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# Trust in public programmes and distributive (in)justice in taxation

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## ABSTRACT

In the tax psychology literature, there is a lack of empirical evidence on the degree of distributive justice in taxation. This article aims to test the relationship between trust in public programmes and distributive justice in taxation at the cross-country level. The sample consists of 47 countries. Trust in public programmes and distributive justice in taxation are measured based on data collected from Wave 7 of the World Values Survey, which took place worldwide in 2017-2022. An Ordered Probit Model was utilised for the empirical analysis. This study finds that if taxpayers support preferential organisations like the police and universities, they are less likely to support distributive justice, where the rich are taxed to support the poor. On the other side, if taxpayers support equitable organisations such as armed forces, courts, civil service, and elections, then they are more likely to believe in taxing the rich to support the poor. The current study's findings have policy implications for governments intending to improve tax revenue collection. Additionally, the practical implication of the current study is that governments willing to combat income inequality should consider the differences between preferential and equitable organisations in their decision-making. There is congruence between taxpayers' feelings toward distributive justice and their confidence in equitable organisations.

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World Values Survey; trust; government-funded organisations; distributive justice; taxation

## JEL CLASSIFICATIONS

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## 1. Introduction

As Kirchler and Hoelzl (2017, p. 246) note, 'Paying taxes is not fun'. Taxes are a social contract between the government and taxpayers (Khlif et al., 2016). Taxpayers' desire to cooperate with the government and its funded organisations depends upon external and internal factors. Torgler (2004) explains that external factors are defined as how the taxpayer believes the government is treating them in areas such as paying taxes, receiving government services, or the timeliness of government decisions. The most important factors are tax rates, income, probability of audits, and severity

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of fines. Internal factors are defined (Torgler, 2004) as how taxpayers evaluate their compliance behaviour in light of their perceptions of what constitutes decent, moral, or ethical conduct. These are psychological factors such as tax knowledge, norms, perceptions of justice, and motivational postures (Kirchler, 2007). While economists emphasise the importance of external factors, psychologists demonstrate that internal variables are just as meaningful. This article draws upon this psychological research, for example, Wenzel (2003) and Hofmann et al. (2008). Wenzel (2003) shows that the perception of justice is one of the most important internal factors in the relationship between a democratically elected government and its taxpayers. Understanding this underlying psychological determinant, distributive justice in taxation, is important to governments and policymakers as they develop and put into practice measures to lessen its harmful consequences.

Therefore, the main goal of this article is to test a new theory that distributive justice in taxation is related to trust in government-funded organisations. But more importantly, that trust in different types of organisations leads the taxpayer to believe in equity or inequity in taxation. The two primary research questions are about the relationship between confidence in equitable or preferential organisations and how that helps frame taxpayers' perceptions of distributive justice in taxation.

Equity theory (Adams, 1965) provides a useful lens for understanding distributive justice in taxation. According to the equity theory (Adams, 1965), individuals compare the ratio of their effort and money with others' effort/money ratio. It is perceived as fair if hard-working individuals get paid more than individuals with less effort. When effort/money ratios are unequal, individuals are unsatisfied and try to compensate by decreasing their effort (Van Dijke et al., 2019; Verboon & Van Dijke, 2007). Thus, in the taxation context, while distributive justice (exchange equity) corresponds to the perception that the government provides public goods in relation to one's tax contribution, distributive injustice (exchange inequity) refers to the feeling that the government does not offer enough public goods to the amount of tax one must pay (Verboon & Van Dijke, 2007). Interestingly, little research has examined the relationship between trust in public goods and distributive justice in taxation (McGee et al., 2019a, 2019b). Their empirical work evaluated only confidence in government as a trust variable. Koumpias et al. (2021) stressed that using a generic 'confidence in government' test to treat public programme trust uniformly is not the proper course of action. Therefore, we fill a gap in the tax psychology literature by separately testing the association between the trust in different types of organisations and distributive justice in taxation. Taxpayers that trust equitable organisations, such as the armed forces, courts, government, parliament, civil service, and elections, will believe exchange equity exists. In contrast, taxpayers that trust preferential organisations, such as the police and universities, will believe that there is an exchange inequity.

Building on equity theory (Adams, 1965), we test two main hypotheses: (H1) Distributive justice in taxation will be negatively related to individuals' confidence in preferential organisations that do not benefit everyone or do so inequitably; (H2) Distributive justice in taxation will be positively related to individuals' confidence in equitable organisations that impact everyone in society relatively equally.

The current study uses Wave 7 of the World Values Survey (hereinafter ‘WVS’) (2017-2022) dataset to measure the degree to which individuals use the perception of distributive justice in taxation in their understanding of public transfers by the government. The WVS allows for cross-country comparisons of individuals’ perceptions of distributive justice in taxation. To conduct the empirical study, an Ordered Probit Model was used. Using a sample of 47 countries, we provide evidence that while the level of confidence in equitable organisations like the armed forces, courts, civil service, and elections is associated with distributive justice in taxation, the level of confidence in preferential organisations like police and universities may lead to distributive injustice in taxation.

The findings of this study contribute to two distinct literary streams. First, this article proposes a novel measure of ‘distributive justice in taxation’ at the societal level. The second contribution of this work is the evaluation of the relative importance of trust in different types of organisations for distributive justice in taxation. To the best of our knowledge, this study is the first study to explicitly distinguish the relationship between preferential and equitable organisations and distributive justice in taxation.

The remainder of the article is organised as follows. [Section 2](#) describes the theory and development of the hypotheses. [Section 3](#) presents the research design. [Section 4](#) summarises the empirical results and analysis. [Section 5](#) includes the discussion and [Section 6](#) covers conclusions.

## 2. Theory and hypothesis development

### 2.1. *Distributive justice in taxation*

In the tax psychology literature, Wenzel (2003) postulates three fairness concepts: distributive justice, procedural justice, and retributive justice. This article focuses on distributive justice, because while procedural justice deals with the process of resource distribution, retributive justice considers the perceived fairness of norm-keeping measures such as audit and punishment (Roberts & Roberts, 2020; Van Dijke et al., 2019; Wenzel, 2003). Distributive justice is considered a fair exchange of resources, which can be perceived as negative or positive (e.g., the tax burden and tax-based benefits). It should be noted that those who care about distributive justice should consider taxation as an effective mechanism to deal with rising income inequality (Sugin, 2004). Gamage (2014) states that governments should raise the highest income tax rates to combat income inequality. However, collecting taxes and redistributing them among the poorer taxpayers is challenging, because it can reduce the high-income taxpayers’ incentive to work (Pedersen, 2020). Therefore, raising tax rates should be done while causing the least harm possible to high-income taxpayers. As Wenzel (2003) notes, distributive justice can have different meanings at different levels of analysis, such as individual, group, and societal levels. At the individual level, we address the question, ‘Am I being treated fairly?’ which is a question of the tax burden on an individual level. At the group level, we address the question, ‘Is my group (e.g., taxi drivers) being treated fairly?’ which is a question about ingroup treatment, a category of similar individuals with whom someone identifies. On the other hand, at the societal level, we are interested in the question, ‘Is the tax system fair for

everyone?’ The question is one of the relative fairness of the tax burden between members of society. Studies in tax compliance research show that taxpayers who view the distribution of tax burdens and benefits across individuals, groups, and society as fair are more prone to comply with tax laws and regulations (Van Dijke et al., 2019).

The latest empirical studies by McGee and Yoon (2018), Yoon (2020), and McGee et al. (2019a, 2019b) inspired this research. McGee et al. (2019b) summarise the effect of variables such as socioeconomic, social bond, attitudinal, and religiosity on the legitimacy of the policy of democracy to tax the rich and subsidise the poor. Using the ‘tax the rich and subsidize the poor’ concept, they measured the coercive power of the government in distributing wealth. Only confidence in government as an attitudinal variable (trust variable) was tested in their empirical paper. We expand on their work by examining the effect of individuals’ confidence levels in public programmes on their views of distributive justice in taxation. Additionally, our study is original in defining ‘distributive justice in taxation’ at the societal level as individuals’ beliefs in whether taxing the rich and subsidising the poor is a fundamental characteristic of democracy. The democratic act of government policy to ‘tax the rich and subsidize the poor’ is deemed as helping to reduce income inequality among its citizens (Koay et al., 2020).

## **2.2. Trust in public programmes**

Perceptions of distributive justice in taxation are likely low when the government’s supply or distribution of goods and services is considered small or unfairly distributed. One way to measure taxpayers’ views on the supply and distribution of goods and services is to measure taxpayers’ confidence in government-funded organisations. Tax rate increases to fund government services that benefit most taxpayers are more likely to be considered fair from a distributive justice perspective (Moser et al., 1995).

Our theory builds on previous tax morale research that tested confidence in government organisations. For example, Kouamé (2017) breaks down government organisations into three subcomponents: confidence in the legal system (police and courts), legislative and executive authority (parliament and government), and other public services (universities and civil service). Kouamé (2017) found that all elements of trust in government organisations raise citizens’ willingness to pay taxes. However, in recent tax morale literature (Leonardo & Martinez-Vazquez, 2016; Koumpias et al., 2021), government organisations were distinguished as either on the government’s output side or the government’s input side. While the former refers to civil services, police, and courts, the latter corresponds to government and parliament. Put differently, Koumpias et al. (2021) classified the legal system and other public services from Kouamé (2017) as the output side of government and the legislative and executive branches as the input side of government. The input side of government is concerned with what should be delivered, but the output side deals with how those goods and services are delivered. Their result suggests that taxpayers interact more with output organisations (civil services, police, and courts). Therefore, their intrinsic motivation to pay taxes increases when their trust in those organisations increases. Contrary to Kouamé (2017), Koumpias et al. (2021) provide that taxpayers are

**Table 1.** Relationships between confidence in organisation type and distributive justice in taxation.

|                                 |      | Type of organisation                             |  |
|---------------------------------|------|--|--|
|                                 |      | Equitable <sup>a</sup>                           | Preferential <sup>b</sup>                        |
| Confidence in organisation type | High | Distributive justice in taxation is essential.   | Distributive justice in taxation is unimportant. |
|                                 | Low  | Distributive justice in taxation is unimportant. | Distributive justice in taxation is essential.   |

<sup>a</sup>Equitable organisations benefit the country's citizens similarly.

<sup>b</sup>Preferential organisations primarily benefit a subset of citizens.

Source: Authors' Conceptual Framework.

believed to be less likely to interact with input organisations (government and parliament), ultimately leading to a smaller effect on tax morale.

### 2.3. Hypotheses development

We used a different classification system for government organisations compared to Kouamé (2017) and Koumpias et al. (2021). It should be noted that, in contrast to Koumpias et al. (2021), we believe that taxpayers' desire to pay taxes relies not only on how they engage with government organisations but also on how taxpayers get benefits from these government organisations. There are eight government organisations in our analysis. We distinguish between equitable organisations that benefit the country's citizens fairly equitably, and preferential organisations that primarily benefit a subset of citizens (see Table 1). Out of the eight organisations studied that receive government funding, six benefit the country's citizens fairly equitably: armed forces, courts, government, parliament, civil service, and elections (the equitable organisations). The other two are likely to benefit a subset of citizens, primarily the wealthy: police and universities (the preferential organisations). Therefore, taxpayers likely believe that taxes to fund equitable organisations are fair when the government spending benefits everyone in society relatively equally. Conversely, taxpayers are likely to believe taxes to fund preferential organisations are relatively unfair when government spending benefits a few people, and the benefits are unequal.

Thus, we set the following hypothesis:

Hypothesis 1. A positive relationship exists between confidence in equitable organisations and perceptions of distributive justice in taxation.

Hypothesis 2. A negative relationship exists between confidence in preferential organisations and perceptions of distributive justice in taxation.

## 3. Research design

### 3.1. Sample

To find the factors influencing 'distributive justice in taxation', we gather data from the Wave 7 of the WVS, conducted in 2017–2022. The WVS collects information about many political, social, and cultural issues from countries around the world. Academics have used the WVS data for a long time, and it is the most popular data

source for investigating willingness to pay taxes since there are the most observations available for analysis (Koumpias et al., 2021; Korgaonkar, 2022). Moreover, it has been demonstrated that employing WVS data validated the findings of studies done using a variety of methods to gauge taxpayers' willingness to pay (Alm & Torgler, 2006). Table A1 presents the sample selection process. Table A2 provides the list of the 47 countries with data available to be used in the analysis.

### **3.2. Variable measurement**

#### **3.2.1. Dependent variable: distributive justice in taxation**

The general question to assess the level of distributive justice in taxation from WVS is:

Many things are desirable, but not all of them are essential characteristics of democracy. Please tell me for each of the following things how essential you think it is as a characteristic of democracy. Use this scale where one means "not at all an essential characteristic of democracy", and ten means it definitely is "an essential characteristic of democracy: Governments tax the rich and subsidize the poor". (Haerpfer et al., 2022)

In the previous research utilising the WVS survey, responses have been represented by different point scales. For instance, while Torgler (2003) uses a 4-point scale to measure tax morale responses from the WVS, Koumpias et al. (2021) use a 2-point scale to measure the same variable. Our study followed the strategy by merging statistically indistinguishable survey responses. Therefore, the dependent variable, distributive justice in taxation, is the 10-point scale responses converted into a 3-point scale (0 to 2). The value of 0 stands for 'It is against democracy (spontaneous)' and is an aggregation of responses from 1 to 3 in the original scale. The value of 1 stands for 'Not an essential characteristic of democracy' and is an aggregation of original responses 4 to 7. The value of 2 represents 'An essential characteristic of democracy' and is an aggregation of responses from 8 to 10.

#### **3.2.2. Independent variables**

The independent variables are codified by asking respondents,

*I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence, or none at all?* (Haerpfer et al., 2022)

This 4-point scale ranges from 1 = no confidence at all, to 4 = a great deal of confidence. The respondents expressed their confidence in the armed forces, police, universities, courts, government, parliament, civil service, and elections.

#### **3.2.3. Control variables**

The demographic variables were included as controls: sex (1 = male; 0 = female), age of respondents, and level of education attainment (ISCED classification). We include personal income using a 10-point scale ranging from 1 = lowest household income to 10 = highest household income. We also include the importance of democracy, which was measured by asking the following question: 'How important is it for you to live in a country that is governed democratically?' This is also a 10-point scale ranging from

not at all important = 1 to absolutely important = 10. Happiness was measured by the item: 'Taking all things considered, would you say you are (not at all) happy = 1, not very happy = 2, quite happy = 3, and very happy = 4'. The item was reverse-coded in the empirical tests for comparability when interpreting the results.

The following question assessed government responsibility: 'How would you place your views on this scale?' The 10-point scale ranges from 1 = the government should take more responsibility to ensure that everyone is provided for, to 10 = people should take more responsibility to provide for themselves. Social class variables were described as lower class, working class, lower middle class, and upper class. Marital status variables included married, divorced, single, and widowed. Employment status variables were described as full-time, part-time, self-employed, retired, student, unemployed, and homemaker. The enterprise variables were classified as government or public institution, private business or industry, and private non-profit organisation.

### 3.3. Model specification

An Ordered Probit Model is used to test the relationship between trust in public programmes and distributive (in)justice in taxation. This estimation has been employed in several previous tax morale studies (Korgaonkar, 2022; Rodriguez-Justicia & Theilen, 2022). The Ordered Probit Model was selected because it helps to examine the ranking information of the scaled dependent variable, distributive justice in taxation. However, in this model, the equation has a nonlinear form, so only the sign of the coefficient will be interpreted instead of its size. Therefore, quantitative effects will be calculated, and marginal effects will be reported. In Table 4, we show only the marginal effect for the highest value distributive justice in taxation, which is 'an essential characteristic of democracy'. To evaluate the empirical validity of the hypotheses presented in Section 2, the following estimation equation is employed:

$$DJ_i = \alpha_0 + \alpha k \sum_{k=1}^6 EO_i + \alpha k \sum_{k=7}^8 PO_i + \alpha k \sum_{k=9}^{21} C_i + u_i \quad (1)$$

where:

*Dependent variable:*

$DJ_i$  = denotes the perception of distributive justice in taxation for individual  $i$ .

*Independent variables:*

$\sum_{k=1}^6 EO_i$  = denotes the confidence in Equitable Organisations, and is specified as follows:

*armed forces* = confidence in armed forces;

*courts* = confidence in justice system/courts;

*government* = confidence in government;

*parliament* = confidence in parliament;

*civil service* = confidence in civil services;

*elections* = confidence in elections.

$\sum_{k=7}^8 PO_i$  = denotes the confidence in Preferential Organisations, and is shown as follows:



*police* = the confidence in police;

*universities* = the confidence in universities.

*Control variables:*

$\sum_{k=9}^{21} C_i$  = denotes the control variables and is specified as follows:

*sex* = a dummy variable: 1 for male and 0 otherwise;

*age* = age of respondents;

*education* = level of education;

*income* = personal income;

*democracy* = the importance of democracy;

*happiness* = happiness score;

*government responsibility* = responsibility of government;

*social class* = lower class, working class, lower middle class, and upper class;

*marital status* = married, divorced, single, and widowed;

*employment status* = full-time employed, part-time employed, self-employed, retired, student, unemployed, and homemaker;

*classification of an enterprise* = sectors of employment such as government or public institution; private business or industry; and private non-profit organisation.

## 4. Empirical results and analysis

### 4.1. Descriptive statistics

Descriptive statistics are reported in Table 2. For the dependent variable, distributive justice in taxation has a mean of 1.337 and varies from a minimum of 0 to a maximum of 2. For the main independent variables, including equitable (armed forces, courts, government, parliament, civil service, and elections) and preferential organisations (police, universities), values range from a minimum of 1 to a maximum of 4. Control variables included in the models are sex, age, education, income, democracy,

**Table 2.** Descriptive statistics.

| Variable                         | Obs.  | Mean   | S.D.   | Min. | Max. |
|----------------------------------|-------|--------|--------|------|------|
| distributive justice in taxation | 40930 | 1.337  | 0.790  | 0    | 2    |
| armed forces                     | 40930 | 2.915  | 0.917  | 1    | 4    |
| Courts                           | 40930 | 2.591  | 0.930  | 1    | 4    |
| Government                       | 40930 | 2.419  | 0.985  | 1    | 4    |
| Parliament                       | 40930 | 2.220  | 0.934  | 1    | 4    |
| civil service                    | 40930 | 2.442  | 0.881  | 1    | 4    |
| Elections                        | 40930 | 2.418  | 0.943  | 1    | 4    |
| Police                           | 40930 | 2.675  | 0.924  | 1    | 4    |
| Universities                     | 40930 | 2.873  | 0.825  | 1    | 4    |
| sex (male = 1)                   | 40930 | 0.532  | 0.498  | 0    | 1    |
| Age                              | 40930 | 43.245 | 15.565 | 16   | 100  |
| Education                        | 40930 | 3.693  | 2.027  | 0    | 8    |
| scale of income                  | 40930 | 4.857  | 2.073  | 1    | 10   |
| Democracy                        | 40930 | 8.406  | 2.122  | 1    | 10   |
| happiness                        | 40930 | 3.164  | 0.694  | 1    | 4    |
| government responsibility        | 40930 | 5.070  | 3.010  | 1    | 10   |
| social class                     | 40930 | 2.748  | 0.963  | 1    | 5    |
| marital status                   | 40930 | 2.478  | 2.085  | 1    | 6    |
| employment status                | 40930 | 2.663  | 1.892  | 1    | 8    |
| classification of an enterprise  | 40930 | 1.857  | 0.532  | 1    | 3    |

Source: Authors' Calculations.

happiness, government responsibility, social class, marital status, employment status, and classification of an enterprise. After eliminating observations with missing values, the final sample comprises 40930 observations. Table 3 contains a correlation matrix for the variables used in the empirical analysis.

#### 4.2 Ordered Probit estimation results

The results are presented in Table 4. We predict a positive relationship between confidence in equitable organisations and distributive justice in taxation. With regard to the coefficient of the index of confidence in the armed forces (Coeff = 0.057;  $p < 0.001$ ), an increase in the index of confidence in the armed forces raises the taxpayers' fair distributions of tax burdens, indicating the highest distributive justice in taxation by 2.2%. The coefficient of the courts is statistically significant (Coeff = 0.029;  $p < 0.001$ ) and shows a marginal effect of 1.1 percentage points. Thus, the results indicate that taxpayers are more willing to accept the courts as the use of taxes for public goods and services, consequently increasing the fair distributions of tax burdens.

Conversely, the government (Coeff = 0.011;  $p = 0.212$ ) and parliament (Coeff = 0.005;  $p = 0.617$ ) variables do not show any statistically significant effect on distributive justice in taxation. The coefficient of the index of the civil service has a highly significant positive effect on distributive justice in taxation (Coeff = 0.060;  $p < 0.001$ ) with a high marginal effect. An increase in the index of confidence in the civil service by one point increases the proportion of taxpayers, indicating the highest distributive justice in taxation by 2.3 percentage points. Finally, taxpayers might favour the necessity of elections in the decision of the fair fiscal exchange, and thus elections raise fair distributions of tax burdens. The coefficient of the elections is statistically significant (Coeff = 0.066;  $p < 0.001$ ) and shows the strongest marginal effect (2.5 percentage points).

We predict a negative relationship between preferential organisations and distributive justice in taxation. The coefficient of the police (Coeff = -0.030;  $p < 0.001$ ) is highly significant, with a marginal effect of 1.2 percentage points, indicating the highest distributive injustice in taxation. It shows that police have yet to receive support from the taxpayers because of their lower desired utility in the share of public goods and services. Therefore, it reduces the fair distribution of tax burden. Similarly, the coefficient on universities is statistically significant (Coeff = -0.022;  $p < 0.001$ ), and a one-unit increase in this variable decreases the percentage of taxpayers reporting the fair distributions of the tax burden by more than 0.9 percentage points. It postulates less acceptance of taxes being spent on universities as a provider of public goods and services among the taxpayers, resulting in the highest distributive injustice in taxation.

## 5. Discussion

The attitude toward taxing the rich and subsidising the poor on a cross-country basis has been gaining interest in the tax psychology literature following the pioneering

Table 3. Correlation matrix.

|                                     | (1)     | (2)     | (3)     | (4)     | (5)     | (6)     | (7)     | (8)     | (9)     | (10)    |
|-------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. distributive justice in taxation | 1.000   |         |         |         |         |         |         |         |         |         |
| 2. armed forces                     | 0.074*  | 1.000   |         |         |         |         |         |         |         |         |
| 3. courts                           | 0.079*  | 0.400*  | 1.000   |         |         |         |         |         |         |         |
| 4. government                       | 0.077*  | 0.351*  | 0.571*  | 1.000   |         |         |         |         |         |         |
| 5. parliament                       | 0.081*  | 0.331*  | 0.545*  | 0.695*  | 1.000   |         |         |         |         |         |
| 6. civil service                    | 0.094*  | 0.341*  | 0.539*  | 0.581*  | 0.629*  | 1.000   |         |         |         |         |
| 7. elections                        | 0.096*  | 0.287*  | 0.478*  | 0.547*  | 0.574*  | 0.530*  | 1.000   |         |         |         |
| 8. police                           | 0.060*  | 0.469*  | 0.643*  | 0.485*  | 0.447*  | 0.462*  | 0.421*  | 1.000   |         |         |
| 9. universities                     | 0.050*  | 0.244*  | 0.362*  | 0.340*  | 0.374*  | 0.436*  | 0.412*  | 0.306*  | 1.000   |         |
| 10. sex                             | 0.009   | 0.062*  | -0.006  | -0.003  | -0.004  | 0.003   | 0.017*  | -0.017* | 0.008   | 1.000   |
| 11. age                             | 0.031*  | 0.064*  | 0.019*  | 0.014*  | -0.001  | 0.017*  | 0.062*  | 0.091*  | 0.019*  | 0.019*  |
| 12. education                       | -0.023* | -0.029* | -0.018* | -0.103* | -0.060* | -0.027* | -0.025* | 0.009*  | -0.035* | -0.003  |
| 13. scale of income                 | 0.003   | 0.003   | 0.025*  | 0.001   | 0.020*  | 0.014*  | 0.042*  | 0.029*  | 0.011*  | 0.011*  |
| 14. democracy                       | 0.103*  | 0.034*  | 0.049*  | 0.020*  | 0.040*  | 0.061*  | 0.082*  | 0.061*  | 0.114*  | 0.018*  |
| 15. happiness                       | -0.010* | 0.076*  | 0.086*  | 0.129*  | 0.106*  | 0.086*  | 0.111*  | 0.094*  | 0.110*  | -0.025* |
| 16. government responsibility       | -0.038* | 0.011*  | -0.001  | 0.055*  | 0.023*  | 0.003   | 0.021*  | 0.029*  | -0.013* | 0.010*  |
| 17. social class                    | -0.015* | -0.002  | 0.029*  | -0.005  | 0.012*  | 0.014*  | 0.041*  | 0.041*  | 0.005   | -0.014* |
| 18. marital status                  | -0.024* | -0.072* | -0.068* | -0.105* | -0.093* | -0.083* | -0.083* | -0.065* | -0.032* | -0.017* |
| 19. employment status               | -0.011* | 0.001   | -0.022* | -0.018* | -0.019* | -0.041* | -0.011  | -0.005  | 0.012*  | -0.119* |
| 20. classification of an enterprise | -0.010* | -0.056* | -0.042* | -0.038* | -0.043* | -0.075* | -0.042* | -0.005  | 0.012*  | -0.119* |
| 11. age                             | 1.000   |         |         |         |         |         |         |         |         |         |
| 12. education                       | -0.127  | 1.000   |         |         |         |         |         |         |         |         |
| 13. scale of income                 | -0.086* | 0.283*  | 1.000   |         |         |         |         |         |         |         |
| 14. democracy                       | 0.086*  | 0.063*  | 0.019*  | 1.000   |         |         |         |         |         |         |
| 15. happiness                       | -0.053* | 0.012*  | 0.134   | 0.032*  | 1.000   |         |         |         |         |         |
| 16. government responsibility       | -0.001  | 0.033*  | 0.100*  | -0.007  | 0.071*  | 1.000   |         |         |         |         |
| 17. social class                    | -0.023* | 0.339*  | 0.489*  | 0.027*  | 0.120*  | 0.070*  | 1.000   |         |         |         |
| 18. marital status                  | -0.288* | 0.093*  | -0.004  | -0.039* | -0.053* | -0.008  | -0.002  | 1.000   |         |         |
| 19. employment status               | 0.116*  | -0.189* | -0.134  | -0.008  | -0.021* | -0.024* | -0.103* | 0.059*  | 1.000   |         |
| 20. classification of an enterprise | 0.116*  | -0.189* | -0.134* | -0.008  | -0.020* | -0.013* | -0.103* | 0.034*  | 0.105*  | 1.000   |

Source: Authors' Calculations.

**Table 4.** Ordered Probit estimation results.

| Dependent variable: Distributive Justice In Taxation<br>Independent variables | Equation (1) |     |             |                 |
|---|--------------|-----|-------------|-----------------|
|   | Coefficient  |     | z-Statistic | Marginal effect |
| <i>(a) Confidence in Equitable Organisations</i>                              |              |     |             |                 |
| armed forces  | 0.057        | *** | 7.700       | 0.022           |
| Courts  | 0.029        | *** | 3.110       | 0.011           |
| Government  | 0.011        |     | 1.250       | 0.004           |
| Parliament  | 0.005        |     | 0.500       | 0.002           |
| civil service   | 0.060        | *** | 6.320       | 0.023           |
| Elections   | 0.066        | *** | 7.980       | 0.025           |
| <i>Confidence in Preferential Organisations</i>                               |              |     |             |                 |
| Police  | -0.030       | *** | -3.370      | -0.012          |
| Universities  | -0.022       | *** | -2.710      | -0.009          |
| <b>Control variables</b>  |              |     |             |                 |
| <i>(b) Demographic factors</i>  |              |     |             |                 |
| Male  | 0.002        |     | 0.180       | 0.001           |
| Age   | 0.002        | *** | 3.180       | 0.001           |
| Education   | -0.013       | *** | -3.940      | -0.005          |
| <i>(c) Economic variables</i>   |              |     |             |                 |
| scale of income   | 0.012        | *** | 3.530       | 0.005           |
| <i>(d) Democracy</i>  |              |     |             |                 |
| Democracy   | 0.057        | *** | 21.100      | 0.022           |
| <i>(e) Satisfaction</i>   |              |     |             |                 |
| Happiness   | -0.037       | *** | -4.270      | -0.014          |
| <i>(f) Responsibility</i>   |              |     |             |                 |
| government responsibility   | -0.016       | *** | -8.220      | -0.006          |
| <i>(g) Social class</i>   |              |     |             |                 |
| upper class   | -0.054       | **  | -2.160      | -0.021          |
| lower middle class  | 0.029        |     | 1.370       | 0.011           |
| working class   | 0.044        | **  | 2.030       | 0.017           |
| <i>(h) Marital status</i>   |              |     |             |                 |
| Married   | -0.066       | **  | -2.210      | -0.026          |
| Divorced  | -0.129       | *** | -3.580      | -0.050          |
| Single  | -0.060       | *   | -1.770      | -0.023          |
| <i>(i) Employment status</i>  |              |     |             |                 |
| full-time employed  | 0.048        | **  | 2.180       | 0.019           |
| part-time employed  | 0.095        | *** | 3.430       | 0.037           |
| self-employed   | 0.093        | *** | 3.840       | 0.036           |
| retired   | -0.013       |     | -0.430      | 0.036           |
| Student   | 0.002        |     | 0.040       | 0.001           |
| unemployed  | 0.045        |     | 1.430       | 0.017           |
| <i>(j) Classification of an enterprise</i>                                    |              |     |             |                 |
| government or public institution  | 0.029        |     | 1.180       | 0.011           |
| private business or industry  | 0.015        |     | 0.710       | 0.006           |
| Observations  | 40,930       |     |             |                 |
| Prob (LM-statistic)   | 0.000        |     |             |                 |

Dependent variable: Distributive justice in taxation on a three-point scale. In the base group are, female, widowed, housewife, lower class, private non-profit organisation.

Marginal effect = highest distributive justice in taxation score (2).

\* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Source: Authors' Calculations.

study by McGee et al. (2019a, 2019b). For example, taxpayers might think that if many people agree with a statement such as 'Governments tax the rich and subsidize the poor is an essential characteristic of democracy', then this is the assessment of their attitudes in the tax survey, but not their behaviour in reality. Thus, it is essential to reflect on the value of attitude measures when researchers use surveys to examine tax behaviour. This study examines the relationship between trust in public programmes (government-funded organisations) and distributive justice in taxation at the cross-country level. Using a sample of 47 countries, we find that while equitable

organisations are positively associated with distributive justice in taxation, preferential organisations are negatively associated with distributive justice in taxation or lead to distributive injustice in taxation.

Two main hypotheses were proposed and tested. Hypothesis 1 shows a positive correlation between confidence in equitable organisations and perceptions of distributive justice in taxation. The findings provide partial support for Hypothesis 1. The Ordered Probit Model shows substantial evidence that confidence in equitable organisations is essential for taxpayers' perception of a fair distribution of the tax burden. These results imply that armed forces, courts, civil service, and elections are considered distributively fair public programmes in taxing the rich and subsidising the poor. The effect of trust in courts on distributive justice in taxation has a smaller magnitude compared to the other equitable organisations. This result aligns with Koumpias et al. (2021), as they explain the rationale behind this as fewer taxpayers have exposure to the courts.

In the equitable organisation context, government and parliament do not support our hypothesis. This result is consistent with the finding in the tax morale study reported by Koumpias et al. (2021). Individuals interact less with the government and parliament; therefore, distributive justice in taxation must be influenced by something other than confidence in the government and parliament. On the other hand, McGee et al. (2019a) found that individuals with higher scores for confidence in government think positively about the policy of taxing the rich and subsidising the poor. However, they assessed confidence in the government with a single item. This again highlights how it is improper to regard trust in different government institutions uniformly as a generalised 'confidence in government'.

Hypothesis 2 shows a negative correlation between confidence in preferential organisations and perceptions of distributive justice in taxation. The findings provide support for Hypothesis 2. As predicted, unfair outcomes are believed to stem from preferential organisations that give taxpayers no reason to support the distribution of wealth from the rich to the poor. Police and universities are considered distributively unfair public programmes in the preferential organisation context. The results of the study by Koumpias et al. (2021), where the interpretation of the police variable was that people have varied expectations of the police, are somewhat comparable to the findings on the association between confidence in the police and distributive justice in taxation. Also, the findings on the relationship between confidence in university and distributive justice in taxation are inconsistent with Kouamé's study (2017). In these programmes, comparing the tax burden on the rich to that of the poor who pay less may promote feelings of distributive injustice in taxation.

## 6. Conclusion

A substantial body of research demonstrates the significance of trust in government organisations and willingness to pay taxes (Ciziceno & Pizzuto, 2022; Matthaei et al., 2023). Recently, academics have focused on internal variables rather than the external incentives that influence citizens' willingness to pay taxes (Hofmann et al., 2008; Koumpias et al., 2021). One of the most significant internal elements affecting the relationship between a democratically elected government and its taxpayers is the perception

of justice. This, in turn, prompted the formulation of two main research questions for our study, which focused on the association between trust in preferential and equitable organisations and how that affects taxpayers' views of distributive justice in taxation.

In this article, we made the case that how taxpayers benefit from the provision of public goods and services impacts trust in government and, consequently, distributive justice in taxation. The current study's findings are of great value for economies that need to improve tax revenue collection through programmes benefiting everyone and equally. Expressed differently, the government will be considered trustworthy among the taxpayers if it allocates tax revenue to the armed forces, courts, civil service, and elections by taxing the rich and subsidising the poor. On the other hand, the government will be considered untrustworthy among the taxpayers if it allocates tax revenue to the police and universities by following the legitimacy of the policy of democracy to tax the rich and subsidise the poor. The rationale is that in equitable organisations (armed forces, courts, civil service, and elections), taxpayers feel their preferences are being considered. Consequently, they get their 'fair share' back for their taxes. In the preferential organisations (police and universities), the government loses credibility in taxpayers' eyes (i.e., they have low trust) since they feel that government benefits a select group of citizens.

In recent years, 'Tax the rich, subsidize the poor' has been considered one of the vital financial policies in a democracy (Koay et al., 2020). The practical implication of this financial policy is that governments can adopt this strategy of income redistribution to tackle income inequality.

Our study has several limitations. First, the sample size is limited to 47 countries, which may decrease the reliability and generalisability of our study. Second, the current study uses only WVS Wave 7; other waves (from 1 to 6) were omitted. However, this is a common problem for studies using the WVS database because the country list is not stable between waves. This instability decreases the number of countries in the analysis when all waves (1-7) are merged to create longitudinal data. For this reason, we have used only WVS Wave 7. Third, it should be noted that the empirical methodology we follow does not allow us to tackle the possible endogeneity and reverse causality. It is possible that there can be a contradictory story: as distributive justice in taxation increases (or decreases), it can subsequently affect trust. Finally, our article has focused on individuals' attitudes toward tax behaviour, and actual behaviour has yet to be considered.

Future research may consider external variables such as audits and punishment to test the retributive justice in taxation. In addition, using other confidence variables on this topic can raise the robustness of the current study and provide a range of important avenues for future research.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendix

**Table A1.** Sample description.

|   |             |
|---|-------------|
| Sample selection process  |             |
| <b>Initial sample:</b> Countries included in WVS Wave 7 (2017-2022) dataset   | <b>59</b>   |
| <b>Less:</b> Countries without the confidence in public organisation variable | <b>(12)</b> |
| <b>Final sample</b>   | <b>47</b>   |

Source: raw data analysis.

**Table A2.** List of the countries included in the analysis.

| Andorra    | Hong Kong   | Peru          |
|------------|-------------|---------------|
| Argentina  | Indonesia   | Philippines   |
| Australia  | Iran        | Puerto Rico   |
| Bangladesh | Iraq        | Romania       |
| Bolivia    | Japan       | Russia        |
| Brazil     | Kazakhstan  | Serbia        |
| Myanmar    | Jordan      | Vietnam       |
| Chile      | South Korea | Zimbabwe      |
| China      | Kyrgyzstan  | Tajikistan    |
| Taiwan ROC | Lebanon     | Thailand      |
| Colombia   | Macau SAR   | Tunisia       |
| Cyprus     | Malaysia    | Turkey        |
| Ecuador    | Mexico      | United States |
| Ethiopia   | New Zealand |               |
| Germany    | Nicaragua   |               |
| Greece     | Nigeria     |               |
| Guatemala  | Pakistan    |               |

Source: Haerpfner et al. (2022).