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Evaluating the prevalence of the undeclared economy in Central and Eastern Europe: an institutional asymmetry perspective

Abstract

This paper explains the undeclared economy in general, and envelope wages more particularly, from an institutional perspective as resulting from the asymmetry between the codified laws and regulations of the formal institutions and the unwritten socially shared rules of informal institutions. Reporting a 2013 Eurobarometer survey of the prevalence of envelope wages across 10 Central and East European countries, a strong association is revealed between the prevalence of envelope wage payments and the degree of asymmetry of formal and informal institutions at both the individual- and country-level. The paper then explores the implications for theorising and tackling undeclared work practices.

Keywords: informal economy; envelope wages; tax evasion; institutional analysis; transition economies; post-Soviet societies.

Introduction

In Central and East European (CEE) nations, a burgeoning literature reveals how employers use the undeclared economy in multifarious ways to reduce their labour costs, ranging from employing undeclared workers, through outsourcing work to the 'bogus self-employed' to under-reporting the wages of their formal employees (Abbot and Wallace, 2009; Kukk and Staehr, 2014; Morris and Polese, 2013, Sauka and Putniņš, 2011, Wallace and Latcheva, 2006; Williams *et al*., 2013a,b). With some quarter of national income in CEE nations not declared to the authorities and an equivalent proportion of jobs in the undeclared economy

(Schneider and Williams, 2013), tackling such undeclared practices is central to the study of industrial relations. Unless the undeclared economy is addressed, there will be a lack of control over the quality of working conditions, weakened trade union and collective bargaining, unfair competition for legitimate businesses and pressure on them to evade regulatory standards, and limited public finances available for social cohesion projects (Andrews *et al*., 2011; ILO, 2014; TUC, 2008).

The aim of this paper is to advance and evaluate a new way of explaining and tackling this undeclared economy. Drawing inspiration from institutional theory (Baumol and Blinder, 2008; Helmke and Levitsky, 2004; North, 1990), undeclared work practices are explained to result from the asymmetry between the codified laws and regulations of a society's formal institutions and the socially shared unwritten rules of its informal institutions. The greater the institutional asymmetry, the higher is the likelihood of undeclared work practices. This therefore enables one to explain both at the individual- and societal-level why some employers and employees engage in undeclared work practices and others do not. Previous explanations, in stark contrast, have been unable to take agency into account. Instead, and as Williams (2013) highlights, they have explained the undeclared economy solely in terms of various country-level structural conditions, including: under-development (modernisation theory); high taxes, state corruption and burdensome regulations and controls (neo-liberal theory), or inadequate state intervention and protection of workers (political economy theory). Nevertheless, this does not mean that these various structural conditions (e.g., social protection) identified in previous explanations are unimportant. In the institutional asymmetry thesis however, they are more ways of reducing institutional asymmetry rather than free-standing explanations and as such, important for determining which structural conditions might engender greater institutional symmetry.

To advance and evaluate this institutional asymmetry thesis, and rather than focus upon all undeclared practices, the intention here is to analyse one in particular which is prominent in CEE nations. This is the practice where employers pay their employees an official declared salary and an additional undeclared ('envelope') wage in order to reduce their tax and social security payments. In the next section therefore, we briefly review the previous literature on envelope wages and propose a set of hypotheses regarding firstly, the relationship between the prevalence of envelope wages and the degree of institutional asymmetry and secondly, what needs to be done to reduce this institutional asymmetry drawing upon previous explanations. The third section then introduces the methodology and data set used to test these hypotheses, namely a 2013 survey involving 4,670 face-to-face interviews with formal employees in 11 CEE countries, followed in the fourth section by the results on the relationship between the propensity to pay envelope wages and institutional asymmetry, and how this institutional incongruence and thus the prevalence of envelope wages might be reduced. The final section then draws conclusions on the theoretical and policy implications of the findings.

Explaining the undeclared economy: an institutional asymmetry approach

Since the turn of the millennium, a burgeoning literature has revealed how formal employers in CEE nations often seek to reduce their tax and social security payments and thus labour costs by paying their formal employees two salaries; an official declared salary and an additional undeclared ('envelope') wage which is hidden from the authorities for tax and social security purposes. This has been identified in studies conducted in Estonia (Meriküll and Staehr, 2010), Latvia (Meriküll and Staehr, 2010; Sedlenieks, 2003; Žabko and Rajevska, 2007), Lithuania (Karpuskiene, 2007; Meriküll and Staehr, 2010; Woolfson, 2007), Romania (Neef, 2002), Russia (Williams and Round, 2007) and Ukraine (Williams, 2007).

This illegitimate wage arrangement occurs when an employer agrees with an employee, usually when appointed, an official declared salary detailed in a formal written contract and an additional undeclared (envelope) wage in a verbal unwritten agreement (Chavdarova, 2014; Williams, 2009; Woolfson, 2007). Sometimes this verbal agreement might be simply that the employee will be paid more than the written formal contract states. Usually however, conditions are attached to receiving this additional envelope wage, such as the employee agreeing not to take their full entitlement to annual leave, to work longer hours (which might take them over the maximum in the working hours directive or result in them being paid below the minimum hourly wage) or to do a different job to that specified in their formal contract (Chavdarova, 2014; Williams, 2014a). In all cases however, both the employer and employee understands that this verbal contract supersedes the formal written contract and constitutes the unwritten 'psychological contract' regarding their conditions of employment (Rousseau, 1995). Of course, verbal agreements *per se* are not illegitimate. However, this particular verbal agreement to pay an additional undeclared (envelope) wage is illegitimate because both parties are mutually agreeing to fraudulently under-report the salary earned by the employee in order to evade the full tax and social security dues owed by the employer and employee.

Here, institutional theory is argued to provide a useful lens for explaining this undeclared work practice (Baumol and Blinder, 2008; Helmke and Levitsky, 2004; North, 1990). All societies have codified laws and regulations (i.e., formal institutions) that define the legal rules of the game. They also have 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). When symmetry exists between these formal and informal institutions, little or no undeclared work will exist since the socially shared norms, values and beliefs of the population will be aligned with the formal

rules. However, when there is asymmetry between the formal and informal institutions, such as when there is a lack of trust in government and the rule of law, practices will emerge grounded in the socially shared norms which, although socially legitimate, are illegal in terms of the formal rules (van Schendel and Abraham, 2005).

Envelope wages are an exemplar. The payment of an envelope wage directly results from individual employers and employees not adhering to the codified laws and regulations of formal institutions and instead adopting unwritten socially shared rules agreed via a verbal agreement to pay an additional undeclared ('envelope') wage so as to avoid paying the full tax and social security payments owed. At the societal level meanwhile, it can be similarly argued that the greater the institutional asymmetry in a society, the greater will be the prevalence of envelope wages. To evaluate this at both the individual- and societal-level, the degree of institutional asymmetry needs to be measured, which can be achieved in relation to undeclared work practices by examining the level of tax morality of a person or population, which is their intrinsic motivation to pay taxes owed (McKerchar et al., 2013; Torgler, 2011; Torgler and Schneider, 2007). Here therefore, we propose the following hypothesis to test the institutional asymmetry thesis:

> *Institutional asymmetry hypothesis* (H1): the prevalence of envelope wages will be greater in populations expressing lower levels of tax morality.

Indeed, previous studies reveal that smaller businesses and those in the construction sector are more likely to receive envelope wages, as are men, younger persons and the lower paid (Williams and Padmore, 2013). By testing this hypothesis, whether these populations also have lower tax morality can be evaluated. Similarly, previous studies reveal that the prevalence of envelope wages is greater in East-Central and Southern European nations than

in West European and Nordic nations (Williams, 2009). Testing this hypothesis enables an evaluation of whether such cross-national variations are associated with cross-national variations in the degree of institutional asymmetry (as measured by tax morality).

It is important however, not only to test this new institutional asymmetry thesis but also the previous perspectives focusing upon various structural conditions when explaining the prevalence of undeclared work practices. Given that from an institutional asymmetry perspective, changing various structural conditions (e.g., tax rates) are ways of reducing institutional symmetry (and improving tax morality), these previous competing perspectives are evaluated here not as free-standing explanations but to identify the country-level structural conditions that are associated with greater institutional symmetry. As Williams (2014b) highlights, there have been three major competing explanations for undeclared work practices.

Firstly, a 'modernisation' thesis has argued that undeclared work practices become less prevalent with economic development and the modernisation of government (Geertz, 1963; Lewis, 1959). Applying this to the cross-national variations in the prevalence of envelope wages, this perspective would thus view envelope wages as more prevalent in less developed economies, measured in terms of GNP per capita, and societies in which there is a lack of modernisation of the state bureaucracy. To explore this, therefore, the following hypothesis can be tested:

> *Modernisation hypothesis* (H2): the prevalence of envelope wages is lower in wealthier economies with modern state bureaucracies.

Secondly, a 'neo-liberal' school of thought has asserted that undeclared work practices result from high taxes and too much state interference in the free market and that reducing taxes and

state interference in work and welfare arrangements is the way forward (De Soto, 1989, 2001; London and Hart, 2004; Nwabuzor, 2005; Schneider and Williams, 2013). From this viewpoint in consequence, envelope wages will be more prevalent in CEE nations with higher taxes and levels of state interference in work and welfare systems. The following hypothesis, therefore, can be tested:

> *Neo-liberal hypothesis* (H3): the prevalence of envelope wages is lower in economies with lower tax rates and lower levels of state interference in the free market.

Third and finally, a 'political economy' thesis has asserted, in stark contrast to the neo-liberal thesis, that envelope wages result from inadequate levels of state intervention in work and welfare arrangements which leaves workers less than fully protected. From this perspective in consequence, envelope wages can be tackled by increasing expenditure on social protection, reducing inequality and the effectiveness of social transfers to help vulnerable groups (Davis, 2006; Gallin, 2001; ILO, 2014; Slavnic, 2010; Taiwo, 2013). As such, envelope wages will be more prevalent in countries with relatively low levels of such state interventions. To evaluate the validity of this explanation therefore, the following hypothesis can be tested:

> *Political economy hypothesis* (H4): the prevalence of envelope wages is lower in more equal economies with higher tax rates, greater levels of social protection and more effective redistribution via social transfers to protect workers from poverty.

Until now, these competing explanations have only been evaluated using simple bivariate correlations between cross-national variations in envelope wages (and undeclared work) and cross-national variations in variables (e.g., tax rates) reflecting the tenets of these competing

perspectives (European Commission, 2013; Eurofound, 2013; Williams, 2013, 2014b). These reveal support for the modernisation and political economy theses but no support for the neo-liberal thesis. This simplistic analytical method however, fails to analyse whether these associations remain significant when other variables are held constant. Neither do these previous analyses either consider or evaluate the relationship between envelope wages and the level of institutional asymmetry, which the present paper argues is central to understanding this wage arrangement. To fill this gap therefore, a logistic regression analysis is here used to evaluate not only this new institutional asymmetry explanation for envelope wages but also the previous explanations.

Methodology

To analyse the relationship between the prevalence of envelope wages and the degree of institutional asymmetry, along with the other explanations, data from special Eurobarometer survey no. 402, which involved 11,131 face-to-face interviews conducted in 2013 in 11 CEE nations, is reported. In all 11 CEE countries, a multi-stage random (probability) sampling methodology was employed which ensured that on the issues of gender, age, region and locality size, each country as well as each level of sample was representative in proportion to its population size. Here therefore, for univariate analysis we employ the sample weighting scheme as recommended in both the wider literature (Sharon and Liu, 1994; Solon et al., 2013; Winship and Radbill, 1994) and the Eurobarometer methodology, to obtain meaningful descriptive results. For the multivariate analysis however, a debate exists over whether to use a weighting scheme. Reflecting the dominant viewpoint, the decision was taken not to do so (Pfefferman, 1994; Sharon and Liu, 1994; Solon et al., 2013; Winship and Radbill, 1994).

The face-to-face interviews covered firstly attitudinal questions about undeclared work followed by questions on whether participants purchased goods and services on an

undeclared basis, received envelope wages and participated in undeclared work. In this paper, we focus upon the questions on envelope wages. Firstly, the 4,670 participants in these 11 CEE countries reporting that they were formal employees were asked whether they had received an envelope wage in addition to their official declared wage from their employer in the prior 12 months, secondly, whether this envelope wage was for their regular work, as payment for overtime hours, or for both and, third, what percentage of their gross yearly income from their job was received as an envelope wage.

To analyse the above hypotheses, the dependent variable is whether employees received envelope wages. This is based on their response to the question: 'Sometimes employers prefer to pay all or part of the salary or the remuneration (for extra work, overtime hours or the part above a legal minimum) in cash and without declaring it to tax or social security authorities. Has your employer paid you any of your income in the last 12 months in this way?'. To analyse H1 regarding whether the prevalence of envelope wages is associated with the degree of institutional asymmetry, a tax morality index for each survey participant and country is constructed. This examines responses to attitudinal questions in the survey about how acceptable employees view six non-compliant tax behaviours using a 10-point scale (where 1 means 'absolutely unacceptable' and 10 means 'absolutely acceptable'), namely: someone receives welfare payments without entitlement; a firm is hired by another firm and does not report earnings; a firm hires a private person and all or part of their salary is not declared; a firm is hired by a household and does not report earnings; someone evades taxes by not or only partially declaring income; and a person hired by a household does not declare earnings when it should be declared. The tax morality index for each individual and nation is calculated using the mean score across these six attitudinal questions.

Meanwhile, to analyse hypotheses H2-4, the association between cross-national variations in the prevalence of envelope wages and various country-level structural

conditions are considered, whilst holding constant tax morality and a range of individual-level socio-demographic, occupational and socio-economic characteristics described in Table 1 below. To evaluate the modernisation hypothesis (H2), the indicators used are:

- GDP per capita in purchasing power standards (Eurostat, 2014a), and
- European Quality of Government Index – this includes 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, with higher scores marking a higher quality of government (Charron*et al*., 2014).

To evaluate the tax tenet of the neo-liberal hypothesis (H3), the indicator previously employed when evaluating this perspective in relation to wholly undeclared work (European Commission, 2013; Williams, 2013) is used, namely the:

- Implicit tax rate (ITR) on labour, which 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, 2014b).

To evaluate the contrasting views regarding state intervention of the neo-liberal (H3) and political economy (H4) hypotheses meanwhile, the indicators analysed, akin to previous studies on wholly undeclared work in Europe (European Commission, 2013; Eurofound, 2013; Williams, 2013), are:

- The level of income inequality, measured using the income quintile share ratio S80/S20, which is the ratio of total income received by the 20 percent of the population with the highest income (the top quintile) to that received by the 20 percent of the population with the lowest income (the bottom quintile) (Eurostat, 2014c);

- Social protection expenditure contain: 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, 2014d); and
- The impact of social transfers, which is a computed indicator based on the formula, 100*(B-A)/B, where B=the proportion at-risk of poverty before social transfers excluding pensions (which is the share of people having an equivalised disposable income before social transfers that is below the at-risk-of-poverty threshold calculated after social transfers), and A= the proportion at risk-of-poverty (which is the share of people with an equivalised disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income after social transfers) (European Commission, 2013).

To analyse the institutional asymmetry hypothesis (H1), and given the nonparametric nature of the data, firstly, a two-sample Wilcoxon rank-sum (Mann-Whitney) test is used to evaluate whether the median tax morality score of those receiving envelope wages significantly differs to the median score of those not receiving envelope wages, whilst secondly, a Spearman's bivariate correlation is used to evaluate whether a statistically significant relationship exists between cross-national variations in tax morality and cross-national variations in envelope wages. To evaluate whether H1 remains valid when a range of individual- and country-level variables are introduced, a logistic regression analysis is provided.

To evaluate the three hypotheses (H2-4) investigating the country-level structural conditions associated with a higher propensity to pay envelope wages meanwhile, and given

the significant correlation between these country-level structural conditions, a logistic regression analysis is employed, adding each structural condition in turn to the individual-level variables to evaluate whether they are significantly associated with the propensity to pay envelope wages.

Findings

Of the 11,131 face-to-face interviews conducted in 2013 across 11 CEE countries, 4,670 were with formal employees, of whom one in 17 (6 per cent) received envelope wages in the prior 12 months, receiving on average 30 percent of their gross annual salary as an envelope wage.

Not all businesses however, display the same propensity to pay envelope wages and not all employee groups are equally likely to receive such wages. As Table 1 displays, smaller businesses are more likely to pay envelope wages, in part doubtless a consequence of the lack of presence of dedicated HRM staff and formal HRM practices in such businesses (Barrett and Mayson, 2007; Benmore and Palmer, 1996), resulting in employers being more able to introduce unwritten verbal contracts that contravene the employees' formal written contract.

Examining the employee groups more likely to receive envelope wages, this practice is more prevalent amongst manual workers; 10 per cent of unskilled and 8 per cent of skilled manual workers. So too are younger people more likely to receive envelope wages, amongst whom joblessness is much higher (European Commission, 2013), although those of retirement age are also more likely, as are those with less years in formal education and those who have difficulties paying the household bills most of the time, who also receive a greater proportion of their income in this manner. The tentative finding therefore, is that perhaps weaker and more vulnerable employees are more likely to be targeted by employers, who may also be more likely to view the formal rules of the game as being for the benefit of

others rather than them, thus resulting in less allegiance to these formal rules. Indeed, this is tentatively supported by a Wilcoxon Rank Sum test which reveals that those receiving envelope wages have a lower tax morality with a median tax morality score of 3.83 compared with a median of 2.33 for those not receiving envelope wages (where 1=totally unacceptable and 10=totally acceptable across six tax non-compliance behaviours).

INSERT TABLE 1 HERE

Table 1 also reveals cross-national variations in the prevalence of envelope wages. To evaluate whether these cross-national variations in the prevalence of envelope wages are associated with cross-national variations in the level of institutional asymmetry (measured by tax morality), a Spearman's bivariate analysis reveals a statistically significant association ($p<0.001$***). The lower the tax morality in a country, the greater is the prevalence of envelope wages. Therefore, the prevalence of envelope wages appears to be significantly associated with the level of institutional symmetry at not only the individual- but also societal-level.

To determine whether this association remains significant when other characteristics are taken into account and held constant, Table 2 reports the results of a logistic regression analysis. Model 1 examines whether this association remains significant when purely individual-level characteristics are analysed, and models 2-8 when various country-level variables are added. The first row in models 1-8 reveal that the propensity to receive envelope wages remains strongly associated with lower levels of tax morality across all models, whether individual-level characteristics alone are analysed, or country-level structural conditions are added. A strong association thus exists between tax morality and the prevalence of envelope wages. As tax morality improves, and thus institutional asymmetry

decreases, the prevalence of envelope wages significantly declines. As such, this further validates the institutional asymmetry hypothesis (H1).

Moreover, model 1 also identifies the types of business and employee groups in which the prevalence of envelope wages is higher when other factors are held constant. Smaller firms are significantly more likely to pay envelope wages and skilled manual workers, supervisors, professionals and those who travel for their jobs more likely to receive envelope wages than those in employed positions at a desk, perhaps reflecting how unwritten contracts amongst these groups treat working hours more flexibly than the formal written contract stipulates. Men are also significantly more likely to receive envelope wages than women and the likelihood of receiving envelope wages decreases significantly with age. Strong evidence also exists that envelope wages are more prevalent among those who have difficulties most of the time in paying their household bills. Model 2 similarly reveals that employees in some countries, namely Latvia, Croatia and Romania are more likely to receive envelope wages than those in the reference country of Lithuania, even when individual-level factors are taken into account, thus displaying how CEE countries cannot be treated as a 'bloc'. There are significant cross-national variations in the prevalence of envelope wages.

INSERT TABLE 2 HERE

Models 3-8 in Table 2 therefore, test the hypotheses H2-4 regarding how to explain these cross-national variations. Each country-level variable refers to a particular country-level structural condition that the competing perspectives use to explain the cross-national variations in envelope wages. Given that partial correlations reveal that these country-level variables are strongly correlated with each other, each is here analysed in separate models, providing alternative perspectives on the reasons for paying envelope wages.

Starting with the modernisation thesis (H2), model 3 provides good evidence that the prevalence of envelope wages is higher in countries with lower levels of GDP per capita and model 4 provides good evidence that envelope wages are more likely in countries with lower qualities of government. These models thus support the modernisation thesis that envelope wages are more prevalent in countries with lower levels of economic development and less modernised state bureaucracies. To evaluate the neo-liberal thesis (H3), model 5 reveals a significant relationship between envelope wages and the implicit tax rate (ITR) on labour. However, this is in the opposite direction to that suggested by the neo-liberal thesis. The prevalence of envelope wages decreases as the ITR on labour increases, providing support for the political economy thesis (H4). Similarly, and further analysing the state intervention tenets of H3 and H4, model 6 provides strong evidence that envelope wages are more likely in countries with higher income inequalities, model 7 good evidence that the propensity to receive envelope wages is higher in countries with lower levels of social protection expenditure and model 8 strong evidence that the prevalence of envelope wages is more likely in countries with less effective redistribution via social transfers.

Discussion

Evaluating the institutional asymmetry hypothesis (H1), the analysis reveals a strong association between envelope wages and institutional asymmetry as measured by tax morality. Not only is the likelihood of envelope wages higher amongst those whose beliefs regarding tax compliance are more at odds with the formal rules, but also in countries where the level of institutional incongruence is higher and this remains a strongly significant association when other individual- and country-level variables are introduced and held constant. In consequence, the higher is the asymmetry between formal and informal institutions, the greater is the likelihood of this undeclared practice. This institutional

asymmetry thesis (i.e., that the prevalence of envelope wages is greater in populations expressing lower levels of tax morality) is valid therefore, not only across individuals, business types and employee groups but also countries.

As such, and unlike previous explanations for undeclared work, this institutional asymmetry thesis explains using the level of tax morality why some individuals and groups of employers and employees within a country engage in undeclared work practices and others do not. However, this does not mean that previous explanations are therefore irrelevant. Given that from an institutional asymmetry perspective, changing various structural conditions (e.g., tax rates) are ways of reducing institutional symmetry (and improving tax morality), the previous competing theories for the cross-national variations in such practices provide a conceptual framework for identifying country-level structural conditions which might engender greater institutional symmetry. Testing each of these competing theories, the above analysis positively confirms the modernisation and political economy theses and negatively confirms the neo-liberal thesis. CEE countries with more modernised governance, higher tax rates, greater income equality, higher expenditure on social protection and more effective redistribution via social transfers, have a lower prevalence of envelope wages.

This analysis, therefore, provides not only a new way of explaining the prevalence of envelope wages but also suggests the need for change in how such practices are tackled and identifies a way forward. Conventionally, governments have used direct controls to ensure that the cost of being caught and punished is greater than the pay-off from undeclared work, largely achieved by increasing the actual and perceived risks and costs associated with participation (see Allingham and Sandmo, 1972; Williams, 2014a). More recently moreover, greater attention has started to be paid to making the full declaration of salaries more beneficial (Williams, 2014a). The above findings however, suggest the need for a rather different policy approach.

Undeclared work in CEE countries, as shown here with the example of envelope wages, results from employers and employees not adhering to the written codified laws and regulations and adopting unwritten verbal agreements that violate the formal written agreement, and the likelihood of undeclared work increases as the degree of institutional incongruence increases. What is thus required is a focus on reducing the degree of institutional asymmetry.

To achieve this, and drawing inspiration from how this is achieved at the organisational level where there has been a shift from 'hard' to 'soft' HRM, and from bureaucratic to post-bureaucratic management (Legge, 1995; Thompson and Alvesson, 2005; Watson, 2003), a similar shift is here advocated at the societal level. Instead of seeking compliance using 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 required that aligns the values of employers and employees with the formal institutions so as to generate self-regulated control. This requires changes in not only informal institutions but also formal institutions.

To alter informal institutions, three policy initiatives can be pursued. Firstly, tax education targeted at both employers and employees is required to align them with the formal rules and elicit self-regulation, such as by providing information on the public goods and services paid for by their taxes (Saeed and Shah, 2011). Secondly, advertising campaigns (targeting the groups identified above with low tax morality) can be used, which can either inform employees and employers of the costs and risks of envelope wages and/or benefits of fully declaring salaries (OECD, 2013). And third and finally, normative appeals to employers and employees can be used which during 2008 in Estonia for example resulted in 46 percent of enterprises adjusting their wage levels and paying more taxes (Lill and Nurmela, 2009).

To improve the social (psychological) contract between governments and employers and employees nevertheless, formal institutions also need to change. On the one hand, and as model 4 in Table 2 clearly reveals, employers and employees will not improve their tax morality if there remains a low level of trust in government and extensive public sector corruption, as is the case in many CEE countries (European Commission, 2014a,b). To tackle this low trust in government, a modernisation of governance is thus necessary. This requires at least three institutional reforms. Firstly, procedural justice must be improved, which here refers to the tax authority treating employers and employees in a respectful, impartial and responsible manner and thus shifting away from a 'cops and robbers' approach and towards a service-oriented approach (Leventhal, 1980; Murphy, 2005). Secondly, procedural fairness must be enhanced which refers to employers and employees believing that they pay their fair share compared with others (Molero and Pujol, 2012) and third and finally, redistributive justice needs improving which relates to whether employers and employees believe they receive the goods and services they deserve given the taxes they pay (Kirchgässner, 2010).

On the other hand, and as models 3-8 in Table 2 display, the pursuit of wider economic and social developments can also reduce institutional asymmetry. These models clearly reveal how CEE countries with not only more modernised governance but also higher tax rates, greater income equality, higher expenditure on social protection and more effective redistribution via social transfers, have a lower prevalence of envelope wages. For CEE countries displaying comparatively lower levels of progress on each of these wider economic and social developments therefore, greater attention to their pursuit is required if institutional asymmetry is to be reduced, and thus undeclared work tackled. For CEE countries already relatively 'progressive' on these fronts meanwhile, the policy approach will need to be more attentive to pursuing tax education, advertising campaigns and normative appeals to change

informal institutions, and the pursuit of procedural and redistributive justice and fairness to change formal institutions, to reduce institutional asymmetry and thus undeclared work.

Conclusions

This paper has advanced a new way of explaining and tackling the undeclared work practice of paying envelope wages. Drawing upon institutional theory, it has displayed that when formal and informal institutions are not aligned, undeclared work practices such as envelope wages emerge embedded in unwritten socially shared rules which, although socially legitimate, are illegal in terms of the formal written rules since they fraudulently evade the rules of the game. The greater is the institutional asymmetry, the higher is the likelihood of such practices. Using logistic regression analysis, this has been shown to be the case for both the individuals engaged in such activity and for the countries with a greater propensity to use envelope wages.

To reduce the prevalence of envelope wages in consequence, it has been argued that a shift away from direct controls that seek to detect and punish this practice is required and towards eliciting a high trust high commitment culture where the values of employers and employees are aligned with the formal institutions. This requires alterations not only in the informal institutions, using measures such as tax education, awareness raising campaigns and normative appeals, but also and importantly, changes in formal institutions so as to improve trust in government by developing firstly, greater procedural justice, procedural fairness and redistributive justice and secondly, lower poverty levels, more equality, more effective redistribution via social transfers and greater state intervention in the labour market to protect vulnerable groups.

Whether this institutional approach is also relevant when explaining and tackling other forms of undeclared work in CEE nations and beyond now needs to be evaluated. If this

paper stimulates such evaluations, then it will have fulfilled one of its intentions. If it also encourages governments to recognise how the undeclared economy results from such institutional incongruence and to begin exploring how this can be tackled, rather than continuing to simply detect and punish such practices, then this paper will have achieved its broader intention.

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Table 1. Distribution of envelope wages in Central and Eastern Europe: by business size, employee group and country

N= 4,670	% of employees receiving envelope wages in last 12 months	% of gross salary received as envelope wage (median)	% of all employees receiving envelope wages	% of all employees	Tax morality index (where 1 = totally unacceptable and 10 = totally acceptable)
All CEE	6	30	100	100	2.81
Company size:					
1 - 4 employees	12	25	17	9	2.84
5 – 9	8	40	15	11	3.09
10 – 19	11	30	27	16	3.39
20 – 49	7	20	23	22	2.84
50 – 99	3	45	7	15	2.61
100 - 499	3	30	7	15	2.53
500 or more	2	30	4	12	2.45
Occupation:					
Employed professional	6	25	9	9	2.88
General, middle management, etc.	3	45	5	9	2.59
Employed position, at desk	2	20	7	19	2.78
Employed position, travelling	5	25	8	10	2.96
Employed position, service job	7	23	16	14	2.59
Supervisor	9	40	4	2	2.96
Skilled manual worker	8	40	41	31	2.88
Unskilled manual worker, etc.	10	35	10	6	2.93
Gender:					
Men	8	30	68	54	2.88
Women	4	30	32	46	2.72
Age:					
15-24	9	30	15	9	3.15
25-34	6	28	27	28	2.87
35-44	6	20	30	29	2.77
45-54	5	35	21	24	2.76
55-64	4	50	6	9	2.50
65+	7	25	1	1	2.62
Education (age education ended):					
<15	6	25	3	3	2.84
16-19	7	30	75	60	2.90
20+	4	20	22	37	2.61
Difficulties paying bills:					
Most of the time	9	30	12	8	2.79
From time to time	8	30	49	35	3.11
Almost never/never	4	20	39	57	2.62
Country:					
Latvia	11	50	4	2	3.95
Croatia	8	35	5	3	2.15
Romania	7	9	23	19	2.29
Slovakia	7	20	7	6	3.17
Bulgaria	6	30	8	7	2.46
Hungary	6	20	9	10	2.95
Lithuania	6	20	3	3	3.09
Czech Republic	5	25	9	12	3.10
Estonia	5	40	1	1	2.82
Poland	5	20	30	35	2.96
Slovenia	4	20	1	2	2.20

Table 2. Logistic regressions of the propensity to receive envelope wages

			Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Tax morality (Centred)			0.240*** (0.034)	0.247*** (0.036)	0.249*** (0.034)	0.248*** (0.034)	0.247*** (0.034)	0.235*** (0.034)	0.229*** (0.034)	0.239*** (0.034)
Gender (Women)	Men		0.452*** (0.152)	0.442*** (0.154)	0.460*** (0.152)	0.446*** (0.152)	0.450*** (0.152)	0.441*** (0.152)	0.444*** (0.152)	0.462*** (0.152)
Age (Centred age: 41)			-0.027*** (0.007)	-0.026*** (0.007)	-0.027*** (0.007)	-0.027*** (0.007)	-0.028*** (0.007)	-0.027*** (0.007)	-0.028*** (0.007)	-0.027*** (0.007)
Formal education (15 and under)	16-19		0.457 (0.506)	0.525 (0.508)	0.497 (0.512)	0.475 (0.511)	0.446 (0.511)	0.446 (0.507)	0.382 (0.507)	0.429 (0.509)
	20+		-0.028 (0.531)	-0.029 (0.535)	-0.026 (0.537)	-0.042 (0.536)	-0.078 (0.536)	-0.125 (0.532)	-0.148 (0.533)	-0.126 (0.535)
Difficulties paying bills last year (Most of the time)	From time to time		-0.458** (0.194)	-0.424** (0.198)	-0.428** (0.195)	-0.425** (0.195)	-0.427** (0.195)	-0.397** (0.195)	-0.441** (0.194)	-0.443** (0.195)
	Almost never/never		-1.028*** (0.209)	-1.009*** (0.219)	-0.961*** (0.212)	-0.955*** (0.212)	-0.966*** (0.212)	-0.944*** (0.211)	-1.014*** (0.210)	-1.009*** (0.210)
Occupation (Employed position, at desk)	Employed professional		0.855** (0.333)	0.740** (0.339)	0.800** (0.334)	0.827** (0.334)	0.777** (0.334)	0.723** (0.335)	0.782** (0.335)	0.737** (0.335)
	General, middle management etc.		0.277 (0.345)	0.173 (0.350)	0.268 (0.345)	0.291 (0.345)	0.229 (0.345)	0.187 (0.346)	0.226 (0.346)	0.207 (0.346)
	Employed position, travelling		0.706** (0.306)	0.623** (0.312)	0.674** (0.307)	0.710** (0.307)	0.667** (0.307)	0.626** (0.308)	0.657** (0.308)	0.619** (0.308)
	Employed position, service job		0.528* (0.284)	0.376 (0.291)	0.467 (0.286)	0.485* (0.285)	0.437 (0.287)	0.382 (0.289)	0.450 (0.286)	0.408 (0.287)
	Supervisor		1.105** (0.438)	0.915** (0.449)	0.994** (0.441)	1.003** (0.441)	1.026** (0.440)	0.976** (0.441)	1.044** (0.440)	0.971** (0.442)
	Skilled manual worker		0.746*** (0.259)	0.672** (0.265)	0.704*** (0.259)	0.729*** (0.259)	0.708*** (0.259)	0.664** (0.261)	0.710*** (0.259)	0.674*** (0.260)
	Unskilled manual worker, etc.		0.505 (0.364)	0.444 (0.370)	0.437 (0.366)	0.466 (0.366)	0.411 (0.367)	0.381 (0.366)	0.435 (0.365)	0.384 (0.367)
Company size (1-4 employees)	5 - 9		-0.371 (0.255)	-0.350 (0.257)	-0.383 (0.255)	-0.382 (0.255)	-0.373 (0.256)	-0.370 (0.256)	-0.385 (0.256)	-0.381 (0.256)
	10 - 19		-0.607** (0.239)	-0.597** (0.242)	-0.629*** (0.239)	-0.621*** (0.239)	-0.624*** (0.239)	-0.628*** (0.239)	-0.639*** (0.240)	-0.642*** (0.240)
	20 - 49		-0.669*** (0.236)	-0.616** (0.240)	-0.675*** (0.236)	-0.683*** (0.236)	-0.676*** (0.236)	-0.645*** (0.236)	-0.682*** (0.236)	-0.668*** (0.236)
	50 - 99		-1.161*** (0.284)	-1.113*** (0.287)	-1.172*** (0.284)	-1.173*** (0.285)	-1.171*** (0.285)	-1.146*** (0.285)	-1.170*** (0.285)	-1.155*** (0.285)
	100 - 499		-1.521*** (0.310)	-1.501*** (0.312)	-1.497*** (0.310)	-1.508*** (0.311)	-1.510*** (0.311)	-1.517*** (0.311)	-1.545*** (0.311)	-1.508*** (0.311)
	500 or more		-1.527*** (0.351)	-1.510*** (0.353)	-1.495*** (0.352)	-1.507*** (0.352)	-1.509*** (0.352)	-1.496*** (0.352)	-1.524*** (0.352)	-1.499*** (0.352)
Country (Lithuania)	Latvia			0.762** (0.317)						
	Croatia			0.789** (0.362)						
	Romania			0.975*** (0.376)						
	Slovakia			0.437 (0.348)						
	Bulgaria			0.551 (0.355)						
	Hungary			0.063 (0.368)						
	Czech Republic			-0.033 (0.381)						
	Estonia			0.433 (0.372)						
	Poland			0.288 (0.395)						
	Slovenia			0.381 (0.424)						
GDP per capita in PPS 2013 (Centred)					-0.018** (0.007)					
European Quality of Government Index 2013 (Centred)						-0.349** (0.144)				
Implicit tax rate on labour 2012 (Centred)							-0.044** (0.017)			
Income inequality 2012 (Centred)								0.204*** (0.067)		
Social protection expenditure 2011 (Centred)									-0.057** (0.027)	
Impact of social transfers 2012 (Centred)										-0.023*** (0.008)
		Constant	-2.488*** (0.601)	-2.936*** (0.675)	-2.483*** (0.607)	-2.483*** (0.606)	-2.465*** (0.606)	-2.433*** (0.602)	-2.364*** (0.602)	-2.316*** (0.606)
		N	3675	3675	3675	3675	3675	3675	3675	3675
		Pseudo R^2	0.1304	0.1413	0.1338	0.1337	0.1340	0.1358	0.1330	0.1359
		Log likelihood	-759.6241	-750.0599	-756.6471	-756.7318	-756.4207	-754.8923	-757.3142	-754.8115
		χ^2	227.76	246.89	233.72	233.55	234.17	237.23	232.38	237.39
		p>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Notes: significant at *** p<0.01, ** p<0.05, * p<0.1 (standard errors in parentheses).
All coefficients are compared to the benchmark category, shown in brackets. Indicators were centred to the mean obtained using the weighting scheme.