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COVID-19 and undeclared work: impacts and policy responses in Europe

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The Coronavirus pandemic has led to restrictions on movement and workplace closures, resulting in governments offering temporary financial support to enterprises and workers. This paper evaluates a group unable to access this financial support, namely those in the undeclared economy, and possible policy responses. To identify the service industries and workers involved, a late 2019 Eurobarometer survey of undeclared work in Europe is reported. This reveals that undeclared work is particularly prevalent in the hospitality, retail and personal services sectors and identifies the population groups over-represented. Given that this undeclared workforce is now largely unable to work, it will be argued that providing access to temporary financial support, through a voluntary disclosure initiative, would be a useful initiative not only to provide the income support these enterprises and workers need but also to bring them out of the shadows and put them on the radar of the state authorities.

Keywords: coronavirus; informal economy; undeclared work; tax evasion; service sector; public policy.

Introduction

In the early months of 2020, a new respiratory virus (COVID-19) became a global issue. On the 30th January, the World Health Organisation declared a global health emergency and on 11th March, a pandemic. At the time of writing in April 2020, a

rapidly growing share of the global population is now living with new rules on the restriction of movement and there has been the closure of non-essential businesses. This has had a profound impact on many service industries, ranging from the tourism and hospitality sector through to the retail and leisure industries, which have temporarily closed. The response of many governments has been to offer temporary financial support to the businesses and workers affected (for a review, see ITUC, 2020). For example, in the UK employees can be kept on the payroll of a businesses if the workplace is closed or there is no demand, with businesses able to claim 80% of their employees' wages up to maximum of £2,500 per employee each month from the UK government, and for the self-employed a taxable grant has been made available by the UK government worth 80% 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 (De Vita, 2020). Similar schemes have been replicated across Europe.

This paper evaluates a group who have been unable to access this financial support, namely those participating in the undeclared economy. The undeclared economy, reflecting the consensus of academicians and practitioners, is here defined as paid activities that are not declared to the authorities in order to evade tax and social security contributions and/or labour laws (Aliyev, 2015; European Commission, 2016; Hodosi, 2015; Kedir et al., 2018; Littlewood et al., 2018; OECD, 2017; Williams, 2019a; Williams & Windebank, 1998; World Bank, 2019). Across the world, the ILO (2018) estimates that over 60% of the world's employed population have their main employment in this sector. Moreover, two-thirds of businesses globally are not registered at start-up and operate in the undeclared economy (Autio & Fu, 2015) and an even greater proportion do not declare some or all of their production and/or sales to the authorities for tax, benefit and/or labour law purposes when they should do so

(Karabchuk & Zabirova, 2018; OECD, 2017; Williams, 2017; World Bank, 2019). Therefore, this group excluded from the temporary financial support being offered to businesses and workers is not some small peripheral minority. It is a major segment of the global labour force and worldwide business community.

The reasons for addressing this large group of workers and businesses currently excluded from financial support is two-fold. On the one hand, there are a growing number of reports in the media of these undeclared workers falling through the safety net, being without money, and engaging in illegal (albeit perhaps socially legitimate) acts such as raiding grocery shops to obtain food (Follain, 2020; He, 2020; Johnson & Ghiglione, 2020; Lynch, 2020; Reuters, 2020; Speak, 2020). On the other hand, if undeclared businesses and workers are not supported and they out of economic necessity continue to work, even whilst infected, the virus will spread, thus impeding attempts to 'flatten the curve' (see Ebata et al., 2020). Therefore, the aim of this paper is to evaluate the service industries and workers involved, and how governments might address this large group so far excluded from financial support. In order to do so, a late 2019 Eurobarometer survey of undeclared work in Europe is reported.

To commence, therefore, a brief review is provided of the rationale for including enterprises and workers in the undeclared economy in the financial support packages to the businesses and workers affected by the coronavirus pandemic, along with a brief review of what is known about the extent and characteristics of the undeclared economy in Europe, which is the geographical focus of this paper and the epicentre of the coronavirus outbreak at the time of writing. Following this, and in order to provide an up-to-date analysis of the sectors and workers involved, the data and methodology used is reported, namely a probit regression analysis of the late 2019 special Eurobarometer survey. Revealing the service industries in which undeclared work is particularly

prevalent and the composition of the undeclared workforce, the fourth and final section draws out the conclusions, including the policy implications and possible ways forward for governments.

COVID-19 and the undeclared economy: a literature review

Since the World Health Organisation declared a pandemic in March 2020, a rapidly growing number of countries have established new rules restricting the movement of their citizens and the closure of non-essential businesses. This has had a significant impact on businesses and workers in the service industries.

Although the overall impact has been generally negative across the service industries and wider economy, this is not universally the case for all service industries. One notable exception is the health services sector where workplaces continue to operate and demand is growing due to the pandemic, as is the number of jobs. Another exception is online retailing which prior to the pandemic accounted for at most 10% of all grocery shopping in the UK (Mintel, 2019) but has witnessed substantial growth in terms of revenue and jobs.

However, the overall impact on businesses and workers across most service industries has been negative. Epitomising this is the tourism industry. In 2016, one in 10 enterprises (2.4 million) in the European non-financial business economy were in tourism industries, employing 13.6 million persons, or 9.5% of the EU workforce (Eurostat 2019a, 2019b). As Eurostat (2019b) reveal, most workers (8 out of 10) in the tourism industries are in either the accommodation sector (19.7 % of all employment in the tourism sector) or food and beverage serving activities (58.7 %). The restriction of movement and closure of these non-essential businesses has had catastrophic impacts on

businesses and workers across the tourism sector. Similar negative impacts have been replicated across many other specific service industries and the wider economy.

The ILO (2020) have consequently called for a response to the COVID-19 pandemic across three pillars: protecting workers in the workplace, stimulating the economy and employment, and supporting jobs and incomes. The recommended measures include extending social protection, supporting employment retention (i.e. short-time work, paid leave, other subsidies), and financial and tax relief, including for micro, small and medium-sized enterprises. In Europe, the current epicentre of this pandemic and resultant geographical focus of this paper, this has been implemented through the Support to mitigate Unemployment Risks in an Emergency (SURE) support programme (European Commission, 2020). This is designed to help national governments protect jobs and workers affected by the coronavirus pandemic by providing loans to Member States of up to €100 billion in total to cover the national governments short-term schemes to protect jobs, employees and the self-employed against the risk of dismissal and loss of income (for examples of national financial support schemes, see ITUC, 2020). Businesses, therefore, can temporarily reduce the hours of employees or suspend work altogether, with income support provided by the state for the hours not worked, whilst the self-employed will receive temporary income replacement. The temporary support measures therefore seek to protect jobs and workers affected by the coronavirus pandemic, stimulate the economy and support jobs and incomes. Protection and support measures have been put in place for both dependent employees and the self-employed.

However, the problem is that many enterprises and workers either do not operate in the declared economy or only partially do so. Globally, two billion workers, representing 61.2% of the world employed population, are in the undeclared economy

(ILO, 2018). It is similarly the case when examining businesses. Autio and Fu (2015) find that two-thirds of businesses are not registered at start-up not only in developing and transition countries but also in OECD countries, whilst Acs et al. (2013) reveal that at least half of all businesses globally operate on an unregistered basis. If the so far uncalculated number of registered enterprises worldwide that conduct some of their transactions in the undeclared economy is included, the proportion of enterprises in the undeclared economy is even higher (Williams, 2017). The result is that the majority of the world's workers and enterprises will be unable to fully or even partially access the temporary financial support that governments are putting in place to offset the problems resulting from the social distancing and social isolation measures to 'flatten the curve' so as to reduce the number of infections that will occur at any one time from the pandemic.

It might be considered that in European economies, this exclusion of businesses and workers operating in the undeclared economy would not be of a magnitude to be a major concern. However, estimates of the magnitude of the undeclared economy in Europe display that it is a sizeable phenomenon. Williams and Schneider (2016) find that the equivalent of 15.8% of GDP is in the undeclared economy in the European Union (EU), whilst Williams et al. (2017a) estimate that 11.6% of total labour input in the private sector is undeclared in the EU. In consequence, across Europe, a significant proportion of workers and enterprises will be unable to access the temporary financial support being provided to workers and businesses by governments.

On the one hand, unregistered enterprises will be unable to access this financial support, which are largely sole traders and smaller businesses (Williams, 2017; Williams et al., 2017b). These 'ghosts', who are often self-employed sole traders and micro-enterprises, are unknown to tax administrations. They will be wholly excluded

from access to financial support during the current crisis. On the other hand, there are registered businesses who do not declare all their transactions. These businesses will only be able to access support according to the level of their declared turnover and for their declared employees. Meanwhile, undeclared workers are of three types. First, there are wholly undeclared employees with no written contract of employment who are unregistered with the authorities, and suffer poor working conditions (Williams & Horodnic, 2019b; Williams & Kayaoglu, 2017). In the EU in 2015, 7% of service industry employees (1 in 14) had no written contract of employment across the 35 European countries surveyed, although this varies from 34% in Cyprus to 1% in Sweden (Williams & Horodnic, 2018). These workers will be unable to access any of the financial support for employees provided by national governments. Depending on the social insurance system in individual countries, they might be also unable to receive welfare benefits. Secondly, there are those in under-declared employment, who are in declared employment but receive an official declared wage (often set at the minimum wage) and the rest of their salary as an undeclared 'envelope wage'. In 2013, one in 33 formal employees in the EU28 received envelope wages, and the median proportion of their gross salary paid as an envelope wage was 25% (Williams & Horodnic, 2015, 2017b). Depending on the social insurance systems in individual countries, they may therefore receive lower welfare benefits than would be the case if their full wage was declared. Thirdly, there are those in bogus self-employment, of what is sometimes referred to as dependent self-employment, which refers to those in an employment relationship in which they are formally registered as self-employed but work under the same working conditions as direct employees and/or they depend on a single employer for a main part of their income. In the EU, 4.3% of total employment is bogus self-employment (Williams & Lapeyre, 2017, 2020; Williams & Horodnic, 2019a). These

bogus self-employed workers will be unable to access financial support packages for employees but can access financial support packages for the self-employed in countries where these have been established.

In what sectors, therefore, is undeclared work to be found? Until now, little research has been conducted. In a 2013 Eurobarometer survey of the EU28 involving 25,563 interviews, Europeans who carry out undeclared work most commonly mentioned home repairs or renovations (conducted by 19% of all undeclared workers), 14% undertake gardening work, 13% domestic services, 12% childcare, 11% worked as waiting staff in the hospitality industry, 7% IT support services, 7% provide home removal services, 7% tutoring and 3% assistance for an elderly or dependent person. Such work, therefore, is concentrated in the service industries, many of which have witnessed closure during the current 'lockdown' (e.g., waiting staff). Among the personal services commonly provided on an undeclared basis such as elder care, domestic cleaning and tutoring (Kedir & Rodgers, 2018; Windebank & Martinez-Perez, 2018), many of these undeclared workers will have lost their jobs either because customers fear having them in their home, or because the undeclared workers can no longer travel to do such work. If they do continue to work, out of economic necessity, then there are concerns that this will increase the rate of infections, and their clients in some cases are the most physically vulnerable, particularly in relation to elder care.

Indeed, the argument that if excluded from government financial support, undeclared workers will either be without income or will attempt to continue to work is reinforced when previous studies are analysed of who engages in undeclared work. In the developing world, it is widely recognised that populations marginalised from the declared economy constitute the undeclared workforce and that they undertake such activity as survival strategy in the absence of alternative means of livelihood (ILO,

2018; World Bank, 2019). In the advanced economies, this 'marginalisation thesis' has been validated in previous studies. Undeclared work is more prevalent in poorer countries (Schneider & Williams, 2013; Williams, 2015), less wealthy regions (Kesteloot & Meert, 1999; Williams & Windebank, 2001) and peripheral rural areas (Button, 1984; Williams, 2004). Similarly, the unemployed disproportionately engage in undeclared work (Ahmad & Nobil, 2008; Castree *et al.,* 2004; Katungi *et al.,* 2006; Rubić. 2013, Sasunkevich 2014, Surdej & Ślęzak 2009), those with fewer years in full-time education are more likely than those with more years in full-time education (Slavnic, 2010; Taiwo, 2013), and those with financial difficulties are more likely than more affluent population groups (Barbour & Llanes, 2013; Katungi *et al.,* 2006; Williams, 2004). Using a multilevel mixed-effects logistic regression analysis of the 2013 Eurobarometer survey of the EU, moreover, the finding is that the unemployed and those having difficulties paying their household bills are significantly more likely to participate in undeclared work, although this was not found to be the case those with less formal education and living in rural areas and deprived European regions (Williams & Horodnic, 2017a).

Turning to what is known about their motives for engaging in undeclared work, participation in undeclared work is often portrayed as resulting from their 'exclusion' from the declared economy (Davis, 2006; Gallin, 2001; ILO, 2018). Others, however, have argued that undeclared workers voluntarily 'exit' the declared economy, due to the high taxes and burdensome regulations (De Soto, 1989, 2001; Maloney, 2004) or their dissatisfaction with the government (Horodnic, 2018; Williams, 2017). However, others have argued that there is a dual undeclared labour market with an exit-driven 'upper tier' and an exclusion-driven 'lower tier' of undeclared workers (Fields, 1990, 2005; Williams & Bezeredi, 2018; Williams et al., 2017c). In a study of the EU based on the

2013 Eurobarometer survey, Williams et al. (2017c) reveal that 24% of participants do so for solely exclusion reasons, 45% for solely exit rationales and 31% for mixed reasons. They thus conclude the existence of a dual informal labour market with those in the exclusion-driven lower tier being half the number of those in the exit-driven upper tier, although the ratio of exit- to exclusion-driven informal workers significantly varies in different EU regions. In Southern Europe, a 2:1 ratio exists of those purely exclusion-driven and purely exit-driven, whilst the inverse exists in Nordic nations and Western Europe, where a 6.8:1 ratio and 3.6:1 ratio respectively prevails between exit-driven and exclusion-driven undeclared workers. Moreover, the exclusion-driven 'lower tier' is significantly more populated by the unemployed and those living in East-Central Europe and the exit-driven 'upper tier' by those with few financial difficulties and living in Nordic nations. Those living in more affluent EU regions and having fewer or no financial difficulties are therefore involved in undeclared work out of choice whilst the unemployed and those in East-Central Europe do so as a survival strategy. This suggests that it is primarily those in the lower tier of the dual undeclared labour market who may be finding themselves in difficulty with the coronavirus pandemic if they cannot access the financial support offered to enterprises and workers to offset its impacts on their livelihoods.

Having reviewed previous studies on undeclared work and undeclared workers in Europe and beyond, it is necessary to briefly review how governments have attempted to tackle the undeclared economy. This has important implications for policy decisions in the present-day climate. The currently dominant policy approach adopted by governments has its origins in a seminal paper by Allingham and Sandmo (1972). This views citizens and employers as participating in undeclared work when the expected costs (i.e., the likelihood of being caught and punished) do not outweigh the

benefits. To make acting lawfully the rational choice, this seminal paper argued that governments need to alter cost/benefit ratio, and that the way to do this is by raising the costs of undeclared work through increasing the sanctions and likelihood of detection so as to deter engagement in undeclared work. This deterrence approach has been subsequently widely adopted across Europe and beyond (Grabiner, 2000; Hasseldine & Li, 1999; Richardson & Sawyer 2001; Williams & Franic, 2016). Indeed, in an examination of European countries, a 2017 survey of the official government representatives on the European Commission's European Platform Tackling Undeclared Work reveals that penalties are ranked the most important policy measure for tackling undeclared work by national governments followed by improving the risk of detection and these are also perceived as the most effective measures for tackling the undeclared economy (Williams, 2019b). Interestingly, neither scholars nor governments have attached much importance to altering the cost/benefit ratio by increasing the benefits of declared work. In the present-day climate where government financial support is being provided to those in declared work, this dominant deterrence policy approach perhaps needs revisiting, and use made of the current financial support on offer to bring these enterprises and workers out of the shadows.

Given this review of the evidence on the undeclared economy in Europe, what becomes apparent is that there is no up-to-date analysis of the service industries and service workers who participate in undeclared work and will have been affected by the coronavirus pandemic. To provide such an analysis, a Eurobarometer survey on undeclared work undertaken in September 2019 and made public in the last month is here reported.

Data and methodology

Data

To evaluate the service industries and service workers who participate in undeclared work and will have been affected by the coronavirus pandemic, data is reported from 27,565 interviews undertaken in September 2019 in 28 European countries (the 27 European Union member states and the UK) in Eurobarometer special survey 92.1. All interviews were conducted in the national language with adults aged 15 years and older. A multi-stage random (probability) sampling methodology was used, 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.

Variables

To evaluate participation in undeclared work, the dependent variable is a dummy variable with value 1 for respondents answering the question of 'Which of the following activities have you carried out undeclared in the last 12 months?', and responding 'yes' to any service sector activity and value 0 otherwise. The service sector activities covered are: administrative and clerical tasks or IT assistance; professional services; writing or translation services; creative, multimedia or software services; waiter-waitress services; gardening; transport services; selling farm food; selling other goods or services; babysitting; elderly care; domestic cleaning or ironing; tutoring, and helping move house.

Similar to past studies that evaluate engagement in undeclared work (Williams & Horodnic, 2016, 2017a), the control variables selected include various demographic, socio-economic and spatial variables (see Table 1).

INSERT TABLE 1 ABOUT HERE

Analytical methods

Probit regression analysis is used in the empirical analysis because our dependent variable is a binary variable. The maximum likelihood method is used to estimate the objective function. The log-likelihood function for the probit model is:

$$lnL_i(\boldsymbol{\beta}) = y_i \log\{\phi(x_i\beta)\} + (1 - y_i)\log\{1 - \phi(x_i\beta)\}$$

where ϕ is the standard cumulative normal distribution function which is numerically maximized with respect to β. Using probit analysis, the following model is adopted:

$$\Pr(y_i^* > 0|\boldsymbol{x}_i) = \phi(\boldsymbol{x}_i\boldsymbol{\beta})$$

The dependent variable of the model (y_i^*) is a latent variable, which represents engagement in undeclared service provision and is linearly related to a set of factors **x** and a disturbance process ε. Control variables are described in Table 1 above.

Findings

Table 2 reveals that 3.6% (1 in 28) of the European citizens surveyed had undertaken undeclared work in the 12 months prior to the survey which was conducted in September 2019. Of those conducting undeclared work, their activity is concentrated in specific sectors: 27% supply undeclared goods and services in the personal services sector, which includes childcare, care for the elderly, and cleaning services; 19% work in the construction sector; 17% in the hospitality sector; 10% in the retail sector or repair service sector; 8% in education, health and social work services; 6% in agriculture; 5% in transport, and 4% in industry and manufacturing.

Asking those who undertake undeclared work about the more precise activities that they undertake: 21% undertake home repairs or renovations; 14% babysitting; 14% work as a waiter or waitress; 12% household cleaning or ironing; 12% gardening; 10%

assistance for a dependent or elderly person; 10% tutoring; 6% household removal services; 5% professional services (e.g., accounting, consulting, project management); 5% writing or translation services; 5% creative, multimedia and software services (e.g., design, marketing support, wen or software development); 4% IT assistance or administrative and clerical tasks, and 3% passenger transport services.

Some 80.3% of all undeclared work, therefore, is in the service sector involving the provision of undeclared services, meaning that 2.8% (1 in 35) of all European citizens provide undeclared services to others. The undeclared services provided, moreover, are precisely those which have been heavily affected by the current pandemic. The 14% of the undeclared workforce employed as waiters and waitresses now have no source of income due to the closure of restaurants, bars and cafes, the 6% of the undeclared workforce providing home removal services will now have no income due to the cessation of the housing market, and the 3% providing passenger services will have witnessed drastically reduced trade due to the restrictions on movement. Many involved in the provision of personal services that take place in the client's household (e.g., babysitting, household cleaning and ironing, assistance for a dependent or elderly person, tutoring) will also have suffered severe reductions in their income as households self-isolate (and cancel their use of such services for fear of infection) and even if the demand for such services persist, movement restrictions will make travel to work difficult for these undeclared service providers.

Examining the employment relationships of the 1 in 35 European citizens providing undeclared services, 50% undertake such service provision on an own-account self-employed basis, 16% as waged work for an employer, 11% as a mixture of both waged employment and own-account work, 8% for a partner or family businesses, whilst 15% do not know or refused to answer. Moreover, examining how their

undeclared work fits into their overall portfolio of work, 21% of those providing undeclared services (0.6%, or 1 in 175 of all European citizens) rely solely on undeclared service provision for all their income. This group, therefore, are currently entirely excluded from the temporary financial support available for declared employees and the self-employed that has been put in place in response to the coronavirus pandemic. These undeclared service providers who rely entirely on undeclared income are particularly concentrated in Southern Europe, comprising 27% of all undeclared workers in this EU region.

Who, therefore, engages in the provision of undeclared services in Europe? Table 2 reveals that men are more likely than women, as are younger age groups. Single people and single people living with a partner are also over-represented in the undeclared workforce, as are those in single person households. Although the years spent in education appears to make little difference to participation, students are over-represented in the undeclared workforce, as are the self-employed, manual workers and unemployed. Those who have difficulties paying the household bills most of the time are also over-represented, and although there are few differences between urban and rural areas, those living in Western Europe and the Nordic nations are more likely than those in East-Central Europe and Southern Europe to engage in the provision of undeclared services.

INSERT TABLE 2 ABOUT HERE

To analyse if these descriptive results remain valid when other variables are introduced and held constant, Table 3 reports the marginal effects of the probit regression analysis. Model 1 introduces the socio-demographic variables, model 2 adds the socio-economic variables and model 3 (the full specification model) adds the spatial variables.

Reporting the results of the full specification model, the finding is that after controlling for other variables, men have a 35% higher probability of providing undeclared services than women. Single person households have an almost 15 percentage point higher probability of providing undeclared services than those living in single households with children. Those who left full-time education aged 16-19 have a 12% higher likelihood of providing undeclared services than those who finished full-time education at 15 years old or younger. Although self-employed individuals are 8% more likely to provide undeclared services than manual workers, their probability of doing so is 20 percentage points lower than white collar workers other than managers. Those who have difficulty paying their household bills most of the time are also significantly less likely to provide undeclared services than those who have difficulties never or nearly never. This is likely linked to the fact that undeclared income has helped these individuals pay their bills more easily and has important consequences for the pandemic since this ability afforded by their participation in undeclared work is likely to be no longer available to them. Those living in Southern and Western Europe have a higher probability of providing undeclared services than those in East-Central European countries. This could well be related with higher costs of formal service provision in the former countries which might lead citizens to purchase services on an undeclared basis.

INSERT TABLE 3 ABOUT HERE

Discussion and conclusions

The problem raised in this paper has been that the temporary protection and support measures put in place for both dependent employees and the self-employed only relate to the declared work of dependent employees, the self-employed and enterprises. For those engaged in undeclared work, there is no such support. Through an analysis of the

late 2019 Eurobarometer survey, this paper has revealed that this affects 2.8% (1 in 35) of all European citizens who in the 2019 survey provided undeclared services to others, and especially the 21% of those providing undeclared services (0.6%, or 1 in 175 of all European citizens) who rely solely on undeclared service provision for all their income. These undeclared service providers are now unable to earn their livelihood through the undeclared economy. Examining the service industries and workers involved, it has been revealed that undeclared work is particularly prevalent in the hospitality, retail and personal services sectors and the undeclared workforce disproportionately composed of men, single person households, those with fewer years in full-time education, the self-employed and white collar workers other than managers, those who until now have seldom had difficulties paying the bills, doubtless due to their undeclared incomes, and people living in Southern and Western Europe.

What, therefore, is to be done about these undeclared service providers? Before the pandemic, the dominant approach used by government to tackle the undeclared economy was based on the view participation in the undeclared economy occurred when the expected costs (i.e., the likelihood of being caught and punished) did not outweigh the benefits. To change the cost/benefit ratio to make acting lawfully a rational choice, governments sought to raise the costs of engaging in undeclared work by increasing the sanctions and likelihood of detection (see Williams, 2019). Interestingly, neither scholars nor governments have given much attention to altering the cost/benefit ratio by increasing the benefits of declared work. However, in the current period, using penalties and the risk of detection are obsolete because most undeclared work has ceased. Nevertheless, improving the benefits of declared work to pull workers and enterprises into the declared economy, remains available. The current provision of temporary financial support to those in declared work provides an

opportunity to use the support being offered to pull these undeclared enterprises and workers out of the shadows.

The way in which this could be achieved is through a voluntary disclosure initiative. These are schemes where those voluntarily disclosing their previous undeclared work to the enforcement authorities have the penalties waived which would have otherwise applied so long as they remain compliant in the future (see Williams, 2014, 2017). Voluntary disclosure schemes are therefore a way of encouraging enterprises and workers to come out of the shadows and to declare their past undeclared activities to the authorities. To encourage this to occur, such enterprises and workers have traditionally been threatened with high fines after the voluntary disclosure period. In the current period, they can instead be offered an incentive to do so. Their current loss of earning capacity and the availability of temporary financial support represent a major reason for them to come forward and declare their past undeclared service provision. More particularly, their ability to access the temporary financial support being offered to declared enterprises and workers, if they voluntarily disclose their previous undeclared activities, would provide a powerful incentive for them to make use of any voluntary disclosure scheme introduced in the current period.

A recent survey of senior officials of European national governments reveals that voluntary disclosure schemes have been used in Belgium, Cyprus, France, Italy, Lithuania, Slovenia and the UK (Williams & Puts, 2017). Numerous examples exist of effective voluntary disclosure schemes. In the UK, the VAT short-term incentive scheme in 2003 offered businesses the opportunity to regularise their VAT situation without penalty. It cost £500,000 in marketing costs and £2.7 million in penalties foregone. The UK tax authorities received 3,000 registrations raising £11.4 million in tax and interest and a further £2.5 million in penalties for those who did not continue to

comply, resulting in a return-to-cost ratio of 23:1 (National Audit Office, 2008). In Italy in 2001, a voluntary disclosure scheme allowed undeclared enterprises and workers to formalise. They could either fully formalise and pay reduced taxes and social contributions for three years, or engage in gradual formalisation, and the formalisation plan was not adhered to, they had to pay 100 per cent of the tax and contributions owed. It produced 1,794 declarations from enterprises and 3,854 new declared workers, although there was a larger 'indirect' formalisation with 385,000 additional declared workers registered nationally that year during a time of economic stagnation (Meldolesi, 2003).

Using a voluntary disclosure scheme to encourage undeclared enterprises and workers to declare their past undeclared service provision (which could be either with or without penalty) and in return, offering them access to the temporary financial support being offered to declared enterprises and workers, could be an effective way forward. On the one hand, it would provide the undeclared enterprises and workers with the temporary financial support they currently require. On the other hand, it brings these undeclared service providers out of the shadows and onto the radar of enforcement authorities. Such an initiative, it should be added, may not be feasible in other global regions and different approaches will be required in different contexts to provide support to undeclared service providers.

Of course, this paper has confined itself to the impacts of COVID-19 on the undeclared economy and a possible policy response. However, research is required in future on many other issues related to the impacts of this pandemic on the service industries. A non-exhaustive list includes: the wider economic and business impacts on specific service industries (e.g., accommodation services; food and beverage serving activities; retailing; railway, road, water and air passenger transport services; travel

agencies and other reservation services; cultural activities, and sports and recreational activities); rescue packages and their effectiveness, and how their effectiveness varies across different industries; the future recovery and the consequences for new business models in specific service industries, such as in response to a potential shift towards greater localisation and the on-going repeated use of 'lockdowns' at regular intervals; and the impacts on workers in the service industry such as the changes required in workplace behaviours, working practices (e.g., homeworking), and the consequences of any emergent changes in what is considered valuable and valued service work. These are all potential avenues for future research. However, this paper has confined itself to the impacts of the pandemic on the undeclared economy and a possible practical policy response to mitigate its negative consequences.

In sum, if this paper encourages recognition by European governments of the problems being witnessed by undeclared service providers and helps identify the prevalence of such providers (with the caveat that direct surveys under-estimate the proportion of the enterprises and workers participating in the undeclared economy) along with the sectors and population groups involved, then it will have achieved one of its intentions. If it also results in recognition by governments that action is required, and greater consideration of the feasibility of a voluntary disclosure initiative using the temporary financial support being offered to declared enterprises and workers as an incentive to come forward, then it will have achieved its fuller intention.

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Table 1. Control variables used: definitions

Variables	Definition
Gender	A dummy variable with value 0 for females and 1 for males
Age	A categorical variable indicating the age interval of a respondent with value one for those aged 15-24, value 2 for aged 25 to 39, value 3 for aged 40 to 54, and value 5 for those who are aged 55 or above.
Marital status	A categorical variable for the marital status of respondents with value 1 for (re)married, value 2 for single living with a partner, value 3 for single, value 4 for divorced or separated, value 5 for widow, and value 6 for others.
Household type	A categorical variable for the household situation with value 1 for single household without children, value 2 for single household with children, value 3 for multiple household without children, and value 4 for household with children.
Number of children under 10 years old	This is a truncated variable for the number of children in households who are younger than 10 years old. If there is no children aged below 10 in a household than it is equal to 0 which is the first category whereas it is always equal to value 5 if there are more than and equal to 4 children below age 10 in a household.
Stopped full-time education	A categorical variable for the education level of respondents. It is equal to 1 if s/he stopped full-time education below age 15, value 2 if stopped between 16-19, value 3 if stopped at an age older than 19, value 4 if s/he still studies, and value 5 if s/he does not have any full-time education.
Labour market status	A categorical variable grouping respondent by their socio-professional category with value 1 for self-employed, value 2 for managers, value 3 for other white collars, value 4 for manual workers, value 5 for house person, value 6 for unemployed, value 7 for retired, and value 8 for students.
Difficulties paying bills	A categorical variable for the respondents' difficulties in paying bills with value 1 for almost never/never, value 2 for occasionally, and value 3 for having difficulties most of the time.
Urban/rural	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.
Southern Europe	A dummy variable equals to 1 if the respondent is from Greece, Spain, Portugal, Cyprus, Italy or Malta
Western Europe	A dummy variable equals to 1 if the respondent is from Belgium, Luxembourg, the Netherlands, Austria, Ireland, the United Kingdom, France or Germany
East-Central Europe	A dummy variable equals to 1 if the respondent is from Latvia, Croatia, Romania, Slovakia, Bulgaria, Hungary, Lithuania, Czech Republic, Estonia, Poland or Slovenia.
Nordic nations	A dummy variable equals to 1 if the respondent is from Denmark, Finland or Sweden.

Table 2. Descriptive statistics of participation in undeclared service provision in Europe

Variable	All surveyed	All undeclared work	Undeclared service sector activities
Number	26,565	961	686
All (%)	100.0	3.6	80.3
Socio-demographic variables			
Gender			
Male	45.3	59.3	50.3
Female	54.7	40.7	49.7
Age			
15-24	8.7	17.6	20.5
25-39	20.1	30.0	30.8
40-54	23.8	27.4	24.2
55+	47.4	25.0	24.5
Marital status			
(Re)Married	52.4	36.7	36.1
Single living with partner	12.1	20.8	19.9
Single	16.9	27.9	29.3
Divorced or separated	8.0	10.0	9.6
Widow	10.1	3.6	3.9
Other	0.5	1.0	1.2
Household type			
Single household without children	29.9	34.6	36.3
Single household with children	5.3	7.4	7.2
Multiple household without children	35.6	29.2	29.8
Household with children	29.5	28.8	26.7
Number of children below age 10			
0	83.0	80.3	81.3
1	10.2	12.4	11.8
2	5.6	5.6	5.1
3	0.9	0.8	0.7
4+	0.3	0.8	1.0
Socio-economic variables			
Stopped full-time education			
15-	13.5	8.5	8.6
16-19	43.9	42.7	38.6
20+	35.5	35.0	35.7
Still studying	6.2	12.6	15.9
No full-time education	0.9	1.2	1.2
Labour market status			
Self-employed	6.9	11.9	10.2
Managers	10.6	8.0	8.2
Other white collars	12.8	11.5	13.1
Manual workers	20.1	26.5	23.2
House person	5.3	3.8	4.5
Unemployed	4.9	13.3	13.1
Retired	33.1	12.8	12.2
Students	6.1	12.3	15.5
Difficulties paying bills			
Almost never/never	68.4	53.4	53.0
From time to time	24.0	28.5	28.1
Most of time	7.7	18.1	18.9
Spatial characteristics			
Urban/rural			
Rural area or village	34.3	33.9	34.1
Small or medium sized town	37.2	39.6	39.8
Large town	28.5	26.5	26.1
EU region			
Southern	18.4	14.9	16.2

Western	30.1	33.2	35.9
East-Central	40.3	38.7	34.7
Nordic nations	11.2	13.2	13.3

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

Table 3. Marginal effects of the probit regression analysis of the likelihood of providing undeclared services in Europe, 2019

	Model 1			Model 2			Model 3		
	dy/dx	p-value	se	dy/dx	p-value	se	dy/dx	p-value	se
Socio-demographic variables									
Gender (Reference Category (RC): Female)									
Male	-.359	***	.039	-.350	***	.039	-.347	***	.039
Age (Ref. category: 15-24)									
25-39	-.066		.047	.012		.051	.015		.050
40-54	-.135	***	.050	-.041		.054	-.039		.054
55+	-.134	**	.052	-.040		.059	-.033		.059
Marital status (RC: (Re)Married)									
Single living with partner	-.050		.038	-.061	*	.035	-.057	*	.035
Single	-.029		.084	-.026		.078	-.027		.076
Divorced or separated	.001		.083	.010		.078	.025		.077
Widow									
Household Type									
(RC: Single Household without children)									
Single Household with children	-.117	*	.063	-.128	**	.064	-.145	**	.062
Multiple Household without children	.019		.082	.030		.077	.035		.076
Household with children	-.048		.085	-.052		.080	-.054		.079
Number of Children below age 10									
(RC: 0)									
1	-.003		.048	.005		.048	.008		.047
2	-.027		.065	-.031		.061	-.026		.061
3	-.141		.123	-.157		.143	-.146		.151
4+	.127		.142	.143		.121	.145		.131
Socio-Economic Variables									
Stopped Full-time Education									
(RC: 15-)									
16-19				-.127	***	.048	-.121	**	.048
20+				-.080		.053	-.076		.053
Still studying				.105		.097	.104		.095
No full-time education				-.088		.116	-.074		.113
Labour Market Status									
(RC: Self-employed)									
Managers				.044		.060	.051		.061
Other white collar				.205	***	.066	.206	***	.066
Manual workers				-.077	*	.040	-.076	*	.041
House person				-.028		.113	-.030		.114
Unemployed				.000		.049	.003		.050
Retired				-.043		.052	-.042		.053
Students				-		-	-		-
Difficulties paying bills									
(RC: Almost never/never)									
From time to time				-.012		.030	-.013		.030
Most of time				-.073	*	.039	-.077	*	.041
Spatial characteristics									
Urban/rural									
(RC: Rural area or village)									
Small or medium sized town							.005		.029
Large town							-.040		.033
EU region									
(RC: East-central)									

Southern				.067	* .040
Western				.051	* .031
Nordic nations				.020	.043
	N	816	816		816
	Pseudo R^2	0.1719	0.2472		0.2559
	χ^2	96.02	122.81		146.11
	p>	0.0000	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 each and 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