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Explaining and tackling unregistered employment: evidence from an employers' survey

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Abstract

When explaining and tackling employers participating in the informal economy, they have been conventionally viewed as rational economic actors who engage when the benefits outweigh the costs, and thus their participation is deterred by increasing the sanctions and/or risks of detection. An emergent social actor approach, however, has explained employers as engaging in the informal economy when there is a lack of vertical trust (i.e., their norms, values and beliefs are not in symmetry with the laws and regulations) and horizontal trust (i.e., they believe many others are being non-compliant). The aim of this paper is to evaluate these competing perspectives by reporting a 2015 survey of 450 employers in FYR Macedonia. The finding is that although there is no association between employers using unregistered workers and the perceived level of penalties and risks of detection, there is a strong significant association with both the level of vertical and horizontal trust. Those whose beliefs do not align with the laws and regulations display a significantly greater likelihood of employing unregistered workers, as do those who perceive a larger proportion of the population to be engaged in the informal economy. The theoretical and policy implications are then discussed.

Keywords: informal economy; tax morale, institutional theory; trust; tax evasion; labour law.

Introduction

The aim of this paper is to explain why employers use unregistered workers and how this illegal employment practice can be tackled. The conventional dominant explanation is that employers are rational economic actors who employ workers without a written contract or terms of employment when the pay-off is greater than the expected cost of being caught and punished (Allingham and Sandmo 1972). To tackle this illegitimate practice, therefore, the policy approach is to increase the actual or perceived penalties and probability of detection. Over the past decade, however, an alternative social actor approach has emerged. Grounded in institutional theory (North 1990), this has explained employers use of unregistered workers as occurring when there is a lack of "vertical trust", measured by a non-alignment between the norms, values and beliefs of employers and the laws and regulations of the formal institutions (Alm et al. 2010; Cummings et al. 2009; Kirchler 2007; Murphy 2008; Torgler, 2007; Williams and Horodnic, 2015a,b). The policy approach is therefore to align the informal institutions (i.e., the norms, values and beliefs of citizens) with the laws and regulations of the formal institutions (Alm et al. 2012; Alm and Torgler 2011; Torgler 2012; Williams and Horodnic 2016a,b). In recent years, moreover, this social actor approach has started to additionally view employers as

using unregistered workers when they lack horizontal trust that other employers are operating in a compliant manner (Baric 2016; Williams et al. 2017). The solution is therefore to improve vertical and horizontal trust. In this paper, the intention is to evaluate these competing ways of explaining and tackling employers use of unregistered workers.

This issue of tackling unregistered employment is currently high on the political agenda in Central and Eastern Europe and well beyond, exemplified by the European Commission establishing the European Platform Tackling Undeclared Work (European Commission 2016) and the International Labour Organisation passing Recommendation 208 (ILO 2015) to deal with this problem. The reason it is high on the political agenda is because employers who employ workers without written contracts or terms of employment not only reduce the ability of the state to protect the quality of working conditions, but it also weakens trade union and collective bargaining, and exerts pressure on businesses acting legitimately to themselves employ unregistered workers to deal with the unfair competition they witness (Andrews *et al*. 2011; Williams 2014).

To advance understanding of how this phenomenon can be explained and tackled, therefore, section 2 reviews the previous literature on unregistered employment and draws upon the study of the wider informal economy to develop hypotheses on how to explain and tackle this illegal practice of unregistered employment. To test these hypotheses, section 3 then reports the data used, namely the 2015 GREY survey of employers in FYR Macedonia, involving 450 face-to-face interviews. Section 4 reports the findings regarding the validity of the different ways of explaining and tackling unregistered employment, while section 5 summarises the theoretical and policy implications.

Explaining and tackling unregistered employment: theoretical framing and hypotheses development

The informal economy refers to paid work that is not unregistered by, or not declared to, the authorities for tax, social security and/or labour purposes (Khan 2017; Slack et al. 2017; Williams 2017; Williams and Windebank 1998; Windebank and Horodnic 2017). A form of waged work which is wholly undeclared and unregistered is unregistered employment, which is paid work without a legal written contract or terms of employment. This is the focus of this paper. Other work in the informal economy includes employers not declaring some or all their income and formal employers evading paying their full tax and social contributions on their formal employees by paying some of their salary as an official declared wage and the rest as an undeclared (envelope) wage (ILO 2015; Williams 2017).

Although the informal economy as a whole has been subject to widespread evaluation in recent years (for a review, see Williams & Schneider 2016), unregistered employment has received little attention. The exceptions are Hazans (2011) and Williams and Kayaoglu (2017), who both evaluate its prevalence and distribution. Williams and Kayaoglu (2017) find that in the European Union, 5 per cent of employees report being in unregistered employment in 2013, while Hazans (2011), using European Social Survey data on 30 countries for the period between 2004 and 2009, finds that the proportion of employees without a contract is 2.7% in Nordic countries, 9.5% in Southern Europe, and 5 per cent in Western and East-Central Europe. Analysing its distribution, Williams and Kayaoglu (2017) find no significant association between various socio-demographic and socio-economic factors (i.e., gender, age, educational level, and occupational status), although Hazans (2011) finds that unregistered employment is more likely among those with fewer years in education, students, women, and that older and younger employees more likely to work without a contract.

Both these studies of unregistered employment, like most studies of the wider informal economy, are based on employee surveys. Few employer surveys have been conducted. This is

particularly important when evaluating the validity of policy approaches for tackling unregistered employment, and the informal economy more widely. Overall, it is employers, rather than employees, who decide whether an employee should have a written contract or not, and it is employers, not employees, who are penalised if caught (Williams 2018). Indeed, this is also the case in FYR Macedonia, which is the focus of this paper (Mojsoska Blazevski and Williams 2018). Until now, however, studies of unregistered employment and the wider informal economy have only evaluated whether employees are rational economic actors or social actors (Horodnic and Williams 2018; Williams and Franic 2016; Williams and Kayaoglu 2017; Williams and Besnik 2018). More important when explaining and tackling unregistered employment, and the wider informal economy, is whether employers are rational economic actors or social actors. Here, therefore, each way of explaining and tackling informality is here reviewed and hypotheses developed.

The view that employers using unregistered workers are "rational economic actors" has its contemporary roots in the seminal work of Allingham and Sandmo (1972) which views them as doing so when the benefits are greater than the costs. The policy solution therefore, is to ensure that the costs outweigh the benefits. This is pursued by firstly increasing the actual and/or the perceived risk of detection and secondly, the actual and/or perceived level of penalties for those caught. This is currently the dominant policy approach pursued by governments in Central and Eastern Europe and beyond (Williams and Puts 2017; ILO 2017). Indeed, this is also the dominant policy approach in FYR Macedonia where the emphasis of the tax administration and labour inspectorate when tackling unregistered employment and the wider informal economy is on increasing the penalties and risks of detection, to ensure that the costs outweigh the benefits (Mojsoska Blazevski and Williams 2018).

When analysing the findings of surveys of unregistered employees, however, the findings are not conclusive that this is a rational economic decision on their part. Analysing previous employee surveys, the finding is that while some confirm that the likelihood of participation in unregistered employment and the wider informal economy is significantly lower when the levels of penalties and risks of detection are higher (Feld and Frey 2002; Mas'ud *et al.* 2015; Mazzolini *et al.* 2017), others find no significant association (Hartl *et al.* 2015; Shaw *et al*, 2008; Williams and Franic 2015, 2016), and yet others that increasing the actual and/or perceived deterrents leads to greater non-compliance (Chang and Lai 2004; Hofmann *et al.* 2017; Kaplanoglou and Rapano, 2015; Murphy 2005, 2008; Murphy and Harris 2007). Given that employees are not penalised if caught working unregistered, this is not surprising.

Analysing the few employer surveys conducted, however, the results are again inconclusive. While in Estonia, Latvia and Lithuania, the finding is that the higher the risk of detection and the penalty, the lower the tax evasion and misreporting by employers (Putniņš and Sauka 2017), in Moldova and Romania no significant relationship is identified (Putniņš *et al*. 2018). In Greece, meanwhile, the finding in a sample of small and medium-size enterprises is that the coercive power of authorities has a negative effect on both intended tax compliance and voluntary tax compliance, and yet a positive effect on enforced tax compliance (Kaplanoglou et al. 2016). However, and despite previous studies of both employees and employers being inconclusive about the association between non-compliance and the level of penalties and risks of detection, this rational economic actor approach remains dominant. Thus, the following hypothesis will be tested:

> *Rational economic actor hypothesis* (H1): the higher are the perceived penalties and risks of detection, the lower the likelihood of employers using unregistered workers, ceteris paribus.
> *H1a:* the higher are the perceived penalties, the lower the likelihood of employers using unregistered workers.

H1b: the higher are the perceived risks of detection, the lower the likelihood of employers using unregistered workers.

Since the turn of the millennium, it has started to be recognised that many employers and employees do not participate in the informal economy even when the benefit/cost ratio suggests they should (Alm et al. 2010; Kirchler 2007; Murphy 2008; Murphy and Harris 2007). The outcome has been the emergence of a "social actor" approach. This argues that many are compliant even when it would be rational for them to be non-compliant because they self-regulate themselves (Alm and Torgler 2006, 2011; Cummings et al. 2009; McKerchar et al. 2013; Torgler 2011; Torgler and Schneider 2007).

This approach has its origins in the work of Georg von Schanz (1890) who argued that a tax contract exists between the state and its citizens, which some six decades later, was further advanced by the German "Cologne school of tax psychology" (see Schmölders 1952, 1960, 1962; Strümpel 1969) which viewed the breakdown of this contract as a primary determinant of tax non-compliance (Schmölders 1960). Following the ascendancy of the rational economic actor approach from the 1970s, this approach receded. However, over the past decade or so, it has re-emerged (Alm et al. 2012; Kirchler 2007; Torgler 2007, 2011). The outcome has been calls to improve the trust of citizens in the state so that voluntary compliance will result (Alm and Torgler 2011; Torgler 2012; Williams 2014; Williams 2017).

As such and drawing inspiration from institutional theory (Helmke and Levistky 2004; North 1990), an alternative way of tackling unregistered employment and the wider informal economy has re-emerged (Williams and Horodnic 2015a; Williams *et al.* 2015). From this institutionalist perspective, all societies have formal institutions, which are laws and regulations defining 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). Unregistered employment thus arises when there is a lack of vertical trust (measured by the gap between the formal institutions and informal institutions). When vertical trust is lower, the prevalence of unregistered employment will be higher (cf. Kistruck *et al.* 2015; Webb *et al.* 2009). The greater the lack of vertical trust, the more prevalent will be unregistered employment (cf. Williams and Horodnic 2015a,b).

Analysing employees' views of the formal rules of the game, this has been confirmed regardless of the type of informal work considered. A direct link has been identified between the level of vertical trust and working without contract (Williams and Horodnic 2015b, 2016a; Windebank and Horodnic 2017) as well as salary under-reporting (Williams and Horodnic 2015a, 2017b). Turning to the few surveys of employers rather than employees, again a link has been identified between the level of income and wage underreporting and tolerance to tax evasion in Estonia, Latvia and Lithuania (Putniņš and Sauka 2017) as well as in Romania and Moldova (Putniņš *et al*. 2018).

In the past few years, furthermore, it has been asserted to be not just the lack of vertical trust (i.e., formal/informal institutional asymmetry) that leads to informality, but also the lack of horizontal trust that others are being compliant (Baric, 2016; Williams et al. 2017). When employers perceive that a large majority of their competitors are not adhering to the formal rules of the game, then the argument is that they too decide to do so. Indeed, the lower the level of horizontal trust (i.e., the greater the perceived propensity of other employers to be non-compliant), the greater will be likelihood that employers will be themselves non-compliant. To evaluate the validity of this social actor approach towards explaining and tackling employers use of unregistered workers, therefore, the following hypothesis can be evaluated:

Social actor hypothesis (H2): the greater the level of vertical and horizontal trust, the lower is the likelihood of employers using unregistered workers.

H2a: the greater is the level of vertical trust, the lower the likelihood of employers using unregistered workers.

H2b: the greater the level of horizontal trust, the lower the likelihood of employers using unregistered workers.

Methodology

To evaluate these two contrasting ways of explaining and tackling unregistered employment, we here use data from a representative business survey conducted in 2015 in FYR Macedonia, a country with one of the highest levels of informal work in Europe (Medina and Schneider 2018). The sampling methodology ensured that the samples are proportionate to the universe in each country with respect to firm size, region and sector. The owners or managers of a representative sample of 450 businesses were surveyed.

Given the nature of the topic, and to build up rapport with the participants, the survey adopted a gradual approach to the more sensitive questions. The interview schedule thus started by asking the employers about their satisfaction with the business environment, followed by questions on the acceptability of some uncompliant behaviours and only then questions regarding whether they consider they are affected by the existence of the businesses which employ informal practices and their engagement in such practices. Examining the responses of the interviewers regarding their perceived reliability of the interviews, in 94 per cent of cases, interviewers reported excellent or fair cooperation from the employers. Cooperation was bad, or the interviewer did not assess the perceived reliability of the interviews in only 1 per cent of cases.

To evaluate the hypotheses, we here use ordered logit regression analysis. The dependent variable is a categorical variable showing how often employers hire a worker without a contract: 1 = never, 2 = sometimes, 3 = in most cases, 4 = always.

To evaluate whether there is an association between employers hiring unregistered workers without a written contract or terms of employment, and the two types of policy approach, four key explanatory variables are used. On the one hand, the two variables investigating the elements of the "rational economic actor" approach are:

- *Detection risk*: A categorical variable describing respondent's estimation about the probability that the typical company in his/her industry would be caught if the company was to underreport its number of employees: 1 = less than 30%, 2 = 30 to 60%, 3 = more than 60%.

- *Expected sanction*: A categorical variable measuring anticipated penalties when the company were caught for deliberately misreporting: 1=nothing serious or a small fine, 2=a serious fine that would affect the competitiveness of the company, 3=a serious fine that would put the company at risk of insolvency, 4=the company would be forced to cease operations.

On the other hand, the two variables investigating the vertical and horizontal trust elements respectively of the "social actor" approach are:

- *Tax morale*: A categorical variable recorded using the following survey question - To what extent do you agree with the statements that underreporting annual revenue or turnover to evade taxes is acceptable. This variable is measured on a 10-point Likert scale, 1 means completely disagree, 10 means completely agree. Thus, the lower the tax morale index value, the higher is the tax morale, and vice versa

- *Estimated share*: A categorical variable describing the respondent's estimation of the overall share of the informal economy in his/her country: 1=less than 10%, 2=10 to 20%, 3=21 to 30%, 4=31 to 50%, 5=50% or more.

A series of individual-level and firm-level variables extracted from previous studies analysing the likelihood of participation in the informal economy (Ali and Najman, 2018; Hudson *et al.* 2012; Putniņš and Sauka 2017; Putniņš *et al.* 2018; Williams *et al.* 201) are used as control variables as detailed below.

- *Sector:* A categorical variable describing the main activity of the company: 1=agriculture, 2=hotels and restaurants, 3=services, 4=construction, 5=transport and communications, 6=trade, 7=retail, 8=industry, 9=health, 10=other.
- *Number of employees*: A categorical variable describing the total number of currently employed people in the observed company (excluding owners and partners): 1=sole proprietor's and micro (0-9 employees), 2=small (10-49 employees), 3=medium and large (50+ employees).
- *Status business*: A categorical variable describing the legal status of observed company: 1=sole proprietorship, 2=private limited company, limited by shares (LTD.), 3=public Ltd Company (PLC), 4=other.
- *Age business*: A categorical variable showing how many years has the observed company been trading (this includes under all ownerships and all legal statuses): 1=less than 5 years, 2=6 - 10 years, 3=11 - 20 years, 4=more than 20 years.
- *Business locality*: A categorical variable describing in what kind of locality does the observed company/ firm carry out its main activity: 1=the capital, 2=big city (regional centre), 3=small town, 4=village or rural area, 5=the entire country, 6=both inside the country and outside the country, or outside the country only.
- *Vat registered*: A dummy variable describing whether the respondent's company is VAT registered: 0=no, 1=yes.

For the descriptive analysis we report the crude data for each variable to provide an accurate description and to minimise the bias that one would encounter by excluding those employers who did not provide responses to all the variables in the analysis but provided responses for some questions. In the regression analysis, on the other hand, only those respondents for which data on each variable was available for each model were analysed due to the technical requirements of this type of analysis

Results

Examining the surveyed employers, 33.2 per cent never hired a worker without a contract, 40.8 per cent sometimes did so, 21.8 per cent in most cases did so, and 4.3 per cent always did so (see Table 1). This displays how commonly employers employ workers on an unregistered basis without a written contract or terms of employment in FYR Macedonia.

INSERT TABLE 1 ABOUT HERE

However, not all types of employer were equally likely to employ unregistered workers. Examining those who in most cases or always employed unregistered workers (i.e., the last two columns of Table 1), the finding is that employers in the construction, transport and communications, trade and retail sectors are far more likely than those in the health, agriculture or service industries to use unregistered workers. So too is this more likely in micro-enterprises and small businesses, in sole proprietorship businesses, and in new businesses less than five years old, in small towns and villages or rural areas, and in VAT registered businesses.

Analysing the policy approaches, Table 1 firstly reveals so far as the rational economic actor approach is concerned that there does not appear to be any strong correlation between the use of unregistered workers by employers and their perception of the risk of detection. Although those perceiving a high risk of detection are less likely to always or in most cases employ

unregistered workers, it is not markedly less than those perceiving a low risk of detection. Similarly, there is no clear relationship between the use of unregistered workers by employers and their perceptions of the expected sanction. Although those who perceive the sanction to be nothing serious or a small fine are more likely to employ unregistered workers than those who believe that a serious fine would result, those who believe that their company would be forced to cease trading are surprisingly markedly more likely to employ unregistered workers.

Examining whether the likelihood of employers using unregistered employment is correlated with their levels of vertical and horizontal trust, Table 1 firstly reveals that the greater their adherence and belief in the formal rules of the game (i.e., the laws and regulations), the less likely are they to always or in most cases employ unregistered workers. This appears to be strongly correlated. Similarly, those who estimate the share of the informal economy in FYR Macedonia as higher are markedly more likely to in most cases or always use unregistered workers. Some 38.5 per cent of those who perceive the informal economy to be 50 per cent or more of GDP always or in most cases employ unregistered workers compared with just 12.5 per cent of those who perceive the informal economy to be less than 10 per cent of GNP.

These, however, are descriptive statistics. They do not hold constant the other variables which may influence these correlations. To do so, Table 2 therefore presents an ordered logit regression analysis. This adopts a staged approach. The issue of horizontal trust is included in all the models. Model 1 adds the influence of vertical trust, model 2 the risk of detection, model 3 the expected sanction and model 4 includes all these factors. Before examining the correlation between these explanations for employers using unregistered workers, it is first necessary to examine the types of business more likely to use unregistered workers when all other variables are held constant.

INSERT TABLE 2 ABOUT HERE

Table 2 reveals similar results across all models. Compared with the construction industry, manufacturing firms are significantly less likely to employ unregistered workers, as is the health sector. Similarly, compared with sole proprietors and micro-enterprises, small businesses are significantly less likely to employ unregistered workers, as are private limited companies and public limited companies significantly less likely to employ unregistered workers than sole proprietorships, possible due to the relative absence of a formal human resource management function in such businesses. The age of the business, however, is not significantly associated with the likelihood of using unregistered workers. Businesses in small towns, however, are significantly less likely to employ unregistered workers than those in the capital city of Skopje and larger cities.

To evaluate firstly the rational economic actor approach, it can be seen in models 3 and 4 that there is no significant association between the likelihood of employers using unregistered workers and the expected sanction for doing so (refuting Hypothesis H1a). Meanwhile, models 2 and 4 display a weak but significant correlation between the likelihood of employers using unregistered workers and the risk of detection. Employers who perceive the probability of detection as greater than 60 per cent are significantly less likely to employ unregistered workers than those who perceive the probability of detection as less than 30 per cent (confirming hypothesis H1b).

Secondly, and evaluating the social actor explanation, there is firstly a strong significant association between the level of vertical trust and the likelihood of employers using unregistered workers. The lower the level of vertical trust (measured by employers' tolerance of those who engage in the informal economy, or what is her called tax morale), the significantly greater is the likelihood of the employer using unregistered workers (confirming Hypothesis H2a). An increase in the tax morale index by one unit increases the share of employers always

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hiring workers without a contract by 0.5 percentage points. This reinforces previous work on this subject regarding the wider informal economy (Williams and Franic 2015; Williams and Horodnic 2015a,b,c, 2017; Williams et al. 2015).

Similarly, it is shown across all models that there is a strong significant association between the level of horizontal trust and the likelihood of employers using unregistered workers. The lower the level of horizontal trust (measured by the employers estimate of the share of the informal economy in the country), the significantly greater is the likelihood of the employer using unregistered workers (confirming Hypothesis H2b). An employer who estimates that the probability of being caught for under-reporting its number of employees is over 60 per cent has a 1.9 percentage points lower probability of always hiring unregistered workers than an employer who estimates that this probability is less than 30 per cent.

Discussion and Conclusions

To explain why employers use unregistered workers and how this illegal employment practice can be tackled, this paper has evaluated both a rational economic actor explanation which views employers as using unregistered workers when the benefits outweigh the costs, and an emergent social actor approach which explains employers as using unregistered workers when they lack both vertical trust (i.e., their norms, values and beliefs are not in symmetry with the laws and regulations) and horizontal trust (i.e., they believe many others are being non-compliant). Reporting a 2015 survey of 450 employers in FYR Macedonia, the finding is that although there is no association between employers using unregistered workers and the perceived level of penalties, and only a weak significant association with the probability of detection, there is a strong significant association with both the level of vertical and horizontal trust. Those whose norms differ to the laws and regulations, display a significantly greater likelihood of employing unregistered workers, as do those who perceive a larger proportion of the population to be engaged in the informal economy.

In terms of theoretical advances therefore, this paper makes four major contributions. Firstly, despite numerous studies explaining participation in the wider informal economy, few studies have sought to explain unregistered employment and how this can be tackled. Secondly, most studies explaining participation in the informal economy have focused upon employees and few have evaluated employers' reasons. This paper has filled these two lacunae. Thirdly, by revealing that there is no association between employers using unregistered workers and the perceived level of penalties, and only a weak significant association with the probability of detection, but a strong association between vertical trust and participation in unregistered employment, it confirms the usefulness of an institutional theory lens. The greater the degree of asymmetry between the laws and regulations of formal institutions and the norms, values and beliefs of employers, the greater is the prevalence of unregistered employment. Fourth and finally, and importantly for advancing institutional theory, the finding is that there is a strong association between horizontal trust and the likelihood of employers using unregistered workers. This is a novel finding not before revealed.

In terms of policy implications therefore, the finding is that tackling unregistered employment will require a shift away from treating employers primarily as rational economic actors. Increasing the penalties for employing unregistered workers is not related to the propensity to do so, and even if increasing the probability of detection is significantly related to the propensity for employers to use unregistered workers, it is a weak association. Instead, there is a need to recognise that employers are primarily social actors. There is a strong significant association between employers using unregistered workers and their lack of both vertical trust (i.e., their norms, values and beliefs do not align with the formal laws and regulations) and horizontal trust (i.e., they believe many other employers are employing

unregistered workers). To tackle unregistered employment, therefore, increasing the level of deterrents will have little impact, while measures that improve the social contract between the government and employers (i.e., improving vertical trust) will have a significant impact. On the one hand, this can be achieved by changing employers' norms, values and beliefs regarding the acceptability of using unregistered workers, using education and awareness raising campaigns. However, it is unlikely that this will be effective unless formal institutions themselves change. On the other hand, therefore, there is also a need to change the formal institutions, such as by eradicating public sector corruption and improving procedural and distributive justice and fairness (Horodnic 2018; Horodnic and Williams 2018; Molero and Pujol 2012; Murphy 2005; Williams and Horodnic 2015a). There is also a need to improve horizontal trust. To do so, information on their peers might be provided to employers. Many employers believe that the informal economy is larger than most measurements find. Contrary to what is often the case, therefore, governments could actively publicise the high level of employer compliance. Studies of UK taxpayers reveal that such messages have a strong significant impact on increasing compliance (Hallsworth *et al*, 2017).

This paper, nevertheless, has limitations. First, it is based on just one country. Future studies, therefore, could evaluate whether similar findings are identified when conducting employer surveys in other Central and Eastern European countries. Second, and importantly, although this study reveals that the propensity of employers to use unregistered workers is significantly associated with their levels of vertical and horizontal trust, it does not uncover the reasons for this lack of vertical and horizontal trust. Future quantitative as well as in-depth qualitative research could be conducted, therefore, to find out these reasons, including which formal institutions lead to low levels of vertical trust, and why a lack of horizontal trust prevails, so that targeted policy measures can be pursued to improve the level of trust between employers as well as between employers and government.

In sum, this paper has revealed the importance of the "social actor" approach in both explaining as well as tackling the propensity of employers to use unregistered workers, and the need for a shift away from "rational economic actor" explanations and the associated deterrence approach that seeks to increase the penalties and probability of detection. If this paper stimulates similar research to be conducted in other countries as well as more in-depth research on the reasons for the lack of vertical and horizontal trust, then it will have fulfilled one of its intentions. If this then leads to a reconsideration of how unregistered employment is tackled, and to greater emphasis being put on tackling the low the levels of vertical and horizontal trust that lead to higher levels of unregistered employment, then it will have fulfilled its wider intention.

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Table 1. Hiring a worker without a written contract (%)

	Never	Someti mes	In most cases	Always
Total	33.2	40.8	21.8	4.3
Sector				
Agriculture	31.3	50.0	12.5	6.3
Hotels and restaurants	13.8	75.9	6.9	3.5
Services	34.0	50.0	8.0	8.0
Construction	16.0	36.0	40.0	8.0
Transport and communications	47.4	21.1	23.7	7.9
Trade	20.6	38.4	41.1	0.0
Retail	31.4	34.3	28.6	5.7
Industry	46.0	36.0	14.0	4.0
Health	57.1	39.3	3.6	0.0
Other	43.8	50.0	6.3	0.0
Number of employees				
Sole proprietor's and micro (0-9 employees)	32.9	41.3	21.5	4.4
Small (10-49 employees)	25.6	38.5	30.8	5.1
Medium and large (50+ employees)	66.7	33.3	0.0	0.0
Status business				
Sole proprietorship	12.7	41.3	41.3	4.8
Private limited company, limited by shares (LTD.)	32.7	41.5	21.2	4.6
Public Ltd Company (PLC)	46.2	41.0	10.3	2.6
Other	45.0	50.0	0.0	5.0
Age business				
Less than 5 years	28.8	41.3	21.3	8.8
6 - 10 years	36.8	36.8	23.9	2.6
11 - 20 years	29.7	46.1	21.9	2.3
More than 20 years	39.7	38.2	16.2	5.9
Estimated share				
Less than 10%	53.1	34.4	12.5	0.0
10 to 20%	42.7	45.1	9.8	2.4
21 to 30%	39.5	44.4	16.1	0.0
31 to 50%	22.8	39.6	30.7	6.9
50% or more	24.2	37.4	30.3	8.1
Business locality				
The capital	52.5	39.0	5.1	3.4
Big city (regional centre)	35.8	39.1	21.7	3.4
Small town	15.9	42.0	37.7	4.4
Village or rural area	27.3	36.4	27.3	9.1
The entire country	16.1	54.8	19.4	9.7
Both inside the country and outside the country, or outside the country only	38.9	38.9	16.7	5.6
Vat registered				
No	36.4	40.9	15.2	7.6
Yes	31.5	41.4	23.3	3.8
Tax morale				
1 and 2	34.5	42.9	18.1	4.4
3 and 4	44.6	41.1	14.3	0.0
5 and 6	23.2	35.7	33.9	7.1
7 and 8	7.7	50.0	38.5	3.9

9 and 10	20.0	26.7	46.7	6.7
Detection risk				
Less than 30%	36.6	36.6	21.8	4.9
30 to 60%	27.2	41.8	28.2	2.9
More than 60%	34.0	45.1	16.7	4.2
Expected sanction				
Nothing serious or a small fine	36.2	32.4	24.8	6.7
A serious fine that would affect the competitiveness of the company	29.9	45.8	22.6	1.7
A serious fine that would put the company at risk of insolvency	38.4	43.0	15.1	3.5
The company would be forced to cease operations	25.9	33.3	25.9	14.8

Source: Authors' own work based on the GREY Survey in FYROM

Table 2. Likelihood of unregistered employment, ordered logit regression

	Model 1		Model 2		Model 3		Model 4	
	Coefficient (Standard error)	Marginal effect	Coefficient (Standard error)	Marginal effect	Coefficient (Standard error)	Marginal effect	Coefficient (Standard error)	Marginal effect
Sector (RC: Construction)								
Agriculture	-0.635 (0.675)	-0.035	-0.584 (0.663)	-0.028	-0.721 (0.655)	-0.035	-0.299 (0.685)	-0.016
Hotels and restaurants	-0.826 (0.557)	-0.042	-0.548 (0.558)	-0.027	-0.647 (0.548)	-0.032	-0.766 (0.563)	-0.035
Services	-0.391 (0.512)	-0.023	-0.163 (0.516)	-0.009	-0.182 (0.513)	-0.011	-0.146 (0.533)	-0.009
Transport and communications	-0.749 (0.547)	-0.040	-0.693 (0.550)	-0.032	-0.599 (0.540)	-0.030	-0.546 (0.557)	-0.027
Trade	-0.643 (0.462)	-0.035	-0.478 (0.464)	-0.024	-0.516 (0.460)	-0.027	-0.448 (0.469)	-0.023
Retail	-0.807 (0.493)	-0.042	-0.534 (0.496)	-0.027	-0.571 (0.494)	-0.029	-0.610 (0.502)	-0.030
Industry	-1.364 (0.519)***	-0.058	-1.275 (0.523)**	-0.048	-1.176 (0.515)**	-0.048	-1.174 (0.541)**	-0.046
Health	-1.600 (0.719)**	-0.063	-1.342 (0.703)*	-0.049	-1.303 (0.707)*	-0.051	-1.472 (0.725)**	-0.052
Other	-0.417 (0.801)	-0.025	-0.308 (0.797)	-0.017	-0.207 (0.796)	-0.012	-0.170 (0.821)	-0.010
Number of employees (RC: Sole proprietor's and micro (0-9 employees))								
Small (10-49 employees)	0.702 (0.363)*	0.035	0.684 (0.364)*	0.034	0.761 (0.361)**	0.040	0.696 (0.372)*	0.035
Medium and large (50+ employees)	-0.553 (0.709)	-0.017	-0.384 (0.707)	-0.012	-0.505 (0.681)	-0.016	-0.422 (0.741)	-0.014
Status business (RC: Sole proprietorship)								
Private limited company, limited by shares (LTD.)	-0.587 (0.317)*	-0.027	-0.637 (0.315)**	-0.030	-0.626 (0.315)**	-0.031	-0.445 (0.322)	-0.020
Public Ltd Company (PLC)	-0.888 (0.461)*	-0.037	-0.998 (0.45)**	-0.041	-1.063 (0.453)**	-0.044	-0.842 (0.470)*	-0.033
Other	-0.597 (0.688)	-0.027	-0.843 (0.662)	-0.036	-1.001 (0.656)	-0.043	-0.443 (0.685)	-0.020
Age business (RC: Less than 5 years)								
6 - 10 years	-0.291 (0.307)	-0.013	-0.263 (0.308)	-0.011	-0.240 (0.301)	-0.011	-0.335 (0.314)	-0.015
11 - 20 years	-0.202 (0.308)	-0.009	-0.211 (0.309)	-0.009	-0.218 (0.303)	-0.010	-0.187 (0.314)	-0.009
More than 20 years	-0.613 (0.358)*	-0.024	-0.638 (0.362)*	-0.024	-0.611 (0.351)*	-0.024	-0.608 (0.366)*	-0.024
Estimated share (RC: 50% or more)								
Less than 10%	-1.640 (0.456)***	-0.054	-2.051 (0.467)***	-0.063	-1.769 (0.448)***	-0.059	-1.808 (0.483)***	-0.057
10 to 20%	-1.191 (0.343)***	-0.046	-1.377 (0.34)***	-0.053	-1.281 (0.333)***	-0.050	-1.225 (0.351)***	-0.048
21 to 30%	-0.980 (0.33)***	-0.041	-1.078 (0.328)***	-0.046	-0.967 (0.324)***	-0.043	-1.005 (0.334)***	-0.042
31 to 50%	-0.319 (0.295)	-0.017	-0.359 (0.295)	-0.020	-0.315 (0.292)	-0.018	-0.303 (0.298)	-0.017
Business locality (RC: Small town)								
The capital	-1.901 (0.437)***	-0.061	-1.843 (0.432)***	-0.062	-1.758 (0.424)***	-0.057	-1.963 (0.448)***	-0.063
Big city (regional centre)	-0.652 (0.288)**	-0.032	-0.739 (0.294)**	-0.037	-0.553 (0.288)*	-0.028	-0.675 (0.299)**	-0.034

Village or rural area	-0.510 (0.635)	-0.027	-0.485 (0.671)	-0.027	-0.239 (0.637)	-0.014	-0.471 (0.680)	-0.026
The entire country	-0.307 (0.458)	-0.017	-0.537 (0.462)	-0.029	-0.387 (0.453)	-0.021	-0.343 (0.472)	-0.020
Both inside the country and outside the country, or outside the country only	-0.662 (0.578)	-0.033	-0.680 (0.569)	-0.035	-0.717 (0.572)	-0.034	-0.668 (0.583)	-0.034
Vat registered	0.168 (0.291)	0.007	0.199 (0.292)	0.008	0.233 (0.287)	0.010	0.089 (0.297)	0.004
Tax morale	0.127 (0.045)***	0.005					0.122 (0.046)***	0.005
Detection risk (RC: Less than 30%)								
30 to 60%			-0.300 (0.275)	-0.013			-0.298 (0.282)	-0.013
More than 60%			-0.463 (0.261)*	-0.019			-0.461 (0.270)*	-0.019
Expected sanction (RC: Nothing serious or a small fine)								
A serious fine that would affect the competitiveness of the company					-0.268 (0.261)	-0.011	-0.059 (0.274)	-0.002
A serious fine that would put the company at risk of insolvency					-0.329 (0.317)	-0.013	-0.156 (0.332)	-0.006
The company would be forced to cease operations					0.373 (0.456)	0.020	0.523 (0.474)	0.026
Number of observations	359		366		372		354	
Pseudo R2	0.111		0.000		0.000		0.000	
Prob > F	0.000		0.108		0.106		0.114	

Notes: (1) Dependent variable: "Hiring a worker without a contract" measured on a four-point scale (1=Never; 2=Sometimes; 3=In most cases; 4=Always)

(2) We report the marginal effects for the highest score of the dependent variable (4)

(3) The lower the tax morale index value, the higher is the tax morale, and vice versa

(4) Significance: *p<0.1, **p<0.05, ***p<0.01

(5) Source: Authors' own work based on the GREY Survey in FYROM