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**Article:**

Williams, C.C. [orcid.org/0000-0002-3610-1933](https://orcid.org/0000-0002-3610-1933) and Yalaman, G.Ö. (2021) The coronavirus pandemic, short-term employment support schemes and undeclared work: some lessons from Europe. *Employee Relations*, 43 (3). pp. 630-643. ISSN 0142-5455

<https://doi.org/10.1108/ER-05-2020-0218>

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# **The coronavirus pandemic, short-term employment support schemes and undeclared work: some lessons from Europe**

*Employee Relations*

DOI: 10.1108/ER-05-2020-0218

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## **Acknowledgement**

Gamze Oz-Yalaman acknowledges support from an Eskişehir Osmangazi University Research Grant (2019-2772).

## **Abstract**

### **Purpose**

The temporary enforced closure of businesses in response to the coronavirus pandemic has resulted in governments in Europe and beyond offering short-term financial support to the businesses and workers affected. The aim of this paper is to evaluate a group of workers unable to benefit from the short-term job retention schemes and support to the self-employed made available by governments, namely those whose paid work is comprised wholly of undeclared work, and how this could be addressed.

### **Methodology**

To identify those involved, a Eurobarometer survey of undeclared work in Europe is reported conducted in September 2019, just prior to the pandemic, and involving 27,565 face-to-face interviews in 28 European countries.

### **Findings**

The finding is that the paid work of one in every 132 European citizens is comprised wholly of undeclared work, and these workers are concentrated in non-essential

businesses and activities severely affected by the lockdown. These workers whose paid work is comprised wholly of undeclared work are significantly more likely to be widowed or divorced/separated, living in households with three or more adults, without children, and most of the time have financial difficulties in making ends meet.

### **Practical implications**

Given that businesses and workers in the undeclared economy are largely unable to work under lockdown, it is argued that providing access to short-term financial support, through a regularisation initiative based on voluntary disclosure, would not only provide the income support these workers need but also bring them out of the shadows and put them on the radar of the state authorities, thus transforming undeclared work into declared work.

### **Originality/value**

This paper shows how in the current or repeat lockdowns, the short-term financial support made available by governments can be used to transform undeclared work into declared work.

**Keywords:** coronavirus; COVID-19; informal economy; undeclared work; worker protection; public policy.

## **Introduction**

In January 2020, a new respiratory disease (COVID-19), resulting from a strain of coronavirus (SARS-CoV-2), started to spread across the world. On the 30<sup>th</sup> January, the World Health Organisation declared a global health emergency and a global pandemic on the 11<sup>th</sup> March. To restrict the movement of people in order to slow the rate at which the virus spreads, governments throughout the world ordered the closure of workplaces. By April 2020, 81 per cent of the world's workforce had been directly affected by the full or partial closure of their workplaces (ILO, 2020b). Given the deleterious impacts on the incomes of businesses and workers, governments have responded by offering short-term financial support to protect the enterprises and workers affected (for a global review, see IMF, 2020).

The starting point of this paper is recognition that despite both declared work and undeclared work coming to a halt, this short-term financial support is only available to enterprises and workers operating in the declared economy. Those working in the undeclared economy are excluded, which here refers to paid activities not declared to the authorities for the purpose of evading tax and social security contributions and/or labour laws (European Commission, 2016; OECD, 2017; Williams, 2019; Williams and Windebank, 1998; World Bank, 2019). The exclusion of enterprises and workers in the undeclared economy from this short-term financial support is important to study for three reasons. First, 61 per cent of workers globally have their main employment in this sector (ILO, 2018) and eight out of ten enterprises globally operate in the undeclared economy (ILO, 2020c; Williams, 2017). Second, many popular media articles have provided graphic evidence of how undeclared workers have fallen through the safety net, are without money and food (Follain, 2020; He, 2020; Johnson and Ghiglione, 2020; Lynch, 2020; Reuters, 2020; Speak, 2020). Third and finally, if undeclared workers and enterprises are not supported, they may be forced to work out of necessity, even if infected, thus spreading the virus and preventing any flattening of the curve (Ebata et al.,

2020). In consequence, the aim of this paper is to evaluate a group of workers unable to benefit from the short-term job retention schemes and support to the self-employed made available by governments, namely those whose paid work is comprised wholly of undeclared work, and how this could be addressed.

To do so, the next section briefly reviews the short-term financial support schemes developed in response to the workplace closures resulting from the COVID-19 pandemic, along with what is known about the prevalence and characteristics of the undeclared economy in Europe, which was an initial epicentre of the coronavirus pandemic and is the focus of this paper. To provide an up-to-date evaluation of the extent and characteristics of the workforce whose paid work was comprised wholly of undeclared work immediately prior to the pandemic, the third section then introduces the data and methods here used, namely a probit regression analysis of a special Eurobarometer survey of undeclared work involving 27,565 interviews conducted in September 2019. The fourth section then reveals the prevalence in Europe of workers whose paid work was entirely composed of undeclared work, the sectors and activities in which they engage, and their socio-demographic, socio-economic and spatial characteristics. This is then followed in the fifth and final section by a discussion of the implications for policy, and future research required.

### **COVID-19, short-term employment protection schemes and the undeclared economy**

The advent of a more globalised world has made easier the rapid spread of viruses. For example, in 1970, there were 310 million air transport passengers but by 2018, this was 14 times higher at 4.2 billion (World Bank, 2020). Given this, it is not surprising that following reports in January 2020 of a new coronavirus strain (SARS-CoV-2) in Wuhan, China, it spread at such speed that the World Health Organisation declared a global health emergency on the 30<sup>th</sup> January and a global pandemic on 11<sup>th</sup> March.

Following this announcement of a pandemic, governments across the globe have restricted the movement of citizens and non-essential businesses have been temporarily closed. The result is that 81 per cent of the world's workforce by April 2020 had witnessed the full or partial closure of their workplaces (ILO, 2020b). Given this lockdown situation, the ILO (2020a) called on national governments to adopt a three-pillar response that firstly, protected workers, secondly, stimulated the economy and employment, and thirdly, supported jobs and incomes. The ILO recommended extending social protection to all affected by the lockdown, supporting employment retention (e.g., temporary paid leave), and providing tax and other financial relief to affected businesses.

In Europe, which has been one of the initial epicentres of the pandemic, the European Commission has implemented these three pillars largely through a €100 billion Support to mitigate Unemployment Risks in an Emergency (SURE) programme for workers and the self-employed (European Commission, 2020). This provides loans to Member States to resource short-term schemes to protect employees and the self-employed against dismissal and loss of income (see IMF, 2020; ITUC, 2020 for a detailed review of national schemes). With this funding, businesses have been able to temporarily reduce the hours of employees or suspend their employment altogether, with government funding covering the hours not worked and providing the self-employed with short-term income replacement to replace lost revenue. This temporary financial support therefore protects jobs and workers deleteriously affected by the coronavirus pandemic, stimulates the economy and supports jobs and incomes.

These support measures protect businesses from their temporary loss of revenue and workers (both dependent employees and the self-employed) who would have otherwise lost their incomes. Each European national government has adopted slightly different short-term financial support schemes for businesses and workers. In Belgium, for example, employers receive 70 per cent of the monthly remuneration of employees capped at €2,754.76, whilst the self-employed can receive compensation between €1,266-1,582 per month in cases of temporary termination of their activity due to COVID-19 along with the deferral of payment of direct and indirect taxes owed (FIEC, 2020). In the UK, similarly, businesses can claim 80 per cent of their employees' wages up to maximum of £2,500 per employee each month, and a taxable grant is available for the self-employed of 80 per cent of their trading profits up to a maximum of £2,500 per month along with the deferral of payment of direct and indirect taxes owed (HM Government, 2020). In Greece, meanwhile, there is an €800 per month benefit for employees for 81 percent of the private sector workforce on condition that there are no layoffs, along with the deferral of indirect and direct taxes, and similar financial aid for the self-employed. In Lithuania, employees temporarily suspended receive no less than the minimum monthly wage, as do the self-employed who have paid social security contributions when unable to carry out their activities. In Slovenia, the government pays 20 per cent of the net compensation for employees temporarily not working and income tax payments have been suspended for the self-employed (FIEC, 2020).

However, the problem is that some enterprises and workers either do not operate in the declared economy or only partially do so. These enterprises and workers have been unable to access these short-term employment support schemes. This is not some small minority of enterprises and workers. Globally, two billion workers (61.2 per cent of the world employed population) have their main employment in the undeclared economy (ILO, 2018; Williams and A Horodnic, 2019) and the proportion of enterprises in the undeclared economy is even higher at around eight in ten enterprises (ILO, 2018; OECD, 2017; Williams, 2017; World Bank, 2019). The ILO (2020b) assert that the incomes globally of those operating in the undeclared economy have declined by some 80 per cent since the onset of the pandemic. In Europe, the assumption might be that only a small number of businesses and workers operate in the undeclared economy and are unable to access this short-term financial support. However, the undeclared economy is estimated as the equivalent of 15.8 per cent of GDP in the EU (Williams and Schneider, 2016) and that 11.6 per cent of all labour input in the private sector is undeclared (Williams et al., 2017a).

The level of accessibility to support of undeclared enterprises and workers becomes transparent when the various types of enterprise and worker in the undeclared economy are analysed. Two types of business operate in the undeclared economy. On the one hand, there are unregistered businesses, which are largely comprised of self-employed sole traders and micro-businesses (Williams, 2017; Williams et al., 2017b). These "ghost" businesses are hidden from, and their transactions are unrecorded by, the tax authorities, and are excluded from accessing any short-term financial support. On the other hand, there are registered businesses declaring a portion of their work and revenue. These have been able only to access short-term financial support to offset the declines in their declared turnover and to use the short-term employment retention only for their declared employees and their declared salaries.

Analysing undeclared workers, meanwhile, there are three types. First, there are unregistered employees. These workers are wholly undeclared and have no written contract of employment (Gashi and Williams, 2019; Krasniki and Williams, 2017). Several studies have been conducted to evaluate their prevalence in Europe. Examining

the 2013 Eurobarometer survey on undeclared work, Williams and Kayaoglu (2017) reveal that 5 per cent (1 in 20) in employment in the EU reported having no written contract or terms of employment. As such, some 10.6 million of the 212 million in employment in the EU in 2013 were unregistered. These workers will be unable to benefit from the current short-term employment retention schemes for employees. Depending on the national social insurance systems, they have been also perhaps unable to access welfare benefits, especially in contributory welfare systems, although some governments have relaxed the eligibility rules for benefits (Gaspar and Mauro, 2020; IMF, 2020).

Second, there are under-declared employees who have a declared job but receive some of their salary as an official declared wage (often paid at the minimum wage rate) and the rest as an additional undeclared ‘envelope wage’. In 2013, 3 per cent (or 1 in 33) declared employees received undeclared envelope wages and the mean proportion of their gross salary received as an envelope wage was 25 per cent (Williams and Horodnic, 2017b, 2017c). In contributory welfare benefit systems, therefore, those in under-declared employment will be receiving lower welfare benefits than would have been the case if their full salary was declared.

Third, there is bogus self-employment. The employment relationship of these workers is classified as self-employment, but their employment relationship is akin to dependent employment and/or they rely on one employer for all or a large share of their income. Estimates using the 2015 European Working Conditions are that 4.3 per cent of all employment in the EU is bogus self-employment (Williams and Lapeyre, 2017, 2020; Williams and Horodnic, 2019). These bogus self-employed are unable to access the short-term employment retention schemes available to employees but have been able to access whatever short-term support has been made available for the self-employed.

Examining the activities undertaken by undeclared workers in the EU, a 2013 Eurobarometer survey finds that the most common activity is home repairs and renovations (conducted by 19 per cent of all undeclared workers), gardening (14 per cent), 13 per cent domestic cleaning and ironing (13 per cent), childcare (12 per cent), working as waiters or waitresses (11 per cent), IT support services (7 per cent), home removal services (7 per cent), tutoring (7 per cent) and assistance to an elderly or dependent person (3 per cent). Most of these activities ceased during the lockdown due to the closure of non-essential businesses.

Analysing who engages in such work, past studies partially validate the “marginalisation” thesis which argues that it is groups marginalised from the declared labour market (Williams and Bezeredi, 2018). An analysis of the 2013 Eurobarometer survey of undeclared work partially supports this, revealing that unemployed people and those with difficulties paying the household bills have a significant greater likelihood of participating in undeclared work, but not those with fewer years in full-time education, rural populations and those in European regions with lower GDP per capita (Williams and Horodnic, 2015, 2017a). There is also evidence that not only are migrant populations more likely to participate in undeclared work in their host country (Shahid et al., 2019; Urzi and Williams, 2017; Verzhinina et al., 2011; 2018), but also those who have lived abroad and return to their home country (Williams and Efendic, 2020).

This review reveals no up-to-date EU-wide evidence exists of the extent and characteristics of the undeclared workers in Europe who will have been affected by the pandemic. In consequence, a Eurobarometer survey on undeclared work conducted in September 2019, just before the onset of the pandemic, and made public in March 2020, is reported. The focus here will be upon the extent and characteristics of the workforce whose paid work was comprised wholly of undeclared work immediately prior to the

pandemic, since these workers will have been most affected by being unable to access the short-term employment support schemes.

## Methodology

To evaluate those whose paid work was comprised wholly of undeclared work immediately prior to the pandemic, and therefore excluded from applying for the short-term employment support, data is reported from Eurobarometer special survey 92.1 on undeclared work, which involved 27,565 interviews being conducted in September 2019 in 28 European countries (the 27 EU member states and the UK). A standard Eurobarometer multi-stage random (probability) sampling method was used, which ensures that which ensured that on the issues of gender, age, region and locality size, both the national and each level of the sample is representative in proportion to its population size. The interviews were in the national language with adults aged 15 years and older.

To analyse those whose paid work was entirely undeclared work, the dependent variable is based on the response to the question “Which of the following best describes your situation?”, with value 1 for respondents answering “All of your paid activity is undeclared” and value 0 otherwise. Akin to previous evaluations of the 2007 and 2013 Eurobarometer surveys of undeclared work (Williams and Horodnic, 2016, 2017a), the control variables involve a range of socio-demographic, socio-economic and spatial variables (see Table 1).

INSERT TABLE 1 ABOUT HERE

Probit regression analysis is used for testing hypothesis about the relationship between a categorical dependent variable and categorical or continuous independent variables. The maximum likelihood method is used to estimate the least squares function (Stock and Watson, 2015). The log-likelihood function for probit is

$$\ln L = \sum_{j \in S} \omega_j \ln \phi(x_j \beta) + \sum_{j \notin S} (\omega_j \ln \{1 - \phi(x_j \beta)\})$$

where  $\phi$  is the standard cumulative normal and  $\omega_j$  denotes the optional weights.  $\ln L$  is maximized. Using probit analysis, the following model is adopted:

$$\Pr(\mathcal{Y}_j \neq 0 | x_j) = \phi(x_j \beta)$$

The dependent variable of the model ( $\mathcal{Y}_j$ ) is binary, which represents those whose paid activity is wholly undeclared,  $x$  represents the explanatory variables, which are socio-demographic variables (gender, age, marital status, people 15+ years in own household, children), socio-economic variables (sector of employment, financial difficulties), spatial variables (area, region) and policy variables (expected sanction, detection risk, level of tax morality, level of horizontal trust) (see Table 1 for a description of the variables).

For the univariate analysis, the sample weighting scheme is used to obtain meaningful descriptive results, as recommended in both the wider literature (Sharon and Liu, 1994; Solon et al., 2013; Winship and Radbill, 1994) and the Eurobarometer methodology. For the multivariate analysis meanwhile, debate exists over whether to use a weighting scheme (Pfeffermann 1993; Sharon and Liu 1994; Solon et al., 2013; Winship and Radbill 1994). Reflecting the majoritarian view, the decision has been taken here not to do so. For the descriptive results, moreover, the findings are reported for all

respondents answering each question, whilst for the regression analysis, we kept in the analysis the individuals for which data on every independent variable is available.

## Findings

Across the 28 European countries surveyed (i.e., the 27 European Union member states and the UK), 3.6 per cent of the European citizens surveyed (one in 28) had engaged in undeclared work in the year prior to the survey undertaken in September 2019. Of those doing so, 21 per cent conduct all their paid work in the undeclared economy. That is, 0.8 per cent of all European citizens surveyed, or one in every 132, undertake all their paid activity on an undeclared basis. Extrapolating from this, immediately prior to the pandemic, there were some 2.65 million EU citizens of working age who conducted all their paid activity in the undeclared economy. In consequence, a significant minority of European citizens are currently wholly excluded from the temporary financial support offered to declared employees and the self-employed.

Moreover, this is likely to be an under-estimate. For example, undocumented third country migrants, many of whom are employed wholly in the undeclared economy, are not fully captured by the Eurobarometer sampling method. Indeed, Connor and Passel (2019) estimate that there are 3.9-4.8 million undocumented workers in Europe, defined as living without a residency permit in their country of residence, who are not citizens of any European Union or European Free Trade Association (EFTA) country. Therefore, it is likely that the number wholly dependent on the undeclared economy for their paid work is higher.

What activities do those whose paid activity is entirely undeclared engage in? Some 20 per cent state that they work as a waitress or waiter; 19 per cent provide child care; 18 per cent tutoring; 17 per cent domestic cleaning or ironing; 14 per cent home repairs and renovations; 12 per cent gardening services, 10 per cent assistance for a dependent or elderly person; 5 per cent sell goods and services (other than food); 3 per cent home removal services; 3 per cent sell food (e.g., farm produce); 2 per cent passenger transport services, and 1 per cent or less professional services (e.g., accounting, consulting, project management), writing or translation services, creative, multimedia and software services (e.g., design, marketing support, web or software development), and IT assistance or administrative and clerical tasks, respectively. These are nearly all activities severely affected by the lockdown.

Turning to the employment relationships of those who conducted all their paid activity undeclared prior to the pandemic, 54 per cent worked on an own-account self-employed basis, 24 per cent engaged in undeclared waged employment for an employer, 2 per cent both undeclared own-account work and waged employment, 15 per cent work for a partner or family businesses (e.g., in family-owned businesses), whilst 5 per cent either refused to answer or did not know.

Who, therefore, are these workers? As Table 2 reveals, men are slightly over-represented, as are younger age groups. Single people are heavily over-represented, and to a lesser extent single people living with a partner and the divorced/separated. Those households with multiple adults in their household are also over-represented, as are those working in personal services. Those having difficulty paying the bills most of the time are also very heavily over-represented, as are those living in rural areas or villages. There are also variations across European regions. Here, five regions are analysed: Nordic nations (Denmark, Finland, Sweden), Western Europe (Belgium, Luxembourg, Netherlands, Austria, Ireland, United Kingdom, France, Germany), East-Central Europe (Czechia, Estonia, Latvia, Lithuania, Poland and Slovakia), Southern Europe (Italy,



Malta, Spain and Portugal) and South-East Europe (Bulgaria, Croatia, Cyprus, Greece, Hungary, Romania and Slovenia). Those living in Western, Southern and South-East Europe are over-represented.

INSERT TABLE 2 ABOUT HERE

To examine whether these descriptive findings remain valid when other variables are introduced and held constant, Table 3 reports the probit regression analysis. Reporting the results of the full specification model, the finding is that there are no significant associations between the likelihood of one's paid activity being entirely undeclared and gender and age. However, those who are widowed and those who are divorced/separated are significantly more likely to depend entirely on undeclared work for their paid income than those who are married. So too are those living in households with three or more adults significantly more likely to be entirely dependent on undeclared work, whilst those with children are significantly less likely to be engaged in such endeavour. There are no variations by sector. However, those having difficulty paying their household bills most of the time are significantly more likely to depend on undeclared work entirely than those who never or almost never have difficulties, and those who from time to time have difficulties and those who almost never or never have difficulties. Although no significant variations exist between those living in rural or urban areas, those living in the Nordic nations are significant less likely than those living in Western Europe to rely entirely on undeclared work for the paid work.

INSERT TABLE 3 ABOUT HERE

## **Discussion and conclusions**

This paper has revealed that 3.6 per cent (one in 28) of all European citizens report participating in undeclared work in the 12 months prior to the pandemic, and that the paid work of 0.8 per cent (one in every 132) of all European citizens is comprised wholly of undeclared work. Analysing the latter citizens, they are significantly more likely to be widowed or divorced/separated, living in households with three or more adults, without children, and most of the time have financial difficulties in making ends meet. There are in addition likely to be undocumented third country migrants who will have been not fully captured due to the Eurobarometer sampling method.

What is to be done about these workers whose paid activities were entirely in the undeclared economy prior to the pandemic? One option is simply to leave these workers to claim benefits based on the non-contributory minimum income welfare 'safety nets' available. However, this misses an opportunity. Providing them with access to short-term financial support, through a regularisation initiative based on voluntary disclosure, would bring the enterprises and workers operating in the undeclared economy into the declared economy, stamping out unfair competition and protecting these workers.

This has started to be argued in many European countries. For example, in Ireland, 21 social partner organisations have called for a programme to enable the estimated 15,000-20,000 undocumented workers to regularise their status (Holland, 2020). The government in Portugal, meanwhile, has implemented a regularisation scheme to grant temporary residency rights to migrants and asylum seekers until July 1<sup>st</sup>. In Italy, meanwhile, there is currently much debate on implementing a regularisation initiative to provide undocumented migrant workers with either work and/or residency permits and Italian undeclared workers access to short-term financial support (Follain and Rotundi,

2020; Reuters, 2020). The European Trade Union Confederation (ETUC) have also called for the introduction of “regularisation measures to reduce vulnerability, labour exploitation and social exclusion of irregular migrant workers” (ETUC, 2020, p.1), as have the European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT) argued that “the need to regularize undocumented migrants is now crucial” (EFFAT, 2020, p.1).

To implement such a regularisation initiative, one option is to use the tried and tested method of a voluntary disclosure scheme. These enable those voluntarily disclosing to the authorities their past undeclared work to have the penalties waived (or reduced) that would have applied, if they are compliant in the future (Williams, 2014, 2017). In the present crisis period, these schemes could instead offer an incentive, rather than waive penalties, by providing access to the temporary financial support being offered to declared enterprises and workers, in return for voluntarily disclosing their previous undeclared work. This would not be some benevolent act. It would bring these undeclared enterprises and workers out of the shadows to stamp out unfair competition and protect the workers. It would be a time-limited offer to become legitimate.

European countries who have previously used voluntary disclosure regularisation schemes include Belgium, Cyprus, France, Italy, Lithuania, Slovenia and the UK. In 2001 in Italy, a regularisation initiative to encourage undeclared enterprises and workers to formalise either by fully formalising straight away or doing so gradually over a three-year period, produced 1,794 declarations from enterprises and 3,854 new declared workers, although there was also a larger ‘silent’ formalisation in that 385,000 extra declared workers were registered that year during a time of economic stagnation (Meldolesi, 2003). A 2019 voluntary disclosure initiative in Lithuania by the tax office offered all businesses and personnel the ability to voluntarily declare incomes or other taxes without any penalty from 1 January until 30 June 2019. They collected an additional 42 million euros in taxes during this period arising from this initiative. In the UK, a VAT short-term incentive scheme in 2003 offered businesses the opportunity to regularise their VAT situation without penalty. It cost the tax authorities £500,000 in marketing costs and £2.7 million in penalties foregone. They received 3,000 registrations raising £11.4 million in tax and an additional £2.5 million in fines applied to those not continuing to comply, with a resultant return-to-cost ratio of 23:1 (National Audit Office, 2008). Another UK voluntary disclosure initiative on offshore bank accounts resulted in 64,000 bank accounts and around 45,000 disclosing by the closure in June 2007, bringing in £400 million in taxes at a cost of £6 million, or a return of 67:1 (National Audit Office, 2008). Belgium has ran a similar voluntary disclosure scheme on offshore banking in both 2004 and 2005, as has the Australian Tax Office (see Gould and Rablen, 2020).

In the current crisis, a regularisation scheme using voluntary disclosure could take various forms. Firstly, disclosure could be with or without penalty for past non-compliance. If penalties are used, the level of the penalty could be on a sliding-scale reduced by set amounts depending on whether the employer agrees to employ the undeclared or under-declared worker on a (full-time) declared basis for at least 3, 6 or 12 months, as recently introduced in Greece to transform detected undeclared jobs into declared jobs (Williams, 2019). Secondly, the scheme could be universal, or it could be targeted at either specific sectors, such as personal services, the tourism industries or construction sector, and/or specific population groups or types of undeclared work, such as undocumented third country migrant workers (e.g., EFATT, 2020; ETUC, 2020), undeclared self-employed workers, or online platform economy service providers. Thirdly, access to the temporary financial support provided to declared enterprises and workers could be offered as an incentive to come out of the shadows, or not offered. If

offered, access to such short-term support could be conditional on the business offering the undeclared workers they voluntarily disclose a declared contract (or the undeclared worker a full-time contract) for at least a specific number of months, or not.

The only known country to have implemented such a regularisation initiative in the present crisis period is Kosovo. The short-term financial support provided by government includes help for businesses by paying salaries for two months at the minimum wage, as well as pension contributions, and for small and medium-sized enterprises, up to half the cost of renting premises. The Kosovo tax authority has used the package to encourage businesses to access such support if they voluntarily disclose that they employed workers undeclared, so long as they employ the workers on declared contracts for at least one year. The Finance Minister reports that 10,597 new employees have been registered, representing an increase of 2.6 per cent in official employment (Bami, 2020). This, therefore, provides some indication of the potential effectiveness of implementing regularisation initiatives.

This, however, is not the only issue in relation to the short-term financial support schemes and the undeclared economy that requires further research. There are at least five other issues that are in need of further research. The prevalence of undeclared work in the recovery period will depend on firstly, the effectiveness of the national rescue packages in retaining jobs and businesses, secondly, whether the governments withdraw this support in a way that retains these declared businesses and jobs, thirdly, synchronising the timing between sectors (i.e., matching supply and demand so that the undeclared economy does not fill the gaps and fourthly, the effectiveness of any regularisation initiatives implemented. If ineffective, then the undeclared economy may fill the gaps left by the demise of declared enterprises. Learning what has worked in the first period in preventing undeclared work is required for knowing what support to use in repeat lockdowns. Fifth and finally, there are emerging concerns regarding the legitimacy of the claims made for short-term financial support. In the UK, for example, concerns exist that some employees are being asked to work even though the employer is receiving furlough payments for these employees (Smith, 2020). Future research will need to evaluate such abuses and how this might be prevented in any future lockdowns. This will require an evaluation of on the one hand, abuses of the furlough scheme for employees, perhaps using qualitative research with employees of the myriad ways in which employers have abused these schemes and on the other hand, abuses of the short-term financial support schemes for the self-employed again perhaps through qualitative research with the self-employed of the forms this has taken. Once the multifarious ways in which the short-term financial support schemes have been abused are understood, policy solutions can be then sought to prevent this in any future use of these schemes.

In conclusion, if this paper stimulates European governments to recognise the problems being witnessed by enterprises and workers in the undeclared economy, especially those workers whose paid work was wholly undeclared prior to the pandemic, then one of its intentions will have been achieved. If it also leads governments to recognise action is required, and the feasibility of regularisation initiatives using voluntary disclosure are further explored, then it will have achieved its fuller intention.

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Table 1. Control variables used in the analysis: definitions

Variables	Definition
Gender	A dummy variable with value 0 for females and 1 for males.
Age	A continuous variable indicating the exact age of a respondent.
Marital status	A categorical variable grouping respondent by their marital status with value 1 for (re)married, value 2 for single living with a partner, value 3 for single, value 4 for divorced/separated, value 5 for widow.
People 15+ years in own household	A categorical variable for people 15+ years in respondent's household (including the respondent) with value 1 for one person, value 2 for two persons, value 3 for 3 persons or more.
Children	A dummy variable for the presence of children up to 14 years old in the household with value 0 for individuals with no children and value 1 for those having children.
Sector of employment	A categorical variable grouping respondent by their sector of employment with value 1 for construction, value 2 for hospitality, value 3 for personal services, value 4 for industry, value 5 for retail, value 6 otherwise.
Financial difficulties	A categorical variable for the respondent difficulties in paying bills with value 1 for having difficulties most of the time, value 2 for occasionally, and value 3 for almost never/ never.
Area	A categorical variable for the area where the respondent lives with value 1 for rural area or village, value 2 for small or middle-sized town, and value 3 for large town.
Region	A categorical variable for the region where the respondent lives in the EU with value 1 for South East Europe, value 2 for Western Europe, value 3 for Southern Europe, value 4 for East Central Europe, value 5 for Nordic.



Table 2. Descriptive statistics of participation in undeclared work in Europe, 2019

Variable	All paid work is undeclared work (n=220)	Rest of surveyed population (n=27,345)
% of total surveyed population	0.8	99.2
<i>Socio-Demographic Variables</i>		
Gender (%)		
Female	51.5	53.6
Male	48.5	46.4
Age (mean)	40	52
Marital Status (%)		
Re(Married)	31.3	53.6
Single living with partner	14.9	12.3
Single	32.8	17.0
Divorced/Separated	14.3	8.0
Widow	6.7	9.1
People 15+ years in own household		
One	22.4	23.9
Two	37.3	51.4
Three and More	40.3	24.7
Children (%)		
No children	77.6	75.5
Having children	22.4	24.5
<i>Socio-Economic Variables</i>		
Sector		
Construction	18.7	21.5
Hospitality	14.2	15.2
Personal Services	33.6	19.4
Industry and Manufacturing	4.5	7.6
Retail or Repair services	9.7	13.9
Other	17.9	27.6
Financial Difficulties		
Most of the time	39.6	7.0
From time to tome	22.4	23.7
Almost never/never	38.0	69.3
<i>Spatial Variables</i>		
Area		
Rural area or village	36.5	32.9
Small or middle-sized town	35.1	37.7
Large town	28.4	29.4
Region		
South East Europe	24.6	22.8
Western Europe	37.3	31.8
Southern Europe	17.9	12.4
East Central Europe	18.7	20.5
Nordic	1.5	12.5

Source: authors' calculations based on the 2019 Eurobarometer 92.1 survey

Table 3. Probit regression models of likelihood a citizen's paid work is undeclared in Europe, 2019

	Model 1 $\beta$ (Robust se)	Model 2 B (Robust se)	Model 3 B (Robust se)
<i>Gender (Female)</i>			
Male	0.0325 (0.0639)	-0.1744 (0.1469)	-0.1568 (0.1470)
Age (exact age)	-0.0149*** (0.0027)	-0.0050 (0.0060)	-0.0058 (0.0060)
<i>Marital Status (Married)</i>			
Single living with a partner	0.0324 (0.1138)	-0.1099 (0.2068)	-0.0332 (0.2096)
Single	0.1157 (0.1149)	0.0675 (0.2140)	0.0659 (0.2139)
Divorced or separated	0.4916*** (0.1261)	0.4842** (0.2374)	0.4429* (0.2381)
Widow	0.4067*** (0.1572)	1.1576*** (0.3566)	1.1466*** (0.3779)
<i>People 15+ years in own household (One)</i>			
Two	0.1133 (0.1160)	0.2568 (0.1967)	0.2108 (0.1943)
Three and more	0.2236** (0.1056)	0.6022*** (0.1976)	0.5013** (0.1991)
<i>Children (No children)</i>			
Having children	-0.1831** (0.0837)	-0.3086** (0.1451)	-0.3497** (0.1482)
<i>Sector (Other Sectors)</i>			
Construction		-0.0080 (0.1640)	-0.0258 (0.1690)
Hospitality		-0.1749 (0.1854)	-0.2016 (0.1866)
Personal services		0.2607* (0.1516)	0.2542 (0.1550)
Industry		-0.1198 (0.2582)	-0.2094 (0.2592)
Retail		-0.0530 (0.1988)	-0.0053 (0.2048)
<i>Financial difficulties (Most of the time)</i>			
From time to time		-0.9130*** (0.1730)	-0.9086*** (0.1756)
Almost never/ never		-0.9802*** (0.1568)	-0.9385*** (0.1655)
<i>Area (Rural area or village)</i>			
Small or middle-sized town			-0.2051 (0.1490)
Large town			-0.2562 (0.1559)
<i>Region (Western Europe)</i>			
South East Europe			-0.1018 (0.1721)
Southern Europe			0.0751 (0.1971)
East Central Europe			0.0811 (0.1806)
Nordic			-0.9498*** (0.3296)
Constant	-2.0104*** (0.2120)	-0.0585 (0.4336)	0.2153 (0.4513)
Observations	594	594	594
Pseudo R <sup>2</sup>	0.0541	0.1403	0.1649
Log pseudolikelihood	-766.609	-272.622	-264.840
$\chi^2$	90.02	81.25	91.16
p>	0.0541	0.0000	0.0000

Notes: Statistically significant at \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (robust standard errors in parentheses). All coefficients are compared to the reference category, shown in brackets. We kept in the analysis the individuals for which data on every independent variable is available. When the models are regressed with clustering the individuals by country, the direction of the associations and the significances do not change for the independent variables discussed in the paper. (with p<0.05 or p<0.01).

Source: authors' calculations based on the 2019 Eurobarometer 92.1 survey