax compliance of any specific population, participants were not selected in order to be representative either of Italian students or Italian tax payers or Asiatic people. Therefore, present results cannot be used to make inferences concerning average tax behavior of Italian or Asiatic citizens. In the future, more applied studies might test similar hypotheses with representative samples of the population of interest. For instance, if the Italian Tax Agency intended to introduce a more collaborative relationship with Italian tax payers, it would be useful to plan a survey with a representative sample to test either a specific persuasive message, or different types of documents to be sent to potential tax payers etc.

References

- Allingham, M., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics*, 1(3–4), 323–338.
- Alm, J. (1991). A perspective on the experimental analysis of taxpayer reporting. *Accounting Review*, 577–593.
- Alm, J. (2013). A convenient truth: Property taxes and revenue stability. *Citiescape – A Journal of Policy Development and Research*, 15, 243–245.
- Alm, J., Kirchlner, E., Muehlbacher, S., Gangl, K., Hofmann, E., & Kogler, C., et al. (2012). Rethinking the research paradigms for analyzing tax compliance behavior. In *CESifo Forum* (Vol. 13, No. 2, pp. 33–40). Ifo Institute for Economic Research at the University of Munich.
- Alm, J., Sanchez, I., & de Juan, A. (1995). Economic and noneconomic factors in tax compliance. *Kyklos*, 48(1), 3–18.
- Andreoni, J., Erard, B., & Feinstein, J. (1998). Tax compliance. *Journal of economic literature*, 818–860.
- Bogaert, S., Boone, C., & Declerck, C. (2008). Social value orientation and cooperation in social dilemmas: A review and conceptual model. *British Journal of Social Psychology*, 47(3), 453–480.
- Braithwaite, V., & Ahmed, E. (2005). A threat to tax morale: The case of Australian higher education policy. *Journal of Economic Psychology*, 26(4), 523–540.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5.
- Cubitt, R., Drouvelis, M., & Gächter, S. (2008). Framing and free riding: Emotional responses and punishment in social dilemma games. CeDex Discussion Paper No. 2008-02, University of Nottingham.
- Cullis, J., Jones, P. R., & Savoia, A. (2012). Social norms and tax compliance: Framing the decision to pay tax. *The Journal of Socio-Economics*, 41, 159–168.
- De Cremer, D., & Van Lange, P. A. (2001). Why prosocials exhibit greater cooperation than proselves: The roles of social responsibility and reciprocity. *European Journal of Personality*, 15(S1), S5–S18.
- De Dreu, C. K., Beersma, B., Steinel, W., & Van Kleef, G. A. (2007). The psychology of negotiation: Principles and basic processes. In A. W. Kruglanski & E. T. Higgins (Eds.), *Handbook of basic principles in social psychology* (2nd ed., pp. 608–629). New York: Guilford.
- De Dreu, C. K., & Boles, T. L. (1998). Share and share alike or winner take all?: The influence of social value orientation upon choice and recall of negotiation heuristics. *Organizational Behavior and Human Decision Processes*, 76(3), 253–276.
- De Dreu, C. K., & Van Lange, P. A. (1995). The impact of social value orientations on negotiator cognition and behavior. *Personality and Social Psychology Bulletin*, 21(11), 1178–1188.
- DeVoe, S. E., House, J., & Zhong, C. B. (2013). Fast food and financial impatience: A socioecological approach. *Journal of personality and social psychology*, 105(3), 476.
- Drouvelis, M., Metcalfe, R., & Powdthavee, N. (2010). Priming cooperation in social dilemma games (No. 4963). Discussion paper series//Forschungsinstitut zur Zukunft der Arbeit.
- Elffers, H., Weigel, R. H., & Hessing, D. J. (1987). The consequences of different strategies for measuring tax evasion. *Journal of Economic Psychology*, 8, 311–337.
- Erard, B., & Feinstein, J. S. (1994). Honesty and evasion in the tax compliance game. *The RAND Journal of Economics*, 25, 1–19.
- Feld, L. P., & Schneider, F. (2010). Survey on the shadow economy and undeclared earnings in OECD countries. *German Economic Review*, 11(2), 109–149.
- Frey, B. S. (1997a). *Not just for the money: An economic theory of personal motivation*. Cheltenham: Edward Elgar.
- Frey, B. S. (1997b). A constitution for knaves crowds out civic virtues. *The Economic Journal*, 107, 1043–1053.
- Fulmer, C. A., Gelfand, M. J., Kim-Prieto, C., Diener, E., Piore, A., et al. (2010). On "feeling right" in cultural contexts how person-culture match affects self-esteem and subjective well-being. *Psychological Science*, 20, 1563–1569.
- Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., et al. (2011). Differences between tight and loose cultures: A 33-nation study. *Science*, 332, 1100–1104.
- Gordon, J. P. F. (1989). Individual morality and reputation costs as deterrents to tax evasion. *European Economic Review*, 33, 797–805.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Hertel, G., & Fiedler, K. (1994). Affective and cognitive influences in a social dilemma game. *European Journal of Social Psychology*, 24, 131–145.
- Hertel, G., & Fiedler, K. (1998). Fair and dependent versus egoistic and free: Effects of semantic and evaluative priming on the "Ring Measure of Social Values". *European Journal of Social Psychology*, 28, 49–70.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1–46.
- Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55(11), 1217–1230.
- Higgins, E. T., Bargh, J. A., & Lombardi, W. J. (1985). Nature of priming effects on categorization. *Journal of Experimental Psychology Learning, Memory, and Cognition*, 11, 59–69.
- Hofstede, G. (1980). Culture and organizations. *International Studies of Management & Organization*, 10, 15–41.
- Holler, M., Hoelzl, E., Kirchlner, E., Leder, S., & Mannetti, L. (2008). Framing of information on the use of public finances, regulatory fit of recipients and tax compliance. *Journal of Economic Psychology*, 29(4), 597–611.

- Johnston, W. A., & Dark, V. J. (1986). Selective attention. *Annual Review of Psychology*, 37, 43–75.
- Joireman, J. A., Lasane, T. P., Bennett, J., Richards, D., & Solaimani, S. (2001). Integrating social value orientation and the consideration of future consequences within the extended norm activation model of proenvironmental behaviour. *British Journal of Social Psychology*, 40(1), 133–155.
- 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.
- Kelley, H. H., & Stahelski, A. J. (1970). Social interaction basis of cooperators' and competitors' beliefs about others. *Journal of Personality and Social Psychology*, 16(1), 66.
- Kirchler, E. (2007). *The economic psychology of tax behaviour*. Cambridge: Cambridge University Press.
- Kirchler, E., Hoelzl, E., & Wahl, I. (2008). Enforced versus voluntary tax compliance: The "slippery slope" framework. *Journal of Economic Psychology*, 29(2), 210–225.
- Kirchler, E., & Wahl, I. (2010). Tax compliance inventory TAX-I: Designing an inventory for surveys of tax compliance. *Journal of Economic Psychology*, 31, 331–346.
- Kuhlman, D. M., & Marshello, A. F. (1975). Individual differences in game motivation as moderators of preprogrammed strategy effects in prisoner's dilemma. *Journal of Personality and Social Psychology*, 32(5), 922–931.
- Kuhlman, D. M., & Wimberley, D. L. (1976). Expectations of choice behavior held by cooperators, competitors, and individualists across four classes of experimental games. *Journal of Personality and Social Psychology*, 34(1), 69.
- Leder, S., Mannetti, L., Holzl, E., & Kirchler, E. (2009). Regulatory fit effects on perceived fiscal exchange and tax compliance. *Journal of Socio-Economics*, 39, 271–277.
- Liebrand, W. B., Jansen, R. W., Rijken, V. M., & Suhre, C. J. (1986). Might over morality: Social values and the perception of other players in experimental games. *Journal of Experimental Social Psychology*, 22(3), 203–215.
- Lubian, D., & Zarri, L. (2011). Happiness and tax morale: An empirical analysis. *Journal of Economic Behavior & Organization*, 80(1), 223–243.
- McClintock, C. G., & Allison, S. T. (1989). Social value orientation and helping behavior. *Journal of Applied Social Psychology*, 19(4), 353–362.
- Nauta, A., De Dreu, C. K., & Van Der Vaart, T. (2002). Social value orientation, organizational goal concerns and interdepartmental problem-solving behavior. *Journal of Organizational Behavior*, 23(2), 199–213.
- Neely, J. H. (1990). Semantic priming effects in visual word recognition: A selective review of current findings and theories. In D. Besner & G. Humphreys (Eds.), *Basic processes in reading: Visual word recognition*. Hillsdale, NJ: Erlbaum.
- Orviska, M., & Hudson, J. (2002). Tax evasion, civic duty and the law abiding citizen. *European Journal of Political Economy*, 19, 83–102.
- Parks, C. D. (1994). The predictive ability of social values in resource dilemmas and public goods games. *Personality and Social Psychology Bulletin*, 20(4), 431–438.
- Posner, E. A. (2000). Law and social norms: The case of tax compliance. *Virginia Law Review*, 8, 1781–1919.
- Suhling, S., Löbmann, R., & Greve, W. (2005). Zur Messung von Strafeinstellungen. *Zeitschrift für Sozialpsychologie*, 36, 203–213.
- Sunstein, C., & Thaler, R. (2008). *Nudge*. New Haven, CT: Yale University Press.
- Sütterlin, B., Brunner, T. A., & Siegrist, M. (2013). Impact of social value orientation on energy conservation in different behavioral domains. *Journal of Applied Social Psychology*, 43(8), 1725–1735.
- Torgler, B., & Schaffner, M. (2007). Causes and consequences of tax morale: An empirical investigation. *CREMA Working Paper Series*, 11, 1–26. Center for Research in Economics, Management and the Arts (CREMA).
- Torgler, B., & Schneider, F. G. (2007). *Shadow economy, tax morale, governance and institutional quality: A panel analysis* (No. 1923). CESifo working paper.
- Traxler, C. (2010). Social norms and conditional cooperative taxpayers. *European Journal of Political Economy*, 26(1), 89–103.
- Turner, J. C. (1991). *Social influence*. Milton Keynes, UK: Open University Press.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, UK: Blackwell.
- Van Lange, P. A. (1999). The pursuit of joint outcomes and equality in outcomes: An integrative model of social value orientation. *Journal of Personality and Social Psychology*, 77(2), 337.
- Van Lange, P. A., Agnew, C. R., Harinck, F., & Steemers, G. E. (1997). From game theory to real life: How social value orientation affects willingness to sacrifice in ongoing close relationships. *Journal of Personality and Social Psychology*, 73(6), 1330–1344.
- Van Lange, P. A., Bekkers, R., Chirumbolo, A., & Leone, L. (2012). Are conservatives less likely to be prosocial than liberals? From games to ideology, political preferences and voting. *European Journal of Personality*, 26(5), 461–473.
- Van Lange, P. A., De Cremer, D., Van Dijk, E., & Van Vugt, M. (2007). Self-interest and beyond. *Social psychology: Handbook of basic principles*, 540–561.
- Van Lange, P. A., Van Vugt, M., Meertens, R. M., & Ruiters, R. A. (1998). A social dilemma analysis of commuting preferences: The roles of social value orientation and trust. *Journal of Applied Social Psychology*, 28(9), 796–820.
- Wenzel, M. (2004). The social side of sanctions: Personal and social norms as moderators of deterrence. *Law and Human Behavior*, 28(5), 547–567.
- Wenzel, M. (2005). Misperceptions of social norms about tax compliance: From theory to intervention. *Journal of Economic Psychology*, 26(6), 862–883.