

# WHICH IS THE BEST GOVERNMENT? COLLIGATING TAX COMPLIANCE AND CITIZENS' INSIGHTS REGARD- ING AUTHORITIES' ACTIONS

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## Abstract

The current paper focuses primarily on taxpayers' perceptions regarding government performance (viz., transparency, taxation level, goods and services provided, political stability) and explores how these perceptions impact on tax compliance when trust in government counts as a mediating variable. To this end we conducted four mediation analyses on a sample pool of 182 countries and territories with data commissioned by international organizations, i.e., World Bank and World Economic Forum. By means of the bootstrapping technique with 95% bias-corrected and accelerated (BCa) confidence interval and 5000 bootstrap resamples, we substantiate the idea that citizens' tax compliance behavior is steered by their level of trust in government which is triggered by the manner they perceive government performance in levying taxes and redistributing wealth. A prescription stemming from this upshot is that governments should extensively enhance visibility of their policy achievements in order to secure citizens' trust, collect proper levels of tax revenues, whence consolidate and maintain economic prosperity as well as social and political balance on the long run.

**Keywords:** tax compliance, taxpayers' perceptions, trust in government, mediation analysis.

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## 1. Introduction

'Which is the best government?', inquired Goethe in his 225<sup>th</sup> famous maxim (Goethe, 2013) when arguing about decisive qualities of a best government. In the realm of taxation, this question found itself in search for suitable answers within a wealth of studies. While some of them have emphasized the role of equity when designing tax policies (Alm, 1996; James, 1998; Finocchiaro Castro and Rizzo, 2014), some revolved around tax reductions or the increase of welfare outlays (Schmölders, 1960; Tyszka, 1994), others focused on tax system intricacy (Cussons, 2006; James, 2008) or its corruption (Vasina, 2003; Imam and Jacobs, 2007). Although these approaches offered cogent solutions, the best answer to the abovementioned question might consist in the following rhetorical inquiry: Could it be that the fundamental quality defining a best government when it comes to taxation lies precisely in its capacity to provide a balance between the adequate strategies of levying taxes and the appropriate mechanism of redistributing them under the form of public goods and services? As much as fiscal obligations stir auspicious conversations, lively debates, conspicuous economic analyses among professionals or small talks between lay people, their importance for the proper functioning of modern societies is undisputable. For that matter, the topic of taxation has been drawing the attention of both rulers and the governed populace since ancient times. In one of his plays, Shaw (2011, p. 40) visualizes a dialogue between Caesar (the ruler of Rome) and Pothinus (regent of Ptolemy, king of Egypt) regarding public levies: 'POTHINUS (bitterly). Is it possible that Caesar, the conqueror of the world, has time to occupy himself with such a trifle as our taxes? / CAESAR. My friend: taxes are the chief business of a conqueror of the world'. Forsooth, taxation is the essential constituent for any government or governor preoccupied with securing a certain level of well-being for the governed populace (Akay *et al.*, 2012; Coelho, 2013; Corral, 2009; Dalziel and Saunders, 2014; Oishi, Schimmack and Diener, 2012). Through this mechanism of wealth redistribution, governments are able to finance citizens' basic needs regarding healthcare, infrastructure, schooling or national security.

In the equation containing the strategies of appropriately levying taxes, on one side, and the mechanism of equitably redistributing them, on the other side, a key role is played by the way taxpayers perceive both the strategies of collecting fiscal obligations and the quality of public goods and services. Their perception is essential on the account that it is not the government performance *per se*, but the *perception* of government performance which influences trust in government (Lewis, 1978; OECD, 2013a, p. 21). Further on, trust in government and public institutions engenders an alteration in tax compliance behavior at the individual level (Fjeldstad, 2004), which ultimately impacts on the budget revenues. An abatement of trust in government triggers a decline of compliance with rules, standards and regulations in general (OECD, 2013a, p. 20) and with fiscal policy requirements in particular, causing a drop in the size of public budget. Conversely, an increase of trust brings forth an enhancement of paid taxes occasioning a rise in the state budget.

Tax compliance and the factors driving it are the chief research topics in the field of tax behavior. Joining the scarce studies which attempt to uncover the puzzle of tax compliance through mediation analysis (e.g., Gangl *et al.*, 2013; Murphy, 2008; Wahl, Muehlbacher and Kirchler, 2010), the current research investigates the extent to which perceptions regarding authorities' actions influence taxpayers' decisions to pay the fair share. To this end we put forward several mediation models and test them using the methodological precepts set by Hayes (2013). The novelty of our endeavor is twofold. First, we examine taxpayers' perceptions regarding both authorities' strategies of collecting taxes and the quality of goods and services provided. Second, we test the aforementioned connection worldwide, on a sample pool of 182 countries and territories, using data commissioned by well-known international organizations and researchers. Our results bolster the idea that trust in government is a significant powerful mediator of the relationship between several variables capturing citizens' perceptions regarding authorities' actions (i.e., transparency, taxation level, goods and services provided, political stability) and tax compliance. The paper offers a new standpoint on the climate of interaction between taxpayers and government in that taxpayers' insights mirrored in their level of trust in the government could assist authorities when designing better fiscal policies.

The architecture of the paper is the following: in the second part, the literature concerning the variables of interest is unfolded along with the hypotheses to be tested. The third section is devoted to some methodological approaches regarding the mediation analysis. The fourth part presents the results of the mediation analyses. The last section concludes by drawing the main upshots of the study and enunciating various policy implications of our findings.

## **2. Background literature and research hypotheses**

Although bearing a formal nature, interactions between citizens and state authorities (e.g., government) may be strengthened or weakened depending on the trust citizens pose in the ruling forces. According to Hardin (2001, p. 3), in such cases the trustee is incentivized to reciprocate (i.e., be trustworthy) by the potential benefits she might draw from future interactions with the trustor. Such being the case, one can state that trust is somewhat embedded in the novel 'quality of government' concept (Rothstein, 2011), which advocates for the establishment of trustworthy, fair-minded and responsible government institutions. In our study, the level of trust granted by citizens to the government was proxied by the item 1.04 '*Public trust in politicians*' included in the Global Competitiveness Report 2012-2013 (World Economic Forum, 2012, p. 391) and constructed on a scale from 1 ('very low') to 7 ('very high'). The item ranks countries based on answers to the question: 'How would you rate the level of public trust in the ethical standards of politicians in your country?'. The proxy was selected on the grounds that the political class within a country represents the wider sample from which governments are to be elected.

Tax literature acknowledges that trust in politicians in general (Hammar, Jagers and Nordblom, 2009) and trust in government in particular (Fjeldstad, 2004; Kirchler, 2007; Torgler, 2003) increase tax compliance. We proxied the level of tax compliance by the size of the *Shadow economy* corresponding to the year 2006, estimated in Schneider (2012) through the MIMIC approach (i.e., ‘multiple indicators multiple causes’). The size of untaxed economic activities is expressed as percentage of the official GDP, with lower values denoting higher levels of tax compliance on behalf of the country’s taxpayers. The proxy selection was driven by the fact that various studies reported a converse relationship between shadow economy and tax compliance (e.g., Alm, Martinez-Vasquez and Schneider, 2004; Tanzi and Shome, 1993).

Much like the scores of studies documenting the straightforward positive relationship between trust in public authorities (especially the government) and tax compliance, Bouckaert and van de Walle (2003) notice there are a multitude of criteria according to which citizens evaluate authorities’ actions and establish the degree to which governments should be vested with trust. In the current paper, we focus our attention mainly on taxpayers’ perceptions regarding government performance and we examine how these perceptions affect tax compliance when trust counts as a mediating variable. The subsequent paragraphs are dedicated to presenting the four hypotheses of our research endeavor along with the explanatory variables retrieved from well-established international rankings and databases commissioned by World Bank and World Economic Forum.

The first criterion driving citizens’ trust is the perception of the extent to which governments ensure the transparency of decisions within the public sector. Hence, the first hypothesis to be tested is:

*H1: The connection between Transparency of government policymaking and Shadow economy is mediated by Public trust in politicians.*

The perception concerning government’s ability to regularly inform taxpayers about structural changes within policies was rated through the item 1.12 ‘*Transparency of government policymaking*’ included in the Global Competitiveness Report 2012-2013 (World Economic Forum, 2012, p. 399) and constructed on a scale from 1 (‘impossible’) to 7 (‘extremely easy’). The item ranked countries and territories based on answers to the inquiry: ‘How easy is it for businesses in your country to obtain information about changes in government policies and regulations affecting their activities?’. Public trust depends on the availability of information and on the effort citizens make to remain connected with economic and political changes. When citizens perceive that policies are not completely disclosed, reluctance intervenes in their interactions with public officials. Studies acknowledge transparency as a fundamental public service value which underpins public trust (e.g., Birkinshaw, 2006; Cook, Jacobs and Kim, 2010; Grimmelikhuijsen *et al.*, 2013; OECD, 2000a, 2000b) and as a human right (Birkinshaw, 2006). It dampers corruption, augments the legitimacy of the government and its performance (Grimmelikhuijsen *et al.*, 2013, p. 575).

A second criterion which adjusts the level of public trust in the ruling politicians is citizens' perceptions on how taxation levels influence economic activities. Hence, we examine the following hypothesis:

*H2: The relationship between Extent and effect of taxation and Shadow economy is mediated by Public trust in politicians.*

The degree to which tax levels influence employment and investment within a country was proxied by the item 6.04 entitled '*Extent and effect of taxation*' from the Global Competitiveness Report 2012-2013 (World Economic Forum, 2012, p. 453). Its scale ranges from 1 ('significantly limits incentives to work or invest') to 7 ('has no impact on incentives to work or invest'). The item ranked countries and territories on the basis of answers to the following question: 'What impact does the level of taxes in your country have on incentives to work or invest?'. In our case, when citizens believe that taxation does not hinder their motivation to be employed or to start a business, public trust in government increases. To wit, seeing that statesmen are capable of implementing efficient fiscal policies in accordance with people's needs (equitable and fair tax systems; flat, progressive or regressive taxation; high or low tax rates; tax exemptions for investors, etc.), the latter comply with the tax code. Otherwise, citizens end up being enmeshed in underground activities, trying to avoid discouraging tax rates.

The third hypothesis colligates tax compliance with perceptions of government's capacity to provide goods and services, namely:

*H3: The relationship between Government provision of services for improved business performance and Shadow economy is mediated by Public trust in politicians.*

Thereby, the perception regarding state authorities' capacity to supply a high quality public goods system was captured by the item 1.13 '*Government provision of services for improved business performance*' comprised in the Global Competitiveness Report 2012-2013 (World Economic Forum, 2012, p. 400) and assessed on a scale from 1 ('not at all') to 7 ('extensively'). The item ranked countries according to answers to the question: 'To what extent does the government in your country continuously improve its provision of services to help businesses in your country boost their economic performance?'. As the literature posits, when citizens perceive the government is yielding high economic performance, trust increases consequently (Chanley, Rudolph and Rahn, 2000; Feldman, 1983; Putnam, 1993). When assessing different levels of governance, it seems that trust is higher at local level where government's achievements in terms of public services are more concrete (OECD, 2013a, p. 34). One suitable solution to improve citizens' perceptions resides in the 'New Public Management' approach, which follows the techniques used by private economic entities to determine customer satisfaction levels. According to this approach, authorities should assess the extent to which citizens are satisfied with the public services financed through taxation, subsequently make efforts to amend citizens' perceptions and ultimately the quality of goods supplied to the populace (Gruening, 2001; Hood, 1991).

The fourth hypothesis to be investigated takes into consideration the perception regarding the stability of the political environment as predictor:

*H4: The relationship between Political stability and absence of violence/terrorism and Shadow economy is mediated by Public trust in politicians.*

The perception concerning government's capacity to secure both a stable political environment and national safety was proxied by the 2012 governance indicator '*Political stability and absence of violence/terrorism*' (Kaufmann, Kraay and Mastruzzi, 2010) estimated by World Bank (2013). In the opinion of Miller (1974), the degree of public trust in government is determined via a barter involving politicians and citizens, which takes place on the psychological stratum. Namely, political elites in power elaborate rules, standards and laws aimed *inter alia* at insuring the stability of the political environment. Consequently, taxpayers content with the ensemble of policies bestow upon them public trust. In a climate distinguished by political, social, psychological stability and rising trust in government, both individuals and corporations are highly incentivized to run their economic activities, comply with fiscal regulations and finally pay their duties. Conversely, when the political scene within a country is beset by instability, government's outliving is conditioned by its ability to enact efficient policies (OECD, 2013a, p. 22). In such cases, politicians may choose to maintain inefficient tax systems because they are not willing to incur the reforming costs and see the upcoming governing forces enjoy the benefits (Inter-American Development Bank, 2005, p. 188). This being the case, citizens will inevitably distrust the government and decide to embark on untaxed activities.

### **3. Methodological approaches to mediation analysis**

The next paragraphs outline the leading methodological approaches to mediation analysis, their advantages and disadvantages, as well as the reasons for which we chose the bootstrapping technique in our empirical research.

In behavioral research, a mediation phenomenon is said to occur when the independent variable impacts on the dependent variable by means of at the least one intervening variable called 'mediator' (Preacher and Hayes, 2008b). Testing the intervening variable effects has become a resounding topic within the realm of behavioral sciences since the 1980s. As a case in point, the literature acknowledges an assortment of methods investigating mediation-built hypotheses: *causal steps* approach (Baron and Kenny, 1986), *product of coefficients* (Alwin and Hauser, 1975; Sobel, 1982), *difference in coefficients* (Olkin and Finn, 1995), *distribution of products* or *empirical M-test* (Holbert and Stephenson, 2003), *Monte Carlo* approach (MacKinnon, Lockwood and Williams, 2004).

From the abovementioned methods, the most widely used is the formal causal steps approach established by Baron and Kenny (1986). According to their rationale, path coefficients are estimated via ordinary least squares (OLS) regression or structural equation modeling (SEM) and mediation is confirmed when various criteria are met

simultaneously (Preacher and Hayes, 2008b, p. 880). Nevertheless, empirical research has shown that the method faces several shortcomings. Firstly, it fails to quantify the indirect effect and only infers its existence based on the significance of path coefficients, i.e.,  $a$ ,  $b$ ,  $c$  (Hayes, 2009, p. 410). Secondly, it has low statistical power which triggers Type I and Type II error results (Preacher and Hayes, 2004, p. 719). Because of these shortcomings, the testing of indirect effects in mediation analysis has become extremely important among behavioral scientists. One test with a higher statistical power was developed by Sobel (1982). It estimates the indirect effect (the product  $ab$ ), determined as the difference between the total effect ( $c$ ) and the direct effect ( $c'$ ), on the assumption that its sampling distribution is normal (Preacher and Hayes, 2008b, p. 25). While it identifies mediation in the case of large samples, it fails to do so with small samples (Preacher and Hayes, 2008a, p. 883).

Recently, nonparametric resampling methods such as *bootstrapping* have gained ground in estimating the indirect effects of intervening variables. Bootstrapping implies 'repeatedly sampling from the data set and estimating the indirect effect in each resampled data set. By repeating this process thousands of times, an empirical approximation of the sampling distribution of  $ab$  is built and used to construct confidence intervals for the indirect effect' (Preacher and Hayes, 2008a, p. 880). The advantages of using this resampling method are at least threefold. To begin with, as opposed to the Sobel test, it makes no assumptions whatsoever concerning the sampling distributions of  $a$ ,  $b$  or  $ab$  (Preacher and Hayes, 2008b, p. 26). In the second place, bootstrapping the indirect effect yields a better outcome as compared to the causal steps approach, in terms of statistical power and Type I error control (Preacher and Hayes, 2008b, p. 26). Namely, Shrout and Bolger (2002, p. 422) emphasize that the power of this method stands in its capacity of identifying that 'the sampling distribution of the mediated effect is skewed away from 0'. Moreover, Hayes (2009, p. 411) states that bootstrapping features the best Type I error control.

Due to its advantages and statistical accuracy in estimating the indirect effects, an increasing stream of literature has been advocating for the bootstrapping technique (Bollen and Stine, 1990; Hayes, 2013; Lockwood and MacKinnon, 1998; MacKinnon *et al.*, 2002; Preacher and Hayes, 2004, 2008a, 2008b).

#### **4. Results**

We conducted the analyses using the IBM SPSS Statistics version 20. Our initial sample pool numbered 182 countries and territories worldwide, representing all levels of economic development. The countries missing data for any of the variables were automatically excluded by SPSS. In order to run the mediation analyses, our workhorse was the PROCESS macro for SPSS developed by Hayes (2013). For each model proposed, we determined the correlation coefficients and conducted the mediation analysis, highlighting all relevant paths ( $c$ ,  $a$ ,  $b$  and  $c'$ ). To this end, we employed the variable Public trust in politicians as mediator, the size of the Shadow economy as dependent variable, Transparency of government policymaking (M1), Extent and

effect of taxation (M2), Government provision of services for improved business performance (M3) and Political stability and absence of violence/terrorism (M4) as independent variables. The significance of indirect effects was explored through the bootstrapping method and Sobel test, while the size of the indirect effect was determined using the 'kappa-squared' ( $k^2$ ) measure proposed by Preacher and Kelley (2011).

### Mediation model M1

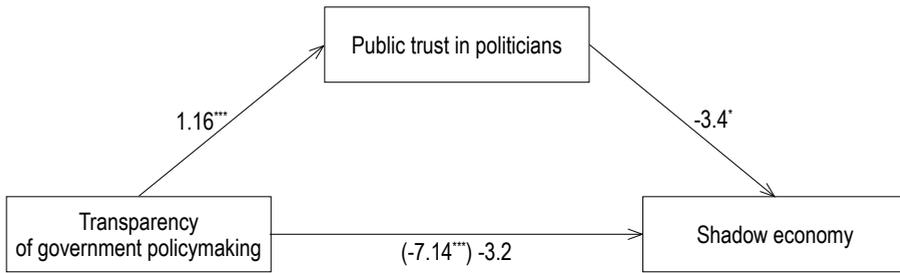
**Table 1:** Correlations among Transparency of government policymaking, Public trust in politicians and Shadow economy

	Transparency of government policymaking	Public trust in politicians
Public trust in politicians	.746**	
Shadow economy	-.394**	-.426**

**Note:** \*\* Correlation is significant at the 1% level.

According to Table 1, Transparency explained 55.65% of the variance in citizens' level of Trust in the political class. Moreover, Transparency shared 15.52% of the variability in Shadow economy and Trust in politicians shared 18.15% of this variability.

Multiple regression analyses were conducted to test hypothesis H1. First, Transparency was negatively related to the size of Shadow economy, i.e., *c*-path ( $\beta = -7.14$ ,  $t(134) = -4.96$ ,  $p < .001$ ). Namely, an increase in the government's transparency triggers a decline in the size of the informal economy. Second, there was a positive relationship between Transparency and Trust in politicians, i.e., *a*-path ( $\beta = 1.16$ ,  $t(134) = 12.54$ ,  $p < .001$ ). Hence, the more transparent a government is with respect to the designed policies, the more citizens tend to trust the political class. Third, a negative relationship was identified between the mediating variable Trust in politicians and the outcome Shadow economy, i.e., *b*-path ( $\beta = -3.4$ ,  $t(134) = -2.58$ ,  $p < .05$ ). Thus, as taxpayers trust politicians more, the number of unregistered activities decreases. The significance of both *a*-path and *b*-path allowed us to perform a mediation analysis via bootstrapping with 95% bias-corrected and accelerated (BCa) confidence interval and 5000 bootstrap resamples (Hayes, 2013). Trust in politicians mediated the connection between Transparency and Shadow economy ( $\beta = -3.95$ , BCa CI [-7.23, -.64]; with a medium effect  $k^2 = .16$ , 95% CI [.03, .29]). Moreover, when controlling for the mediator, the connection between Transparency and Shadow economy was non-significant, i.e., *c'*-path ( $\beta = -3.2$ ,  $t(133) = -1.54$ ,  $p = .13$ ). Figure 1 displays the results of the multiple regressions. Besides making use of the bootstrapping method, the statistical relevance of the indirect effect was investigated with the Sobel test ( $\beta = -3.95$ ,  $z = -2.52$ ,  $p < .05$ ).



**Note:** Values denote unstandardized regression coefficients. The value in parentheses is the coefficient of the regression without the mediator. Asterisks represent significance at the 0.1% (\*\*\*) and 5% (\*) levels.

**Figure 1:** Mediation analysis assessing the role of Public trust in politicians in the relationship between Transparency of government policymaking and Shadow economy

### Mediation model M2

**Table 2:** Correlations among Extent and effect of taxation, Public trust in politicians and Shadow economy

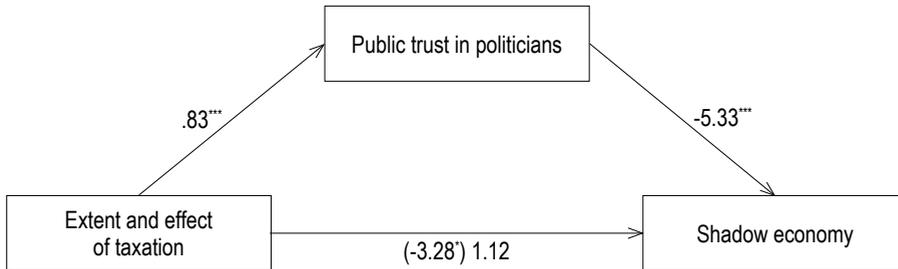
	Extent and effect of taxation	Public trust in politicians
Public trust in politicians	.59**	
Shadow economy	-.196*	-.426**

**Note:** \*\* Correlation is significant at the 1% level. \* Correlation is significant at the 5% level.

The correlation analyses presented in Table 2 revealed that Extent and effect of taxation explained 34.81% of the variance in the level of Trust in politicians. Furthermore, Extent and effect of taxation accounted for 3.84% of the variability in Shadow economy and Trust in politicians accounted for 18.15%.

To examine hypothesis H2, we ran multiple regression analyses. In the first place, the variable Extent and effect of taxation was negatively associated with Shadow economy, i.e., *c*-path ( $\beta = -3.28$ ,  $t(134) = -2.32$ ,  $p < .05$ ). Videlicet, a boost in the Extent and effect of taxation decreases the size of the informal sector. In the second place, Extent and effect of taxation was positively associated with Trust in politicians, i.e., *a*-path ( $\beta = .83$ ,  $t(134) = 7.98$ ,  $p < .001$ ). That is to say, the more efficient is the tax system, the more politicians are trusted by the citizens. In the third place, we identified a negative relationship between the mediating variable Trust in politicians and Shadow economy, i.e., *b*-path ( $\beta = -5.33$ ,  $t(134) = -4.88$ ,  $p < .001$ ). Hence, as taxpayers have more trust in politicians, fewer taxpayers migrate towards the underground economy. Since both *a*-path and *b*-path were significant, a mediation analysis was run and the indirect effect was estimated through the bootstrapping method with 95% bias-corrected and accelerated (BCa) confidence interval and 5000 bootstrap resamples (Hayes, 2013). The predictor Extent and effect of taxation influenced Shadow economy via Trust in politicians ( $\beta = -4.4$ , BCa CI [-6.93, -2.48]; with a large effect  $k^2 = .23$ , 95% CI [.13, .34]). Moreover, the direct effect of Extent and effect of taxation on Shadow economy when

controlling for Trust in politicians was non-significant, i.e.,  $c'$ -path ( $\beta = 1.12$ ,  $t(133) = .71$ ,  $p = .48$ ). The results are reported in Figure 2. Apart from bootstrapping, we tested the significance of the indirect effect via the Sobel test ( $\beta = -4.4$ ,  $z = -4.14$ ,  $p < .001$ ).



**Note:** Values denote unstandardized regression coefficients. The value in parentheses is the coefficient of the regression without the mediator. Asterisks represent significance at the 0.1% (\*\*\*) and 5% (\*) levels.

**Figure 2:** Mediation analysis assessing the role of Public trust in politicians in the relationship between Extent and effect of taxation and Shadow economy

### Mediation model M3

**Table 3:** Correlations among Government provision of services for improved business performance, Public trust in politicians and Shadow economy

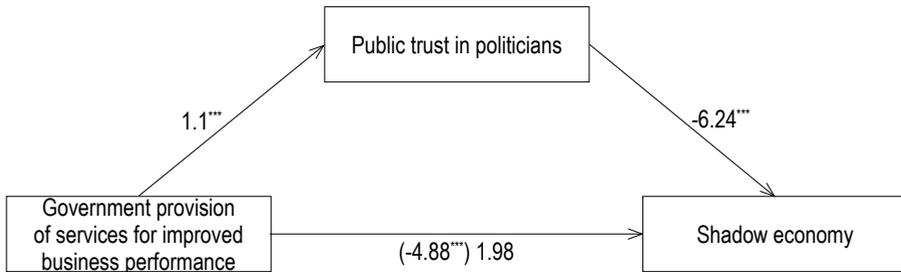
	Government provision of services for improved business performance	Public trust in politicians
Public trust in politicians	.772**	
Shadow economy	-.293**	-.426**

**Note:** \*\* Correlation is significant at the 1% level.

As can be seen from Table 3, Government provision of services shared 59.6% of the variability in the level of Trust in politicians. Similarly, Government provision of services accounted for 8.58% of the variance in the size of the Shadow economy and Trust in politicians shared 18.15% of this variance.

In order to test hypothesis H3, we evaluated mediation model M3 by running multiple regression analyses. Firstly, Government provision of services was found to be negatively associated with Shadow economy, i.e.,  $c$ -path ( $\beta = -4.88$ ,  $t(129) = -3.48$ ,  $p < .001$ ). The result implies that an increase in the quality of public goods and services generates a decrease in the number of activities belonging to the informal sector. Secondly, Government provision of services was positively associated with Trust in politicians, i.e.,  $a$ -path ( $\beta = 1.1$ ,  $t(129) = 13.13$ ,  $p < .001$ ). Stated differently, the better the quality of public goods and services, the more politicians are trusted. Thirdly, a negative relationship was found between the mediating variable Trust in politicians and Shadow economy, i.e.,  $b$ -path ( $\beta = -6.24$ ,  $t(129) = -4.55$ ,  $p < .001$ ). As taxpayers trust politicians more, fewer activities take place in the Shadow economy. Due to the significance of both  $a$ -path and  $b$ -path, we conducted a mediation analysis and tested the significance of the indirect effect using the bootstrapping method with 95% bias-corrected and accelerated (BCa)

confidence interval and 5000 bootstrap resamples (Hayes, 2013). The mediation analysis showed that Government provision of services influenced the size of Shadow economy via the mediator Trust in politicians ( $\beta = -6.86$ , BCa CI [-10.12, -3.57]; with a large effect  $k^2 = .29$ , 95% CI [.15, .42]). Furthermore, when controlling for Trust in politicians, the relationship between Government provision of services and Shadow economy was non-significant, i.e.,  $c'$ -path ( $\beta = 1.98$ ,  $t(128) = .99$ ,  $p = .32$ ). The results are depicted in Figure 3. In addition to the bootstrapping method, we tested the significance of the indirect effect with the Sobel test ( $\beta = -6.86$ ,  $z = -4.29$ ,  $p < .001$ ).



**Note:** Values denote unstandardized regression coefficients. The value in parentheses is the coefficient of the regression without the mediator. Asterisks represent significance at the 0.1% (\*\*\*) level.

**Figure 3:** Mediation analysis assessing the role of Public trust in politicians in the relationship between Government provision of services for improved business performance and Shadow economy

### Mediation model M4

**Table 4:** Correlations among Political stability and absence of violence/terrorism, Public trust in politicians and Shadow economy

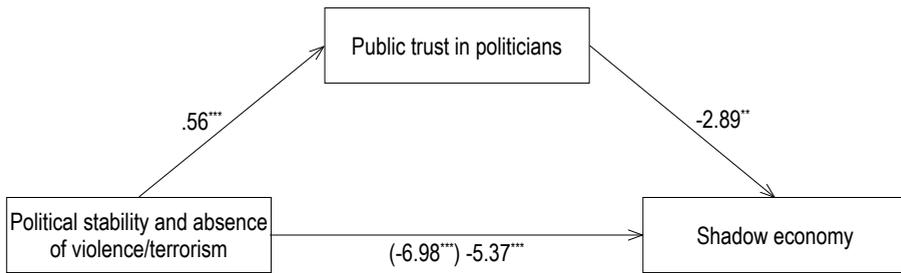
	Political stability and absence of violence/terrorism	Public trust in politicians
Public trust in politicians	.462**	
Shadow economy	-.479**	-.426**

**Note:** \*\* Correlation is significant at the 1% level.

As Table 4 points out, Political stability accounted for 21.34% of the variance in Trust in politicians. In addition, Political stability explained 22.94% of the variance in Shadow economy and Public trust in politicians explained 18.15% of this variance.

With the aim of examining hypothesis H4, we conducted multiple regression analyses. Firstly, Shadow economy was negatively regressed on Political stability, i.e.,  $c$ -path ( $\beta = -6.98$ ,  $t(134) = -6.64$ ,  $p < .001$ ). When the political environment becomes more stable and less prone to violence/terrorism, the size of the underground activities mitigates. In the second place, the variable Political stability was positively related to Trust in politicians, i.e.,  $a$ -path ( $\beta = .56$ ,  $t(134) = 5.93$ ,  $p < .001$ ). Videlicet, the more stable the political environment, the more trusted are the politicians. In the third place, a negative relationship was found between the mediator Trust in politicians and Shadow economy i.e.,  $b$ -path ( $\beta = -2.89$ ,  $t(134) = -3.08$ ,  $p < .01$ ). As taxpayers grant

more trust to politicians, fewer activities unravel in the Shadow economy. Because both *a*-path and *b*-path reached significance, we carried out a mediation analysis using Hayes' (2013) bootstrapping method, i.e., 95% bias-corrected and accelerated (BCa) confidence interval and 5000 bootstrap resamples. The mediation analysis revealed that the indirect effect of Political stability on Shadow economy via Trust in politicians was significant ( $\beta = -1.61$ , BCa CI [-2.99, -.65]; with a medium effect  $k^2 = .12$ , 95% CI [.05, .2]). When controlling for Trust in politicians, the direct effect of Political stability on Shadow economy remained significant, i.e., *c'*-path ( $\beta = -5.37$ ,  $t(133) = -4.69$ ,  $p < .001$ ). The results are illustrated in Figure 4. Apart from using bootstrapping, the product of coefficients approach (Sobel, 1982) reconfirmed the significance of the indirect effect ( $\beta = -1.61$ ,  $z = -2.7$ ,  $p < .01$ ).



**Note:** Values denote unstandardized regression coefficients. The value in parentheses is the coefficient of the regression without the mediator. Asterisks represent significance at the 0.1% (\*\*\*) and 1% (\*\*) levels.

**Figure 4:** Mediation analysis assessing the role of Public trust in politicians in the relationship between Political stability and absence of violence/terrorism and Shadow economy

## 5. Discussion

According to what European historical pages witness, the government institution ensued limitless purposes until the 17<sup>th</sup> epoch because the 'roles of law-giver, high priest, code enforcer, currency-creator, and lord protector were intertwined' (May, 1997, p. 22). With the passing of centuries and the strengthening of secular authority, nowadays governments have come to enjoy narrower well-defined responsibilities which should ultimately aim at securing citizens' well-being. It goes without saying that such a goal can be accomplished properly only when citizens comply with government's policies.

This paper substantiates the idea that citizens' tax compliance behavior is steered by their level of trust in government which is triggered by the manner they perceive government performance in levying taxes and redistributing wealth. To achieve this, starting from the methodology of Hayes (2013), four mediation models were tested on a sample pool of 182 countries and territories with data provided by international organizations. By means of the cutting-edge bootstrapping technique with 95% bias-corrected and accelerated (BCa) confidence interval and 5000 bootstrap resamples, we show that trust in authorities significantly mediates the relationship between citizens' perceptions of government's actions (i.e., transparency, taxation level, services provided, political stability) and tax behavior.

The policy implications derived from the first mediation model is that governments should disclose information on public auctions, state budget, resource allocation, state bodies, etc. via open source data, regulations and laws regarding the free access to information directed towards public organizations, businessmen, foreign investors, populace (e.g., 'Freedom of Information' or FOI). In this respect, about 72% of OECD countries already employ proactive disclosure in conjunction with specific information, i.e., budget documents, audit reports, annual Ministry reports, salaries of public servants (e.g., Chile, Estonia, Israel). Moreover, 81% of these countries benefit from central portals for disseminating information and their citizens can use FOI laws to access data which is not disclosed proactively by state authorities. For example, Anglo-Saxon countries like Australia, New Zealand, UK, and USA have created central websites, i.e., *data.gov* (OECD, 2011, p. 240).

The second assortment of policy implications has taxation levels in the spotlight. Much of the way in which citizens perceive taxation with respect to its impact on labor supply and investment is largely due to the architecture of the tax system within a country. When taxpayers consider that financing generous welfare states does not impede their opportunities to work or invest, trust in state authorities registers an ascending trend (Algan, Cahuc and Sangnier, 2011) and tax compliance follows the same rising pattern. For a case in point, the working and investing activities of Scandinavian citizens are not limited by the 60-70% marginal tax rates, these citizens trust state authorities and manage to register compliance levels of over 95% because they benefit extensively from tax revenues through high quality public services.

The third take home message is that taxpayers' perceptions regarding government strategies constitute a prerequisite for masterminding structural short and long run reforms and policy measures concerning public goods and services. Based on surveying, observing and interviewing citizens on the tax system quality during 1996-1998, the Australian Taxation Office developed a compliance model with enforcement strategies tailored according to citizens' motivational postures (Braithwaite, 2003) and has consequently improved compliance along the years. According to OECD (2013a, p. 34), the status of public services could be appraised via a quality framework comprising four dimensions: access to goods, responsiveness, reliability and satisfaction. For instance, in terms of accessibility to tertiary public education, countries like Denmark, Finland, Norway and Sweden stand out as no tuition fees are required for high quality formal instruction (OECD, 2013b, p. 150). Other state authorities are concerned with mitigating barriers to access (e.g., geographical distance). By implementing the online portal 'Taxpayer personal Office for Individuals', Russian tax administration gives its citizens the possibility to pay taxes from outer space.

Last but not least, the level of trust in the ruling authorities and ultimately tax compliance is conditioned by citizens' insights into the stability of the political scene. In addition, because stability relies on legitimacy (Lipset, 1994), which in turn is determined by government performance (Citrin, 1974), a connection between the quality of public services and stability may be inferred. Thus, failing government performance

pushes citizens to voice their objections via riots and strikes, diminishes trust in governments and decreases their willingness to pay the fair share. Regarding the political stability variable, a telling example comes from Japan. After witnessing a parlous political scene with five prime ministers in 4 years and ongoing deflation (OECD, 2013c, p. 5), Japan has regained stability and now aims to boost economic growth through the so-called 'Abenomics' policies.

Considering that mediation analysis via bootstrapping is still insufficiently employed in the tax literature, the selection of other explicative variables and mediators might open new understandings into the intricate phenomenon that is tax compliance.

All in all, governments perceived by their citizens as considerably putting transparency, taxation effectiveness, public goods and services quality and political stability ahead of politicians' personal interests are conferred a high level of public trust and are able to levy substantial public funds. This ascertainment is a relevant harbinger in terms of how authorities can consolidate and maintain economic prosperity as well as social and political balance on the long run. A prescription stemming from this upshot is that governments should extensively increase visibility of their policy achievements in order to secure citizens' trust and ultimately high levels of collected tax revenues. The conclusion is numbered among the three principles to improve outcomes within societies recommended by Nussle and Orszag (2014, p. 6): intense evidence coverage of policies which yield the best results; mitigation of resources for policies with no straightforward effectiveness; cessation of resources for policies with no quantifiable results. It is ultimately mirrored in 'the question with which any investigation about the discipline that citizens exercise over their tax paying behavior must start': How is the government represented in citizens' minds? (Schmölders, 1960, p. 38 *apud* Kirchler, 2007, p. 28).

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