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Determinants of undeclared work in the EU Member States

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Abstract

In the context of European economic recovery, undeclared work has become a true challenge for the labour market policies, mainly because it affects tax revenue, social security and labour standards. Without better understanding of the main determinants of undeclared work, little can be done to prevent it. Having these in mind and based on the Eurobarometer survey, the paper aims to find the main factors that trigger undeclared work. Our findings suggest that after the economic crisis, the trust in national authorities has dropped and generated more undeclared payments, especially for the case of small and medium firms.

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1. Introduction

In the context of European economic recovery, undeclared work has become a true challenge for the labour market policy implementation, mainly because of its negative influence upon economy. At EU level, the concept of undeclared work is generally understood as any paid activity carried out in a formal undertaking, partially or fully undeclared to public authorities. Self-employed work could also meet the basic definition, when a self-employed person provides services either to a formal enterprise or to other clients, such as households. Clearly, undeclared work primarily affects tax revenues and implicitly, it also affects social security, labour standards and workers' safety. In an increasing number of EU member states, hard work has already been done towards reducing and

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preventing undeclared work. Most papers focused on developing and testing policy measures that aim to tackle undeclared work around all 28 EU member states and feasible measures for different nations were taken under discussion (EIRO, 2005; European Employment Observatory, 2007; Renooy et al, 2004; Williams, Horlings and Renooy, 2008).

Most findings suggest that undeclared work is often carried out in sectors like construction, renovation or repair works, cleaning, babysitting or care for the elderly. Regarding the regional particularities at EU level, Hazans (2011) found for a set of 30 European countries that the informal sector is mostly present in the Southern Europe and less in the North, while the difference between West and East is almost insignificant. The findings of the "European Social Survey" conducted in 2008-2009 indicated that the proportion of workers without contracts vary from 2.7% in the Nordic countries up to 9.5% in southern Europe, while being approximately 5% in East and West alike. Based on the proportion of the informal employed workforce out of total employed, Hazans (2011) classified Greece, Spain, Cyprus, Italy, Portugal, UK, Poland and Austria as countries with a high degree of informal employment (20 to 57% of the workforce being informal), while at the opposite point were Lithuania, Latvia, Sweden, Hungary, Estonia, France and Belgium, with low percentages between 6.4% and 10%.

Moreover, the growing interest in the issues of tax reform, fiscal sustainability and wage differentials (Hurdzeu et al. 2014; Lazar, 2014; Matei et al., 2014; Zamfir, et al., 2015), has rapidly increased the discussions about how to tackle undeclared work in order to prevent unregistered or hidden income or unregistered taxes and social insurances (Davidescu, 2015; 2014; European Commission, 2007; Grabiner, 2000).

However, without better understanding the main determinants of undeclared work, little can be done to prevent it. For instance, current socio-economic context is characterized by a number of elements that somehow encourages undeclared work - long-term unemployment, the existence of vulnerable groups (youth, migrants, etc.) who have difficulties in finding a job, as well as the pressure for higher earnings and minimum wages as a social support measure. Hence, the paper will attempt to find the main determinants of undeclared work and based on the 2013 Eurobarometer survey we will try to highlight several particularities at EU level, by considering both employers' and employees' perspectives.

2. Eurobarometer survey analysis

In this paper, a research study was conducted in an attempt to identify the main factors that trigger undeclared work at the EU level, based on the Eurobarometer survey conducted on the 28 EU countries in 2013. Regarding the reasons given by respondents as crucial in carrying out undeclared work, we note that too low salaries for declared work is one of the main reasons (18.9%), indicating that employers would rather keep wages at a low level, possibly as closest to the minimum wage.

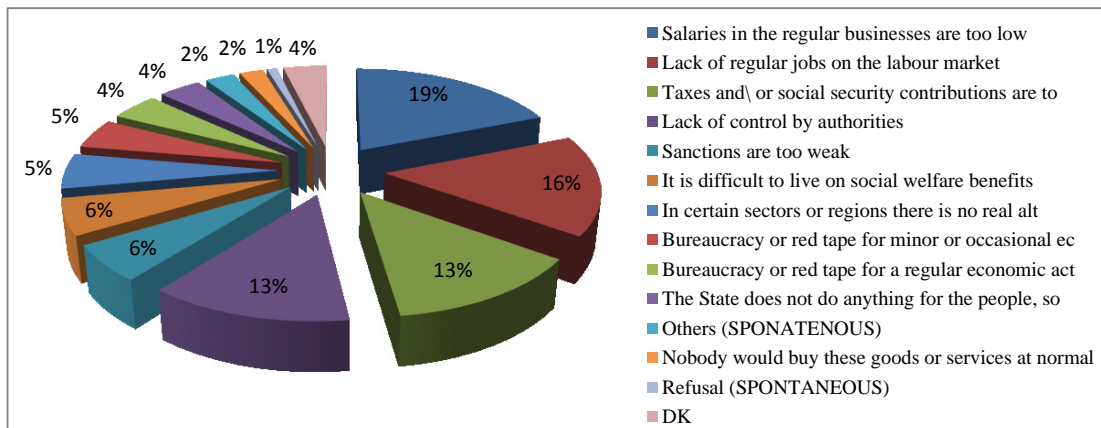


Fig. 1. Main reasons for undeclared payments

Other reasons raised are lack of regular jobs on the labour market (15.9%), taxes and/ or social security contributions that are too high (13%), as well as lack of control by authorities.

Out of the total number of 27563 respondents of the Eurobarometer survey, the vast majority, representing 91.6% of them, denied having employers willing to declare lower wages to public authorities, in order to avoid higher taxes, while only 3.8% admitted having employers who prefer under-declared work. Among the respondents who have admitted to have received payment in cash without declaring it to tax or social security authorities, most of them are working in small and medium firms with 1-9 employees (32%), respectively 10-99 employees (46%), while only 6% of them work in large companies with over 500 employees.

Moreover, based on the Eurobarometer, it seems that the recent economic crisis has strongly affected the image of important institutions, both at national and at European level. Thus, public confidence in the national authorities (Government, Parliament, regulatory institutions, etc.) decreased the most (i.e. 63.4%). Even the financial industry has registered a loss of confidence of 61.5%, while the European institutions turned out to be less credible in 53.7% of the cases. An interesting aspect consists, however, in the fact that the confidence in their personal bank(s) has not been affected by the crisis for almost 53% of the respondents.

Out of the total number of respondents of the Eurobarometer survey, the vast majority, representing 92.4% of them, denied having conducted undeclared activities in the last 12 months, while only 4.5% admitted it. Out of the 1234 respondents working without declaring their entire revenues, 62% were male and only 38% female. Regarding the socio-demographic characteristics of those who conducted undeclared work in the last 12 months, 37% of them have ages between 35 and 54 years, 24% correspond to the 25-34 age group, while other 21% are between 15-24 years old. Only 12% correspond to the age group 55-64, while other 6% have over 65 years old.

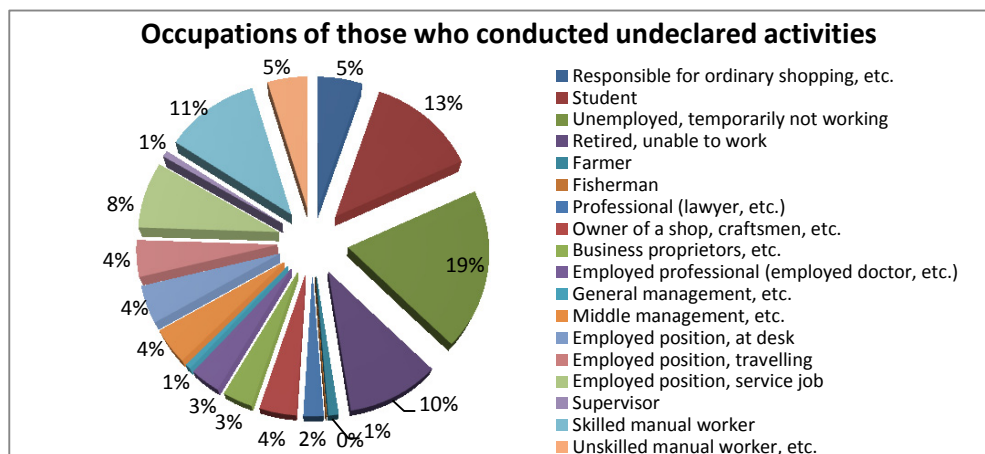


Fig. 2. Occupations of those who conducted undeclared activities

Regarding the main types of occupations of those who declared in the Eurobarometer survey to have conducted undeclared activities in the last 12 months, 19% of them were unemployed or temporary not working, 13% were students, while other 11% were skilled manual workers and 10% more were retired or unable to work. A small part of them, representing around 8% of the respondents had service jobs, while less than 5% each were responsible for ordinary shopping or unskilled manual worker. Some other less frequent occupations (with less than 4% each) were those of fisherman, desk positions, owner of a shop or middle management.

When it comes to the main types of undeclared activities that were recently conducted, it seems that little has to do with the general occupational field of one's individual. Most solicited undeclared activities were repairs and renovations (22.1%), selling other services (19.4%) and gardening (12.1%). We may also notice that a great part of the declared activities are domestic activities, belonging to household (cleaning, ironing clothes, repairs or renovations, gardening, car repairs). Basically, there are quite a few activities that can be considered as carrying

undeclared work (babysitting 8.5%, waiter or waitress 8.3%, administrative or IT assistance 6%, selling goods or/and services 33%).

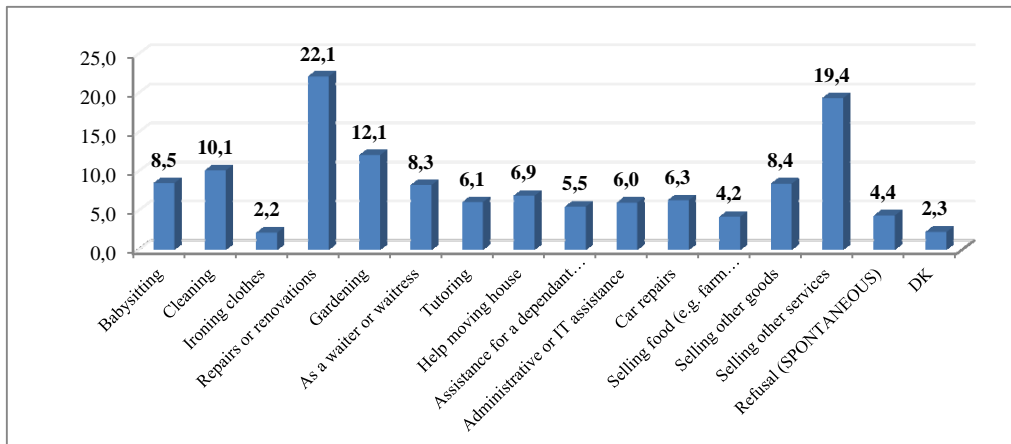


Fig. 3. Main types of undeclared activities conducted in the last 12 months

3. Logistic regression

Having in mind both employers' and employees' perspectives, two distinct logistic models were estimated and plausible arguments were then built in order to better understand the triggers of undeclared work.

According to Shumway (2001) the logistic model is a single-period classification model which uses maximum likelihood estimation to provide the conditional probability of an individual belonging to a certain category given the values of the independent variable. It describes the relationship between a dichotomous variable Y , that takes values 1 for 'conducting undeclared work' and 0 if not, and k explanatory variables x_1, x_2, \dots, x_k , representing triggers for undeclared work. The logistic regression model is defined as follows:

$$p_i = \frac{1}{1 + e^{-(\beta_0 + \sum_{j=1}^k \beta_j x_{i,j})}} \quad (1)$$

When applying the logit-transformation to the above equation, we get a linear relationship between $\text{logit}(p_i)$ and the explanatory variables:

$$\text{logit}(p_i) = \log\left(\frac{p_i}{1 - p_i}\right) = \beta_0 + \sum_{j=1}^k \beta_j x_{i,j} \quad (2)$$

This equation is also called the **logit form** of the model (Greene, 1990) where $\text{logit}(p_i)$ is the log odds of conducting undeclared work for the given values $x_{i,1}, x_{i,2}, \dots, x_{i,k}$ of the explanatory variables.

Regarding the employers' perspective towards undeclared work, our findings suggest that after the economic crisis, the trust in national authorities has dropped and lead to more undeclared payments for salaries that are higher than the minimum wage, especially for the case of small and medium firms. We may notice that small and medium firms (under 100 employees) are those preferring to pay employees "in envelope", because of the financial standing

of these firms, which are practically trying to lower wage costs by not paying the social security contributions to authorities. Another reason may be that in small and medium firms the employers interact more often with their employees, potentially leading to a closer relationship, so that payment may be made in cash through tacit agreement. On the other hand, the employees working within large companies (over 500 employees) are less likely to be paid "in envelope". The impact of the economic crisis on the respondents' confidence in a series of authorities shows us that the lack of confidence in national authorities leads to the labour payment "in envelope", whereas the lack of confidence in the credit rating agencies is not beneficial to the payment of undeclared labour.

Logistic regression		Number of obs	=	10513
		LR chi2(5)	=	128.05
		Prob > chi2	=	0.0000
Log likelihood = -1693.5544		Pseudo R2	=	0.0364

undeclare_pay	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
under10	.9963079	.1361443	7.32	0.000	.7294699	1.263146
under100	.6932052	.131215	5.28	0.000	.4360286	.9503818
over500	-.7802116	.2261767	-3.45	0.001	-1.22351	-.3369135
notrust_na	.2132395	.1132507	1.88	0.060	-.0087278	.4352068
notrust_credit	-.2818886	.1075789	-2.62	0.009	-.4927393	-.0710378
_cons	-3.568498	.1273651	-28.02	0.000	-3.81813	-3.318867

Fig. 4. The logistic model describing the employers' perception towards undeclared pays

Moreover, from the employees' perspective, it turned out that employers who have difficulties in paying bills tend to accept undeclared work more easily. Also employees who work without contract or who have salaries based on results tend to have high chances for undeclared work.

From the point of view of social-demographic characteristics, our findings suggest that single male persons, living in rural areas have a higher tendency towards conducting undeclared activities.

Logistic regression		Number of obs	=	26712
		LR chi2(8)	=	800.50
		Prob > chi2	=	0.0000
Log likelihood = -4599.1631		Pseudo R2	=	0.0801

undeclare_work	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
nocontract	.7251908	.1489309	4.87	0.000	.4332915	1.01709
salary_on_result	.6207194	.1019991	6.09	0.000	.420805	.8206339
unpaid_work	1.614457	.1164723	13.86	0.000	1.386175	1.842738
married	-.3610225	.0642947	-5.62	0.000	-.4870377	-.2350073
male	.6624711	.0610307	10.85	0.000	.5428532	.782089
age	-.0273478	.0018809	-14.54	0.000	-.0310342	-.0236614
urban	-.156122	.062103	-2.51	0.012	-.2778416	-.0344024
dif_pay_bill	.5115589	.0602658	8.49	0.000	.3934401	.6296777
_cons	-2.301781	.1054307	-21.83	0.000	-2.508422	-2.095141

Fig. 5. The logistic model describing the employees' perception towards undeclared work

Moreover, we can state that the chances of a person to conduct undeclared activities decrease with age, but are quite sensible to financial aspects. For instance, if it becomes more difficult to pay the current bills, we might expect a change in attitude and an increase in the chance to conduct undeclared activities in order to gain extra money. Thus, we may conclude that in order to avoid undeclared work, one should be able to better plan the monthly expenses and to avoid spending more than they normally earn. But since this is normally impossible to control, the question still stands.

4. Conclusions

The paper focused on finding the main determinants of undeclared work based on the last available Eurobarometer survey that was conducted in 2013. Having in mind both employers' and employees' perspectives, two distinct logistic models were estimated in order to better understand the triggers of undeclared work and several particularities at EU level were highlighted. Our findings suggest that after the economic crisis, the trust in national authorities has dropped and lead to more undeclared payments, especially for the case of small and medium firms. Moreover, employers who had difficulties in paying bills and had family businesses tend to accept undeclared work more easily. Plausible arguments were then built in order to better understand the triggers of undeclared work.

Practically, the professional profile of those providing undeclared work indicates that they are either working without a formal written contract, or have a variable salary, with a substantial part based on results, so that a large part of it is not declared, especially when a certain value is exceeded. The social and demographics profile showed that those who are married and those living in the urban areas are less likely to perform undeclared work. On the other hand, the financial issues reflected by the difficulties in paying invoices have a positive influence on undeclared work.

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