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PROCEDURAL FAIRNESS, A SENSE OF ALIENATION AND PAYING TAXES

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Abstract: This paper presents the results of two studies analysing the impact of procedural fairness and a sense of alienation on real tax payments in the public goods game. Study 1 showed that an unfair procedure of determining the rules of the game increases the frequency of tax evasion. In Study 2, tax evasion was associated with a sense of alienation induced in the subjects, understood as a conviction about the ineffectiveness of one's own actions. The results of the studies presented in this paper indicate the importance of the treatment of taxpayers by the tax system as a factor influencing the propensity for tax fraud.

Keywords: tax, procedural fairness, sense of alienation, common good.

SPRAWIEDLIWOŚĆ PROCEDURALNA, POCZUCIE ALIENACJI I PŁACENIE PODATKÓW

Streszczenie: Artykuł przedstawia wyniki dwóch badań analizujących wpływ sprawiedliwości proceduralnej oraz poczucia alienacji na rzeczywiste wpłaty podatkowe w grze o dobro wspólne. W badaniu 1 stwierdzono, że niesprawiedliwy sposób ustalania reguł gry zwiększa częstość uchylania się od płacenia podatków. W badaniu 2 uchylanie się od podatków wiązało się z wywołanym u badanych poczuciem alienacji rozumianym jako przekonanie o nieskuteczności własnych działań. Wyniki badań przedstawionych w artykule wskazują

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wagę sposobu traktowania podatników przez system podatkowy jako czynnika kształtującego skłonność do popełniania oszustw podatkowych.

Słowa kluczowe: podatki, sprawiedliwość proceduralna, poczucie alienacji, dobro wspólne.

1. A SENSE OF PROCEDURAL UNFAIRNESS AND ALIENATION AND TAXPAYERS' DESIRE TO CHEAT

Paying taxes is a civic contribution to the common good. It is mandatory in nature, independent of individual benefits obtained by individuals. Nevertheless, people are sensitive to the fairness of exchange between citizens and the state. Many studies have shown a widespread sense of the unfairness of that division (Weigel et al., 1987; Kirchler, 2007; Niesiobędzka, 2013). Consequently, people are inclined to evade taxes, or 'free riding'. This is why one of the more important challenges facing the state is to minimise 'free riding'. Tax evasion may take various forms, from miscalculating the tax base, e.g. by failing to report a part of one's income, misusing tax relief and deductions, purposeful miscalculating the amount of tax rebate for which the individual is not eligible, to failure to register a business or make advance tax payments on time. In each of those cases, the taxpayer makes a conscious decision to evade their tax responsibilities and not to participate in the costs of running the state. This is illustrated by studies based on the public goods game, which is relatively often employed in research into game theory and experimental economics (cf. Cadsby, Maynes, 1998; Fischbacher, Gächter, Fehr, 2001; Kurzban, Houser, 2001; Semmann, Krambeck, Milinski, 2003; Cox, Stoddard, 2018 et al.). A majority of experiments conducted according to this model used a classic scenario, placed outside the tax context and referring to making a contribution as adding value to the so-called 'common pool'. Teschner (2014) added the tax context to the classic description of the game by presenting it to his research subjects as 'a game of taxes'. In his study, he analysed how people react to tax profits and losses as well as a profit or loss without this context. The subjects participated in two games where their task was to roll a dice, whereby the number of pips rolled reflected the level of profit or loss. The roll was made in private, with subjects asked to tell the number of pips rolled, which created an opportunity to cheat by reporting a more favourable result than the actual one. At the end of the experiment, the points gained (or lost) that way were converted into monetary compensation. Instructions in the first of the games played referred to profits or losses in general whereas the second game was set in the tax context, where the subjects paid tax or determined the amount of tax deduction. The findings demonstrated that placing the game in the

tax context significantly raised the frequency of cheating in order to obtain a more favourable result. While the game played outside the tax context saw the subjects cheat in moderation, inflating the number of pips on their dice roll only slightly, the level of cheating was considerably higher in the tax-related game.

Many factors may affect taxpayers' desire to cheat on their taxes. When analysing taxpayer behaviour, researchers have referred to various models, including Kirchler's slippery slope model (2007; Kirchler, Hoelzl, & Wahl, 2008). According to the author of the model, there are two dimensions that describe taxpaver behaviour, namely the power of tax authorities and trust in tax authorities. The former is a derivative of perceived possibilities for evasion as well as attitudes to and knowledge of taxes. The latter reflects the general opinion of an individual and social groups on the tax administration's goodwill and its work for the common good. One of the key factors that affect trust in tax authorities is procedural fairness (Cuccia & Carnes, 2001; Wenzel, 2004; Torgler, 2007; van den Bos, 2015; Jimenez & Iyer, 2016). Perceived procedural fairness depends on the assessment of the level of control over the decision-making process and the level of control over the results of decisions (Thibaut & Walker, 1978; Folger, Cropanzano, 1998). The perceived ability to influence decision making is associated with the right to be heard, the ability to present one's case and the ability to express reservations and raise objections. Studies have shown that a sense of participation in making decisions on tax revenue allocation reduces the propensity for tax evasion (Alm, Jackson, & McKee, 1993; Alm, McClelland, & Schulze, 1999; Murphy, 2003, 2007). In an experiment conducted by Alm, Jackson and McKee (1993), at the beginning of each round student subjects received information on the amount of their income and the tax rate (low and fixed in all rounds). Subsequently, they decided on the amount of taxable income to be reported. The subjects were also informed that tax revenues will be transferred to various university-related organisations. In addition, some subjects were allowed to name the organisation of their choice while others were not. The findings showed that a sense of procedural fairness gained through participation in making the decision on expenditure had a significant impact on tax evasion. Taking into account personal preference considerably reduced the desire to withhold income information. Studies have also shown that a sense of procedural fairness of taxes has a significant impact on approval of tax fraud. The stronger the sense of procedural fairness, the greater the strictness of prescriptive tax norms (Niesiobedzka, 2013; 2014). Furthermore, the willingness to collect taxpayer feedback on proposed changes to tax law has an impact on the level of approval for the proposed changes. New proposals to general tax law are more likely to be approved if they are preceded by extensive public consultations than if they are prepared without the willingness or attempt to learn taxpayers' opinions (Niesiobędzka, Kołodziej, 2017).

The belief that actions of an individual have no meaningful impact constitutes a part of a broader phenomenon: a sense of alienation. Seeman (1959) defines alienation as the expectation that one's behaviour cannot determine outcomes. It is multidimensional and may take the form of powerlessness, meaninglessness, anomie, social isolation and self-estrangement (Seeman, 1959). Alienation is also understood as a combination of a sense of inefficacy and a lack of trust (Bowler & Donovan 2002; Kim, 2005). Inefficacy is a belief that the behaviour of an individual does not have an impact on the course of events. Trust, on the other hand, is a belief that the governments act in the interest of their citizens. Both elements define the individual-state relationships and are of key importance to the development of civic duty. Studies have shown that a sense of participation in making decisions on tax revenue allocation and taking into account citizens' preferences in planning expenses not only increases the strictness of tax moral norms but also reduces the propensity for tax evasion (Alm, Jackson, & McKee, 1993; Alm, McClelland, & Schulze, 1999; Casal et al., 2016; Pommerehne et al., 1994; Torgler, 2004). Interest in and taking into account citizen feedback leads to a greater percentage of people supporting new proposals for tax burden (Fujii, Kitamura, Suda, 2004). Similarly, trust in institutions is significantly associated with unwillingness to cheat on one's taxes (Niesiobedzka, 2013; 2014) and greater strictness of individual tax moral norms (Alm & Torgler, 2006; Letki, 2015; Niesiobędzka, 2013; Torgler, & Schneider, 2007). Song and Yarbrough (1978) demonstrated that the greater the sense of alienation, the lower the tax morality of citizens.

The aim of the studies that we describe in this paper is the impact of procedural fairness and a sense of alienation on taxpayers' desire to cheat on their taxes. To that end, we employed an experimental procedure where we studied the amount of tax payments made in the public goods game. The public goods game is an economic game that makes it possible to study cooperation in making strategic decisions. In each consecutive round, each game participant decides on the division of their resources (e.g. tokens) between the private good (e.g. tokens kept for oneself) and the public good (e.g. tokens transferred to a common pool). The total revenue from contributions to the public good is equal to the total of contributions made by individual players multiplied by a predetermined coefficient. Subsequently, the total revenue from contributions to the public good is evenly distributed between all players, regardless of the amount of the individual players' contributions to the public good. In both our experiments, the subjects played a public goods game that was presented as a game of taxes, with contributions to the public good presented as tax contributions. This was inspired by the aforementioned findings of the study by Teschner (2014), who demonstrated that introducing the tax context increases the propensity for fraud in subjects.

Study 1 examined the impact of procedural fairness on the amount of tax payments in the public goods game. The study manipulated the ability to participate in deciding on the number of rounds of the game. Some subjects (Experimental Group 1, voice) were assured that not only were they allowed to speak out on the matter but also that their opinion substantially influenced the final decision. On the other hand, subjects from Experimental Group 2 (non-voice) were allowed to propose a number of rounds but their suggestions were ignored. Manipulating the ability to voice one's opinion (voice/non-voice procedure) is the main method for differentiating a sense of procedural fairness in many studies (Brockner et al., 1998; De Cremer, Brebels, Sedikides, 2008; Lind, Kanfer, Earley, 1990; Van den Bos, 1999). In the study, it was assumed that the amount of tax payments would be higher in the group that was allowed to participate in decision making than in the group whose voice had no impact on the deciding the course of the game.

Another study focused on the impact of a sense of alienation on the amount of tax payments in the public goods game. In Study 2, a sense of alienation was induced in the experimental group using word puzzles containing words associated with a sense of powerlessness, trust and alienation (cf. inducing materialism: Bauer, Wilkie, Kim, & Bodenhausen, 2012). A sense of alienation was not activated in the control group. The study assumed that the amount of tax payments would be significantly lower in the group with a sense of alienation induced than in the group without a sense of alienation induced.

2. Study 1: the impact of procedural fairness on the amount of payments in the public goods game

Method

Sample and procedure. The study involved a total of 42 students of Kozminski University, including 26 women and 16 men (M = 19.76; SD = 0.79), who were randomly assigned to two experimental groups, Group 1 with procedural fairness (*voice*, N = 20) or Group 2 with procedural unfairness (*non-voice*, N = 22).

Materials and procedures. At the beginning of the study, members of both experimental groups were informed that they would be playing a 'game of taxes'. Subsequently, they were introduced to the rules of the game. The subjects were informed that the game would be played in groups of four, formed at random. The rules of the game were as follows: (1) Each group member receives 10 points of which they can transfer any number (in whole numbers) to a common pool. (2)

They can keep for themselves all points they decide not to transfer. (3) All points they decide to transfer will be multiplied by two and divided evenly among all group members. The sum of points obtained individually by subjects in the game was then calculated and added to the points required to complete the university course. In order to provide a better illustration of those rules, the subjects were presented with an example of a hypothetical round and asked to calculate payments in a sample interaction. In order to begin the game, all subjects needed to correctly solve the example. The next step was to inform the subjects about the need to determine the number of rounds to be played.

Procedural fairness. In Experimental Group 2 (non-voice), the subjects were informed that although players usually decide about the number of rounds by providing the preferred number, these preferences would not be collected in their case. The subjects received information that the number of rounds was predetermined by the organiser of the study. On the other hand, subjects in Group 1 (voice) were informed about the minimum and maximum number of rounds and then asked to indicate their preferred number of rounds. After the subjects provided their preference, they were told that the number of rounds to be played would be five, based on the most common choice. Five was also the number of rounds played by the subjects in Experimental Group 2, since that was the number provided by the researcher. This means that both groups played an identical number of rounds (N = 5). Both groups played in teams of four, with team line-ups changing every round. The study was conducted using computer software; the subjects did not know who their teammates were.

Tax payments. The subjects' contribution to the public good was assessed based on the amount of payments made in individual rounds. Within the tax context that was introduced, it was assumed that the payments are taxes and, therefore, understating or not transferring points to the public good will be treated as tax evasion.

The assessment of procedural fairness. In order to verify the effectiveness of manipulation, the subjects were asked to assess how they were treated while determining the number of rounds on a four-point scale, where 1 was completely unfair and inappropriate treatment, and 4 completely fair and appropriate.

Results

The statistical analysis confirmed the significance of differences in the assessment of procedural fairness between the groups (t(40) = 3.80; p < 0.001). Group 1 (*voice*) found the method for determining the number of rounds played by the participants

as significantly fairer M = 3.20; (SD = 0.70) as compared to Group 2 (non-voice) M = 2.36; (SD = 0.73).

The chart below presents the amount of average tax payments in individual rounds of the game. As can be observed, the average amount of tax payments was the highest in round two (M = 5.14; SD = 3.32), slightly lower in round one (M = 4.46; SD = 3.01) and three (M = 4.34; SD = 3.09), and the lowest in round four (M = 4.02; SD = 3.45) and five (M = 3.24; SD = 3.68).

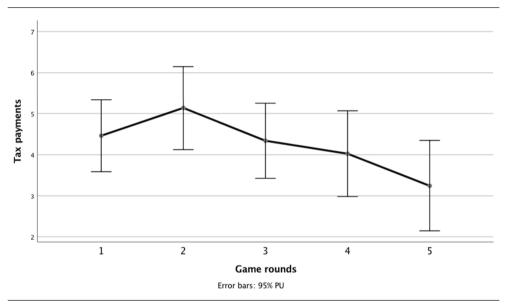


Chart 1. The amount of tax payments in individual rounds - Study 1

Subsequently, a repeated measures analysis of variance was performed to verify the assumption about the impact of procedural fairness on the amount of tax payments. The analysis revealed a significant main effect of procedural fairness F(1.40) = 11.10; p < 0.002; $eta^2 = 0.29$. The average amount of tax payments in all rounds of the game was significantly higher in Group 1 (*voice*) (M = 5.31; SD = 2.44) than in Group 2 (*non-voice*) (M = 3.17; SD = 1.67). Also significant was the effect of round order F(4.40) = 2.75; p < 0.030; $eta^2 = 0.06$. A *post hoc* analysis revealed significant differences in the amount of tax payments between round one and five (p < 0.05), two and five (p < 0.01), as well as between round three and five (p < 0.05). No significant differences in tax payments were recorded in the remaining rounds.

3. Study 2: the impact of a sense of alienation on the amount of payments in the public goods game

Method

Sample and procedure. The study involved a total of 56 participants, including 25 women and 31 men (M = 23.76; SD = 2.55), who were randomly assigned to the control group (N = 28) or the experimental group (N = 28).

Materials and procedures. At the beginning of the study, members of the control and the experimental group were informed that they would be playing a 'game of paying taxes'. Subsequently, they were introduced to the rules of the game. The rules were typical of a public goods game presented in the previous study. The subjects were also informed about the number of all rounds (five) and the multiplication factor used. After it was ensured that the rules of the game of taxes are clear, the subjects were given envelopes with 10 tokens in each. As was the case with Study 1, the game was played in teams of four; this time, however, team line-ups remained unchanged throughout the game.

A sense of alienation. In the experimental group, a sense of alienation was induced after the rules of the game of taxes were explained but before the game began. To that end, team members were asked to form coherent sentences out of the words they were given. The words were derived from Korzeniowski's Political Alienation Scale (1991, 2009). For the purpose of the study, 10 items from the Political Alienation Scale were selected and formed into 10-word puzzles (sentences) (e.g. *I am state cog in small machine; decision citizen ignores politician make opinion)*. The subjects were advised that they can freely inflect the words in the puzzles so as to form meaningful sentences. Having formed the sentences, the teams in the experimental group began the game of taxes while the teams in the control group began the game immediately after the rules were explained to them.

Tax payments. The subjects' contribution to the public good was assessed based on the amount of payments made in individual rounds with the same suggestion that withholding payments would be considered tax evasion.

Results

Chart 2 shows the average amount of tax payments in individual rounds. As can be observed, the average tax payment was highest in round one (M = 2.95 SD = 1.49),

lower in round two (M = 2.04; SD = 1.13) and three (M = 1.39; SD = 0.95), and lowest in round four (M = 0.96; SD = 0.74) and five (M = 1.07; SD = 0.87).

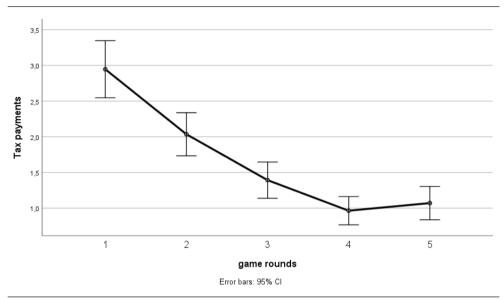


Chart 2. The amount of tax payments in individual rounds of the game – Study 2

A repeated measures analysis of variance was performed in order to determine whether inducing a sense of alienation has an impact on the amount of tax payments. The analysis revealed a significant main effect of a sense of alienation F(1.54) = 21.96; p < 0.001; $eta^2 = 0.29$. The average amount of tax payments in all rounds of the game was significantly higher in the group without a sense of alienation being induced (M = 2.01; SD = 0.61) than in the group with an induced sense of alienation (M = 1.36; SD = 0.40). Also significant was the effect of round order F(4.51) = 39.35; p < 0.001; $eta^2 = 0.42$. A post hoc analysis revealed significant differences in the amount of tax payments between round one and two, one and three, one and four, as well as between round one and five at p < 0.001. Significant differences in the amount were recorded between round two and three, two and four, and two and five (all at p < 0.001). There was also a significant difference in payments between round three and four (p < 0.004), and three and five (p < 0.022). No statistically significant difference in the amount of tax payments was recorded between round four and five (p > 0.05).

4. CONCLUSION

The aim of the studies presented above was to find out the impact of procedural fairness and a sense of alienation on the amount of tax payments in the public goods game. The state budget is a public good created by citizens. The size of that budget is largely determined by civic contributions, including taxes. Tax evasion means 'free riding' in a situation where others contribute to the public good. Study 1 manipulated procedural fairness, allowing (or not) the subjects to co-decide on a significant rule of the game, which influenced their end result. Consequently, the manipulation of procedural fairness had a significant impact on the amount of payments to the common pool. Significant differences between Group 1 (voice) and Group 2 (non-voice) were determined in the amounts of payments in a majority of rounds. Study 1 showed that the propensity for 'free riding' was characteristic of subjects deprived of the ability to co-decide. This result indicates that fair treatment in the tax context is an important factor influencing the readiness to participate in the system. Failure to maintain fairness, manifesting itself in muzzling taxpayers or ignoring their opinion, increases the propensity for tax evasion. These findings are consistent with the results of the study by Alm, Jackson and McKee (1993), where maintaining procedural fairness by allowing subjects to influence how tax revenues were spent also reduced the propensity for tax evasion. The study by Alm, Jackson and McKee was focused on budget management and thus procedural fairness referred to co-deciding how tax revenues are spent by naming the organisation that is to become the beneficiary of those revenues. Our experiment, on the other hand, referred to the treatment of taxpayers before determining their tax liability and concerned the rules of receiving compensation.

Study 2, which also employed the public goods game, was focused on the impact of a sense of social alienation on the amount of tax payments. Alienation is a combination of a sense of inefficacy and a lack of trust (Bowler & Donovan 2002; Kim, 2005). Our study focused on the former factor. In accordance with the assumptions of the study, the findings showed a significantly higher propensity for 'free riding' in the group with a sense of alienation compared to the group without a sense of alienation. The results of both experiments confirm previous findings and demonstrate the importance of taxpayers' expectation that their behaviour has an impact on the course of events (Alm, Jackson, & McKee, 1993; Alm, McClelland, & Schulze, 1999; Casal et al., 2016; Fujii, Kitamura, Suda, 2004; Pommerehne et al., 1994; Torgler, 2004). The stronger the conviction that the government is not interested in hearing out its citizens or is interested but does not treat their preferences as binding, the weaker the sense of duty to the state. The Fairness Theory (Folger & Cropanzano, 1998) holds that if procedures are assessed as unfair, people attribute responsibility for the

results that are unfavourable to them to the decision-makers. External attribution of a result that is unfavourable to an individual reduces the sense of responsibility for the outcome. In the case of an unfair procedure, people are convinced that the results would have been better if the decision-makers had applied a fairer procedure. External attribution of an unfavourable result leads to a pejorative assessment of the decision-makers (individuals, institutions) and a negative reaction to decisions made (Brockner, 2002; Van den Bos, 2015). Experiencing an unfair procedure, the subjects thus received information that the rules of the game are established in a way unfavourable to them, which weakened their inclination to commit to the game, as expressed by lower payments to the public good.

Previous studies have shown that the average payment to the public good in a one-off game varies from 40% to 60% of the initial amount. If the game is played repeatedly, payments to the public good decrease with every round (Chaudhuri, 2009; Chaudhuri, Paichavontvijit, & Smith, 2017). Both studies saw a decline in the average amount of payments in each consecutive round, which is compatible with previous findings in this regard. This is a manifestation of typical behaviour in a cooperative situation, namely conditional cooperation. Fischbacher, Gächter and Fehr (2001) demonstrated that a majority of people make the amount of payment in the public goods game dependent on others' behaviour. Egotistic choices made by other players reduce an individual's motivation for cooperation, which in turn decreases the amount of payments to the public good in subsequent rounds. Importantly, conditional cooperation does not depend on the group line-up. In accordance with the description of the procedure applied in both experiments, individual rounds were played in changing teams of four in Study 1 and fixed teams throughout the game in Study 2. The results showed that, regardless of the team line-up in subsequent rounds, the amount of tax payments in a repeated game follows a downward trend observed in previous studies. It can be therefore presumed that a decision to make a lower payment to the public good in the next round stems from not only witnessing other team members making low payments but also the generalised belief about a declining inclination for participation in the public good during a game of this type.

Furthermore, the results show a higher level of payments to the public good in Study 1 as compared to Study 2. In Study 1, while compensation took the form of points (rather than money), those points had real value as they were subsequently converted into an additional university course score. Linking the individual score obtained by a player to a bonus in the form of an additional course score produced high payments. Perhaps higher payments may be attributed to a greater commitment of the subjects due to potential benefits; the subjects decided to make higher payments to the common pool in order to improve their chances of a higher course score. That factor also had an impact on the reality of the experimental situation itself. In this

context, it was expected that the subjects would strive to play as many rounds as possible, as also confirmed by preferences collected in the group that was allowed to express them. The inability to participate in the decision on the number of rounds, combined with the knowledge that other groups were allowed to participate, was negatively received by the students. Unfair treatment of the subjects contributed to a significant decrease in the amount of tax payments despite the aforementioned high motivation to maximise the game score.

As expected, the studies confirmed the impact of procedural unfairness and a sense of alienation on the propensity for tax evasion in the public goods game. In both experiments, the subjects made real payments to the common pool and subsequently received compensation according to the previously presented algorithm. In addition, the reality of the research situation was highlighted in Study 1 by linking the final game score to an additional course score. We find this a considerable merit of the study. However, the relatively small size of the samples is definitely a limitation. In addition, the procedure in Study 2 did not involve a measurement of the effectiveness of manipulation. However, pilot studies that preceded the experiment described here showed that subjects manipulated by being requested to create sentences out of a word puzzle centred around a sense of alienation had associations with lack of civic empowerment, lack of significance, the incomprehensibility of actions, and politics. Furthermore, it would seem interesting to know whether the two defined variables, procedural fairness and a sense of alienation, interact with one another. The answer to this question would require a study in an extended experimental model.

Placing the findings of our experiments in the context of taxpayers' reality, one may offer some examples of taxpayer behaviour that support the conclusions presented above. A case in point is the number of taxpayers who name a public benefit organisation to which they give 1% of their income tax in their annual personal income tax return, which has been steadily growing ever since this became a possibility. The systematic increase in the number of taxpayers who indicate an organisation to which they wish to donate 1% of their income tax illustrates how important it is for taxpayers to be able to express their preferences regarding the use of tax revenues. Importantly, the donation of 1% of personal income tax not only enables taxpayers to indicate their preferences but also, by the binding nature of the entry made in the tax return, becomes an element of co-deciding about the distribution of budget revenues. Similarly, legal solutions applicable in some countries (e.g. the United States, Canada) provide for negotiation or mediation with taxpayers, e.g. on the repayment of tax arrears. Before such solutions were introduced, tax disputes were resolved predominantly in courts, which was a lengthy and expensive process for both parties. In addition, court proceedings did not encourage developing a common solution that takes into account the interests and situation of both parties of the conflict. The

inability to engage in mediation and negotiation in the case of Polish taxpayers has been noticed by the lawmakers, who drafted a new tax law that provides for entering in tax agreements with taxpayers (regarding the settlement of tax liabilities but not the amount of tax due) and mediation with the tax office via a mediator. Mediation, which is a non-coercive form of exercising tax authority, is supposed to expedite the processing of cases without the need to engage in protracted proceedings. The results of the studies presented in this paper support the assumption that the active inclusion of taxpayers in tax-related decision making may have a positive impact on their willingness to pay taxes.

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