Explaining informal entrepreneurship in South-East Europe: a tax morale approach

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Abstract

Conventionally, entrepreneurs participating wholly or partially in the informal economy were explained as rational economic actors doing so when the benefits outweigh the costs. However, the finding that many entrepreneurs do not operate in the informal economy even when the pay-off is greater than the costs has led to the emergence of a new tax morale approach. Grounded in institutional theory, this asserts that formal institutional problems lead to an asymmetry between the laws and regulations, and entrepreneurs' views on the acceptability of informality. The greater this asymmetry (measured by the level of tax morale), the greater is the prevalence of informal entrepreneurship. To evaluate this, interviews with a nationally representative sample of 1,430 entrepreneurs in Bulgaria, Croatia and FYR Macedonia are reported. Using an ordered logit model, the contribution of this paper is to reveal that entrepreneurs operating in the informal economy have significantly lower tax morale, and that the formal institutional problems associated with lower tax morale include a lack of tax fairness, corruption and political instability. The theoretical and policy implications are then discussed.

Keywords: informal economy, shadow economy, entrepreneurship, tax morale, institutional theory

Introduction

To explain the participation of entrepreneurs in the informal sector, the conventional approach has been to view such entrepreneurs as rational economic actors who participate in the informal sector when the benefits outweigh the expected costs (Allingham and Sandmo, 1972). However, many entrepreneurs do not participate in the informal sector even when the rational economic decision would be to do so. The outcome has been the emergence of a new tax morale approach

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(Webb *et al*., 2009, 2013; Williams, 2018; Williams *et al*., 2017a). Grounded in institutional theory (North, 1990), this views informal sector entrepreneurship to result from formal institutional problems that lead entrepreneurs to view engagement in the informal sector as an acceptable activity, which results in the prevalence of informal entrepreneurship (Kirchler, 2007; Murphy, 2008; Torgler, 2007; Williams and Horodnic, 2015 a,b; 2016a,b). The solution is therefore to seek improvements in tax morale, namely the intrinsic motivation to pay taxes (Torgler and Schneider, 2007). Until now, however, most studies of tax morale have focused on citizens. Little attention has been paid to evaluating the tax morale of entrepreneurs, and which formal institutional problems need solving to improve their tax morale. This paper seeks to fill these lacunae.

As such, this paper advances the new tax morale approach in three ways. Firstly, and empirically, a significant positive relationship is revealed between the likelihood of entrepreneurs operating in the informal sector and their tax morale. Secondly, we advance the theoretical basis of this tax morale approach which is grounded in institutional theory by identifying some key formal institutional problems that lead to low tax morale, and therefore informal sector entrepreneurship. Third and finally, and from a policy viewpoint, we discuss the need to complement the currently dominant policy approach, which increases the costs of informal entrepreneurship by increasing the penalties and risks of detection, with a policy approach that seeks to improve tax morale and show how this can be achieved.

To achieve this, section 1 reviews the emergent literature explaining the informal sector entrepreneurship from a tax morale perspective to formulate hypotheses regarding both the relationship between tax morale and informal entrepreneurship, as well as the formal institutional problems that lead to lower levels of tax morale. To evaluate these, section 2 then reports the data used, namely a 2015 survey of entrepreneurs in Bulgaria, Croatia and FYR Macedonia, involving 1,430 face-to-face interviews. Section 3 then reports the findings, while the final section summarises the theoretical and policy implications.

1. Informal Entrepreneurship and Tax Morale: Literature Review and Implementation of Hypotheses

In this paper, informal sector entrepreneurs are defined as persons starting up and/or owning and managing a business venture that does not register and/or declare some of or all its sales to the authorities for tax, social insurance or labour law purposes, when it should do so (Ketchen *et al*., 2014; Siqueira *et al*., 2016; Williams *et al*., 2017a). Viewed through the lens of institutional theory, formal entrepreneurs adhere to the formal laws and regulations. Informal entrepreneurs, meanwhile, engage in entrepreneurial endeavour outside of the formal laws and regulations but within the norms, values and beliefs held by citizens and entrepreneurs regarding what is right and acceptable (Godfrey, 2011; Kistruck *et al*., 2015; Webb *et al*., 2009;

Welter *et al.*, 2015). Criminal entrepreneurs, meanwhile, engage in endeavours outside of not only the formal rules of the game but also the socially shared rules of what is acceptable. The latter are not included in the analysis since none were interviewed.

Conventionally, a rational economic actor approach has been used to explain informal sector entrepreneurship. Originally proposed by Allingham and Sandmo (1972) when studying tax non-compliance, it views entrepreneurs as operating wholly or partially in the informal economy when the benefits outweigh the expected costs of being detected and fined. To tackle informal entrepreneurship, therefore, the focus has been on increasing the actual or perceived penalties and risks of detection (e.g., Horodnic, 2018; ILO, 2017; Williams, 2014, 2018; Williams and Puts, 2017). Indeed, this focus on increasing the fines and probability of detection is the dominant policy approach adopted by the governments in all three countries here studied, namely Bulgaria (CSD, 2013; Stefanov *et al*., 2017a), Croatia (Stefanov *et al.*, 2017b; Williams *et al*, 2017b) and FYR Macedonia (Mojsoska Blazevski and Williams, 2018; Stefanov *et al*., 2017c).

Despite the dominance of this rational economic actor approach in policy circles, the evidence of its effectiveness at reducing informality is less than conclusive. Although some scholars find that increasing penalties and the probability of detection reduces participation in the informal sector (Mas'ud *et al.,* 2015; Mazzolini *et al*., 2017), others find no significant association (Shaw *et al*, 2008; Williams and Franic, 2015, 2016), and yet others identify that increasing the actual or perceived penalties and probability of detection leads to higher levels of informality (Hofmann *et al.,* 2017; Kaplanoglou and Rapano, 2015; Murphy, 2005, 2008; Murphy and Harris, 2007). However, the key criticism of this rational economic actor approach is that many entrepreneurs do not participate in the informal sector even when benefits outweigh the costs, suggesting that they are not always taking a rational economic decision on whether to participate or not (Kirchler, 2007; Murphy, 2008; Murphy and Harris, 2007; Williams and Krasniqi, 2017).

To explain this, a tax morale approach has emerged. This asserts that entrepreneurs have a greater likelihood of participating in the informal sector if they possess low tax morale, by which a low intrinsic motivation to pay taxes is meant (Torgler, 2007). To provide a theoretical basis to this conceptualisation, institutional theory (North, 1990) has been drawn upon. Viewing institutions as the rules of the game, all societies are said to have both formal institutions, which are laws and regulations that define the legal rules of the game, as well as 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, p. 727). In the first wave of institutional theory, solely the formal institutional failings were focused on as explanations for the existence of informal entrepreneurship (see Williams, 2018). The problem, however, was that these formal institutional failures only lead to informal entrepreneurship if the formal and informal institutions do not align. In a second wave of institutional theory, therefore, this has been recognised. It is argued that when the formal and informal institutions fully align, no informal entrepreneurship will occur, except unintentionally, because entrepreneurs will adhere to the formal rules of the game. However, when the formal and informal institutions are not in symmetry, which can be measured by the level of tax morale, participation in informal entrepreneurship becomes more prevalent (Williams, 2018).

Until now, lower levels of tax morale have been found to be significantly associated in cross-country studies in Europe with not only higher levels of participation in the informal economy (Horodnic and Williams, 2016; Williams and Horodnic, 2015b, 2016a; Windebank and Horodnic, 2017) and higher levels of participation by employers in salary under-reporting (Williams and Franic, 2017; Williams and Horodnic, 2015a,c,d,e, 2016b, 2017a), but also with higher levels of tax non-compliance (Brink and Porcano, 2016; Lima and Zaklan, 2008; Lisi, 2015; Ostapenko and Williams, 2016; Stark and Kirchler, 2017; Sumartaya and Hafidiah, 2014; Torgler, 2004; Torgler and Schaffner, 2007; Torgler *et al.*, 2008). Indeed, a strong negative correlation has been identified between tax morale and citizens participation in the informal economy with Pearson r values between -.46 and -.66 (Alm and Torgler, 2006; Torgler, 2011). For example, Torgler (2011) reveals how in post-socialist societies a one unit decrease in tax morale results in a 20 percentage points increase in the informal economy. Whether there is a similar strong correlation between tax morale and participation of entrepreneurs in informal entrepreneurship has so far not been evaluated. To evaluate this proposition, therefore, the following hypothesis can be tested:

> *Tax morale hypothesis (H1)*: the lower the tax morale, the greater is the likelihood of entrepreneurs participating in the informal sector.

What, therefore, causes lower levels of tax morale? In the third wave of institutional theory, it has been argued that formal institutional problems lead to an asymmetry between the laws and regulations, and views on the acceptability of informality. When surveying citizens, rather than entrepreneurs, numerous studies have found that the level of tax morale depends on whether citizens perceive the tax system as fair, or taxes to be inappropriately used by government. Those who do not perceive the tax system as fair possess lower levels of tax morale (Alasfour *et al.*, 2016; Çevik, 2016; Cyan *et al.*, 2016; Niesiobędzka, 2014; Torgler *et al.*, 2008; Vythelingum *et al.*, 2017). For example, tax morale is low when citizens believe there is state capture, by which is meant that individual businesses or groups of enterprises influence the formulation of laws and other government policies to their own advantage by illicit or non-transparent means (Fries *et al.*, 2003). The outcome is preferential treatment and diversion of state resources towards them. For those excluded from these elites capturing state resources, the result is relatively fewer public goods and services in return for the taxes and social contributions paid (Siqueira *et al*., 2016; Williams *et al*., 2016). In countries where there is state capture, citizens therefore have lower levels of tax morale because they feel cheated (Chan *et al*., 2018; Saitta, 2017). To evaluate if this also applies when entrepreneurs are analysed, the following hypothesis can be tested:

> *Distributive fairness hypothesis (H2)*: the lower the perception that taxes are appropriately used by government, the lower is the level of tax morale.

The level of tax morale is also related to the perceived quality of public services (Williams, 2018; Williams and Horodnic, 2017a; Williams and Martinez, 2014), such as the perceived effectiveness of government spending (Alasfour *et al.*, 2016; Barone and Mocetti, 2011; Molero and Pujol, 2012; Sipos, 2015; Vythelingum *et al.*, 2017). This can be measured by examining the perceived presence of public sector corruption (Khan and Quaddus, 2015; Round *et al*., 2008; Tonoyan *et al*., 2010), by which is meant the 'misuse of public office for private gain' (Svensson, 2005). This occurs in relation to entrepreneurs when government officials ask for bribes (e.g., a portion of a given contract) in return for a service. This service might be speeding up the approval process for an operating license, not writing a negative outcome for a workplace inspection, or helping entrepreneurs avoid delays in some other regulatory process such as the granting of a construction permit. Such public-sector corruption not only leads to resource misallocations and inefficiencies, but also to an additional (informal) tax on formal entrepreneurs, which can push them into the informal sector to escape such extortion from public officials. Where public sector corruption prevails, therefore, tax morale is likely to be lower. To evaluate this, the following hypothesis can be tested:

> *Public sector corruption hypothesis (H3)*: the greater the perceived level of public corruption among entrepreneurs, the lower is their level of tax morale.

A further and final formal institutional failing here reviewed is the perceived and/or actual instability and uncertainty of the formal rules. Formal institutional instability and uncertainty result when there are continuous changes in the formal laws and regulations (Levitsky and Murillo, 2009; Williams and Shahid, 2016). This is often the case in many transition economies where entrepreneurs and enterprises are subjected to continuous ongoing alterations in the formal rules, and therefore do not expect the rules that apply today to remain the same in the future. For example, citizens and entrepreneurs in such countries see little point in paying compulsory social insurance contributions so that they can claim unemployment benefits or pensions in the future, because they have little reason to believe that when they wish to benefit, the same rules will apply. This lack of perceived permanency of the formal rules is a major problem for governments. It leads to low levels of tax morale. A further related issue is that, when the perception is that the formal rules are not indigenous to the nation but are imposed from the outside, such as by supra-national institutions, tax morale will again be much lower (see Williams, 2018). Indeed, in such situations, it is perhaps unsurprising that populations and entrepreneurs look beyond the formal laws and regulations to the informal institutions for a more permanent shared set of norms and rules in relation to what is acceptable and what is not to govern and structure their economic activities instead of relying on formal laws and regulations (London *et al*., 2014; Mair *et al*., 2012), which can be very fluid and temporary. To start to evaluate this, the following hypothesis can be tested:

> *Instability of formal institutions hypothesis (H4)*: the greater the perceived political instability among entrepreneurs, the lower is their level of tax morale.

2. Data, Variables and Model

2.1. Data

To evaluate these hypotheses on the relationship between informal entrepreneurship and tax morale, and the determinants of low tax morale, data is reported from a representative survey of entrepreneurs conducted in 2015 in Bulgaria, Croatia and FYR Macedonia, which are countries with some of the largest informal economies in Europe (Medina and Schneider 2018) and there is also a relatively low level of tax morale among its citizens (Stefanov *et al*., 2017a,b,c; Williams and Franic, 2015, 2016). The sampling methodology ensured that the samples are proportionate to the universe in each country with respect to firm size, region and sector. The owners or managers of a representative sample of 456 businesses were surveyed in Bulgaria, 521 businesses in Croatia, and 453 businesses in FYR of Macedonia.

Given that this is a sensitive topic, a rapport had to be established with the interviewees before asking any sensitive questions. In consequence, the interview schedule commenced with non-sensitive questions about their satisfaction with the business environment, and this was followed by questions on the acceptability of various non-compliant behaviours. Adopting a gradual approach, it was therefore only after these non-sensitive topics that questions were posed on whether they consider themselves affected by businesses using informal practices and their own engagement in informal economic practices. Interviewers were asked to rate the reliability of the interviews. Reviewing the responses, interviewers reported excellent or fair cooperation in 94 per cent of the interviews with entrepreneurs. Cooperation was bad, or the interviewer did not assess the reliability of the interviews, in only 1 per cent of interviews.

2.2. Variables

To evaluate the hypotheses, ordered logit regression analysis has been used. The dependent variable is a categorical variable of the level of tax morale of entrepreneurs. To measure this, the following question was asked: *To what extent do you agree that underreporting annual revenue or turnover in order to evade taxes is acceptable*. The responses were provided on a 10-point Likert scale, ranging from 1, meaning completely disagree to 10, meaning completely agree. Here, this 10-point scale is recoded into a four point scale (Torgler, 2004; Torgler and Schneider, 2009): value 1 = low tax morale (responses from 4 through 10); value 2 = middle lower tax morale (response 3); value 3 = middle upper tax morale (response 2); and value 4 = high tax morale (response 1- “completely disagree”).

The key independent variables used to evaluate the four hypotheses respectively, meanwhile, are the following:

- *Participation in informal economy*: a categorical variable showing how often employers hire an employee on a contract with “hidden clauses, that is, social insurance and tax contributions are paid based on for example the minimum wage, whilst the rest of the pay is paid undeclared, without a payslip”: 1 = never, 2 = sometimes, 3 = in most cases, 4 = always.
- *Tax fairness*: A categorical variable recorded using the following survey question - To what extent do you agree with the statements that the state does not give businesses enough in return for the taxes they pay. This variable is measured on a 10-point Likert scale, 1 means completely disagree, 10 means completely agree.
- *Corruption as an obstacle to the current operations of the companies*. A categorical variable recorded using the following survey question - To what degree is corruption an obstacle to the current operations of the companies: value 1=very severe obstacle, value 2=major obstacle, value 3=moderate obstacle, value 4=minor obstacle, value 5=no obstacle.
- *Political instability as an obstacle to the current operations of the companies*. A categorical variable recorded using the following survey question - To what degree is political instability an obstacle to the current operations of the companies: value 1=very severe obstacle, value 2=major obstacle, value 3=moderate obstacle, value 4=minor obstacle, value 5=no obstacle.

A series of firm-level variables derived from previous studies analysing the likelihood of participation in the informal economy (Ali and Najman, 2018; Hudson *et al.*, 2012; Putniņš and Sauka, 2017; Putniņš *et al.*, 2018; Williams and Horodnic, 2017a, b) are used as control variables as detailed below:

- *Sector:* A categorical variable describing the main activity of the company: 1 = agriculture, 2 = hotels and restaurants, 3 = services, 4 = construction, 5 = transport and communications, 6 = trade, 7 = retail, 8 = industry, 9 = health, 10 = other.

- *Number of employees*: A categorical variable describing the total number of currently employed people in the observed company (excluding owners and partners): 1 = sole proprietor's and micro (0-9 employees), 2 = small (10-49 employees), 3 = medium and large (50+ employees).
- *Legal Status*: A categorical variable describing the legal status of observed company: 1 = sole proprietorship, 2 = private limited company, limited by shares (LTD.), 3 = public Ltd Company (PLC), 4 = other.
- *Firm Age:* A categorical variable showing for how many years the observed company has been trading (this includes under all ownerships and all legal statuses): 1 = less than 5 years, 2 = 6-10 years, 3 = 11-20 years, 4 = more than 20 years.
- *Business locality*: A categorical variable describing the kind of locality the observed company carries out its main activity: 1 = the capital, 2 = big city (regional centre), 3 = small town, 4 = village or rural area, 5 = the entire country, 6 = both inside the country and outside the country, or outside the country only.
- *Vat registered*: A dummy variable describing whether the respondent's company is VAT registered: 0 = no, 1 = yes.

For the descriptive analysis, the crude data for each variable is reported to provide an accurate description and to minimise the bias that would occur if the entrepreneurs who did not respond to all questions included in the analysis but did provide answers to some of the questions were excluded. In the ordered logit regression analysis, however, only respondents providing responses to all questions included in the analysis are included due to the technical requirements of this type of analysis. Answers of "don't know" and "refusal" were eliminated in all estimations. Accordingly, an ordered logit model has been used without multiple imputations.

2.3. Econometric model

Given that the dependent variable is an ordered categorical variable, we apply an ordered logit model.[1] Let y be an ordered response taking on the values $j = 1, \ldots, K$, where K denotes the total number of alternatives of the dependent variable. The ordered logit model is derived from the following latent variable model (Cameron and Trivedi, 2005; Wooldridge, 2010; Greene, 2012)

$$y_i^* = \beta x_i + \varepsilon_i ,$$

where $i = 1, \ldots, N$. N denotes the sample size, β is a row vector of the regression parameters, x_i is a column vector of explanatory variables and ε_i is the

[1] Since the dependent variable is an ordered categorical variable, the ordered logit model is a more appropriate econometric method than linear regression (Lago-Peñas and Lago-Peñas, 2010; Long, 1997).

logistic distributed random error.[2] As usual, y_i^* is unobserved, and for a K-alternative ordered logit model we observe

$$y_i = j \text{ if } \mu_{j-1} < y_i^* \leq \mu_j ,$$

where μ 's represent unknown threshold parameters to be estimated along with β, $\mu_0 = -\infty$ and $\mu_K = +\infty$. Then, the probability that observation i will choose alternative j is

$$\begin{aligned} P\left[y_i = j\right] &= P\left[\mu_{j-1} < y_i^* \leq \mu_j\right] \\ &= P\left[\mu_{j-1} - \beta x_i < \varepsilon_i \leq \mu_j - \beta x_i\right], \\ &= F\left(\mu_j - \beta x_i\right) - F\left(\mu_{j-1} - \beta x_i\right) \end{aligned}$$

where F is the standard logistic cumulative distribution function

$$F(z) = \frac{e^z}{1+e^z}.$$

The marginal effects are defined as

$$\frac{\partial P\left[y_i = j\right]}{\partial x_i} = \beta\left[F'\left(\mu_{j-1} - \beta x_i\right) - F'\left(\mu_j - \beta x_i\right)\right].$$

To examine the null hypothesis whether at least one of the predictors' regression coefficient is not equal to zero in the model, the Likelihood Ratio (LR) Chi-Square test is used

$$LR = -2\left(L_0 - L_F\right) \sim \chi^2\left(df\right).$$

L_0 denotes the log likelihood with just the response variable in the model and L_F denotes the log likelihood from the final iteration (assuming the model converged) with all the parameters. df indicates the degrees of freedom of the Chi-Square distribution and is equal to the number of predictors in the model. We use STATA software for the purposes of the analysis.

3. Findings

Table 1 presents the descriptive results of the level of tax morale of 1,430 entrepreneurs interviewed in Bulgaria, Croatia and FYR Macedonia. This reveals that, overall, 37.9% have low tax morale, strongly agreeing that it is acceptable to underreport annual revenue or turnover to evade taxes, 8.1% have lower middle tax morale, 9.2% upper middle tax morale and 44.7% high tax morale, completely disagreeing that it is acceptable to underreport annual revenue or turnover to evade

[2] We assume that ε is logistically distributed across observations. Greene (2012) states that logistic and normal distributions generally give similar results in practice. This is also confirmed in this paper, ordered probit and logit models provide almost the same size of the marginal effect.

taxes. However, the level of tax morale of entrepreneurs varies across the three countries. In Bulgaria, a higher proportion of entrepreneurs have low tax morale (50.6%) than in Croatia and FYR of Macedonia (32.4% and 31.9% respectively). Concomitantly, a much lower proportion of entrepreneurs in Bulgaria have high tax morale (28.0%) than in Croatia and FYR of Macedonia (50.8% and 54.3% respectively).

The level of tax morale of entrepreneurs also varies markedly according to the type of business venture that they operate. Commencing with whether entrepreneurs participate in informal practices, the finding is that there appears to be an association between their tax morale and whether they participate in informal practices. Some 49.2% of those who never use informal practices have high tax morale but only 38.0% of those who in most cases or always use informal practices have high tax morale. Similarly, 47.6% of those who in most cases or always use informal practices have low tax morale but only 36.6% of those who never use informal practices have low tax morale.

Moreover, the level of tax morale markedly varies across sectors. A larger proportion of entrepreneurs have low tax morale in the hotels and restaurants sector, construction industry, retail and trade sectors and health sectors, while higher proportions have high tax morale in agriculture, transport and communications sectors. Similarly, a larger proportion of entrepreneurs who are sole traders and operate micro-enterprises have low tax morale compared with entrepreneurs who operate small and medium-sized businesses. So too do a larger proportion of entrepreneurs, who are sole proprietors and have a low tax morale compared with those operating limited companies, as well as a larger share of entrepreneurs who operate younger enterprises compared with more established entrepreneurs. It is also the case that a greater proportion of entrepreneurs operating businesses in the capital cities of Sofia, Zagreb and Skopje have low tax morale compared with those operating outside the capital cities, as do those who are not registered for VAT.

Table 1. Distribution of tax morale in Bulgaria, Croatia and FYROM,% of entrepreneurs

	Low tax morale	**Mid low tax morale**	**Mid high tax morale**	**High tax morale**
Total	37.9	8.1	9.2	44.7
Country				
FYR of Macedonia	31.9	7.4	6.5	54.3
Bulgaria	50.6	10.3	11.2	28.0
Croatia	32.4	6.9	9.9	50.8
Participation in informal economy				
Never	36.6	8.3	5.9	49.2
Sometimes	38.6	8.3	12.1	41.1

In most cases/ always	47.6	7.4	7.0	38.0
Sector				
Agriculture	19.5	7.3	7.3	65.9
Hotels and restaurants	44.6	8.4	10.8	36.1
Services	34.9	15.8	7.9	41.5
Construction	42.4	4.0	9.6	44.0
Transport and communications	25.6	6.7	8.9	58.9
Trade	42.3	7.8	11.6	38.4
Retail	42.0	7.2	6.6	44.2
Industry	32.7	13.1	8.4	45.8
Health	40.4	5.8	5.8	48.1
Other	37.3	5.7	10.0	47.0
Number of employees				
Sole traders and micro (0-9 employees)	39.8	8.2	8.8	43.2
Small (10-49 employees)	25.8	6.8	9.1	58.3
Medium and large (50+ employees)	25.0	9.1	20.5	45.5
Business status				
Sole proprietorship	51.4	11.0	8.6	29.1
Private limited company, limited by shares (LTD.)	35.7	7.6	9.8	47.0
Public Ltd Company (PLC)	40.0	7.7	3.1	49.2
Other	29.5	9.0	10.3	51.3
Operating period				
Less than 5 years	45.6	6.6	6.6	41.2
6 - 10 years	40.4	8.9	9.7	41.0
11 - 20 years	35.6	8.9	10.4	45.2
More than 20 years	27.0	8.0	10.1	54.9
Business locality				
The capital	46.2	7.0	8.5	38.4
Big city (regional centre)	39.3	7.9	7.4	45.5
Small town	33.3	7.7	12.5	46.5
Village or rural area	38.3	12.8	19.2	29.8
The entire country	24.1	9.8	7.1	58.9
Both inside the country and outside the country, or outside the country only	23.9	13.0	10.9	52.2
Vat registered				
No	46.9	8.3	9.6	35.3
Yes	34.4	8.3	9.3	48.0
State does not give businesses enough in return for taxes paid				
Completely disagree	25.8	2.5	5.8	65.8
2 and 3	22.7	13.6	19.5	44.2
4 and 5	39.1	13.3	7.7	39.9

6 and 7	46.1	6.5	6.9	40.6
8 and 9	46.2	7.6	10.6	35.6
Completely agree	38.8	5.7	7.2	48.3
Corruption obstacle to operations				
Very severe obstacle	47.3	6.6	8.8	37.2
Major obstacle	40.8	10.9	12.5	35.9
Moderate obstacle	35.8	8.5	13.0	42.7
Minor obstacle	37.4	9.4	7.9	45.3
No obstacle	25.7	6.0	3.5	64.8
Political instability obstacle to operations				
Very severe obstacle	54.6	6.8	7.3	31.4
Major obstacle	40.9	6.9	10.1	42.0
Moderate obstacle	40.5	13.0	13.9	32.6
Minor obstacle	32.5	9.0	6.6	51.8
No obstacle	24.8	5.0	6.8	63.4

Source: Authors' own work based on the representative GREY Survey in Bulgaria, Croatia and FYROM

There is, however, a marked relationship between the satisfaction of entrepreneurs with the state giving businesses enough in return for the taxes they pay, and their level of tax morale. Some 38.8% of the entrepreneurs who completely agree that the state does not give businesses enough in return for the taxes they pay have low tax morale, and just 25.8% totally disagree with this statement. Similarly, 65.8% of entrepreneurs who have high tax morale completely disagree that the state does not give businesses enough in return for the taxes they pay but 48.3% of them totally agree with this statement. There also appears to be a close association between corruption and the level of tax morale of entrepreneurs. Those viewing corruption as more of a problem have lower tax morale. Some 47.3% of the entrepreneurs who have low tax morale view corruption as a very severe obstacle to the operations of their businesses while only 25.7% of them do not view it as an obstacle. Similarly, 65.0% of entrepreneurs with high tax morale view corruption as no obstacle to the operations of their businesses while only 37.2% of them view it as a very severe obstacle. And finally, there appears to be a close association between political instability and tax morale. Some 54.6% of entrepreneurs with low tax morale perceive political instability as a very severe obstacle to the current operations of their business but only 24.8% do not perceive political instability as an obstacle. Meanwhile, 64.8% of entrepreneurs with high tax morale do not perceive corruption as an obstacle to their business while 31.4% of them perceive it as a very severe obstacle.

The shortcoming of these descriptive statistics, however, is that they do not hold constant the other variables, which may influence these correlations. To achieve this, Table 2 presents an ordered logit regression analysis. Starting with how firm-level variables influence tax morale, ordered logit model reveals that entrepreneurs in agriculture, services, retail, industry, transport and communications, are significantly more likely to have a high tax morale than entrepreneurs in the construction sector. So too are entrepreneurs employing 10-49 employees significantly more likely to have high tax morale than entrepreneurs with 0-9 employees. Interestingly, however, when other variables are held constant, there is no difference in the tax morale of entrepreneurs by the legal status of the business, except in the 'other' category. There are significant variations, however, by firm age. Entrepreneurs operating older established business ventures are significantly more likely to have high tax morale than entrepreneurs operating younger, less than five-year-old enterprises. Whether they are VAT registered or not has no significant influence on whether they have high tax morale. Nevertheless, there are significant variations by the type of locality. Entrepreneurs in the village and rural area are significantly less likely to have high tax morale, and those operating across the entire country are significantly more likely to have high tax morale than those operating in small towns. So are entrepreneurs in Bulgaria significantly less likely to have high tax morale, while entrepreneurs in Croatia are significantly more likely to have high tax morale, than those entrepreneurs operating in FYR Macedonia.

Turning to the variable of participation in the informal economy, the finding is that entrepreneurs operating in the informal economy are significantly less likely than those not operating in the informal economy to have high tax morale (confirming hypothesis *H1*). Indeed, a one unit increase in the scale of participation in the informal sector worsens by 3.8 percentage points the proportion of entrepreneurs indicating the highest level of tax morale.

Table 2. Estimation results from the ordered logit regression

	Coefficient (Standard error)	Marginal effect
Country (RC: FYROM)		
Bulgaria	-0.543 (0.190)***	-0.110
Croatia	0.323 (0.188)*	0.070
Sector (RC: Construction)		
Agriculture	2.155 (0.498)***	0.435
Hotels and restaurants	0.299 (0.330)	0.059
Services	0.647 (0.290)**	0.132
Transport and communications	0.780 (0.338)**	0.161
Trade	0.338 (0.251)	0.067
Retail	0.725 (0.284)**	0.149
Industry	0.524 (0.314)*	0.106
Health	0.549 (0.414)	0.111
Other	0.457 (0.249)*	0.092
Number of employees (RC: Sole traders and micro)		
Small (10-49 employees)	0.523 (0.236)**	0.112
Medium and large (50+ employees)	0.061 (0.362)	0.013
Legal status (RC: Sole proprietorship)		
Private limited company, limited by shares (LTD.)	0.192 (0.190)	0.040
Public Ltd Company (PLC)	-0.004 (0.369)	-0.001
Other	0.737 (0.328)**	0.156
Firm age (RC: Less than 5 years)		
6 - 10 years	0.144 (0.178)	0.030

11 - 20 years	0.344 (0.175)**	0.072
More than 20 years	0.652 (0.210)***	0.138
Business locality (RC: Small town)		
The capital	-0.140 (0.193)	-0.029
Big city (regional centre)	0.072 (0.187)	0.015
Village or rural area	-0.565 (0.343)*	-0.112
The entire country	0.754 (0.270)***	0.162
Both inside the country and outside the country, or outside the country only	0.460 (0.369)	0.099
Vat registered	0.218 (0.168)	0.045
Participation in informal economy	-0.182 (0.088)**	-0.038
State does not give businesses enough for taxes paid	-0.051 (0.021)**	-0.011
Corruption obstacle to operations	0.137 (0.057)**	0.029
Instability obstacle to operations	0.217 (0.056)***	0.045
Number of observations	990	
LR chi2 (29)	184.2	
Prob > chi2	0.000	
Pseudo R2	0.080	

Notes: (1) Dependent variable: Tax morale measured on a four-point scale (1=Low tax morale; 2=Mid low tax morale; 3=Mid high tax morale; 4=High tax morale);
(2) We report the marginal effects for the highest score of the tax morale index (4)
(3) Significance: *p<0.1, **p<0.05, ***p<0.01
Source: Authors' own work based on the representative GREY Survey in Bulgaria, Croatia and FYROM

To evaluate the association between various formal institutional problems and the non-alignment of entrepreneurs' views with the formal rules, we use the variable of whether they view the state as giving businesses enough in return for the taxes they pay. The finding is that entrepreneurs believe that the state does not give businesses enough in return for the taxes they pay are significantly less likely to have high tax morale than those who do not believe this (confirming Hypothesis *H2*). An increase by one unit in the perception that the state does not give businesses enough in return for the taxes they pay decreases by 1.1 percentage points the proportion of entrepreneurs indicating the highest level of tax morale.

Hypothesis *H3*, meanwhile, examines whether public sector corruption is correlated with tax morale. The finding is that entrepreneurs who perceive public corruption as an obstacle are less likely to have high tax morale (confirming Hypothesis *H3*). An increase by one unit in an entrepreneur's perception that corruption is an obstacle to their operations decreases by 2.9 percentage points the proportion of entrepreneurs indicating the highest level of tax morale.

Finally, Hypothesis *H4* explores whether perceived political instability is associated with the tax morale of entrepreneurs. The finding is that entrepreneurs who perceive political instability as an obstacle to their operations are less likely to have high tax morale (confirming Hypothesis *H4*). An increase by one unit in the perception of entrepreneurs that political instability is an obstacle to their current operations decreases by 4.5 percentage points the proportion of entrepreneurs indicating the highest level of tax morale.

Discussion and conclusions

This paper has evaluated a new tax morale approach, grounded in institutionalist theory, which argues that formal institutional problems lead to the emergence of lower tax morale amongst entrepreneurs, which in turn leads to the prevalence of informal entrepreneurship. Reporting face-to-face interviews with 1,430 entrepreneurs in Bulgaria, Croatia and FYR Macedonia, not only is participation in the informal economy associated with lower tax morale, but some specific formal institutional problems are identified that lead to lower levels of tax morale.

In terms of the theoretical implications, therefore, this paper makes three advances. First, most studies explaining the informal economy from this tax morale perspective have focused on citizens or employees' level of tax morale. Few have evaluated the tax morale of entrepreneurs. This paper has filled this lacuna in South-Eastern Europe. Secondly, by revealing that there is a strong association between participating in the informal economy and the tax morale of entrepreneurs, it confirms the usefulness of institutional theory. The greater the degree of asymmetry between the laws and regulations of formal institutions and the norms, values and beliefs of entrepreneurs (measured by their level of tax morale), the greater is the prevalence of informal entrepreneurship. Third and finally, and importantly for further advancing institutional theory, some of the formal institutional problems that are associated with lower tax morale have been identified. There is a significant association between the tax morale of entrepreneurs and their perceptions of distributive tax fairness, public sector corruption and instability in the formal institutions.

Examining the implications for policy, this paper reveals that at a minimum, the dominant rational economic actor policy approach, which increases the risks of detection and penalties, needs to be complemented with policy measures to improve tax morale. To do so, two options are available. On the one hand, policy initiatives can be pursued to improve the tax morale of entrepreneurs such as tax education and awareness raising campaigns (e.g., by providing information about the benefits of operating in the formal economy, and showing the public goods and services received for the taxes paid). However, it is arguable that the tax morale of entrepreneurs will not alter unless the formal institutional problems that lead them to adopt non-compliant attitudes are resolved. On the other hand, therefore, the formal institutional problems that lead to low tax morale need to be addressed. As the ordered logit regression analysis in this paper reveals, this requires, at a minimum, improvements in distributive tax fairness, reduced public sector corruption and greater stability in the formal institutions.

Despite these clear theoretical and policy implications, this paper nevertheless has limitations. Firstly, it reports results for only three South-East European countries. Future research, therefore, needs to evaluate whether similar significant associations are identified when conducting surveys of entrepreneurs not only in other nations and European regions but also beyond. Secondly, although this study reveals that the propensity of entrepreneurs to operate in the informal economy is significantly associated with their level of tax morale, it only uncovers a few formal institutional problems correlated with lower tax morale. Future quantitative and in-depth qualitative research is required to evaluate systematically a broader array of formal institutional problems associated with lower tax morale, so that governments can pursue targeted initiatives to improve tax morale and reduce informal entrepreneurship.

In sum, this paper has displayed the importance of the tax morale approach, grounded in institutional theory, when explaining and tackling informal entrepreneurship in these three countries in South-Eastern Europe. If this now encourages similar analyses in other nations and European regions to build the evidence-base regarding the validity of this theoretical perspective, then this paper will have achieved a primary intention. If this then results in alterations in the policy approach used to tackle informal entrepreneurship, with greater emphasis put on addressing the low tax morale that results in the greater prevalence of informal entrepreneurship, then it will have achieved its fuller intention.

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