

Tackling the undeclared economy in the European Union: an evaluation of the tax morale approach

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ABSTRACT

To evaluate a new approach towards tackling the undeclared economy, which views participants as social actors rather than rational economic actors, this article reports evidence from 27,563 face-to-face interviews conducted across the European Union during 2013. Multilevel logistic regression analysis reveals a strong association between participation in undeclared work and the level of tax morale. Finding that higher tax morale (and thus a lower propensity to engage in undeclared work) is strongly correlated with greater levels of state intervention but also with individual-level characteristics such as gender, age, education and employment status, the article concludes not only by confirming a political economy approach and refuting modernization and neo-liberal explanations and remedies, but also by revealing for the first time the importance of solutions not so far considered, including improving educational attainment, older citizens mentoring for younger people and improving women's participation in the labour force.

1 INTRODUCTION

Tackling undeclared work lies at the very core of the study of industrial relations. Unless monetary transactions not declared to the state for tax, social security and/or labour law purposes are addressed, the outcome will be a lack of state control over the quality of working conditions, weakened trade union and collective bargaining and a growing pressure on formal businesses to operate undeclared themselves due to the unfair competition (Andrews *et al.*, 2011). To advance understanding of how to tackle undeclared work, this article transcends the conventional rational economic actor approach that views participation in undeclared work as arising when the pay-off is greater than the expected cost of being caught and punished (Allingham and Sandmo, 1972). Given that many voluntarily comply even when the benefits of undeclared work outweigh the costs (Alm *et al.*, 2012; Kirchler, 2007; Murphy, 2008), a 'social actor' approach is advanced, which views participation in undeclared work as arising when tax morale, defined as the intrinsic motivation to pay taxes (Cummings *et al.*, 2009; Torgler, 2007a, 2007b), is low. The consequent goal of this emergent approach is to elicit greater voluntary commitment to compliant behaviour by raising the level of tax morale (Alm *et al.*, 2012; Alm and Torgler, 2011; Torgler, 2012).

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This article contributes to the advancement of this emergent tax morale approach in three ways. First, and empirically, we report a Eurobarometer survey from 28 member states of the European Union (EU-28) which reveals the strong positive association between participation in undeclared work and the level of tax morale at both the individual, population group and country levels, along with the individual-level and country-level determinants of low tax morale. Second, we theoretically advance this tax morale approach by viewing tax morale through the lens of institutional theory as a measure of the gap that exists between the codified laws and regulations of formal institutions (which we here term ‘state morale’) and the unwritten socially shared rules of informal institutions (which we here term ‘civic morale’) and as low when there is asymmetry between state morale and civic morale. Finally, we make two policy advances. On the one hand, we confirm the political economy explanation that higher tax morale (and thus the propensity to engage in undeclared work) results from greater state intervention in the form of higher taxes and social expenditure. On the other hand, we, for the first time, display the importance of additional solutions so far unconsidered, including improving educational attainment, older citizens mentoring younger people and improving women’s participation in the labour force as means of improving tax morale (and thus reducing the propensity to engage in undeclared work).

To advance understanding, therefore, the second section reviews the previous literature on tax morale so as to formulate hypotheses regarding the association between tax morale and participation in undeclared work, the variations in tax morale across populations and its determinants and what needs to be done to reduce the acceptability of undeclared work. To test these hypotheses, the third section then reports the data used, namely, a 2013 Eurobarometer survey involving 27,563 face-to-face interviews in the EU-28 and the analytical methods employed: a staged multilevel logistic regression model utilising the hierarchical nature of the data (individuals within countries). The fourth section then reports the findings, whilst the fifth and final section discusses the theoretical and policy implications.

To define the undeclared economy, Castells and Portes (1989, 15) describe such activity as ‘a specific form of income generating production... unregulated by the institutions of society in a legal and social environment in which similar activities are regulated’. Although this defines the undeclared economy through the lens of both the formal (‘legal’) and informal (‘social’) institutions in a society, this definition fails to recognise first, that the undeclared economy, even if unregulated by formal institutions, is regulated by the rules of informal institutions and second, that such activity can be ‘legitimate’ from the viewpoint of informal institutions even if it is ‘illegal’ from the viewpoint of formal institutions (Williams and Francic, 2016). Here, therefore, and reflecting the consensus in the literature, the undeclared economy is defined as a socially legitimate activity, which is legal in all respects other than it is not declared to the authorities for tax, social security or labour law purposes (see Williams, 2014a). If it is not legal and legitimate in all other respects, it is not part of the undeclared economy. Whilst the declared economy is legal (from the viewpoint of formal institutions) and legitimate (from the viewpoint of informal institutions), the undeclared economy is illegal but legitimate, unlike the criminal economy (e.g. forced labour), which is both illegal and illegitimate.

2 TACKLING UNDECLARED WORK: THEORETICAL FRAMING AND HYPOTHESIS DEVELOPMENT

Conventionally, a rational economic actor approach first proposed by Allingham and Sandmo (1972) has been adopted when considering how to tackle undeclared work. This views non-compliance as occurring when the pay-off from undeclared work is greater than the expected cost of being caught and punished. To tackle undeclared work, most governments have thus concentrated on the cost side of the equation by increasing the actual and/or perceived level of punishments and likelihood of detection (e.g. Hasseldine and Li, 1999; Williams, 2014a). However, the evidence that this is effective is less than conclusive. Although some argue that increasing the penalties and probability of detection reduces undeclared work, at least for some income groups (Klepper and Nagin, 1989; Varma and Doob, 1998), others reveal that this increases undeclared work, not least due to a breakdown of trust between the state and its citizens (Chang and Lai, 2004; Kirchler *et al.*, 2014). Indeed, the perhaps most telling rebuttal of the rational actor model is that many voluntarily comply even when the benefit/cost ratio suggests that they should operate on an undeclared basis (Alm *et al.*, 2012; Kirchler, 2007; Murphy, 2008; Murphy and Harris, 2007).

To explain this, a 'social actor' model has emerged in the form of a tax morale approach, which views undeclared work as arising when the intrinsic motivation to pay taxes is low (Alm *et al.*, 2012; Torgler, 2007a,b, 2012). The consequent goal is to raise tax morale so as to elicit greater voluntary commitment to compliant behaviour (Alm and Torgler, 2011; Torgler, 2012). Rather than the state pursue compliance through close supervision and monitoring, tight rules, prescribed procedures and centralised structures within the context of a low commitment, low trust and adversarial culture, a high trust, high commitment culture is thus pursued that aligns the values of citizens with the formal rules so as to generate internal control (Williams, 2014a). Viewing this tax morale approach through the lens of institutional theory (Baumol and Blinder, 2008; North, 1990), which views all societies as having formal institutions, which are codified laws and regulations that define the legal rules of the game, and 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), it can be seen that tax morale measures the gap between the formal institutions (which we here term 'state morale') and informal institutions (here termed 'civic morale'). When this gap is large, tax morale will be low, and participation in undeclared work will be more prevalent. To evaluate this proposition, therefore, the following hypothesis can be evaluated:

Tax morale hypothesis (H1) the lower is the tax morale (i.e. the greater is the asymmetry between state morale and civic morale), the greater is the likelihood of participation in undeclared work.

2.1 Variations in tax morale across population groups

In recent years, there has been growing recognition that the level of tax morale varies across different population groups. First, women are asserted to display a higher tax morale than men (Alm and Torgler, 2011; Daude *et al.*, 2013; Kastlunger *et al.*, 2013). Second, tax morale has been argued to increase positively with age (Daude *et al.*, 2013; Lago-Peñas and Lago-Peñas, 2010). Third, tax morale is asserted to be greater

among married people but weaker among people living together (Alm and Torgler, 2011; Torgler, 2006, 2007a, 2007b). Fourth, the more educated have been asserted to have a higher tax morale (Lago-Peñas and Lago-Peñas, 2010; Torgler, 2012), fifth, larger households and those with children to have higher tax morale (Torgler, 2007b), sixth, the unemployed and self-employed to have lower tax morale (Alm and Torgler, 2011; Daude *et al.*, 2013), seventh, that tax morale increases with income/financial satisfaction (Lago-Peñas and Lago-Peñas, 2010) and eight and finally, to be higher in rural than urban areas (Torgler, 2007b). To test these assertions in the context of the EU-28, therefore, the following hypotheses can be evaluated:

- H2a* Women are more likely to have higher tax morale than men.
- H2b* Younger age groups are more likely to have lower tax morale than older age groups.
- H2c* Married people have higher tax morale than non-married people.
- H2d* Workers with fewer years in formal education are more likely to have lower tax morale than those who spent longer in formal education.
- H2d* Larger households and those with children have higher tax morale than smaller and childless households
- H2e* The self-employed have lower tax morale than those working as employees.
- H2f* Those with financial difficulties are more likely to have lower tax morale than those without financial difficulties.
- H2g* Those living in rural areas have higher tax morale than those living in urban areas.

2.2 Cross-national variations in tax morale

Previous cross-national comparative analyses display a strong negative correlation between the level of tax morale and participation in undeclared work with Pearson *r* values between -0.46 and -0.66 (Alm and Torgler, 2006; Torgler, 2012). Comparing post-socialist countries, Torgler (2012) finds that a decrease of tax morale by one unit leads to an increase in undeclared work of 20 percentage points. Alm and Torgler (2006) focusing on Europe and the USA similarly find that tax morale explains more than 20 per cent of the total variance of the size of the undeclared economy.

To explain this, most studies have so far engaged in ‘fishing expeditions’, examining country-level conditions such as religiosity, social protection and GNP per capita. Here, a more structured approach is adopted by drawing upon the competing explanations for the cross-national variations in the size of the undeclared economy (Williams, 2014a, 2014b; Williams and Horodnic, 2015) to develop hypotheses to test regarding cross-national variations in tax morale.

First, a ‘modernisation’ thesis has argued that undeclared work is less prevalent with economic development and the modernisation of government (Geertz, 1963; Lewis, 1959). From this perspective, therefore, tax morale would thus be lower in less developed economies, measured in terms of GNP per capita, and countries in which there is a lack of modernisation of the state bureaucracy. To test this, the following hypothesis can be evaluated:

Modernisation hypothesis (H3) tax morale will be higher in more modernised economies.

- H3a* tax morale will be higher in wealthier economies.
H3b tax morale will be higher in societies with modern state bureaucracies.

Second, a group of mostly neo-liberal scholars adopt a ‘state over-interference’ thesis arguing that undeclared work results from a rational economic decision to voluntarily exit the declared realm because of high taxes and state interference in the free market, which increases the cost, time and effort associated with declared work (e.g. De Soto, 1989, 2001; London and Hart, 2004; Nwabuzor, 2005; Sauvy, 1984). Viewed in this manner, tax morale would be seen as lower in countries with higher taxes and state interference in work and welfare systems and the consequent solution to pursue tax reductions and state interference. To evaluate this therefore, the following hypothesis can be evaluated:

- State over-interference hypothesis (H4)* tax morale will be higher in economies with lower state-interference.
H4a tax morale will be higher in economies with lower tax rates.
H4b tax morale will be higher in economies with lower levels of social protection expenditure.

Third and finally, and conversely, political economy scholars have adopted a ‘state under-intervention’ thesis which purports that undeclared work directly results from inadequate levels of state intervention in work and welfare arrangements, which leaves workers less than fully protected and dependent on undeclared work as a survival strategy in the absence of other means of livelihood and support (Davis, 2006; Gallin, 2001; ILO, 2014; Likic-Brboric *et al.*, 2013; Sassen, 1997, 2009; Slavnic, 2010; Taiwo, 2013). Consequently, tax morale would be seen as lower in economies with lower tax rates and levels of social protection. To evaluate this, the following hypothesis can be evaluated:

- State under-intervention hypothesis (H5)* tax morale will be higher in economies with higher tax rates and levels of social protection.
H5a tax morale will be higher in economies with higher tax rates.
H5b tax morale will be higher in societies with higher levels of social protection expenditure.

2.3 Policy approaches

Based on the aforementioned Allingham and Sandmo (1972) rational economic actor approach that seeks to change the costs of operating undeclared and benefits of operating declared, governments have predominantly increased the penalties and risk of detection (e.g. by increasing inspections). Recently, however, a social actor model has emerged grounded in a tax morale approach, which views undeclared work as occurring when tax morale is low, and therefore, the codified laws and regulations of formal institutions (state morale) are not aligned with the socially shared rules of informal institutions (‘civic morale’). Attempts are consequently

made to better align civic and state morale. On the one hand, this is achieved by altering norms, values and beliefs regarding the acceptability of undeclared work, such as by raising awareness about the benefits of taxation and the public goods received. On the other hand, alterations in formal institutions are pursued, including not only the processes of formal institutions such as tax fairness, procedural justice and redistributive justice (Murphy, 2005; Richardson and Sawyer, 2001) but also various country-level conditions that are asserted to lead to lower tax morale (Autio and Fu, 2015; Dau and Cuervo-Cazurra, 2014; Klapper *et al.*, 2007; Thai and Turkina, 2014), although these specification of these country-level conditions vary according to whether one adopts a modernization, neo-liberal or political economy approach.

However, these different policy approaches for tackling undeclared work, based on the rational economic actor and social actor models, are not necessarily mutually exclusive. Indeed, in recent years, a ‘slippery slope framework’ (Kirchler *et al.*, 2008) has emerged, which argues that governments should pursue both voluntary and enforced compliance concurrently by developing both greater trust in authorities and the greater power of authorities (Kogler *et al.*, 2015; Muehlbacher *et al.*, 2011; Wahl *et al.*, 2010). Until now, however, there has been little comparative evaluation of whether higher tax morale is associated with higher perceived levels of penalties and risks of detection, which would suggest that the tax morale approach will be more effective when combined with the conventional deterrence approach, rather than when adopted as an alternative policy approach. To evaluate this, the following hypothesis can be therefore tested:

Slippery slope hypothesis (H6) there is an association between tax morale and the perceived penalties and risk of detection.

3 METHODOLOGY: DATA, VARIABLES AND ANALYTICAL METHODS

3.1 Data

To analyse the level of tax morale (i.e. the acceptability of undeclared work) and its determinants, data are reported from special Eurobarometer survey no. 402, which involved 27,563 face-to-face interviews conducted in April and May 2013 across the EU-28. Interviews were conducted in the national language with adults aged 15 years and older. In every country, a multi-stage random (probability) sampling methodology was used, with interviews varying from 500 in smaller countries to 1,500 in larger nations. This methodology ensures that on the issues of gender, age, region and locality size, each country as well as each level of sample is representative in proportion to its population size. For the univariate analysis, a sample weighting scheme is used to obtain meaningful descriptive results, as recommended in the wider literature (Sharon and Liu, 1994; Solon *et al.*, 2013; Winship and Radbill, 1994) and the Eurobarometer methodology. For the multivariate analysis, however, debate exists over whether to use a weighting scheme (Pfeffermann, 1993; Sharon and Liu, 1994; Solon *et al.*, 2013; Winship and Radbill, 1994). Reflecting the majoritarian view, the decision has been taken not to do so.

The face-to-face interviews adopted a gradual approach towards the more sensitive questions. First, participants were asked attitudinal questions regarding the

acceptability of various forms of undeclared work, followed by questions on whether they had purchased and supplied undeclared goods. Here, we focus first upon the attitudinal questions to examine the level of tax morale and second, the questions on the supply and demand of undeclared work.

3.2 Variables

To analyse the aforementioned hypotheses, the dependent variable is a constructed index of self-reported attitudes towards the acceptability of undeclared work based on a ten-point Likert scale. Rather than use a single question to assess tax morale, this survey thus 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 responses to these six questions, an aggregate 'tax morale index' is constructed for each individual. The Cronbach's Alpha coefficient of the scale is 0.875, which shows a good internal consistency of the scale. The index is represented here in the ten-point Likert scale original format. The lower the index value, the higher is the tax morale.

To analyse H1 regarding the association between tax morale and undeclared work, the following individual-level variables are analysed:

Supplied undeclared work a dummy variable with recorded value 1 for persons who answered 'yes' to the question 'Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?' and with recorded value 0 otherwise.

Purchased undeclared goods/services a dummy variable with recorded value 1 for persons who answered 'yes' to the question 'Have you in the last 12 months paid for any goods or services of which you had a good reason to assume that they included undeclared work (e.g. because there was no invoice or VAT receipt)?' and with recorded value 0 otherwise.

To analyse H2a-g regarding the socio-economic variations in tax morale, the individual-level variables analysed are as follows:

Gender a dummy variable with value 1 for men and 0 for women.

Age a categorical variable for the age of the respondent with value 1 for those aged 15 to 24 years old, value 2 for those aged 25 to 39, value 3 for those aged 40 to 54 and value 4 for those over 55 years old. In the regression analysis, a numerical variable is used with the exact age of the respondent.

<i>Marital Status</i>	a categorical variable for the marital status of the respondent with value 1 for married/remarried individuals, value 2 for cohabiters, value 3 for singles, value 4 for those separated or divorced and value 5 for widowed and for other form of marital status.
<i>Age when stopped full time education</i>	a categorical variable for age of the respondent when stopped full time education with value 1 for 15 years old and under, value 2 for 16–19 years old and value 3 for 20 years old or over.
<i>People 15+ years in own household</i>	a categorical variable for people 15+ years in respondent's household (including the respondent) with value 1 for one person, value 2 for two persons, value 3 for three persons and value 4 for four persons or more.
<i>Children (up to 14 years old in the household)</i>	a categorical variable for number of children with value 1 for individuals with no children, value 2 for the presence of children less than 10 years old live in respondent's household, value 3 for the presence of children aged 10 to 14 years old and value 4 for the presence of children less than 10 years old and children aged 10 to 14 years old live in respondent's household.
<i>Employment</i>	a categorical variable for the employment status of the respondent with value 1 for self-employed, value 2 for employed and value 3 for not working.
<i>Difficulties paying bills</i>	a categorical variable for the respondent difficulties in paying bills with value 1 for having difficulties most of the time, value 2 for occasionally and value 3 for almost never/ never.
<i>Area</i>	a categorical variable for the area where the respondent lives with value 1 for rural area or village, value 2 for small or middle sized town and value 3 for large town.

To test the explanations for cross-national variations in tax morale (H3-5), meanwhile, the same country-level variables employed in studies explaining cross-national variations in undeclared work are here used (Eurofound, 2013; Vanderseyen *et al.*, 2013; Williams, 2013). To evaluate the modernisation hypotheses (H3a and H3b), the indicators used are as follows:

GDP per capita in purchasing power standards (Eurostat, 2015a).

European Quality of Government Index focus on both perceptions and experiences with public sector corruption, along with the extent to which citizens believe various public sector services are impartially allocated and of good quality. The index is standardised with a mean of zero and higher scores implying higher quality of government (Charron *et al.*, 2014).

To evaluate the first state over-interference hypothesis (H4a) and first state under-intervention hypothesis (H5a), the indicators used are as follows:

<i>Current taxes on income, wealth, etc.</i>	covers all compulsory, unrequited payments, in cash or in kind, levied periodically by general government and by the rest of the world on the income and wealth of institutional units, and some periodic taxes assessed neither on income nor wealth (Eurostat, 2015b).
<i>Implicit tax rate on labour</i>	approximates to the average effective tax burden on labour and is the sum of all direct and indirect taxes and employees' and employers' social contributions levied on employed labour income divided by the total compensation of employees (Eurostat, 2015c).

Meanwhile, to evaluate H4b and H5b, the following indicator is analysed:

<i>Social protection expenditure</i>	social benefits, which consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs administration costs, which represent the costs charged to the scheme for its management and administration other expenditure, which consists of miscellaneous expenditure by social protection schemes (payment of property income and other). It is calculated in current prices as percentage of GDP (Eurostat, 2015d).
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Finally, and to evaluate the slippery slope hypothesis (H6) that there is an association between tax morale and the perceived penalties and risk of detection, the following variables are analysed:

<i>Expected sanction</i>	a categorical variable for the respondent expected sanction if someone was discovered to be receiving income from work that was not declared to the relevant authorities, with value 1 for normal tax or social security contributions due, value 2 for normal tax or social security contributions due, plus a fine, and value 3 for prison.
<i>Detection risk</i>	a categorical variable for the respondent perception about the level of risk of being detected (for undeclared work) with value 1 for very high, value 2 for fairly high, value 3 for fairly small and value 4 for very small.

3.3 Analytical methods

To evaluate the association between tax morale and participation in undeclared work (H1) and the level of tax morale across population groups (H2), a multilevel logistic regression analysis is conducted across the individual-level variables, whilst the hypotheses (H3-5) investigating the country-level variables associated with a higher tax morale are tested by staged multilevel logistic regression analysis utilising the hierarchical nature of the data (individuals within countries), which includes the individual-level variables, and then explores whether each country-level independent

variable in turn is significantly associated with higher tax morale. To evaluate the slippery slope hypothesis that tax morale is associated with the perceived penalties and risks of detection (H6), we investigate their views on these policy measures to analyse whether they are significantly associated with higher tax morale whilst holding constant the other variables. Later, we report the results.

4 FINDINGS

The mean tax morale score for the EU-28 regarding the acceptability of participating in undeclared work is 2.19 (where 1 is totally unacceptable and 10 totally acceptable). As Figure 1 reveals however, its acceptability varies according to whether it is a firm or individual engaging in such work. There is less tolerance for firms engaging in undeclared work than individuals. The mean tax morale score is 2.14 for a firm doing undeclared work for a household and 2.07 for a firm hiring an undeclared worker, and 1.88 for firms doing undeclared work for another firm (i.e. the lower the score, the more unacceptable the activity). Meanwhile, there is greater tolerance when individuals rather than businesses engage in undeclared work; 2.20 for a person partially or completely concealing their income and 3.13 for a person conducting undeclared work for a household. The exception is those claiming benefits without entitlement, such as whilst working undeclared, which at 1.71 is the most unacceptable of all forms of undeclared work.

There are, moreover, differences in tax morale across EU regions. Citizens in East-Central Europe have the lowest tax morale and those living in Nordic nations have the highest tax morale, although the variations in the acceptability of the different types of undeclared work remain broadly similar across all regions.

To evaluate first, whether the association between tax morale and participation in undeclared work remains significant when other characteristics are taken into account and held constant (H1), second, whether the variations across population groups are significant (H2), third, the validity of the contrasting explanations for the cross-

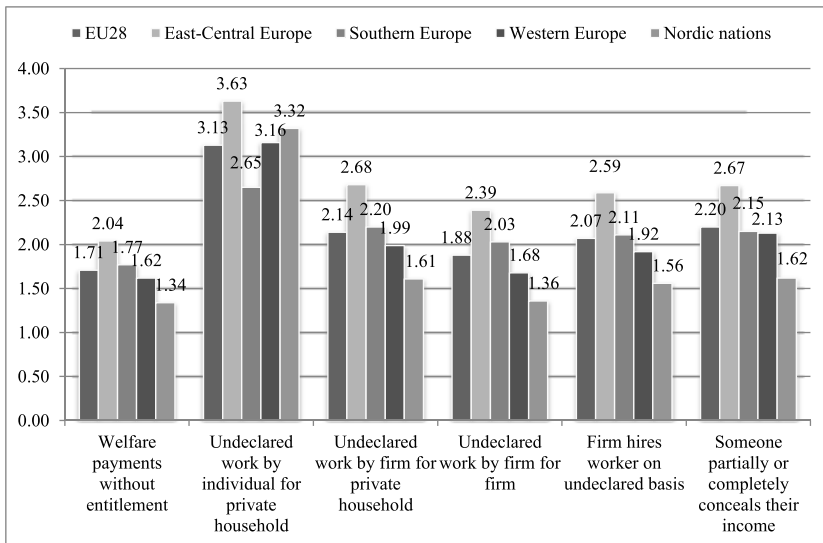


Figure 1: Acceptability of different types of undeclared work: EU-28 regions

national variations in tax morale (H3-5) and fourth, the slippery slope thesis (H6), we here report the results of a staged multilevel logistic regression model, which utilises the hierarchical nature of the data (individuals within countries).

The first stage in the analysis was to estimate a baseline random intercept model with no explanatory variables, in order to identify whether a multilevel approach was appropriate. The likelihood-ratio test that there is no cross-country variation in individual tax morale can be safely rejected ($\chi^2(1) = 1873.58$, $p < 0.001$). Over 11 per cent of the variance in tax morale was accounted for at the country level, indicating significant variation between countries in citizens' tax morale. Having determined that the multilevel mixed-effects linear regression should be the one used, the second stage involved constructing a model with first-level (i.e. individual-level) variables in an attempt to understand their effect. The third stage then involved including both first-level and second-level (i.e. country-level) variables in order to understand the effects at both levels.

Table 1 reports the results. Models 1–3 are random intercept models that only include the individual-level variables. Examining whether there is a significant association between tax morale and participation in undeclared work, this is found to be the case across all models. Those supplying undeclared work have lower tax morale, as do those purchasing undeclared goods and services (confirming H1).

Examining how tax morale varies across population groups, model 1 examines solely the socio-demographic characteristics. This reveals that women have higher levels of tax morale (confirming H2a), as do older people (confirming H2b), married people compared with any other marital status category (confirming H2c) and those who have spent longer in formal education (confirming H2d). However, there is no relationship between household size and tax morale, although those with at least one child less than 10 years old have higher tax morale than those with no children (partially confirming H2d)

Model 2 then adds the socio-economic characteristics of employment status and household financial circumstances. All the socio-demographic variations discussed in model 1 remain significant. The additional finding, however, is that the self-employed do not have a significantly lower tax morale than the employed and those not working (refuting H2e), although those who most of the time face difficulties paying the household bills do have lower tax morale than those without such acute financial difficulties (confirming H2f). Finally, model 3 adds spatial characteristics. Again, all the previous findings remain the same. The additional finding, however, is that individuals living in more urban areas have higher tax morale than those living in rural areas (refuting H2g).

Turning to the cross-national variations, Figure 2 reports the residual level-2 country effects derived from model 3. This demonstrates the differences between countries whilst preserving the underlying multilevel structure of the data. A country whose confidence interval does not overlap the line at zero differs significantly from the EU-28 average at the 5 per cent significance level. At the lower end, Cyprus, Malta, Finland, Greece, Croatia, Spain, Sweden, Denmark, Slovenia, France and the UK are countries for which the confidence intervals do not overlap with 0, indicating that they have significantly higher tax morale than the EU average. At the upper end, Italy, Ireland, Portugal, Estonia, the Netherlands, Belgium, Austria, Hungary, Poland, Slovakia, Lithuania, Czech Republic and Latvia are the countries with intervals that do not overlap with 0, indicating a significantly lower tax morale than the EU-28 average.

Table 1: Multilevel mixed-effects linear regression for the determinants of individual tax morale across EU-28 member states

Fixed part	Mode 1		Mode 2		Mode 3		Mode 4		Mode 5						
	β	se(β)	β	se(β)	β	se(β)	β	se(β)	β	se(β)					
Constant	2.672	0.121	***	2.690	0.128	***	2.736	0.1290	***	3.084	0.1990	***	3.404	0.3350	***
Engage in undeclared work (no)															
Yes	1.005	0.0534	***	0.976	0.0535	***	0.973	0.0535	***	0.974	0.0535	***	0.973	0.0535	***
Purchased undeclared goods/services (no)															
Yes	0.528	0.0292	***	0.526	0.0292	***	0.525	0.0292	***	0.525	0.0292	***	0.525	0.0292	***
Expected sanction (normal contributions due)															
Normal	-0.371	0.0238	***	-0.362	0.0238	***	-0.362	0.0238	***	-0.362	0.0238	***	-0.362	0.0238	***
contributions due + fine															
Prison	-0.367	0.0476	***	-0.370	0.0475	***	-0.368	0.0475	***	-0.368	0.0475	***	-0.368	0.0475	***
Detection risk (very high)															
Fairly high	0.334	0.0421	***	0.333	0.0420	***	0.330	0.0420	***	0.331	0.0420	***	0.331	0.0420	***
Fairly small	0.255	0.0415	***	0.263	0.0414	***	0.263	0.0414	***	0.264	0.0414	***	0.263	0.0414	***
Very small	0.139	0.0458	***	0.147	0.0457	***	0.148	0.0457	***	0.147	0.0457	***	0.147	0.0457	***
Gender (Female)															
Male	0.098	0.0210	***	0.106	0.0211	***	0.106	0.0211	***	0.106	0.0211	***	0.106	0.0211	***
Age (exact)	-0.010	0.0009	***	-0.010	0.0010	***	-0.010	0.0010	***	-0.010	0.0010	***	-0.010	0.0010	***
Marital status (married/remarried)															
Unmarried (cohabitating)	0.151	0.0366	***	0.146	0.0365	***	0.148	0.0365	***	0.149	0.0365	***	0.149	0.0365	***
Unmarried (single)	0.131	0.0393	***	0.123	0.0394	***	0.126	0.0394	***	0.126	0.0394	***	0.126	0.0394	***
Divorce/ Separated	0.142	0.0436	***	0.129	0.0436	***	0.133	0.0435	***	0.133	0.0435	***	0.133	0.0435	***
Widowed/ Other	0.075	0.0450	*	0.075	0.0450	*	0.075	0.0449	*	0.074	0.0449	*	0.074	0.0449	*

Table 1. (Continued)

	Mode 1		Mode 2		Mode 3		Mode 4		Mode 5			
Fixed part	β	se(β)	β	se(β)	β	se(β)	β	se(β)	β	se(β)		
Age when stopped education (-15)												
16-19	-0.103	0.0318	***	-0.091	0.0319	***	-0.085	0.0319	***	-0.085	0.0319	***
20+	-0.172	0.0341	***	-0.130	0.0348	***	-0.115	0.0350	***	-0.116	0.0350	***
People 15+ years in own household (one)												
Two	0.046	0.0357		0.057	0.0356		0.054	0.0356		0.053	0.0356	
Three	0.009	0.0415		0.017	0.0414		0.011	0.0414		0.010	0.0414	
Four and more	0.063	0.0459		0.073	0.0458		0.062	0.0458		0.061	0.0458	
Children (no children)												
Less than 10 years old	-0.081	0.0340	**	-0.099	0.0340	***	-0.102	0.0340	***	-0.102	0.0340	***
Between 10 and 14 years old	-0.028	0.0410		-0.041	0.0410		-0.042	0.0410		-0.042	0.0410	
Less than 10 years old + between 10 and 14 years old	0.039	0.0506		0.016	0.0506		0.010	0.0506		0.010	0.0506	
Employment (self-employed)												
Employed				-0.028	0.0404		-0.021	0.0404		-0.021	0.0404	
Not working				0.021	0.0422		0.025	0.0422		0.025	0.0422	
Difficulties paying bills (Most of the time)												
From time to time				0.096	0.0348	***	0.096	0.0348	***	0.097	0.0348	***
Almost never/never				-0.137	0.0349	***	-0.140	0.0349	***	-0.138	0.0349	***
Area (rural area or village)												
Small or middle sized town				-0.073	0.0245	***	-0.073	0.0245	***	-0.073	0.0245	***

Table 1. (Continued)

	Mode 1		Mode 2		Mode 3		Mode 4		Mode 5	
Fixed part	β	se(β)	β	se(β)	β	se(β)	β	se(β)	β	se(β)
Large town			-0.098	0.0270	***	0.0270	***	0.0270	***	0.0270
Current taxes on income, wealth, etc. 2013							-0.032	0.0141	**	
Social protection expenditure 2012										
Observations	17,860		17,860		17,860		17,860		17,860	
Number of groups	28		28		28		28		28	
Log likelihood	-30,944		-30,900		-30,893		-30,890		-30,890	
χ^2	1,639***		1,736***		1,752***		1,759***		1,758***	
Random part identity: country										
Variance (constant)	0.204		0.202		0.203		0.172		0.174	
	(0.056)		(0.055)		(0.055)		(0.047)		(0.047)	
Variance (residual)	1.860		1.851		1.849		1.849		1.850	
	(0.0197)		(0.0196)		(0.0196)		(0.0196)		(0.0196)	
Variance partition coefficient	0.099		0.099		0.099		0.084		0.086	
LR test	1,505***		1,467***		1,467***		1,220***		1,178***	

*** $p < 0.01$ ** $p < 0.05$ * $p < 0.1$.

All coefficients are compared with the benchmark category, shown in brackets. We ran, in turn, a separate model for each macro-level indicator in our hypotheses. The coefficients and their standard errors obtained are: -0.003 (0.0031) for GDP 2013, -0.121 (0.0884) for EQJ 2013 and 0.018 (0.0151) for implicit tax on labour 2012. None of these is significantly associated with tax morale.

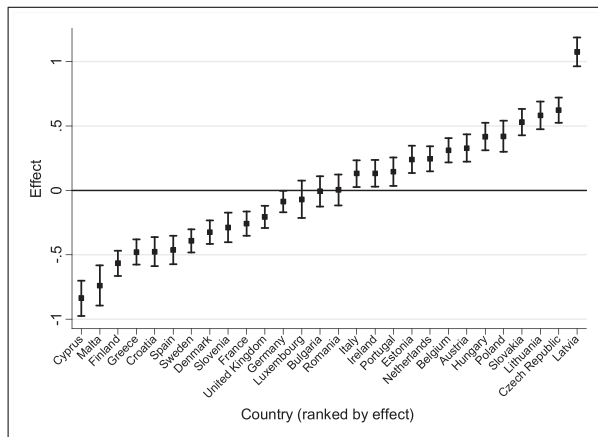


Figure 2: Country-level effects ($\pm 1.96se$) after adjusting for individual-level variables in model 3

To test H3-5 regarding the explanations for these significant cross-national variations in tax morale, and given that these country-level variables are strongly correlated, sequential models are applied to provide alternative perspectives on the cross-national variations in tax morale. Starting with the modernisation thesis, no significant association is found between tax morale and GDP per capita in purchasing power standards (refuting H3a) or the European Quality of Government Index (refuting H3b). Evaluating the over-interference and under-intervention hypotheses, moreover, no significant association is found between tax morale and the implicit tax rate on labour, although a significant relationship is found between tax morale and current taxes on income, wealth, etc (model 4). The direction of the association is in the opposite direction to that proposed by the over-interference hypothesis (refuting H4a but confirming H5a). Furthermore, evaluating the association between social protection expenditure and tax morale, a positive significant association is found (refuting H4b and confirming H5b). As such, this analysis confirms the ‘state under-intervention’ (political economy) explanation (models 4 and 5) and refutes both the modernization and state over-interference (neo-liberal) explanations. Finally, and examining the slippery slope hypothesis, those who perceive the penalties and risk of being detected as small or fairly high have lower tax morale (confirming H6).

5 DISCUSSION AND CONCLUSIONS

Reporting the results of 27,563 interviews conducted in 2013 across the EU-28, multilevel logistic regression analysis has revealed not only a strong association between participation in undeclared work and the level of tax morale but also how variations in the level of tax morale are explained both by country-level structural conditions as well as individual-level characteristics such as gender, age, education and employment status.

In terms of theoretical advances therefore, this article makes three major contributions. First, by revealing the strong association between tax morale and participation in undeclared work in the EU-28, it confirms that institutional theory may be a useful lens through which to explore the issue of tackling undeclared work. Viewing tax morale as a measure of the gap between state morale and civic morale, participation

in undeclared work can be seen as arising when there is asymmetry between the codified laws and regulations of formal institutions and the norms, values and beliefs of citizens that constitute the informal institutions. Second, and importantly for advancing understanding of undeclared work from an institutional theory viewpoint, the finding of this multilevel analysis (individuals within countries) is that variations in the level of tax morale (and thus the propensity to engage in undeclared work) cannot be explained in terms of the level of economic development and quality of governance (modernization theory) or in terms of high taxes and too much government intervention in social protection (the state over-interference or neo-liberal theory). However, lower tax morale (and thus higher levels of undeclared work) can be explained from a political economy perspective as arising when there is state under-intervention in the form of lower tax rates and lower levels of social protection expenditure. Third, this article also reveals that the impacts of state under-intervention on tax morale (and thus the propensity to engage in undeclared work) are not evenly distributed across the populations. Men, younger people, those with fewer years in full-time education and those with difficulties in paying the household bills are more likely to reject 'state morale' and have lower tax morale (and thus greater propensity to engage in undeclared work). Whether this is similarly the case in other global regions when explaining the contrasting levels of tax morale now needs to be investigated.

In terms of policy implications meanwhile, this article reveals that a social actor approach that pursues initiatives to improve tax morale could usefully complement the conventional rational economic actor approach of increasing penalties and the risks of detection (as well as benefits of declared work). Institutional theory has conventionally advocated improving the quality of governance in order to reduce institutional asymmetry, such as by reducing public sector corruption (Thai and Turkina, 2014). For example, initiatives advocated include improving procedural justice, which refers to whether employers and employees believe that the tax authority treat them in a respectful, impartial and responsible manner (Murphy, 2005), procedural fairness, which is the extent to which employers and employees believe they are paying their fair share compared with others (Molero and Pujol, 2012; Wenzel, 2006), and redistributive justice, which refers to whether employers and employees believe they receive the goods and services they deserve given the taxes that they pay (Kirchgässner, 2010). Here, however, by identifying that variations in tax morale are less determined by modernization theory and more by state under-intervention, this article reveals that it is necessary to pursue higher tax levels and higher levels of social protection as a means of raising tax morale and reducing the propensity to engage in undeclared work. Moreover, the finding that individual-level characteristics are important, such as gender, age, education and household financial circumstances, intimates that tackling undeclared work additionally requires a range of initiatives so far seldom considered. These include the following: improving educational attainment; the introduction of schemes to make greater use of older citizens as local role models and mentors for younger people; and greater emphasis on improving women's participation in the labour force. It also suggests the populations that need to be targeted when seeking to change norms, values and beliefs regarding compliance, such as when educating groups about the value of taxation by providing information on the public goods and services paid for by their taxes and advertising campaigns about the benefits of declared work (Saeed and Shah, 2011).

Consequently, if this article stimulates a theoretical and empirical shift in future studies towards evaluating and explaining undeclared work in terms of the level of

tax morale, and this is viewed through the lens of institutional theory, then it will have achieved one of its major objectives. If this then leads to recognition that combining the rational economic actor and social actor policy approaches and measures may be the most effective way forward, then it will have achieved its wider intention.

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