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# **Explaining cross-national variations in the prevalence of envelope wages: some lessons from a 2013 Eurobarometer survey**

## **Abstract**

Reporting a 2013 survey of the prevalence of envelope wages across 27 European Union member states, this paper reveals that this illegitimate wage practice is more common in poorer, less equal countries with lower taxation and social protection levels and less effective redistribution via social transfers.

**Key words:** informal economy; informal employment; envelope wages; tax compliance; tax evasion; European Union

## **Introduction**

In the current period of economic crisis, employers might well be reducing their labour costs by pursuing various illegitimate labour practices. For example, they may be directly employing wholly undeclared labour, sub-contracting and outsourcing tasks to the ‘false self-employed’ or declaring only some of their formal employees’ salaries and paying the rest as an undeclared (‘envelope’) wage in order to reduce tax and social security payments. Until now however, it is unknown which, if any, of these illegitimate strategies have expanded during the recent period of economic crisis. This paper begins to fill that gap. The aim is to report the first study since the economic crisis on the prevalence of the illegitimate labour practice of paying envelope wages across the 27 member states of the European Union (EU-27). This is where formal employers under-report the salaries of formal employees by paying them a declared official salary and an additional undeclared (‘envelope’) wage so as to reduce tax and social security payments (Karpuskiene, 2007; Meriküll and Staehr, 2010; Neef, 2002; Sedlenieks, 2003; Williams, 2007, 2008, 2009a,b,c,d,e,f ; Woolfson, 2007; Žabko and Rajevska, 2007). The intention is to provide the first evidence on the prevalence of envelope wages during the current economic crisis across the EU-27 and in doing so, to explain the cross-national variations in the prevalence of this illegitimate wage practice in the contemporary period.

To achieve this, the first section will briefly review the existing literature on envelope wages and set out three predominant and competing theoretical perspectives that variously explain the cross-national variations in this illicit wage arrangement as: a legacy of under-development (modernisation perspective); due to high taxes, state corruption and burdensome regulations and controls (neo-liberal perspective), or a result of inadequate state intervention in work and welfare arrangements which leaves workers less than fully protected (political economy perspective). To evaluate the cross-national variations in the prevalence of this practice during the current period of economic crisis and the contemporary validity of these competing explanations, the second section reports the methodology of the 2013 Eurobarometer survey conducted in the 27 member states of the European Union (EU-27) followed in the third section by the findings. Revealing that envelope wage payments have declined since the onset of the economic crisis but remain less common in wealthier and more equal societies with higher levels of

taxation, social protection and redistribution via social transfers, the final section will review the theoretical and policy implications of these findings.

### **Explaining the under-reporting of salaries: a literature review**

During the middle-to-late twentieth century, grounded in a dichotomous depiction of declared and undeclared work as separate forms of employment, undeclared work was seen as discrete from declared work (Geertz, 1963; Lewis, 1959). The possibility that an employment relationship could be concurrently both declared and undeclared was not considered. Declared work was paid work declared to the state for tax, social security and labour law purposes, while undeclared work was in every respect the same except that it was wholly hidden from, or unregistered by, the state for tax, social security and/or labour law purposes (European Commission, 2007; ILO, 2002; OECD, 2012). Over the past decade or so however, this dualistic representation of employment as either declared or undeclared has been transcended. A burgeoning literature has displayed that formal employers sometimes under-declare the salaries of formal employees by paying them both an official declared salary as well as an additional undeclared salary, or what is termed an ‘envelope wage’, which is hidden from, or unregistered by, the state for tax and social security purposes. This was first identified in Central and Eastern Europe in studies conducted in Estonia (Meriküll and Staehr, 2010), Latvia (OECD, 2003; 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 (Round et al., 2008; Williams, 2007).

These studies were largely either small-scale qualitative surveys or more extensive surveys but of a single country, ranging from a study of a single person in Lithuania, albeit a cause celebre (Woolfson, 2007) and a study in Riga in Latvia of 15 respondents (Sedlenieks, 2003) through more extensive studies involving 313 households in three cities of Moscow in Russia (Williams and Round, 2007) and 600 households in three Ukrainian localities (Williams, 2007) to a cross-national representative survey involving 900 interviews in Estonia, Latvia and Lithuania between 1998 and 2002 (Meriküll and Staehr, 2010). These surveys began to display the prevalence of this illegitimate wage practice in Central and Eastern Europe. For example, in Ukraine, 30 per cent of formal employees reported receiving an envelope wage from their formal employer (Williams, 2007), whilst in Moscow survey, this figure was 65 per cent (Williams and Round, 2007). Analysing the discrepancies between the results of labour force and employer surveys in Latvia meanwhile, the OECD (2003) reveal that 20 per cent of formal employees in the private sector received envelope wages from their formal employer.

The first cross-national extensive representative survey of the prevalence of envelope wages was conducted in 2007 when as part of the Eurobarometer survey a module was included on this topic. The resultant dataset, namely special Eurobarometer no. 284, involved 11,135 interviews with formal employees across the 27 member states of the European Union (EU-27). This revealed in this pre-crisis period the prevalence of envelope wages in the EU-27 as a whole (Williams, 2009a; Williams and Padmore, 2013a,b) as well as regional analyses of South-Eastern Europe (Williams, 2010, 2012a; Williams et al., 2011), the Baltic region (Williams, 2009d) and Central and Eastern

Europe (Williams, 2008a,b, 2009b,c, 2012b; Williams and Round, 2008). Across the EU-27, 5.5 per cent of formal employees received envelope wages from their formal employer in 2007, amounting to on average 43 per cent of their gross wage. Some 33 per cent received this envelope wage for their regular work, 28 per cent for overtime/extra work and 32 per cent for both their regular work and overtime/extra work. A clear regional divide however, is identified between Western and Nordic nations on the one hand, and Southern and East-Central European nations on the other. The prevalence of envelope wages is much lower in Western and Nordic nations and the share of the gross wage received as an envelope wage lower due to envelope wages mostly being paid for overtime or extra work conducted. In Southern and Central and Eastern Europe meanwhile, envelope wages are more prevalent, paid mostly for the employees' regular employment and the proportion of the gross wage received as an envelope wage is consequently higher (e.g., Williams, 2009a, 2013).

This research however, was in 2007 prior to the economic crisis. What has happened to the prevalence of envelope wages during the crisis period is until now not known. To fill this significant gap, this paper reports the first findings of a repetition of the Eurobarometer survey module on envelope wages conducted in 2013 across the 27 member states of the European Union (EU-27).

A main reason employers under-declare the salaries of their employees is to evade their full social insurance and tax liabilities. Employers also find such a practice useful when seeking to make people redundant. By withholding their envelope wage, formal employees can be encouraged to voluntarily quit their job, meaning that employers can evade social costs such as redundancy pay (Hazans, 2005; Round et al., 2008). Employees, meanwhile, can also benefit by receiving a higher wage due to paying less taxes and social security contributions. Such explanations however, do not explain the cross-national variations in the prevalence of envelope wages. To do this, one way forward is to analyse the relationship between the prevalence of envelope wages and the broader socio-economic environment. This can be done by evaluating critically the validity of the competing theoretical perspectives that have been proposed to explain the cross-national variations in the prevalence of wholly informal employment (see Williams, 2013). These assert that informal employment decreases as economies: modernise and develop ('modernisation' thesis), lower taxes, public sector corruption and state interference in the free market ('neo-liberal' thesis) or intervene in work and welfare provision to protect workers ('political economy' thesis). Here, each is reviewed in turn to show how they can be applied to explaining the cross-national variations in envelope wages.

#### Modernisation thesis

For much of the last century, a recurring assumption was that the nature and inevitable process of modernisation would lead to the formal economy replacing the informal economy, which was depicted as a relic from a pre-modern mode of production. The consequent assumption was that the informal economy is more extensive in less developed economies and that its continuing prevalence in economies signalled its 'backwardness' and 'under-development' (Geertz, 1963; Gilbert, 1998; Lewis, 1959). Applying this to evaluating the cross-national variations in envelope wages, the suggestion is that in less modern and developed economies, measured in terms of GNP

per capita, its degree of formalisation and the existence of a modern state bureaucracy, there will be a higher prevalence of envelope wages than in more developed economies. To explore its validity, the following hypothesis can be tested:

Modernisation Hypothesis (H1): the prevalence of envelope wages will be lower in developed modern economies.

#### Neo-liberal thesis

The recognition that there is not a linear trajectory of economic development towards modern formalised economies and that undeclared work remains extensive and even growing in many global regions (Buehn and Schneider, 2012; ILO, 2012; Jütting and Laiglesia, 2009; Schneider and Williams, 2013) has led many to reject the modernisation thesis and to seek alternative explanations. For neo-liberal scholars, it has been argued that undeclared work results from a rational economic decision to voluntarily exit the declared realm in order to avoid the high taxes, corruption in the state system and the burdensome regulations that increase the cost, time and effort associated with formal employment (e.g., Becker, 2004; De Soto, 1989, 2001; London and Hart, 2004; Nwabuzor, 2005; Sauvy, 1984; Small Business Council, 2004). Viewed in this manner, envelope wages will be more prevalent in countries with higher taxes, corruption and levels of state intervention in work and welfare systems and the consequent solution would be to pursue tax reductions, reduce corruption and state interference in the free market in order to reduce such an illicit wage arrangement. To explore the validity of this neo-liberal explanation, therefore, the following hypothesis can be tested:

Neo-liberal hypothesis (H2): the prevalence of envelope wages is smaller in economies with lower tax rates, less public sector corruption and lower levels of state interference in the free market

#### Political economy thesis

For political economists meanwhile, undeclared work is a result of too little rather than too much state intervention in work and welfare provision. Viewing such endeavour as an integral constituent of contemporary capitalist accumulation practices and key component of the downsizing, sub-contracting and outsourcing arrangements emerging under deregulated global capitalism, undeclared work practices are seen to provide businesses with a production channel to attain flexible production, profit and cost reduction (Davis, 2006; Gallin, 2001; Hudson, 2005; Sassen, 1996; Slavnic, 2010; Taiwo, 2013). In this new regime in consequence, the full-employment and comprehensive formal welfare state regime characteristic of the Fordist and socialist era has faded and a new post-Fordist and post-socialist regime of deregulation, liberalization and privatization emerged (Amin et al., 2002; Castells and Portes, 1989; Fernandez-Kelly, 2006; Meagher, 2010). Viewed in this manner, the prevalence of envelope wages is a cost reduction strategy that prevails due to a lack of state intervention in work and welfare provision, including social protection and social transfers. In consequence, this illegitimate practice would be more prevalent in countries with relatively low levels of state intervention in work and welfare arrangements (Davis, 2006; Gallin, 2001; Slavnic, 2010). To resolve this illicit wage arrangement moreover, the solution would be to pursue greater state intervention in work

and welfare arrangements. To evaluate the validity of this political economy explanation, therefore, the following hypothesis can be tested:

Political economy hypothesis (H3): the prevalence of envelope wages will be smaller in economies with higher tax rates, greater levels of social protection and redistribution via social transfers to protect workers.

To evaluate the prevalence of envelope wages during the current economic crisis period and to test these hypotheses regarding the cross-national variations in the prevalence of envelope wages during the current period of economic crisis, attention now turns to reporting a survey conducted in 2013 across the EU-27.

### **Methodology: examining envelope wages in the EU-27**

To evaluate the cross-national variations in the prevalence of envelope wages and its relationship to the broader economic environment of countries, the results of the 2013 special Eurobarometer survey on undeclared work will be here reported which includes questions on the prevalence, size and nature of envelope wages across the EU-27. Some 26,653 face-to-face interviews were conducted in these 27 countries using the multi-stage random (probability) sampling method used in all Eurobarometer surveys. The face-to-face interview adopted a graduated approach, commencing with attitudinal questions on participation in undeclared work, followed by questions on whether they had received undeclared goods and services. Questions then turned to the issue of whether those who were formal employees had received an additional envelope wage from their formal employer and finally, questions were asked regarding their supply of undeclared work. Given the focus here on envelope wages, attention is paid to the questions asked on this issue. Firstly, those who reported that they were formal employees were asked, ‘Sometimes employers prefer to pay all or part of the regular 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?’. Secondly, and in order to comprehend the nature of envelope wages, they were asked ‘Was this income part of the remuneration for your regular work, was it payments for overtime, or both?’ and thirdly, they were asked to estimate the percentage of their gross yearly income from their main job received as an envelope wage.

To test the hypotheses regarding how these cross-national variations can be explained meanwhile, statistical indicators have been taken from official data sources on the various characteristics each theorisation purports influence envelope wages, such as the level of tax rates, social protection and redistribution via social transfers (Eurostat, 2014a-f). The only indicators taken from unofficial sources are firstly, the perceptions of public sector corruption, taken from Transparency International’s corruption perceptions index for 2007 (Transparency International, 2013) and secondly, evidence on the quality of state bureaucracy taken from the International Country Risk Guide (ICRG, 2013).

To evaluate the modernisation hypothesis, the indicators used are:

- GNP per capita by personal purchasing power (Eurostat, 2014a), akin to previous studies on wholly informal employment (Williams, 2013);

- the employment participation rate (Eurostat, 2014b), which can be used as a proxy indicator of the level of formalisation of economies; and
- the ICRG indicator of bureaucracy quality which measures the institutional strength and quality of the bureaucracy and thus the level of modernisation of government in nations (ICRG, 2013). High points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. Countries lacking the cushioning effect of a strong bureaucracy receive low points because a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions.

To evaluate the neo-liberal hypothesis that the greater prevalence of envelope wages results from high taxes, corruption and state interference in the free market meanwhile, indicators previously used when evaluating this neo-liberal perspective in relation to wholly informal employment (European Commission 2013; Williams 2013) are employed. To test the tax rate tenets, two indicators are analysed, namely:

- 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, 2014c).
- Current taxes on income, wealth, etc, which 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 which are assessed neither on the income nor the wealth (Eurostat, 2014d).

The corruption tenet of the neo-liberal hypothesis meanwhile, is evaluated using:

- Transparency International's Corruption Perceptions Index (CPI) (Transparency International, 2013). This is a composite index of perceptions of public sector corruption that draws on 14 expert opinion surveys and scores nations on a 0-10 scale, with zero indicating high levels and 10 low levels of perceived public sector corruption.
- The percentage of firms stating that they are expected to give gifts in meetings with tax officials (World Bank, 2014), and
- The percentage of firms giving informal payments to public officials (World Bank, 2014).

To analyse the neo-liberal tenet that state interference leads to a higher prevalence of envelope wages along with the converse political economy hypothesis that it is due to inadequate levels of state intervention to protect workers, the indicators analysed akin to previous studies on informal employment in Europe (European Commission, 2013; Eurofound, 2013; Williams, 2013), are:

- The level of severe material deprivation, measured by the percentage of the population unable to afford at least four items on a list of nine items considered by most people to be desirable or even necessary to lead an adequate life (Eurostat, 2014e);
- 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 per cent of the population with the highest income (the top quintile) to that received by the 20 per cent of the population with the lowest income (the bottom quintile) (Eurostat, 2014f);

- The level of social protection expenditure as a percentage of GDP (Eurostat, 2014g); 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 relationship between cross-national variations in the prevalence of envelope wages and cross-national variations in these broader economic and social characteristics, and given the small sample size of just 27 countries and lack of necessary controls to include in a multivariate regression analysis, it is only possible here to conduct bivariate regression analyses. To do this, Spearman's rank correlation coefficient ( $r_s$ ) is used due to the non-parametric nature of the data. Despite this limitation, and as will be shown, meaningful findings are produced regarding the validity of the hypotheses.

Below therefore, firstly the descriptive findings regarding the variable prevalence of envelope wages across the 27 countries will be reported and secondly, a preliminary analysis will be undertaken of the association between wider economic and social conditions and the prevalence of envelope wages to evaluate the hypotheses.

### **Results: envelope wages in the European Union**

Of the 26,653 face-to-face interviews conducted in these 27 member states of the European Union (EU-27) for the 2013 Eurobarometer survey, 11,066 participants were in formal employment. Of these 11,066 formal employees, 3 per cent report receiving an envelope wage from their formal employer in addition to their official declared salary in the year prior to the interview. Compared with 2007 prior to the economic crisis, there has thus been a small drop in the proportion of employees receiving an envelope wage (from 5 per cent to 3 per cent) and an increase in the proportion reporting that they did not receive an envelope wage (from 89 per cent to 93 per cent) due to falls in the share not able to answer or refusing to answer (from 3 per cent to 2 per cent in each case).

One view is that during an economic crisis, such a practice increases as job opportunities, wages and working conditions come under pressure. An alternative view is that envelope wages decline during recession due to employers turning to wholly undeclared labour and/or 'flexible' and cheaper declared labour, both of which are more readily available (Williams and Renooy, 2013: 5). Analysing the prevalence of envelope wages in 2007 and 2013, the finding is that the latter is more the case as employers turn to flexible and cheaper declared labour and/or wholly undeclared labour rather than paying an additional envelope wage to formal employees.

Akin to 2007 however, the use of envelope wages is not everywhere the same. As Table 1 displays, there are marked cross-national variations in the use of envelope wages, ranging from 11 per cent of declared employees receiving envelope wages in Latvia, 8 per cent in Croatia, 7 per cent in Greece, Slovakia and Romania and 6 per cent in Lithuania, Bulgaria and Hungary, through to just 1 per cent in Germany, Finland, France and Sweden and 0 per cent in Malta. In most countries, the proportion receiving envelope

wages is broadly similar to that reported in 2007. The most notable increase is in Greece (+4 percentage points), whilst notable decreases are in Romania (-16 points), Bulgaria (-8 points), Latvia (-6 points), Poland (-6 points), Lithuania (-5 points) and Italy (-5 points).

#### INSERT TABLE 1 ABOUT HERE

The result is that a clear regional divide in the prevalence of envelope wages can be seen. Akin to 2007 (Williams, 2009a), envelope wages are more common in Central and Eastern European (CEE) member states. Indeed, all CEE member states have an above average share of employees receiving envelope wages. In contrast, the Nordic countries all have a below average share of employees receiving envelope wages. In Western countries, only Belgium (4 per cent) reports a share that is above the EU average and in Southern Europe, only crisis torn Greece (7 per cent) and Spain (5 per cent) report higher than average shares. The result is a clear West-East and North-South divide in the prevalence of envelope wages, with CEE and Southern countries having an above average of employees receiving envelope wages and Western and Northern countries having a below average share.

Turning to whether envelope wages are received for regular work, overtime or both, meanwhile, the finding is that 37 percent report receiving envelope wages for their regular work, 31 per cent for overtime or extra work and 25 per cent for both regular work and overtime. Compared with 2007, there has been notable drop in those receiving envelope wages for both regular work and overtime (-11 percentage points from 36 per cent to 25 per cent).

The average proportion of gross yearly income received in the form of an envelope wage is 36 per cent, which is a 7 percentage point fall from the 43 per cent recorded in 2007. Breaking this down, 28 per cent (27 per cent in 2007) assert that they receive 1-24 per cent of their gross annual income as an envelope wage, 10 per cent (7 per cent in 2007) report that envelope wages account for 25-49 per cent, 8 per cent (8 per cent in 2007) stating that is 50-74 per cent and 9 per cent (18 per cent) that it counts for 75-100 per cent. Some 16 per cent refused to answer (11 per cent), 16 per cent (28 per cent) didn't know and 12 per cent were unable to remember. The overall fall in the average amount of the gross yearly wage received as an envelope wage is therefore a result of the notable drop in the proportion reporting that envelope wages accounted for 75 per cent or more of their gross yearly income from their main job (-9 percentage points from 18 per cent to 9 per cent). This tentatively intimates that during the period of economic crisis, employers have perhaps turned to wholly undeclared labour rather than pay formal employees a large share of their salary as an undeclared envelope wage. There has been also a small increase in the proportion refusing to answer (+5 percentage points). The large differences between 2007 and 2013 in the share reporting that they do not know and do not remember are due to changes in the way responses are recorded. In 2007, there was no 'don't remember' option. Combining the share asserting 'don't know' and 'don't remember' reveals that the 2013 and 2007 findings are similar.

Although it is not possible to examine the cross-national variations in the share of the gross wage paid as an envelope wage because the respondent base sizes are not sufficiently robust to allow valid and reliable interpretation of the findings, the spatial variations can be charted at a European regional level. In Southern Europe, those

receiving envelope wages receive 69 per cent of their annual gross wage as an envelope wage, whilst in CEE member states, 29 per cent of the annual gross wage is received as an envelope wage, 17 per cent in Western European countries and 7 per cent in Nordic countries. This reflects that in Western and Nordic member states, envelope wages are not only less prevalent but also more likely to be for overtime or extra work, whilst in Southern European and CEE member states where their prevalence is higher, such wages are paid more for regular employment.

### **Analysis: evaluating the competing explanations**

How, therefore, can the cross-national variations in the prevalence of envelope wages be explained? To answer this, each hypothesis outlined above is evaluated.

#### Evaluating the modernisation hypothesis (H1)

To evaluate the modernisation thesis that envelope wages are less prevalent in developed modern economies, the relationship between the cross-national variations in the prevalence of envelope wages and the cross-national variations in three surrogate indicators that reflect the level of development and modernisation of economies are here analysed, namely: GNP per capita by personal purchasing power standards; the employment participation rate (which is a proxy indicator of the level of formalisation of economies); and the ICRG indicator of bureaucracy quality which measures the institutional strength and quality of the bureaucracy and thus the level of modernisation of government (ICRG, 2013).

Starting with the relationship between the cross-national variations in the prevalence of envelope wages and the cross-national variations in GDP per capita in personal purchasing standards (PPS) in 2012 (the latest figures available), with the EU-27 representing the baseline of 100, Figure 1a uses Spearman's rank correlation coefficient ( $r_s$ ) due to the non-parametric nature of the data. It reveals a strong statistically significant relationship between the cross-national variations in the prevalence of envelope wages and the cross-national variations in PPS at a 0.01 level ( $r_s = -.742^{**}$ ). The direction of this relationship is that the higher the PPS in a country, the less prevalent are envelope wages.

INSERT FIGURE 1 ABOUT HERE

Turning to cross-national variations in the prevalence of envelope wages and cross-national variations in the employment participation rate (i.e., a proxy indicator of the level of formalisation of economies), and again using Spearman's rank correlation coefficient, Figure 1b again reveals a strong statistically significant relationship at the 0.01 level ( $r_s = -.533^{**}$ ). The direction of this relationship is that the higher the employment participation rate, the lower is the level of envelope wages.

Similarly, and examining the relationship between cross-national variations in the prevalence of envelope wages and cross-national variations in the quality of state bureaucracy, and thus the level of modernisation of government, using the International Country Risk Guide (ICRG), which uses a 0-4 scale to evaluate the quality of bureaucracy in a country where 4 is high and 0 is low, the finding in Figure 1c is that there is a strong correlation between the quality of the bureaucracy and the prevalence of envelope wage payments ( $r_s = -.629^{**}$ ). The higher the quality of state bureaucracy, the

less prevalent are envelope wage payments. As such, the modernisation thesis is confirmed that more developed countries with higher levels of GDP/capita measured in terms of PPS, higher employment participation rates and better quality bureaucracies are economies in which envelope wages are less prevalent. It is important to state explicitly that these associations do not establish a direction of the correlation in terms of a cause-effect relationship. This, therefore, is a limitation of the current analysis.

Evaluating the neo-liberal hypothesis (H2)

To evaluate the neo-liberal hypothesis, meanwhile, the correlation between cross-national variations in the prevalence of envelope wages and taxes, corruption and state interference need to be analysed (see Figure 2).

INSERT FIGURE 2 ABOUT HERE

To investigate the relationship with tax rates, implicit tax rates (ITR) on labour can be analysed, which is a summary measure of the average effective tax burden on the income of employed labour. As Figure 2a displays, no significant correlation is found between cross-national variations in the ITR on labour and cross-national variations in the prevalence of envelope wages ( $r_s = -.234$ ). Examining another indicator of tax rates, however, Figure 2b reports a strong statistically significant relationship at the 0.01 level between cross-national variations in current taxes on income, wealth and so forth and cross-national variations in the prevalence of envelope wages ( $r_s = -.772^{**}$ ) but not in the direction suggested by neo-liberal thought. As current tax rates rise, the prevalence of envelope wages falls, perhaps because higher tax levels provide greater state revenue for social protection and regulation of the labour market. No evidence is thus found to support the neo-liberal thesis that envelope wage payments are greater when tax rates are higher and that the consequent remedy is to reduce tax rates.

Turning to the neo-liberal assertion that envelope wages are more prevalent where there is greater public sector corruption, Transparency International's Corruption Perceptions Index (CPI) is here examined (Transparency International, 2013). As Figure 2c reveals, there is a strong correlation between the level of public sector corruption and the prevalence of envelope wage payments ( $r_s = -.684^{**}$ ). The higher is the perceived level of public sector corruption, the more prevalent are envelope wage payments. However, moving beyond perceptions and analysing corruption in practice, the finding is that there is no correlation between cross-national variations in the level of envelope wages and cross-national variations in either the share of firms expected to give gifts in meetings with tax officials ( $r_s = -.079$ ) or the percentage of firms making informal payments to public officials ( $r_s = .487$ ). Consequently, no support is found that public sector corruption is in practice associated with the level of envelope wages.

Reviewing the neo-liberal hypothesis therefore, there is no evidence that envelope wage payments are correlated with higher tax levels. Instead, if anything, the political economy tenet is supported that a lower prevalence of envelope wages is correlated with higher tax rates. Neither is there any evidence that higher levels of public sector corruption are correlated with the greater prevalence of envelope wages. Despite the neo-liberal discourse of the need for austerity measures, such as tax cuts, being politically strong in European nations during the economic crisis, the evidence-base that this is the

way forward is weak. Is it the case however, that envelope wages are more prevalent in nations with greater levels of state interference?

Evaluating the political economy hypothesis (H3)

To evaluate this along with the contrary political economy tenets that the prevalence of envelope wages will be smaller in economies with greater levels of social protection and redistribution via social transfers to protect workers from poverty, we evaluate the correlation between cross-national variations in the prevalence of envelope wages and cross-national variations in the level of severe material deprivation, income inequalities, social protection expenditure and effective redistribution via social transfers (see Figure 3).

INSERT FIGURE 3 ABOUT HERE

Evaluating the correlation between the cross-national variations in severe material deprivation and the prevalence of envelope wages, Figure 3a reveals a strong significant correlation at the 0.01 level ( $r_s = -.688^{**}$ ). Envelope wages are less prevalent in countries where the proportion of the population suffering from severe material deprivation is lower. As Figure 3b reveals, it is similarly the case that cross-national variations in the prevalence of envelope wages are significantly correlated with the level of income inequalities at the 0.05 level ( $r_s = .401^*$ ). In countries where the inequality in incomes between the top and lower quintile of the population is smaller, the prevalence of envelope wages is lower.

Interestingly, there is also a strong correlation between cross-national variations in the prevalence of envelope wages and the levels of state social protection expenditure (excluding old age benefits) as a proportion of GDP at the 0.01 level ( $r_s = -.688^{**}$ ); the greater the level of social protection expenditure, the lower is the prevalence of envelope wages, as displayed in Figure 3c. Support is therefore found for the political economy rather than neo-liberal explanation. In regulatory environments in which there is less material deprivation, more equality and greater social protection of citizens, envelope wages are less prevalent, suggesting that governments that intervene to protect citizens reduce the need for employees to turn to this illegitimate wage practice to secure a livelihood.

Reinforcing this, and as Figure 3d displays, there is also a significant correlation between state intervention to reduce the proportion of the population at risk of poverty, using social transfers, and the prevalence of envelope wages at the 0.05 level ( $r_s = -.454^*$ ). The more effective are nations at reducing the risk of poverty via social transfers, the less prevalent are envelope wages. State intervention to protect workers and reduce the risk of poverty therefore, appears to reduce the prevalence of envelope wages as political economists assert, rather than increase its prevalence as neo-liberals assert.

## Conclusions

This paper has reported fresh evidence on the prevalence of envelope wages during the current economic crisis across the EU-27 and evaluated critically competing explanations for the cross-national variations in the prevalence of envelope wages, namely the 'modernisation' thesis which purports that the prevalence of envelope wages decrease as

economies develop and modernise, the ‘neo-liberal’ thesis that envelope wages directly result from high taxes, corruption and state interference in the free market and the ‘political economy’ thesis that envelope wages are the outcome of inadequate levels of state intervention to protect citizens.

In 2013, 3 per cent of formal employees report receiving an undeclared envelope wage from their formal employer in addition to their declared salary (compared with 5 per cent in 2007) and the average proportion of gross yearly income received as an envelope wage has fallen from 43 per cent in 2007 to 36 per cent in 2013. This displays that the prevalence of envelope wages has fallen during the economic crisis as employers turn to flexible and cheaper declared labour and/or wholly undeclared labour rather than pay an additional envelope wage to formal employees. The broad cross-national variations nevertheless, remain the same as in the pre-crisis period. Envelope wages are more common in Central and Eastern European and Southern member states where they are more likely to be received for regular work, whilst they are less prevalent in West European and Nordic nations where such wages are also more likely to be received for extra work or overtime rather than for regular employment.

To explain these cross-national variations in the prevalence of envelope wages, the competing theories have been evaluated critically. The finding is that cross-national variations in the prevalence of envelope wages need to be explained using a combination of previous theories. Akin to the previous finding when studying wholly undeclared work in the pre-crisis period in the European Union (Williams, 2013), the finding is that despite the neo-liberal thesis being politically strong during the crisis period, the evidence base to support it is weak. The prevalence of envelope wages is not correlated with lower levels of taxation, corruption or too much state interference in work and welfare provision. Indeed, all of these tenets of the neo-liberal hypothesis are rejected. Instead, a synthesis of the modernisation and political economy perspectives explains cross-national variations in the prevalence of envelope wages. The resultant ‘neo-modernisation’ thesis thus explains the lower prevalence of envelope wages as associated with more developed, modernised and equal societies with higher taxation and social protection levels and more effective redistribution via social transfers to protect workers from poverty. Indeed, this explains the lower prevalence of envelope wages in Northern and Western Europe and its higher prevalence in the less developed, less interventionist and more unequal societies of East-Central and Southern Europe. This now requires further evaluation in relation to a wider range of developed and developing economies as well as using time-series data for individual countries and, if possible, multivariate regression analysis on a larger sample size to determine how important each characteristic is to the outcome whilst controlling for the other characteristics. The major barrier to doing this nevertheless, is the current lack of availability of cross-national comparative data on envelope wages to conduct such analyses.

This relationship between envelope wages and the modernisation of work and welfare provision also has clear policy implications. Much of the previous policy literature has focused upon whether repressive measures should be pursued such as higher penalties and better detection, and/or more incentives to make formalisation easier and more beneficial (e.g., Small Business Council, 2004; Williams and Renooy, 2013). This paper however, displays that wider economic and social policies are also potentially important in reducing illegitimate labour practices. Exploring which wider policies

should be pursued, it reveals that the pursuit of lower taxes and de-regulation, as advocated by neo-liberals, is not the way forward. Instead, reducing this illegitimate wage practice requires a modernisation of work and welfare through raising taxation, higher expenditure on social protection, coupled with the introduction of effective redistribution via social transfers and reducing income inequalities. Again, whether the same remedy emerges when other global regions are investigated, as well as whether it remains valid when time-series data is investigated for individual countries, requires further research.

In sum, a strong correlation has been identified between envelope wages and the modernisation of work and welfare arrangements. What is now required is for this to be applied longitudinally within countries as well as to other global regions, in order to evaluate whether the relationship holds. If this paper stimulates such further research, then it will have achieved its objective. If this also leads to recognition of the broader modernisation of work and welfare required to tackle such illicit wage arrangements, then it will have achieved its broader intention. What is certain, however, is that the neo-liberal remedy of decreasing taxes and minimizing state interference seems likely only to worsen the problem of illicit undeclared envelope wages, rather than ameliorate it.

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Table 1 % of employees receiving envelope wages in prior 12 months in the European Union, 2013: by country (2007 results in parentheses)

Country	Yes	No	Refusal	Don't know
Latvia	11(17)	83 (77)	4 (3)	2 (2)
Greece	7 (3)	86 (97)	4 (0)	1 (0)
Slovakia	7 (7)	86 (82)	4 (1)	1 (10)
Romania	7 (23)	73 (46)	4 (0)	16 (0)
Lithuania	6 (11)	90 (86)	2 (1)	2 (2)
Bulgaria	6 (14)	87 (73)	3 (6)	4 (7)
Hungary	6 (8)	85 (84)	8 (7)	1 (1)
Spain	5 (5)	91 (86)	3 (6)	1 (10)
Czech republic	5 (3)	93 (93)	2 (4)	0 (0)
Estonia	5 (8)	91 (88)	3 (1)	1 (3)
Poland	5 (11)	90 (84)	3 (2)	2 (3)
Slovenia	4 (5)	91 (92)	4 (2)	1 (1)
Belgium	4 (6)	95 (94)	1 (0)	0 (0)
Netherlands	3 (2)	96 (98)	0 (0)	1 (0)
Portugal	3 (4)	93 (86)	3 (4)	1 (6)
Luxembourg	3 (1)	95 (98)	1 (0)	1 (1)
Ireland	2 (2)	93 (73)	3 (3)	2 (22)
Italy	2 (7)	90 (79)	6 (10)	2 (4)
UK	2 (1)	96 (97)	0 (1)	2 (1)
Austria	2 (4)	90 (85)	7 (5)	1 (6)
Cyprus	2 (4)	93 (93)	1 (0)	4 (3)
Denmark	2 (2)	96 (97)	1 (0)	1 (1)
Germany	1 (1)	96 (96)	2 (2)	1 (1)
Finland	1 (3)	96 (97)	1 (0)	0 (0)
France	1 (1)	98 (96)	0 (1)	1 (2)
Sweden	1 (3)	99 (97)	2 (0)	3 (0)
Malta	0 (1)	95 (96)	2 (0)	3 (3)
EU-27	3 (5)	93 (89)	2 (3)	2 (3)
Croatia	8 (-)	86	4	2

Source: Eurobarometer survey on undeclared work 2007 and 2013

Figure 1 Evaluation of the modernisation thesis

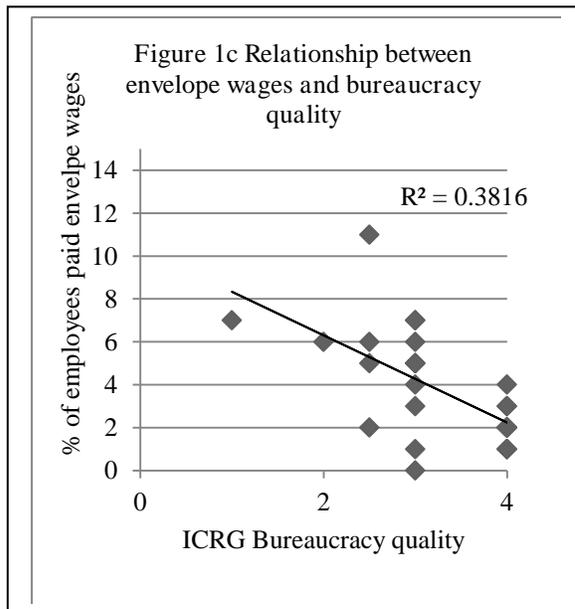
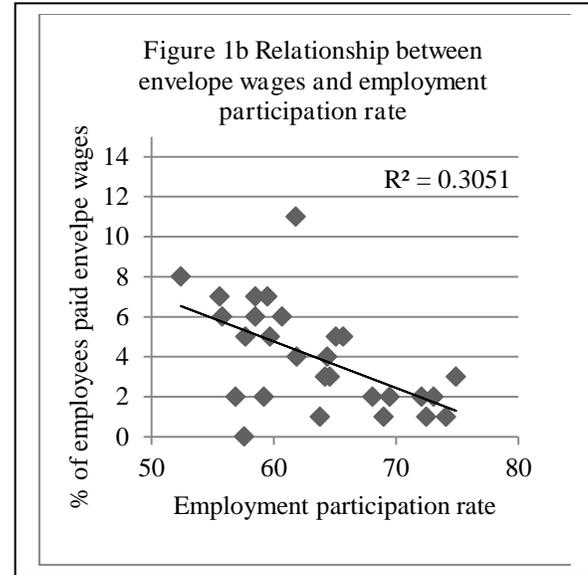
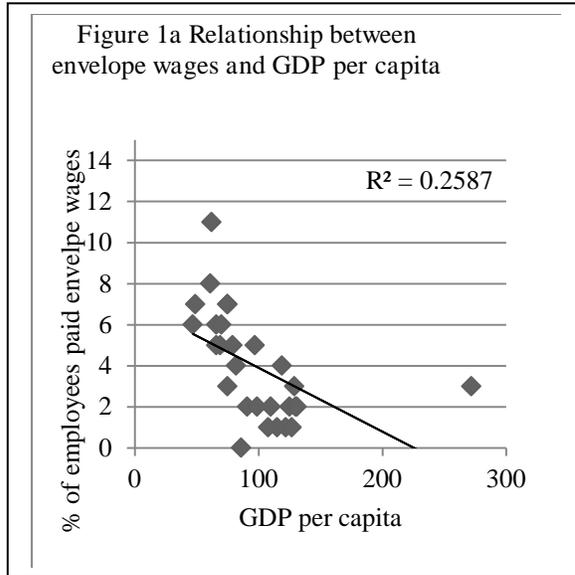


Figure 2 Evaluation of the neo-liberal thesis

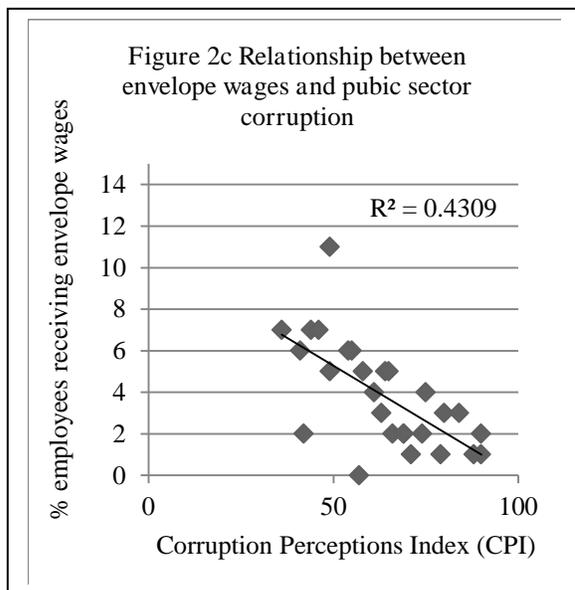
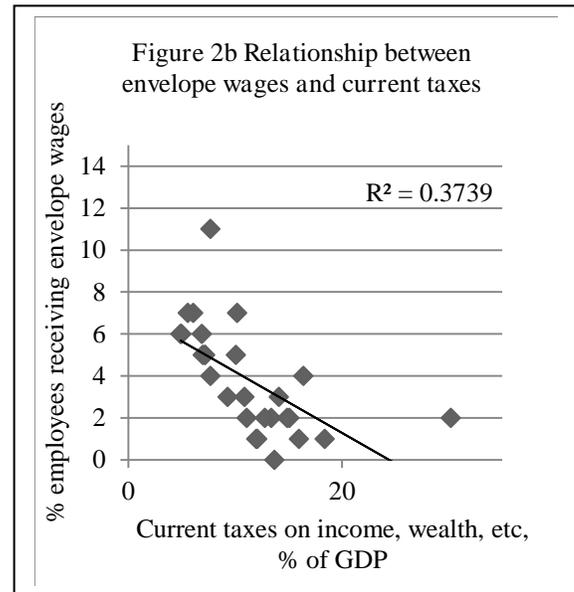
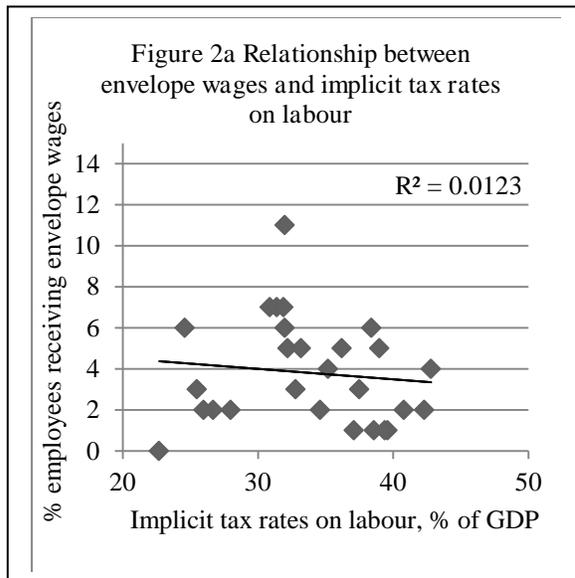


Figure 3 Evaluation of the political economy thesis

