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# **Evaluating competing perspectives towards undeclared work: some lessons from Bulgaria**

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**Journal of Contemporary Central and Eastern Europe**

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# **Evaluating competing perspectives towards undeclared work: some lessons from Bulgaria**

## **Abstract**

When explaining and tackling the undeclared economy in Central and Eastern Europe, participants have been conventionally viewed as rational economic actors. They engage in undeclared work when the benefits outweigh the costs. Participation is thus deterred by increasing the sanctions and/or probability of being caught. Recently, however, an alternative social actor approach has emerged which views participants as engaging in undeclared work when their norms, values and beliefs (i.e., citizen morale) do not align with the laws and regulations (i.e., state morale). Here, therefore, initiatives to develop greater symmetry between civic and state morale are pursued. To evaluate the validity and effectiveness of these competing explanations and policy approaches, 2,004 face-to-face interviews conducted in Bulgaria in late 2015 are reported. Logit marginal effects regression analysis reveals no association between participation in undeclared work and the perceived level of penalties and risk of detection, but a strong significant association with the level of asymmetry between citizen and state morale; the greater the asymmetry, the higher is the likelihood of participation in undeclared work. The paper concludes by discussing the implications for explaining and tackling undeclared work.

**Keywords:** informal sector; tax morale; tax evasion; institutional theory; Bulgaria.

## **Introduction**

In recent years, it has been widely recognised that the undeclared economy is a persistent feature of Central and Eastern European economies. With on average a quarter of national income not declared to the authorities (Williams and Schneider 2016), explaining and tackling this sphere has become a policy priority. Numerous studies highlight the extent and nature of the undeclared economy in Central and Eastern Europe (Kukk and Staehr 2014; Sauka and Putniņš 2011; Wallace and Latcheva 2006; Williams et al. 2013). Rather less attention has been paid to explaining this sphere and few if any studies have evaluated the different ways in which this sector can be tackled. However, unless the rationales for participating in the undeclared economy are understood and effective strategies developed to tackle monetary transactions not declared to the state for tax, social security and/or labour law purposes, governments will continue to suffer public revenue losses, workers from poor working conditions, and legitimate businesses from unfair competition (Andrews et al. 2011; ILO 2014; OECD 2012; TUC 2008).

Conventionally, the dominant way of explaining those engaged in undeclared work has been to view them as rational economic actors. They work on an undeclared basis when the pay-off is greater than the expected cost of being caught and punished (Allingham and Sandmo 1972). To tackle undeclared work, therefore, the focus is upon increasing the actual or perceived costs of working undeclared by raising the sanctions and/or probability of being caught. In the past decade or so, nevertheless, a “social actor” approach has emerged. This explains participation in undeclared work as occurring when tax morale is low, defined as the intrinsic motivation to pay taxes (Alm et al. 2010; Cummings et al. 2009; Kirchler 2007; Murphy 2008; Torgler 2007). Its approach is thus to raise tax morale by aligning the informal institutions (i.e., the norms, values and beliefs of citizens) with the codified laws and regulations of the formal institutions (Alm et al. 2012; Alm and Torgler 2011; Torgler 2012). The aim of this paper, therefore, is to begin to evaluate these competing perspectives towards explaining and tackling undeclared work. To do so, a survey is reported conducted in Bulgaria.

In section 2, therefore, these rational economic actor and social actor policy approaches are reviewed in order to formulate some hypotheses for evaluation. Section 3 then introduces the data and methodology to evaluate these hypotheses, namely a logit regression analysis of 2,004 face-to-face interviews undertaken in late 2015 in Bulgaria. The findings are reported in section 4. Revealing no association between participation in undeclared work and the perceived level of sanctions and probability of being caught, but a strong association with the level of tax morale, section 5 then concludes by discussing the implications for explaining and tackling undeclared work in Bulgaria and beyond.

Throughout this paper, and mirroring the consensus in the literature, undeclared work refers to paid work which is legal in all respects other than it is not declared to the authorities for tax, social security and/or labour law purposes (Aliyev 2015; Barsoum 2015; Boels 2014; European Commission 2007; Hodosi 2015; OECD 2012; Pfau-Effinger 2017; Williams 2014a,b). If it is not legal in all other respects, it is not considered undeclared work. If the goods and/or services exchanged are illegal (e.g., selling illegal drugs, stolen cattle) for instance, then this is not part of undeclared work but is the wider criminal economy. If unpaid, it is part of the unpaid subsistence sphere.

### **Perspectives towards undeclared work**

Since the turn of the millennium, there has been widespread recognition that although the undeclared economy is a greater share of all economic activity in developing economies, it is a persistent and prevalent phenomenon in all global regions (ILO, 2013; Jütting and Laiglesia 2009; Williams and Schneider 2016), including the post-socialist transition economies (Williams et al. 2013). The result is that tackling the undeclared economy has become a prominent issue on the policy agendas of not only supra-national agencies but also governments across the world (European Commission 2007; OECD 2012; Williams 2014a, 2017).

Reviewing the literature on how to explain and tackle the undeclared economy, it becomes quickly apparent that two distinct perspectives exist. On the one hand, there is a rational economic actor approach that seeks to tackle undeclared work by ensuring that payoff from engaging in undeclared work is outweighed by the costs, and on the other hand, a social actor approach that views undeclared work as arising when there is low tax morale. Here, each is considered in turn.

#### **Rational economic actor perspective**

The origins of the rational economic actor perspective towards undeclared work lie in the classic treatises of Cesare Beccaria (Beccaria 1797) and Jeremy Bentham (Bentham 1788) that established a utilitarian theory of crime. This represents those engaged in criminal activities as rational actors. They weigh up the risks and opportunities, and engage in criminal acts if the penalty and probability of being caught is perceived as smaller than the benefits to be gained from their actions. This approach came to prominence in the late 1960s when it was popularised by the Chicago school of economics (Becker, 1968). During the early 1970s, Allingham and Sandmo (1972) then applied it to explaining tax non-compliance. They viewed the non-compliant as rational economic actors who evade paying tax when the pay-off is greater than the expected cost of being caught and punished. Governments therefore needed to alter the cost/benefit ratio confronting those considering engagement in tax non-compliance. This subsequently became the prominent approach of many governments, and was pursued by increasing the actual and/or perceived sanctions and probability of detection, thus raising the costs of engagement (e.g., Grabiner 2000; Hasseldine and Li 1999; Job et al. 2007; Richardson and Sawyer 2001; Williams 2017).

Indeed, this rational economic actor perspective is dominant in Bulgaria, the country studied in this paper. Firstly, sanctions have been increased and secondly, the likelihood of detection

improved such as by increasing workplace inspections and by improving data sharing and matching across government in order to identify individuals potentially engaged in undeclared work (Dzhekova and Williams 2014; Williams and Franic 2016a; Williams et al. 2014). A review of the measures used to tackle undeclared work in Bulgaria between 2005 and 2009, the majority were deterrence measures, with 64 measures alone related to tougher sanctions and improving the probability of being caught through monitoring, data exchange, and more efficient inspections (CSD 2009). For example, amendments to the Labour Code in 2006 and 2008 introduced higher penalties and fines for those engaged in undeclared work (Loukanova and Beslov 2007; Daskalova 2013). Employers that hire workers without an employment contract were now liable to a penalty of BGN 15,000 (€7,500) per worker, compared with BGN 1,000 (€500) previously. Moreover, labour inspectors were given the right to temporarily freeze the activity of offending businesses.

Despite the adoption of this rational economic actor approach both in Bulgaria and well beyond, the evidence-base that increasing the penalties and probability of being caught reduces undeclared work is less than conclusive when this has been evaluated across the globe (Alm et al. 1992, 1995; Slemrod et al. 2001; Varma and Doob 1998). Indeed, this is also found to be the case in the one previous study evaluating this rational economic actor approach in Bulgaria. Reporting data from 1,000 Bulgarian respondents interviewed in 2013 as part of a Eurobarometer survey on undeclared work, Williams and Franic (2016a) find no association between either the perceived level of penalties and participation in the undeclared economy, or the perceived probability of detection and the likelihood of engaging in undeclared work. To further explore in relation to Bulgaria the validity of this rational economic actor approach using a newer dataset based on a more extensive population sample, therefore, the following hypothesis can be evaluated:

Rational economic actor hypothesis (H1): the higher the perceived sanctions and risk of being caught, the lower is the likelihood of engagement in the undeclared economy.

H1a: the higher the perceived sanctions, the lower the likelihood of engagement in the undeclared economy.

H1b: the higher the perceived risks of being caught, the lower the likelihood of engagement in the undeclared economy.

### Social actor perspective

Over the past decade, a perspective has emerged which recognises that citizens are not always rational economic actors. The key argument underpinning this approach is that many citizens are found to voluntarily comply with the law. They do not operate in the undeclared economy even when the benefit/cost ratio strongly intimates that they should be doing so (Alm et al. 2010; Kirchler 2007; Murphy 2008; Murphy and Harris 2007). To explain this, a “social actor” model has emerged. This regards engagement in undeclared work to be an outcome of low tax morale, by which is meant a low intrinsic motivation to pay taxes (Alm and Torgler 2006, 2011; Cummings et al. 2009; McKerchar et al. 2013; Torgler 2011; Torgler and Schneider 2007). The resultant aim is to improve their tax morale so as to improve the level of voluntary compliance and thus reduce engagement in undeclared work (Kirchler 2007; Torgler 2007, 2011).

This perspective has its roots in the classic work of Georg von Schanz (1890) who highlighted the existence of a tax contract between the state and its citizens. Over six decades later, the German “Cologne school of tax psychology” sought to measure the strength of this tax contract using tax morale (see Schmolders 1952, 1960, 1962; Strümpel 1969) and viewed it as strongly correlated with tax non-compliance (Schmolders 1960). Although the rise of the rational economic actor approach from the 1970s onwards led to the demise of this social actor approach, over the past decade or so, it has begun to re-emerge (Alm et al. 2012; Kirchler 2007; Torgler 2007, 2011). At

the heart of this approach is the objective of improving tax morale in order to elicit greater self-regulation (Alm and Torgler 2011; Torgler 2012; Williams 2014a; Williams 2017).

In the past few years, this social actor approach has been understood through the lens of institutional theory (Baumol and Blinder 2008; North 1990). From this institutionalist perspective, all societies possess formal institutions, which are codified laws and regulations that define the legal rules of the game. They also possess informal institutions, which are the “socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels” (Helmke and Levitsky 2004: 727). Adopting this institutional perspective, tax morale therefore measures the extent to which the formal institutions (here termed “state morale”) and informal institutions (here termed “citizen morale”) are aligned. When there is asymmetry, tax morale is low and engagement in undeclared work more prevalent (Webb et al. 2009; Williams and Horodnic 2017; Williams and Franic 2016b). In the only study of tax morale so far conducted in Bulgaria using data from the 2013 Eurobarometer survey, the finding is that there is a strong statistically significant correlation between the level of tax morale and the likelihood of engaging in undeclared work; the lower the tax morale, the greater the likelihood of participating in undeclared work (Williams and Franic 2016a). To again further explore the validity of this perspective using a newer dataset and more extensive population sample, therefore, the following hypothesis can be evaluated:

Social actor hypothesis (H2): the higher is tax morale, the lower is the likelihood of engagement in the undeclared economy.

#### Competing or complementary perspectives

Currently, most governments across the world explain participation in undeclared work from a rational economic actor perspective; they seek to increase the penalties and probability of being caught to deter engagement in undeclared work (see Dekker et al. 2010; Williams et al. 2013). When the social actor perspective has been considered, it has been viewed in two ways. On the one hand, some scholars have seen it as an alternative to the rational actor perspective. For them, therefore, the social actor perspective adopts a different view of participants and is not compatible with a rational economic actor perspective and therefore should be treated as an alternative approach (Eurofound 2013; Williams 2014a). On the other hand, however, there has been recently a surge of interest in whether these are complementary rather than competing approaches. The primary manifestation of this view is the “slippery slope” approach. This argues that governments can pursue not only “enforced” compliance by increasing the penalties and risks of detection and therefore the power of authorities, but also “voluntary” compliance by improving tax morale and therefore trust in authorities (Kirchler et al. 2008; Kogler et al. 2015; Kastlunger et al. 2013; Khurana and Diwan 2014; Muehlbacher et al. 2011; Prinz et al. 2013; Wahl et al. 2010; Windebank and Horodnic 2017). The argument has been that pursuing both is the most effective means of tackling undeclared work (Kogler et al. 2015).

There is an emergent recognition however, that if these approaches are pursued together, they may have complex interaction and mediating effects. Applying higher penalties and risks of detection for example, might not always lead to the same outcome. When tax morale is already high, some have argued that increasing the penalties and risks of detection might lead to greater non-compliance, rather than less, not least due to a breakdown of trust between the state and its citizens (Ayres and Braithwaite 1992; Blumenthal et al. 1998; Brehm and Brehm 1981; Chang and Lai 2004; Kirchler et al. 2014; Murphy and Harris 2007). The consequent intimation is that raising the perceived sanctions and detection risks may have different effects on engagement in the undeclared economy depending on the level of tax morale. Until now, however, little if any research has been conducted on their complex interactions and dynamics. To start to evaluate this, therefore, the

relationships between deterrents, tax morale and engagement in the undeclared economy can start to be tested by evaluating the following hypothesis:

Interactions hypothesis (H3): the effect of the perceived sanctions and risk of being caught on the likelihood of engaging in the undeclared economy varies at different levels of tax morale.

H3a: the effect of perceived sanctions on the likelihood of engaging in the undeclared economy varies at different levels of tax morale.

H3b: the effect of perceived risk of being caught on the likelihood of engagement in the undeclared economy varies at different levels of tax morale.

## **Data and Variables**

### **Data**

To evaluate these competing perspectives and thus hypotheses, data is here used from 2,004 face-to-face interviews undertaken in Bulgaria in late 2015. This representative national survey analysed not only attitudes towards undeclared work, but also who purchases and supplies undeclared work, and the relationship between participation in undeclared work and the perceived sanctions and probability of being caught, and level of tax morale. To collect this data, a multi-stage random (probability) sampling methodology was used to ensure that on the issues of gender, age, region and locality size, the national level sample, as well as each level of the sample, was representative in proportion to its population size. In every household the “closest birthday” rule was applied to select the respondents to answer the survey, while every subsequent address was determined by the standard “random route” procedure.

### **Variables**

To evaluate whether increasing the perceived sanctions and probability of being caught, and higher tax morale, reduces the likelihood of engagement in the undeclared economy, the dependent variable used is a dummy variable with recorded value 1 for those who answered “yes” to the question: “Did you yourself carry out any undeclared paid activities in the last 12 months? Here we mean again activities which you were paid for which were not or not fully reported to the tax authorities”, or value 0 otherwise.

To evaluate the association between engagement in the undeclared economy and the policy approaches, three explanatory variables have been employed. Firstly, to evaluate whether the perceived probability of being caught is correlated with engagement in the undeclared economy, a dummy variable has been used describing the perceived risk of being detected, with value 0 for a very small or fairly small risk, and value 1 for fairly high or very high risk. Secondly, to evaluate whether sanctions are correlated with engagement, a dummy variable has been used, describing the expected sanctions, with value 0 for those asserting that the normal tax or social security contributions would be due, and value 1 for those stating that the normal tax or social security contributions due plus there would be a fine, or imprisonment.

Third and finally, to evaluate the association between engagement in wage under-reporting and tax morale, an interval variable was used by constructing an index of self-reported attitudes towards the acceptability of undeclared work based on a 10-point Likert scale. Rather than use a single question to assess tax morale, this survey uses a range of questions by asking the following:

Now I would like to know how you would rate various actions or behaviours. For each of them, please tell me to what extent you find it acceptable or not. Please use the following scale: “1” means that you find it absolutely unacceptable and “10” means that you find it

absolutely acceptable: (1) someone receives welfare payments without entitlement; (2) an individual is hired by a household for work and s/he does not declare the payment received to the tax or social security authorities even though it should be declared; (3) A firm is hired by a household for work and it does not declare the payment received to the tax or social security authorities; (4) a firm is hired by another firm for work and it does not declare its activities to the tax or social security authorities; (5) a firm hires an individual and all or a part of the wages paid to him/her are not officially declared and (6) someone evades taxes by not declaring or only partially declaring their income.

Collating the responses to these six questions, and giving equal weighting to each response, an aggregate “tax morale index” is constructed for each individual. The Cronbach’s Alpha coefficient of the scale is 0.87 which shows a good internal consistency of the scale (Kline 2000). The index is represented here in the 10-point Likert scale original format. The lower the index value, the higher is the tax morale.

Drawing upon previous studies across the Central and Eastern Europe evaluating the important socio-demographic and socio-economic variables influencing participation in undeclared work (Williams and Horodnic 2015a,b; Williams and Padmore 2013a,b), the control variables selected are:

- Gender: a dummy variable with value 0 for women and 1 for men.
- Age: an interval variable indicating the exact age of the respondent.
- Marital status: a categorical variable with value 0 for single persons, value 1 for married/remarried and value 2 for cohabiting.
- Household size: a categorical variable with value 0 for a one adult household, value 1 for a two adult household, value 2 for a three adult household, and value 4 for a household with four or more adult people.
- Employment status: a categorical variable with value 0 for employed, value 1 for self-employed, value 2 for retired, value 3 for unemployed, and value 4 for student and inactive.
- Financial situation: a categorical variable with value 0 for no money problems, value 1 for just comfortable, value 2 for maintaining, and value 3 for struggling.
- Personal income: a categorical variable for the level of personal formal income per month with value 0 for no income, value 1 for less than 350 euros, value 2 for 350-699 euros, value 3 for 700-999 euros and value 4 for 1000 euros or more per month.
- Type of locality: a categorical variable with value 0 for rural area or village, value 1 for small or middle-sized town, value 2 for large town and value 4 for Skopje.
- Region: a categorical variable with value 0 for North Central, value 1 for North Eastern, value 2 for North Western, value 3 for South Central, value 4 for South Eastern, and value 5 for South Western.

Given that there were a considerable number of missing values and inconclusive answers (i.e., refusal and “don’t know”) across the dependent and independent variables, multiple imputation was used to predict the values. This is done using a system of chained equations for each variable with missing values, with fifty imputations simulated for each missing value. Furthermore, population weights are applied based on age and gender to correct for under- and over-representation in the sample and to ensure that the statistics are representative of the population.

To evaluate the relationship between participation in undeclared work and the perceived sanctions and probability of being caught, and the level of tax morale, a logit marginal effects regression analysis is here used. Before analysing the findings, and given the sensitive topic being investigated, the reliability of the data collected needs to be briefly discussed. In 94 per cent of the interviews, the interviewers reported good or excellent cooperation from the participant when answering the questions, and average cooperation in 5 per cent of cases. Cooperation was found to be poor in only 1 per cent of cases. No evidence that respondents were reticent in answering the



questions, was thus identified, perhaps displaying how the undeclared economy, although formally illegal, is widely deemed a socially legitimate endeavour in Bulgaria. Below, in consequence, the findings are reported.

## Findings

Of the 2,004 respondents interviewed in 2015 in Bulgaria, 10 per cent reported participating in undeclared work in the last 12 months, and they reported earning a mean income of 1,315 euros per annum from their undeclared work. Examining the activities undertaken, 18 per cent of these undeclared workers had sold goods and services (other than foodstuffs), 15 per cent provided home maintenance and improvement services, 12 per cent had provided gardening services, 12 per cent house removal services, 11 per cent had sold goods and services associated with their hobby, 9 per cent had sold food produce, 8 per cent had engaged in domestic cleaning, 7 per cent worked as a waiter or waitress, 7 per cent car repairs, 6 per cent baby-sitting, 5 per cent tutoring, 2 per cent IT assistance and 2 per cent ironing clothes.

Only 17 per cent of this undeclared work was undertaken as waged employment for businesses. The remaining 83 per cent was conducted on a self-employed basis, with 19 per cent conducted for friends, colleagues or acquaintances, 6 per cent for relatives, 11 per cent for neighbours, and the remaining 47 per cent on a self-employed basis for people previously unknown to them. The important finding, therefore, is that the majority (83 per cent) of undeclared work in Bulgaria is undertaken on an own-account basis and 36 per cent for close social relations. This is similar to the findings in previous studies of the EU28 as a whole (Williams 2014a).

Which population groups, therefore, are more likely to participate in undeclared work? And what are their views on the sanctions, probability of being caught and the acceptability of operating in the undeclared economy (i.e., their tax morale)? Table 1 reports the descriptive statistics. This reveals that men are far more likely to participate in undeclared work than women (13.4 per cent compared with 6.2 per cent). So too are those cohabiting more likely than married and single persons to engage in undeclared work, as are those living in larger households compared with smaller households. There are, however, few differences by age, except for those aged over 65 years old who are far less likely to participate in undeclared work. Turning to employment status, 26.4 per cent of the unemployed and 23.8 per cent of the self-employed engage in undeclared work. Other groups such as employees, the retired and students are less likely to do so. There is also a tendency for those struggling to cope financially to be far less likely to participate in undeclared work, and it is similarly the case that participation in undeclared work is polarised at the extremes of the income spectrum (i.e., among those with no formal income and the highest levels of formal income). Undeclared work also appears to be more prevalent in rural areas and villages than in more urban areas, and also much less prevalent in some regions (i.e., the North Eastern and South Western regions) than the rest of the country.

Examining the association of participation in undeclared work with the perceptions of the risk of detection, it appears that those who perceive there to be a low risk of detection are significantly more likely to engage in undeclared work, although no discernible trend appears to be apparent and so far as sanctions are concerned, although there appears to be a slightly greater likelihood that those who perceive the sanctions as lower are more likely to engage in undeclared work. There does, however, appear to be clear relationship between participation in undeclared work and tax morale. The higher is the level of tax morale, the lower is the likelihood of participating in undeclared work.

INSERT TABLE 1 ABOUT HERE

To evaluate whether there is a statistically significant association between participation in undeclared work and these explanatory variables when the control variables are introduced and held constant, as well as whether any of these control variables are significantly associated with participation in undeclared work, Table 2 reports the results of a logit marginal effects regression analysis.

Starting with the control variables and thus which employee groups should be perhaps targeted by inspectors seeking to tackle participation in undeclared work, the finding in model 1 is that gender is strongly statistically significant; men are significantly more likely than women to participate in undeclared work. Given that these are marginal effects, Table 2 thus displays that women are 6 per cent less likely to carry out undeclared work compared with men, holding all other variables constant. Employment status, meanwhile, is also significantly associated with participation in undeclared work. Employees and the economically inactive such as students and the retired are significantly less likely than the unemployed to participate in undeclared work. Indeed, the employed are 14 per cent less likely to engage in undeclared work than the unemployed, and the economically inactive are 15 per cent less likely to do so than the unemployed. Age, however, is not found to be associated with participation in undeclared work, and neither is marital status or household size. Nor is there any statistically significant relationship between participation in undeclared work and their financial situation or their personal income. Importantly, therefore, undeclared work is not significantly associated with poverty or a difficult financial situation. Although no significant variations exist across urban and rural locality types, those living in the South Central region are 4.9 per cent more likely to engage in undeclared work than those in the North Central region, and those in the South Eastern region 6.7 per cent more likely than those in the North Central region. Undeclared work is therefore concentrated among men who are self-employed and unemployed and living in the South Central and South Eastern regions.

INSERT TABLE 2 ABOUT HERE

Turning to the policy measures, the important finding in model 1 is that there is no statistically significant relationship between participation in undeclared work and either the level of sanctions (refuting H1a) or the probability of being caught (refuting H1b). However, tax morale is a strong significant predictor of the propensity to participate in undeclared work (confirming H2). The higher the tax morale, the lower is the likelihood of engagement in the undeclared economy. Indeed, the marginal effects reveal that there is a 2.7 percentage point increase in the probability of conducting undeclared work for each one percentage point lowering in tax morale. These results, therefore, refute the rational economic actor deterrence perspective adopted by many governments and validate the emergent social actor perspective.

Is it the case however, that decreases in the level of engagement in the undeclared economy would be greater if the government were to combine the social actor and rational economic actor approaches? Model 2 in Table 2 introduces the interaction terms between tax morale and the level of sanctions and probability of being caught respectively, in order to investigate if the effects of these two deterrence measures have a different impact on engaging in the undeclared economy at varying levels of tax morale. The finding in model 2 is that the effect of the perceived sanctions on the likelihood of engaging in the undeclared economy is not significantly different at varying levels of tax morale (refuting H3a). Similarly, the interaction term between the probability of being caught and tax morale is not significant overall (refuting H3b). Table 3 provides a summary of which hypotheses have been confirmed and which not.

INSERT TABLE 3 ABOUT HERE

To further portray the effects of the significant explanatory variable of tax morale on the likelihood of participation in undeclared work, Figure 1 outlines the predicted probabilities based on a “representative” Bulgarian citizen engaging in undeclared work, according to their gender which is also found to be a significant control variable. This “representative” worker is defined using mean and modal values of the remaining predictors. The finding is that the probability of the representative man engaging in undeclared work is higher than for a woman at all levels of tax morale, and that as tax morale worsens, the probability of participating in undeclared work increases for both men and women. For men, for example, the probability of engaging in undeclared work ranges from seven in a 100 for those with the highest tax morale to 62 in a 100 for those with the lowest tax morale, and for women from four in a 100 to 46 in a 100 respectively. Tax morale, therefore, has a strong and significant impact on the likelihood of the representative man and woman engaging in undeclared work.

INSERT FIGURE 1 HERE

## **Discussion and Conclusions**

Evaluating the validity of the conventional rational economic actor perspective and the social actor perspective, the finding is that engagement in the undeclared economy in Bulgaria is not influenced by either the sanctions or probability of being caught, but is significantly associated with the level of tax morale. Viewed through the lens of institutional theory, therefore, when the norms, values and beliefs of citizens do not adhere to those of the state in terms of the codified laws and regulations, there is a higher likelihood of them engaging in the undeclared economy. Increasing the perceived or actual level of sanctions and probability of being caught confronting citizens has no impact on the likelihood of them engaging in undeclared work. Neither do sanctions or the probability of being caught have any significantly different effects at varying levels of tax morale. It is not the case, therefore, that for those with lower tax morale for example, greater sanctions and higher probabilities of being caught have a greater effect. The currently dominant deterrence approach based on a rational economic actor model therefore needs to be replaced by a tax morale approach.

Theoretically, therefore, these findings support the emergent explanation of the undeclared economy grounded in institutional theory that undeclared work results from a violation of the social contract between the state and its citizens (Williams and Horodnic 2015a). The undeclared economy put another way, arises when the norms, values and beliefs of citizens (citizen morale) do not align with the codified laws and regulations of a society’s formal institutions (state morale). The wider is the gap between state morale and citizen morale (and thus the lower is the level of tax morale), the higher is the likelihood of engagement in the undeclared economy. As such, this analysis provides a quantitative reinforcement for a burgeoning view that participation in undeclared work in Bulgaria is in large part due to the lack of alignment of citizen morale with state morale (BICA 2011; CSD 2009). Whether similar findings are identified in other countries now needs to be investigated, perhaps using the same Eurobarometer data-set. What is not known from this study is why do not agree with the codified laws and regulations and why undeclared work is viewed as socially legitimate, despite being illegal in terms of the laws and regulations. Although one view is that this might be because Bulgarian citizens commonly view the laws and regulations of formal institutions as made for the benefit of the ruling classes, exemplified by them legitimately evading tax through legal tax avoidance schemes, there has until now been little in-depth research to evaluate whether this is the case. Future research, therefore, could usefully evaluate whether this is the case using in-depth qualitative research of the reasons for citizens not agreeing with the laws and regulations.

Turning to the policy implications, this study strongly suggests that the deterrence approach based on the rational economic actor model needs to be replaced by a social actor perspective that

seeks to improve tax morale. What policy measures are thus required to improve tax morale? Given that tax morale is a measure of the lack of alignment of the laws, codes and regulations of formal institutions and the norms, beliefs and values of informal institutions (Helmke and Levitsky 2004; Webb et al. 2009), two sets of policy initiatives might be used to reduce the asymmetry between the formal institutions (“state morale”) and informal institutions (“civic morale”), and thus improve tax morale and in doing so, reduce engagement in the undeclared economy.

On the one hand, policy initiatives are required that seek to alter the norms, values and beliefs regarding the acceptability of participating in undeclared work. Firstly, campaigns can be designed to raise awareness about the benefits of working in the declared economy and the costs of participating in undeclared work, and secondly, policy initiatives can be pursued to educate citizens about the benefits of taxation in terms of the public goods and services received for the taxes they pay. These measures might range from introducing into school education in the civics curriculum the issue of taxation, through to sending letters to taxpayers about how their taxes are being spent, to putting up signs in hospitals, roads and schools for instance, stating “Paid for by your taxes”. A recent example in Bulgaria is the “Coming into the Light” initiative of the Bulgarian Industrial Capital Association (see Williams 2014a).

On the other hand, however, the reform of formal institutions is also required, especially in Bulgaria where formal institutional deficiencies such as public sector corruption and state capture produce a lack of trust in government. Indeed, informal institutions are unlikely to change unless there are changes in the formal institutions. At the very minimum, this requires a change in the organisational culture of tax and labour inspectorates. Until now, the rational economic actor model based on increasing sanctions and the probability of being caught has manifested itself in a “cops and robbers” approach whereby citizens are viewed by the tax and labour inspectorates as criminals to be caught. It is an approach grounded in a low-trust, adversarial and low-commitment view of citizens. To improve tax morale and institutional symmetry, a more “customer service-orientated” approach is thus required founded upon a high trust-high commitment culture. To achieve this, at least three changes are necessary in formal institutions so that citizens have greater trust in government. As previous studies elsewhere reveal, tax morale improves when citizens view government as treating them in a respectful, impartial and responsible manner (Gangl et al. 2013; Murphy 2005); when they view themselves as paying their fair share compared with others (Kirchgässner 2010, 2011; Molero and Pujol 2012), and believe that they receive the goods and services that they deserve given the taxes they pay (McGee 2005). Ensuring that citizens perceive themselves as receiving their fair share compared with others and being treated equitably and impartially is therefore a necessary prerequisite for tackling participation in undeclared work. Beyond this, however, it also requires changes in the macro-level economic and social conditions that lead to lower tax morale, which wider cross-national studies reveal means increasing the level of expenditure on active labour market policies to support vulnerable groups and the level of expenditure on social protection (Autio and Fu 2015; Dau and Cuervo-Cazurra 2014; Thai and Turkina 2014).

These findings about the need for a social actor perspective and greater focus upon tax morale, however, are based on just one dataset in one country. Further studies in other countries regarding the effectiveness of these different perspectives towards explaining and tackling the undeclared economy are now required. These studies, moreover, need to identify in a richer more nuanced manner the reasons for the distrust in formal institutions. If this paper thus stimulates such deeper evaluations in a range of countries of the effectiveness of these contrasting theoretical and policy perspectives, then it will have fulfilled one of its intentions. If this then stimulates governments to consider alternative approaches other than simply treating participants as rational economic actors and deterring participation in undeclared work by increasing the sanctions and probability of being caught, then it will have fulfilled its wider intention.

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**Table 1.** Participation in undeclared work in Bulgaria (weighted percentages)

<b>All</b>	10.0%	<b>Personal income</b>	
<b>Gender</b>		No income	17.4%
Male	13.4%	Less than 350 euros	7.7%
Female	6.2%	350-700 euros	8.8%
<b>Age Groups</b>		700-1000 euros	7.1%
15 - 24 years	11.7%	More than 1000 euros	20.4%
25 - 34 years	12.7%	<b>City size</b>	
35 - 44 years	12.0%	Rural area	12.1%
45 - 54 years	11.2%	Small/medium town	9.5%
55 - 64 years	12.9%	City	8.1%
65 years+	1.5%	<b>Regions</b>	
<b>Marital status</b>		North Central	12.5%
Married/Remarried	8.5%	North Eastern	5.0%
Cohabiting	17.2%	North Western	11.7%
Single	9.0%	South Central	13.3%
<b>Household Size</b>		South Eastern	13.3%
One	7.3%	South Western	5.8%
Two	6.9%	<b>Tax morale</b>	
Three	10.7%	Upper quartile	4.8%
Four or more	13.1%	Upper middle quartile	3.6%
<b>Occupation</b>		Lower middle quartile	11.8%
Unemployed	26.4%	Lowest quartile	19.6%
Self-employed	23.8%	<b>Detection risk</b>	
Employed	8.6%	Very small	15.1%
Other (Retired, students, disabled, etc.)	4.8%	Fairly small	8.1%
<b>Financial situation</b>		Fairly high/Very high	7.4%
Very comfortable	22.4%	<b>Expected sanctions</b>	
Just comfortable	11.7%	Tax or social security contributions due	9.8%
Maintaining	9.0%	Plus a fine/ Prison	8.3%
Struggling	9.0%		

**Table 2.** Logit marginal effects of the likelihood of participating in undeclared work in Bulgaria

	<b>Model 1</b>	<b>Model 2</b>
Tax morale	0.027*** (0.003)	0.029*** (0.006)
Probability caught (BG: Very small/ Fairly small):		
- Fairly high/Very high	-0.029 (0.018)	-0.046 (0.032)
Expected sanctions (BG: Tax or social security contributions due):		
- Plus a fine/ Prison	-0.012 (0.018)	0.000 (0.026)
Interaction term		
- Fairly high/Very high* Tax morale		0.006 (0.009)
- Plus a fine/ Prison* Tax morale		-0.004 (0.007)
		-0.059***
Female	-0.060*** (0.014)	(0.014)
Age	-0.001 (0.001)	-0.001 (0.001)
Marital status (BG: Married/Remarried):		
- Cohabiting	0.030 (0.024)	0.030 (0.024)
- Single	0.011 (0.019)	0.011 (0.019)
Household Size: (BG: One Person):		
- Two	-0.001 (0.025)	-0.001 (0.025)
- Three	0.016 (0.028)	0.015 (0.028)
- Four or more	0.003 (0.027)	0.003 (0.027)
Employment status (BG: Unemployed):		
- Self-employed	-0.042 (0.063)	-0.045 (0.062)
- Employed		-0.144***
	-0.142*** (0.041)	(0.042)
- Other (Retired, students, disabled, etc.)		-0.153***
	-0.151*** (0.035)	(0.035)
Financial situation (BG: Very comfortable):		
- Just comfortable	-0.072 (0.057)	-0.070 (0.057)
- Maintaining	-0.075 (0.058)	-0.073 (0.058)
- Struggling	-0.069 (0.059)	-0.068 (0.059)
Personal income (BG: No income):		
- Less than 350 euros	0.008 (0.025)	0.009 (0.025)
- 350-700 euros	0.006 (0.030)	0.007 (0.029)
- 700-1000 euros	-0.007 (0.034)	-0.006 (0.034)
- More than 1000 euros	0.059 (0.045)	0.061 (0.045)
Type of locality (BG: Rural area):		
- Small/medium town	-0.014 (0.019)	-0.014 (0.019)
- City	-0.005 (0.018)	-0.005 (0.018)
Regions (BG: North Central):		
- North Eastern	-0.027 (0.026)	-0.026 (0.026)
- North Western	0.010 (0.028)	0.013 (0.029)
- South Central	0.049* (0.026)	0.049* (0.026)
- South Eastern	0.067** (0.031)	0.068** (0.031)
- South Western	-0.028 (0.022)	-0.027 (0.022)
Number of imputations	50	50
N	2005	2005

Table 3. Evaluation of hypotheses

Hypothesis	Result (p<0.01)
H1: The higher the perceived sanctions and risk of being caught, the lower is the likelihood of engagement in the undeclared economy.	
H1a: The higher the perceived sanctions, the lower the likelihood of engagement in the undeclared economy.	Not confirmed
H1b: The higher the perceived risks of being caught, the lower the likelihood of engagement in the undeclared economy.	Not confirmed
H2: The higher is tax morale, the lower is the likelihood of engagement in the undeclared economy.	Confirmed
H3: The effect of the perceived sanctions and risk of being caught on the likelihood of engaging in the undeclared economy varies at different levels of tax morale.	
H3a: The effect of perceived sanctions on the likelihood of engaging in the undeclared economy varies at different tax morale.	Not confirmed
H3b: The effect of the perceived risk of being caught on the likelihood of engaging in the undeclared economy varies at different levels of tax morale.	Not confirmed

**Figure 1.** Predicted probability of participation in undeclared work of a ‘representative’ Bulgarian citizen: by tax morale and gender

