

Chapter 4

Undeclared work: recent developments⁽¹⁾

1. INTRODUCTION

Tax evasion and fraud is increasingly seen as a political challenge at European level to be addressed in the context of the strategy to overcome the fall-out from the financial crisis⁽²⁾. After a largely jobless recovery, the labour market in most of the EU is still weak, with unemployment at unprecedented levels and the financial situation of households under stress. Undeclared work (abbreviated to UDW) is a well-recognised form of tax evasion which, while being fuelled to some extent by the weak labour market and rising levels of poverty, is nevertheless undermining public finances, the welfare state and, ultimately, wider social cohesion.

Given unclear and uncertain evidence concerning the relation between labour market conditions and the extent of UDW⁽³⁾, this chapter seeks to provide clearer insights into the phenomenon itself, and its policy implications, on the basis of a recent Eurobarometer survey (whose results can be compared with a pre-crisis survey).

Part 1 of the chapter addresses issues of definition and measurement. Part 2 presents the main trends in undeclared work across the Member States as seen through the latest Eurobarometer survey.

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⁽²⁾ See European Council conclusions, 22 May 2013.

⁽³⁾ See Williams and Renooy (2013).

Part 3 offers both a descriptive presentation and an econometric analysis of factors driving undeclared work, based on the Eurobarometer survey data. Part 4 highlights some examples of policy action taken by Member States to reduce undeclared work, while Part 5 presents key findings and conclusions.

1.1. Definition and measurement

UDW is a major component of the informal or shadow economy (also known as 'grey' or 'black' economy), which is defined by the European Commission as '...any paid activities that are lawful as regards their nature but not declared to public authorities, taking into account differences in the regulatory system of Member States'⁽⁴⁾. This definition relates to work and services that are concealed from tax and social security administrations and labour inspectorates to avoid taxes and social security contributions related to income and labour law obligations, as well as the cost of complying with registration requirements and health and safety regulations. The definition covers a variety of activities ranging from informal household services to clandestine work by illegal residents, but excluding criminal activities and speculative trade. By its very nature, particular care is needed when making inter-country comparisons on the basis of this, or any other definition, in so far as what is lawful and unlawful activity may differ between Member States.

⁽⁴⁾ European Commission (2007), p. 2.

It is obviously difficult to obtain reliable estimates of the extent of undeclared work and the size of the shadow economy, and a variety of studies, often applying different methods and criteria, inevitably produce equally varied results. Some estimates for different EU Member States demonstrate some of this divergence in results depending on the method used.

In general, though, the research methods used can be categorised as direct or indirect.

Direct methods are generally based on surveys and have the advantage in terms of comparability and detail. However, they tend to under-report the extent of UDW (in part because irregular migrants are significantly under-represented in the sample, but also for other, rather obvious, reasons). Such a Europe-wide survey was conducted for the first time in 2007 (Special Eurobarometer 284), and repeated in 2013 (Special Eurobarometer 402)⁽⁵⁾. A long-standing national example of such a survey is that undertaken by the Rockwool Foundation in Germany⁽⁶⁾.

⁽⁵⁾ The results of Special Eurobarometer 284 were commented on in the European Commission's Communication COM(2007) 628.

⁽⁶⁾ In its report ('*Das Ausmaß der Schwarzarbeit in Deutschland*'), published in 2012, the Rockwool Foundation found that UDW accounted for 2.3% of the total number of hours worked in the formal economy in Germany in 2008 — well down on the 4.1% reported in 2001.

Indirect methods are usually based on comparisons of macro-economic data (such as differences between output, income and expenditure data) or estimates of electricity consumption, or cash transactions. An approach often employed in such international comparisons is based on the Multiple Indicators Multiple Causes (MIMIC) model, which assumes a relationship between the unobserved shadow economy and a set of observable variables, notably monetary ones.

However, this methodology faces strong criticism ⁽⁷⁾. One of the weaknesses is said to be that it tends to over-estimate the level of undeclared work and that country comparisons can be difficult. Furthermore, it says little about its socio-economic characteristics ⁽⁸⁾.

Table 1 presents various estimates on the size of the shadow economy, the scale of undeclared work and the number of informal workers in the Member States using predominantly indirect methods. The first column presents estimates of the size of the shadow economy as a percentage of GDP, based on the MIMIC approach.

A second indirect source comes from the European Employment Observatory (EEO), which collected national data in 2004 and 2007 concerning the share of undeclared work. This is presented in the second column, as a share of either GDP or employment ⁽⁹⁾. These figures are based on labour force studies or macro-models, and complemented by surveys and, hence, not fully comparable across countries. As can be seen, the estimated scale of undeclared work tends to be significantly lower than that estimated by the MIMIC approach.

The World Bank's research on informal workers ⁽¹⁰⁾ suggests a similar picture, as presented in the third column. This measure includes those working without a contract, informal self-employment, unpaid family work and employers who employ five or fewer workers.

Another indicator is the adjustments for the non-observed economy (NOE) in National Accounts, as shown in the fourth column, although this measure includes items that go beyond the standard definition of undeclared work, e.g. illegal activities. A further issue is that such data is only available for a limited

number of countries and not always for recent years.

The divergence between available indicators underlines the need for caution in interpreting data on undeclared work. The data on undeclared work points to a great deal of heterogeneity, with estimates ranging from 2% to 30%. The estimated size of undeclared work is usually significantly lower in the reported national data than the estimates of the shadow economy based on the MIMIC approach. The divergence can only partly be explained by the underreporting of income included in the shadow economy. Another explanation is differences in the definition, and more precisely the range of people covered. For example, the World Bank measure may be less adequate for advanced economies than for emerging ones.

In this respect, the feasibility of establishing a common indirect method was studied by GHK and Fondazione G. Brodolini in 2009. This report recommended using a 'labour input' method based on the comparison of actual social security declarations and imputed declarations based on the European labour force survey (LFS) ⁽¹¹⁾.

⁽⁷⁾ The Intersecretariat Working Group on National Accounts (ISWGNA) warned against the use of the indicator in 2006. The ISWGNA gathers representatives of the five international organisations (European Commission, IMF, OECD, UN, World Bank) that have co-signed the international manual System of National Accounts, 1993.

⁽⁸⁾ It is based on statistical relationships, notably the currency demand, which can partly capture home production. It might not take country-specific characteristics and differences sufficiently into account as the parameters of the model are estimated jointly for a large group of countries.

⁽⁹⁾ For more details, see European Commission (2013), pp. 77–78

⁽¹⁰⁾ The World Bank calculated a proxy for the number of informal workers, available through national social surveys. The WB measure of the shadow economy (as a percentage of a country's registered GDP) covers 'non-professional' self-employed, employers who employ five or fewer workers, people working without a written contract, unpaid family workers, and where possible workers for whom the employer does not pay social contributions. For more details, see World Bank (2012), p. 4, see also Hazans (2011).

⁽¹¹⁾ GHK and Fondazione G. Brodolini (2009): study on indirect measurement methods for undeclared work in the EU, available at: ec.europa.eu/social/BlobServlet?docId=4546&langId=en.

Table 1: Size of shadow economy, undeclared work and informal workers in the EU Member States ⁽¹⁾

Country	Size of shadow economy (as % of GDP)	Undeclared work (share of GDP or employment, 1995–2006)	Informal workers (% of extended labour force, 2008–09)	Non-observed economy adjustments (% of GDP, reference year)
BE	16.4	6–10	10.5	4.6 (2009)
DE	13	7	11.9	NA
EE	27.6	7–8	9.8	9.6 (2002)
IE	12.2	NA	33	4 (1998)
EL	23.6	25	46.7	NA
ES	18.6	12	18.8	11.2 (2000)
FR	9.9	4–6.5	10.3	6.7 (2008)
IT	21.1	12	22.4	17.5 (2008)
CY	25.2	4.2	53	NA
LU	8	NA	NA	NA
MT	24.3	25	NA	NA
NL	9.1	2	12.6	2.3 (2007)
AT	7.5	2	19.7	7.5 (2008)
PT	19	5	22.4	NA
SI	23.1	17	14.1	10.2 (2007)
SK	15	13–15	12.2	15.6 (2009)
FI	13	4.2	11.2	NA
BG	31.2	22–30	13.2	13.4 (2011)
CZ	15.5	9–10	12.5	8.1 (2009)
DK	13	3	11.5	NA
HR	28.4	NA	NA	10.1 (2002)
LV	25.5	18	8	13.6 (2000)
LT	28	16–18	6.4	18.9 (2002)
HU	22.1	15–20	9.4	10.9 (2009)
PL	23.8	12–15	21.6	15.4 (2009)
RO	28.4	16–21	11.8	21.5 (2010)
SE	13.9	5	8.2	3 (2009)
UK	9.7	2	21.7	2.3 (2005)
EU-27	14.3	7.2	16.4	

Source: European Commission, 'Tax reforms in EU Member States 2013 Report', Table 4.7, p. 78.

⁽¹⁾ Please refer to the original sources of information contained in the European Commission (2013) for additional important notes and clarifications on the data.

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1.2. Drivers of UDW

The scale and nature of UDW work are influenced by a wide range of economic, social, institutional and cultural factors. Economic factors include not only the direct and indirect incidence of taxation (both actual and as perceived by employers and employees), but also the 'cost' of complying with complex tax and labour regulations (including employment protection regulation) as well as the penalties (or lack of them) related to enforcement.

Less well recognised, perhaps, are the consequences of sociological and demographic changes, such as the ageing population, which are a source of substantial new demands for household and care services that are not always, or easily, met by market or publicly supplied services, leading to much more informal forms of assistance, with equally informal forms of financial remuneration.

Cyclical factors can also play a role. One view is that in a booming economy there are more opportunities to earn higher incomes and build up corresponding social security rights while, in recession, employment opportunities, wages and working conditions all come under pressure, encouraging some to seek to compensate for income losses from the formal economy through activities in the shadow economy.

The alternative view is that the undeclared economy declines in recession because of lower demand for both declared and undeclared labour; traditional sectors where undeclared work is concentrated (such as construction and catering) will be harder hit in times of economic crisis, and undeclared work will be substituted by 'flexible' and cheaper declared labour (see Williams and Renooy, 2013, p. 5).

A number of features of the current labour market and social situation in Europe are likely to be considered conducive to the growth of informal work, such as the increasing length of unemployment spells, the situation of relatively disadvantaged groups (young people, migrants), and the pressure on wages and household incomes more generally. From the demand side, a difficult business context may also encourage employers to seek to evade or limit tax liabilities by resorting to undeclared work.

1.3. Why does UDW matter?

Many of the concerns about UDW are common to all Member States and have been, for nearly two decades, the subject of EU-wide policy debates and peer reviews given that the Single Market adds an extra dimension to national concerns by increasing the potential mobility of people, goods and services across the EU, including through cross-border subcontracting and posting of workers, with evident opportunities for the evasion of national legislations.

More generally, UDW is seen to obstruct conventional growth-oriented economic, budgetary and social policies. From a macro-economic perspective, it decreases tax revenues and may undermine the financing of, and trust in, social security systems. From a micro-economic perspective, it tends to distort competition between firms and to reduce efficiency since informal businesses typically avoid accessing formal services and inputs (e.g. credit) and hence tend to remain small.

For those concerned, undeclared work is much less of an advantage than it is often assumed, being likely to be associated with poor working conditions and subsequent risks to health, low prospects of career progress, and insufficient or absent social protection coverage⁽¹²⁾.

At the same time, some undeclared workers may continue to draw unemployment, inactivity or family benefits to which they are no longer entitled, although they may also forego the normal benefits of working with a formal contract and risk remaining employed only in undeclared activities. As such, UDW represents an extreme case of labour market segmentation.

The possibility of finding UDW is, however, often seen as a major pull factor for illegal immigration which will largely fall outside the social security system, and therefore see it as the only option on offer.

⁽¹²⁾ In this respect, the 2012 International Labour Conference of the ILO recommended a social protection floor as part of the formalisation process.

2. HIGHLIGHTS OF THE EUROBAROMETER SURVEY

2.1. Introduction

The Special Eurobarometer survey 402 was carried out in the 27 Member States and in Croatia in April/May 2013, on the basis of face-to-face interviews with more than 26 000 respondents from different social and demographic groups⁽¹³⁾. The questionnaire followed essentially the same pattern as the Special Eurobarometer 284 survey of May/June 2007, thereby providing some indications of trends in UDW since the onset of the crisis⁽¹⁴⁾.

In the 2013 survey, respondents' participation in undeclared work was examined from different perspectives. Respondents were asked separately whether they had, within the preceding 12 months:

- acquired any goods or services which they (supposedly) believed to have stemmed from undeclared work (demand side of undeclared goods and services);
- actively performed any undeclared activities (supply side for both goods and services);
- received part of their salary in their regular job (if holding one) on an undeclared basis, as so-called 'envelope wages'.

The survey also asked about perceptions of undeclared work in terms of:

- knowing anyone who works undeclared;
- awareness of the sanctions imposed by authorities if discovered;
- the level of risk of being detected;
- reasons why people may do such work;
- the acceptability of undeclared work and various evasion scenarios.

⁽¹³⁾ The methodology used is that of Eurobarometer surveys as carried out by the Directorate-General for Communication ('Research and Speechwriting' Unit). A technical note on the manner in which interviews were conducted by the Institutes within the TNS Opinion & Social network is appended as an annex to the EB 402 report. Also included are the interview methods and confidence intervals.

⁽¹⁴⁾ Comparisons at EU level between 2007 and 2013 Special Eurobarometers can be made only for the EU-27 as Croatia was not included in the 2007 survey.

Table 2: Types of undeclared work considered in the Eurobarometer survey

Type of undeclared work	From supply perspective (doer)	From demand perspective (buyer)
Individuals doing undeclared work for individuals or private households	✓	✓
Firms working undeclared for individuals or private households	X	✓
Firms performing undeclared work on behalf of other firms	X	X
Individuals doing undeclared work for firms	✓	X

A summary of the findings by country can be found in a detailed report ⁽¹⁵⁾. For the purposes of this report, national results have been aggregated into four groups: 'Continental Europe' ⁽¹⁶⁾, Eastern and Central Europe ⁽¹⁷⁾, Southern Europe ⁽¹⁸⁾ and the Nordic countries ⁽¹⁹⁾. This grouping is consistent with that used in the report on the 2007 Special Eurobarometer ⁽²⁰⁾.

Table 2 illustrates the types of undeclared work covered by the survey from both the demand and the supply side.

In assessing the evidence from this survey, a number of points need to be noted:

- The survey focused on undeclared work by individuals (described as 'private supply') and envelope wages, leaving many undeclared activities performed by companies outside the scope of the survey.
- Respondents had little or no time to prepare their answers, which was beneficial in terms of ensuring spontaneity and sincerity in responses, but this may have reduced the accuracy with respect to information on volumes, value and prices. This may also partly explain the significant share of 'don't know' answers or even refusals, and which are not systematically shown in the tables.
- Illegal immigrants are, almost by definition, hard to survey and difficult to interview when identified. In this survey, undeclared work carried out by illegal

⁽¹⁵⁾ http://ec.europa.eu/public_opinion/index_en.htm

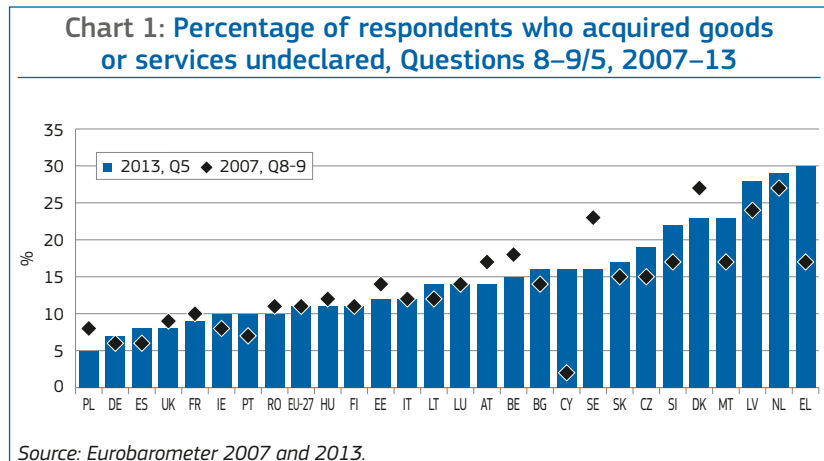
⁽¹⁶⁾ Belgium, Germany, France, Ireland, Luxembourg, the Netherlands, Austria and the UK.

⁽¹⁷⁾ Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia and Croatia.

⁽¹⁸⁾ Cyprus, Greece, Spain, Italy, Malta and Portugal.

⁽¹⁹⁾ Denmark, Finland and Sweden.

⁽²⁰⁾ Available at the Eurobarometer website: http://ec.europa.eu/public_opinion/index_en.htm



immigrants is almost certainly not fully covered from the supply side. In particular, in countries where an important share of undeclared work is believed to be carried out by illegal immigrants, this may have contributed to the unexpectedly low figures for undeclared work observed in this survey.

- When comparing the results between Member States, including the possibly unexpectedly high figures in some Northern European countries, differences in attitudes and differences in the nature and the volume of the services involved may need to be taken into account.
- More generally, answers to questions about the private supply of undeclared work and envelope wages should probably be considered more reliable and factual than those on the demand side, where the question lends itself to over-reporting ⁽²¹⁾.

⁽²¹⁾ Cf. Q6 'Which of the following goods or services have you paid for ...where you had a good reason to believe that they included undeclared work?' In theory, one undeclared worker could be perceived as such by many clients. For example, babysitting is reported twice more on the demand side than on the supply side (12%).

2.2. The demand side of UDW

2.2.1. Overall results

Just over one in ten respondents (11%) report that they had purchased goods or services in the previous year which they had good reason to believe involved undeclared work. This finding is in line with that of the 2007 survey (also 11%).

There are considerable variations across the EU (see Chart 1). Member States with a particularly high proportion of respondents declaring that they had purchased undeclared goods or services in the previous year included Greece (30%), the Netherlands (29%) and Latvia (28%). The Member States reporting the lowest proportions of purchasers were Poland (5%), Germany (7%), Spain and the UK (8% in each).

In most countries the proportion of respondents reporting that they had purchased undeclared goods or services was broadly similar to the result in 2007. The most notable increases were in Cyprus (+ 14 percentage points increase from 2% to 16%) and Greece (+ 13 points from 17% to 30%), followed by Malta (+5 points from 18% to 23%) and Slovenia (+5 points from 17% to 22%). The most notable drop was in Sweden (– 7 points from 23% to 16%).

No marked differences between socio-demographic groups were found — purchasers are found among both men and women, and across all age groups and occupations.

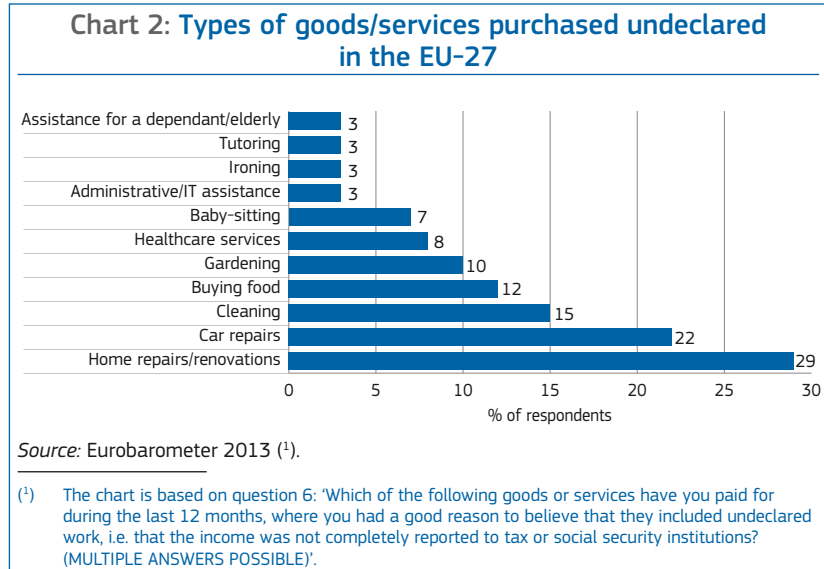
2.2.2. Types of undeclared goods and services purchased

Respondents who paid for goods or services in the last 12 months which they had reason to believe included undeclared work, were asked what goods or services these were.

Home repairs (29%), car repairs (22%), home cleaning (15%) and buying food (12%) were the most frequently cited services, closely followed by gardening services (10%) as shown in Chart 2 (22).

To get a full picture of the types of services/ goods rendered undeclared, Chart 2 should be considered together with the outcome on the supply side, i.e. Chart 7, which points to another important category, namely waiter/waitress activities (11%).

The range of other undeclared activities included healthcare (8% on EU level, and especially popular in Southern European countries), babysitting (a total of 7%), tutoring/IT assistance (3%), and trade in goods (possibly via e-commerce).



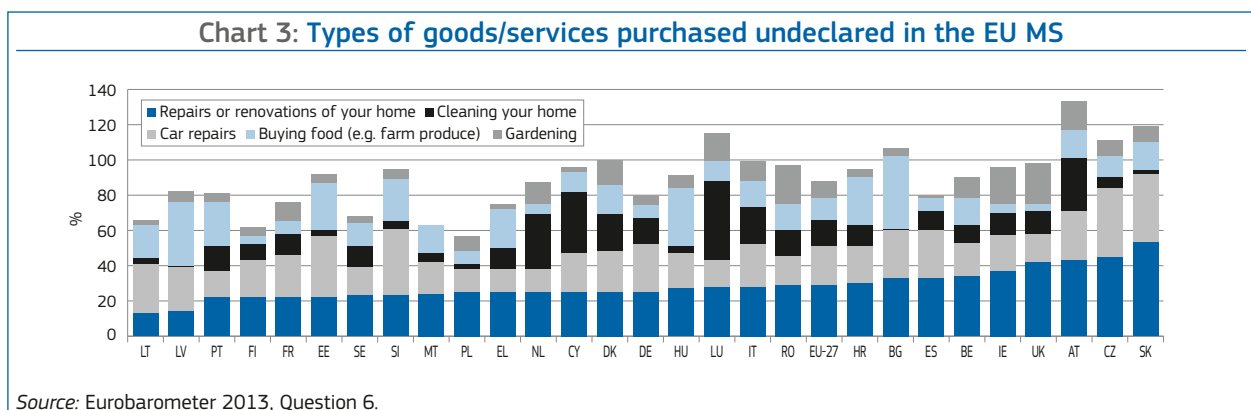
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There are significant variations across the EU in terms of the four most common categories as illustrated in Chart 3. In particular, while undeclared cleaning is frequently mentioned in some Continental and Southern European countries (Austria, Luxembourg, the Netherlands, Cyprus and Italy), it is nearly absent in the new Member States. Also, the undeclared trading of food is particularly popular in many of the new Member States (e.g. the Baltic countries, Bulgaria and Slovenia) and some Southern European countries (Greece and Portugal).

2.2.3. Amount spent on undeclared work

Respondents who thought that they had paid for goods or services in the last 12 months that included undeclared work were asked to estimate how much they had spent in total on them (23). For the EU as a whole, the median amount spent on undeclared goods and services in the previous year was 200 euros (see Table 3).

As shown in Chart 4, over a third (37%) stated that their total expenditure on

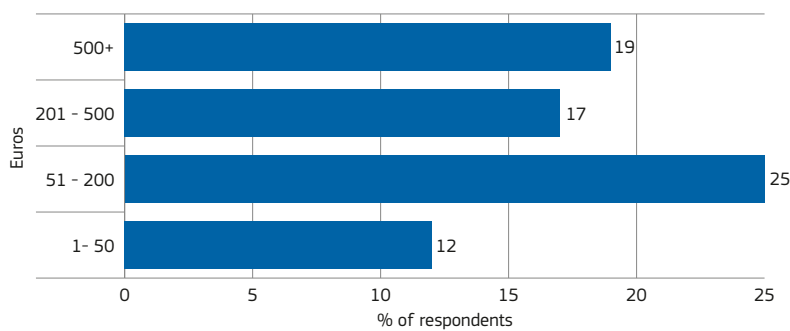


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(22) Many personal and household services offer a large employment potential if performed declared. The European Commission issued in 2012 a staff working document exploiting their employment potential (see SWD(2012) 95 final as well as a summary of the public consultation which took place between April and June 2012 (available at: <http://ec.europa.eu/social/main.jsp?langId=en&catId=88&eventsId=854&furtherEvents=yes>). See also contributions presented at the Conference on Exploiting the Employment Potential of Personal and Household Services (January, 30–31, 2012), e.g. Farvaque (2013). In March 2013 the European Commission also presented a proposal for a Council Decision authorising EU Member States to ratify the ILO 2011 Convention concerning decent work for domestic workers (Convention No 189).

undeclared goods and services in the previous year was 200 euros or less, with around one in eight (12%) saying it was 50 euros or less, and one in four (25%) estimating their spending as being in the range of 51–200 euros. Around one in six (17%) said that they had spent between

(23) Q7a. 'And approximately how much have you spent on all these undeclared goods and services in the last 12 months?' (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'DON'T REMEMBER' CODE '99997' — IF 'REFUSAL' CODE '99998' — IF 'DON'T KNOW' CODE '99999') _ _ _ _ _ EUROS

Chart 4: Yearly amount spent on undeclared goods/services in the EU-27

Source: Eurobarometer 2013 ⁽¹⁾.

⁽¹⁾ The chart is based on question 7a, 'And approximately how much have you spent on all these undeclared goods and services in the last 12 months?'

In terms of the hourly cost of undeclared services (see Table 4), the median *hourly* cost for undeclared goods and services purchased most frequently was 11 euros across the EU.

Around a quarter (24%) of respondents who had purchased undeclared goods or services in the past year estimated the hourly cost of the most frequently bought services to be no more than 10 euros, with most (17%) thinking that the hourly cost was in the range of 6–10 euros, and a smaller proportion (7%) estimating 1–5 euros.

Around one in eight (13%) thought the hourly cost was in the range of 11–20 euros, with 8% estimating 11–15 euros, 5% 16–20 euros and 12% more than 20 euros.

A small minority (5%) refused to provide an approximate cost and over four in ten (42%) did not know, or could not remember, the approximate hourly cost of their most frequently purchased services.

The Nordic countries had the highest median hourly cost for undeclared goods or services, at 20 euro, and Eastern and Central Europe the lowest, at 5 euro.

Unlike the evidence concerning the supply side (see Section 2.3), no marked differences could be detected on the demand side between socio-demographic groups, or groups with particular experiences of and attitudes towards undeclared work.

Table 3: Yearly amount spent on undeclared goods/services by country groups

	1–50 EUR	51–200 EUR	201–500 EUR	500+ EUR	Median (in EUR)
EU-27	12%	25%	17%	19%	200
Continental Europe	13%	29%	17%	22%	200
Eastern and Central Europe	18%	24%	12%	8%	117
Southern Europe	7%	19%	19%	21%	300
Nordic countries	10%	30%	19%	28%	232

Source: Eurobarometer 2013.

Table 4: Hourly cost of undeclared goods/services in the EU and by country groups

	1–5 EUR	6–10 EUR	11–15 EUR	16–20 EUR	20+ EUR	never buy undeclared	median (in EUR)
EU-27	7%	17%	8%	5%	12%	3%	11
Continental Europe	6%	25%	12%	6%	15%	2%	12
Eastern and Central Europe	19%	9%	3%	2%	3%	3%	5
Southern Europe	4%	13%	4%	3%	10%	6%	11
Nordic countries	3%	4%	16%	16%	29%	6%	20

Source: Eurobarometer 2013 ⁽¹⁾.

⁽¹⁾ The table is based on question 7b, 'When considering only the undeclared service which you buy most frequently, how much does this service cost you approximately per hour?'

201–500 euros and a slightly larger proportion (19%) more than 500 euros.

While the median yearly amount of money spent by Europeans was 200 euros, there were considerable variations between countries with

respondents in Southern Europe spending the most, with a median spend of 300 euros, and those in Eastern and Central Europe the least, with a median spend of 117 euros (although these differences may partly reflect differences in purchasing power).

2.3. The supply side of UDW

2.3.1. Overall results

Only a small minority of respondents in the EU, one in 25 (4%), said that they had carried out undeclared paid work in the past year. This result was in line with the findings of the 2007 survey ⁽²⁴⁾.

There is a considerable degree of variation between Member States (Chart 5) with countries with a particularly high

⁽²⁴⁾ It has to be noted, however, that the wording of the question used for this measure is somewhat different from that used in the 2007 survey where respondents were asked if they had carried out undeclared activities which they were paid for in money or in kind. Hence the findings from the two surveys are not strictly comparable. With this in mind, the results show a small drop in 2013 in the proportion of Europeans who say they have carried out undeclared activities.

proportion of respondents saying that they had undertaken undeclared paid work in the last 12 months including Latvia, the Netherlands and Estonia, (11% in each), followed by Denmark (9%), Lithuania (8%) and Sweden, Slovenia and Croatia (7% in each).

Member States with a particularly low proportion of respondents reporting their involvement in undeclared paid work in the past year were Germany, Portugal, Cyprus, Italy and Ireland (2% in each case) and Malta (1%).

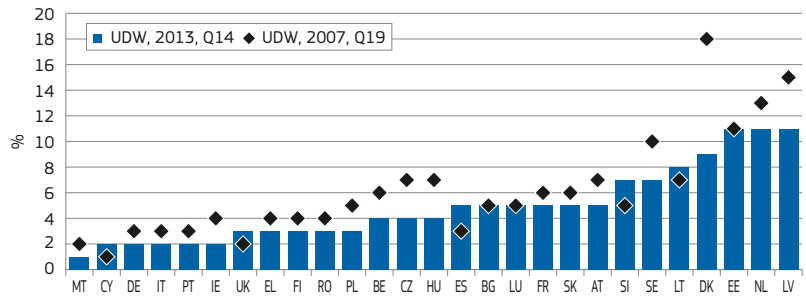
At first sight there is no obvious relation between the trend in undeclared work since 2007 and the economic situation measured by real GDP per capita (Chart 6). However, in Section 3, the possible influence of a number of drivers on undeclared work is analysed.

At the level of country groups, respondents in Eastern and Central Europe and those in the Nordic region were most likely to be reporting undeclared paid work, while those in Southern Europe were the least likely. In most countries the proportion of respondents who said that they were involved in undeclared paid activities remained similar to, or a little lower than, the level reported in 2007.

Differences were particularly notable with respect to groups of people categorised either in a standard socio-demographic way, or in terms of their economic or employment situation. Those most likely to have carried out undeclared paid work were as follows, and as set out in Table 5:

- Gender/age: More men (5%) than women (3%) supply goods/services undeclared. Younger persons (aged 15–24) tend to be more involved (7%) than those aged 55+ (1%).
- Employment/income status: The unemployed (9%) and students (7%), particularly when compared with the retired (1%) and managers (2%) more often engage in undeclared activities.
- Those who struggle to pay household bills most of the time (7%), particularly when compared with those who almost never struggle (3%).

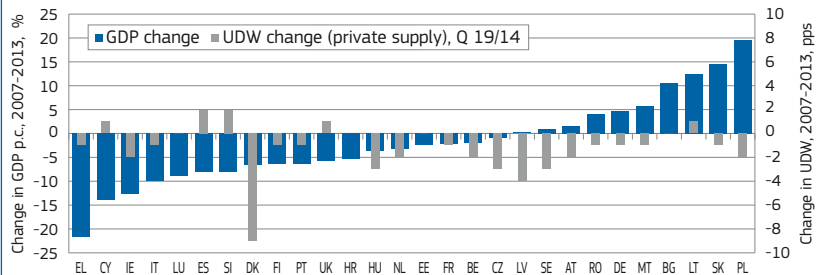
Chart 5: Share of respondents who have performed undeclared work, question 19/14, 2007–13



Source: Eurobarometer 2007 and 2013.

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Chart 6: Development of UDW (private supply) and GDP p.c.



Source: Eurostat National Accounts [namq_aux_gph] and Eurobarometer, 2013 (1).

(1) Data for GDP is quarterly (i.e. average of quarter one and two in the respective year, 2007 and 2013), index 2005 = 100, seasonally adjusted and adjusted by working days, Eurostat table namq_aux_gph. Data on Greece and Romania is based on spring forecast for 2013.

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Table 5: Socio-economic characteristics of suppliers of UDW

Sex		Know anyone who works undeclared	
Male	5%	Yes	10%
Female	3%	No	1%
Age		Risk of detection if caught	
15-24	7%	High	3%
25-39	5%	Small	5%
40-54	3%	Paid for undeclared work	
55+	1%	Yes	14%
Respondent occupation scale		No	3%
Self-employed	5%	Was paid in cash	
Managers	2%	Yes	26%
Other white collars	3%	No	3%
Manual workers	4%	Likely undeclared employment	
House persons	3%	Works without contract	9%
Unemployed	9%	Variable salary	4%
Retired	1%	Work unpaid	14%
Students	7%		
Difficulties paying the bills			
Most of the time	7%		
From time to time	4%		
Almost never	3%		

Source: Eurobarometer 2013 (1).

(1) Based on question 14: 'Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?'

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- Knowledge/experience of undeclared work: Those who know anyone who carries out undeclared work (10%), compared with those who do not (1%); and, those who have bought undeclared work in the past year (14%), compared with those who have not (3%); dependent employees who have been paid any of their income as cash in the past year (26%), compared to dependent employees who have not (3%).

2.3.2. Types of undeclared goods and services supplied

Respondents who had carried out any undeclared paid activities, apart from any regular employment, were asked what kinds of undeclared activities they had undertaken in the past year.

Of those who carried out undeclared work, most were likely to mention repairs or renovations (19%) followed by gardening (14%) and cleaning (13%). A slightly smaller proportion mentioned babysitting (12%) and working as waiters (11%) (see Chart 7).

Less than one in ten respondents mentioned carrying out work in other service sectors. Just under one in seven (15%) said they had carried out undeclared paid activity that involved a *service* not on the list shown to them, and around half as many (7%) mentioned undeclared paid activity involving unlisted *goods*.

At a country group level there were differences, with respondents in Southern Europe much *less* likely than those in other regions (particularly Eastern and Central Europe) to report having carried out undeclared work in terms of repairs or renovations (12% and 26% respectively) and gardening (3% vs. 21%). However, they are much *more* likely than respondents in other regions to have carried out undeclared cleaning work (25%) (see Table 6).

Respondents in 'Continental' countries are much *more* likely than those elsewhere to say they have carried out undeclared babysitting (17%) which was as widely mentioned as repairs or renovations (17%) and gardening (17%).

Respondents in Nordic countries were much *more* likely than those in other regions to have carried out undeclared work involving selling other services (30%).

Table 6: Types of activities supplied undeclared by country groups

	Home repairs/renovations	Gardening	Cleaning	Baby-sitting	As a waiter/waitress
EU-27	19%	14%	13%	12%	11%
Continental Europe	17%	17%	11%	17%	13%
Eastern and Central Europe	26%	21%	7%	7%	6%
Southern Europe	12%	3%	25%	6%	15%
Nordic countries	24%	12%	5%	7%	6%

Source: Eurobarometer 2013, question 15a.

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Table 7: Socio-economic characteristics of suppliers by type of activity

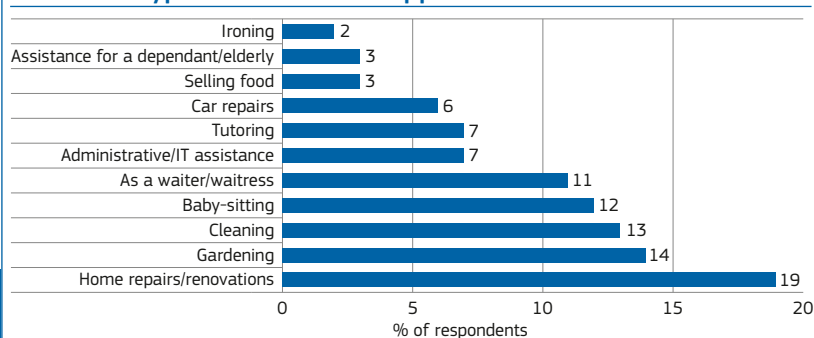
	Repairs or renovations	Gardening	Cleaning	Baby-sitting	As a waiter or waitress
EU-27	19%	14%	13%	12%	11%
Sex					
Male	29%	19%	5%	3%	6%
Female	2%	7%	25%	25%	18%
Age					
15-24	10%	16%	9%	28%	20%
25-39	19%	8%	13%	4%	11%
40-54	23%	20%	18%	6%	4%
55+	28%	18%	14%	6%	3%
Education (End of)					
15-	32%	10%	31%	5%	5%
16-19	23%	16%	12%	10%	10%
20+	12%	13%	6%	6%	10%
Still studying	8%	16%	11%	31%	20%
Respondent occupation scale					
Self-employed	19%	13%	3%	3%	10%
Managers	4%	9%	2%	15%	6%
Other white collars	17%	14%	8%	4%	9%
Manual workers	27%	16%	14%	8%	6%
House persons	10%	6%	32%	16%	14%
Unemployed	23%	14%	22%	6%	14%
Retired	24%	21%	7%	10%	0%
Students	8%	16%	11%	31%	20%
Difficulties paying the bills					
Most of the time	21%	18%	22%	7%	9%
From time to time	11%	11%	11%	8%	14%
Almost never	23%	15%	10%	17%	9%
Know anyone who works undeclared					
Yes	19%	14%	12%	9%	11%
No	14%	16%	18%	24%	9%
Paid for undeclared work					
Yes	18%	11%	7%	8%	13%
No	20%	16%	16%	13%	10%

Source: Eurobarometer 2013 ⁽¹⁾.

⁽¹⁾ Based on question 14: 'Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?'

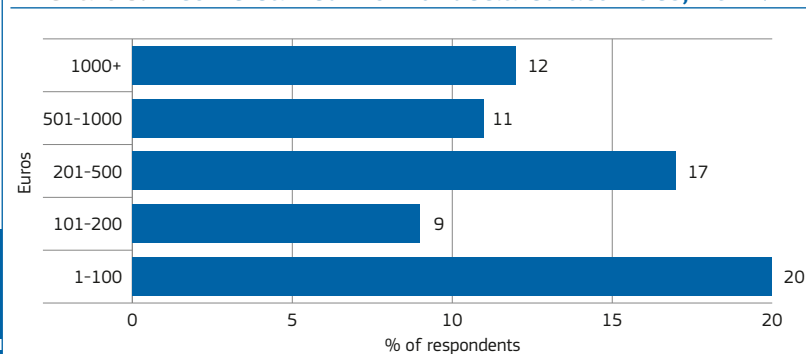
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Chart 7: Types of activities supplied undeclared in the EU-27

Source: Eurobarometer 2013 (†).

(†) Based on question 15a: 'Which of the following activities have you carried out undeclared in the last 12 months? (MULTIPLE ANSWERS POSSIBLE)'

Chart 8: Income earned from undeclared activities, EU-27

Source: Eurobarometer 2013, question 15b.

Table 8: Income earned from undeclared activities, by country groups

	1-100 EUR	101-200 EUR	201-500 EUR	501-1 000 EUR	1 000+ EUR	Median (in EUR)
EU-27	20%	9%	17%	11%	12%	300
Continental Europe	26%	9%	21%	11%	13%	300
Eastern and Central Europe	12%	8%	16%	10%	6%	300
Southern Europe	16%	9%	7%	8%	17%	300
Nordic countries	18%	9%	22%	20%	21%	465

Source: Eurobarometer 2013, question 15b.

There are also differences between socio-demographic groups, and other categories of people, in terms of the proportion of respondents carrying out each type of activity, as shown in Table 7.

- Repairs or renovations: more men (29%) than women (2%) tend to provide these types of services undeclared; those with lower education (32%) than with higher (12%), and manual workers (27%) when compared with managers (4%). Interestingly, the older tend to be more involved than the younger

(those aged 55+ (28%) as against those aged 15-24 (10%).)

- Gardening: more men (19%), compared with women (7%); those who are retired (21%), particularly when compared with house persons (6%) and managers (9%).
- Cleaning: five times more often among women than men (25% vs. 5%); most common among the least educated (31%). House persons (32%) and the unemployed (22%), particularly when compared with managers (2%) and

the self-employed (3%); people who struggle to pay household bills most of the time (22%), particularly when compared with those who almost never struggle (10%).

- Babysitting: more than 8 times more common among women than men (25% vs. 3%); most common among the youngest, 15-24 year olds (28%), and students (31%), particularly when compared with the self-employed (3%) and other (non-managerial) white collar workers (4%).
- Waiter/Waitressing: three times more common among women than men (18% vs. 6%). It is five times more common among the youngest (20%) when compared with those 40-54 (4%), and six times when compared with the oldest in the sample, 55+, (3%). As expected, more common among students (20%), particularly when compared with the retired (0%).

2.3.3. Amount earned through undeclared work

Respondents who had carried out undeclared paid activities in the past year were asked to estimate how much money they had earned from these activities (25). The median EU-level annual earnings from undeclared work carried out in the past year was 300 euros (see Table 8).

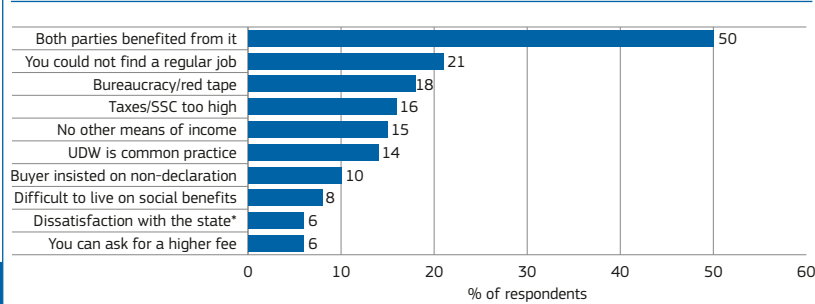
As shown in Chart 8, just under half (46%) estimated that their annual earnings from such activities were no more than 500 euros, with a fifth (20%) reporting earnings in the range of 1-100 euros (20%), just under one in ten (9%) estimating between 101-200 euros, and around one in six (17%) specifying a value in the range of 201-500 euros.

Around one in nine Europeans (11%) estimated annual earnings in the range of 501-1 000 euros and a similar proportion (12%) reported earnings in excess of 1 000 euros.

An analysis by country group indicates that the median annual amount earned from undeclared work was highest in the Nordic countries (465 euros) compared

(25) Q15b. 'APPROXIMATELY how much money have you earned from these undeclared activities in the last 12 months?' (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'DON'T REMEMBER' CODE '99997' — IF 'REFUSAL' CODE '99998' — IF 'DON'T KNOW CODE '99999') _ _ _ _ _ EUROS.

Chart 9: Reasons for working undeclared in the EU-27



Source: Eurobarometer 2013 ⁽¹⁾.

⁽¹⁾ Based on question 17, 'Among the following, what were the reasons for doing these activities undeclared? (MULTIPLE ANSWERS POSSIBLE)'. * The exact wording is 'The state does not do anything for you, so why should you pay taxes'.

Table 9: Reasons for working undeclared by country groups

	Both parties benefited	Can't find a regular job	Taxes/ SSC too high	No other means of income	UDW is common practice
EU-27	50%	21%	16%	15%	14%
Continental Europe	62%	12%	14%	9%	10%
Eastern and Central Europe	43%	28%	17%	19%	17%
Southern Europe	26%	41%	20%	26%	21%
Nordic countries	65%	8%	10%	8%	5%

Source: Eurobarometer 2013.

with a median of 300 euros in each of the other European regions (see Table 8).

2.3.4. Reasons for carrying out UDW

Respondents who had undertaken undeclared paid activities in the past year were asked for their reasons for doing so ⁽²⁶⁾.

As shown in Chart 9, half of the respondents (50%) said that both parties benefited, with other reasons mentioned much less. One in five respondents (21%) reported that they did undeclared work because they could not find a regular

job; around one in nine (18%) mentioned excessive bureaucracy or red tape; and one in six (16%) said that tax and/or social security contributions were too high. One in seven (15%) said that they had no other form of income, and a similar proportion (14%) that it was common practice in their region or sector. Only one in ten (10%) reported that the customer insisted on not declaring the work.

Again differences are found between the four country groups (Table 9). Respondents in both the Nordic and 'Continental' countries were more likely to mention that both parties benefited from the undeclared work (65% and 62% respectively), particularly when compared with those in Southern Europe (26%). Respondents in the Nordic countries were also more likely than those in other regions to mention bureaucracy or red tape as a justification (14%), particularly when compared with 'Continental' countries (4%).

Respondents in Southern Europe were particularly likely to mention an inability to find a regular job (41%) or any other source of income (26%). Respondents in Southern Europe were also the most likely of the four country groups to mention that

undeclared work was a common practice in their region or work sector (21%).

Respondents in Eastern and Central Europe were more likely than those in other regions to say that a reason for doing undeclared work was 'the State does not do anything for you, so why should you pay taxes' (15%), particularly when compared with those in the Nordic countries (2%).

The finding from the socio-demographic groups, and the attitudinal/behavioural groups concerning the main reasons for doing undeclared work, are shown in the table below. While mutual benefit is the most cited reason, the labour market situation, fiscal considerations and the income situation appear as important drivers for some groups.

The labour market situation ('Could not find a regular job') ⁽²⁷⁾ is particularly relevant for:

- 25–39 year olds (27%), particularly when compared with those aged 55+ (16%);
- those who left full-time education aged 15 or under (27%) and aged 16–19 (29%), compared with those who finished their education aged 20 or over (9%);
- the unemployed (58%), particularly when compared with managers (8%) and other white collar workers (5%);
- people who struggle to pay household bills most of the time (38%), particularly when compared with those who almost never struggle (9%);
- dependent employees who received part/all of their income in the last 12 months in cash (25%), compared with those who did not (7%).

Financial considerations ('Taxes and/or social security contributions are too high') are relevant for:

- 25–39 year olds (24%), particularly when compared with those aged 55+ (7%);

⁽²⁶⁾ Q17. 'Among the following, what are your reasons for doing these activities undeclared? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE) The person(s) who acquired it insisted on the non-declaration; Bureaucracy or red tape for a regular economic activity is too complicated; Bureaucracy or red tape for minor or occasional economic activities is too complicated; You could not find a regular job; You were able to ask for a higher fee for your work; Both parties benefitted from it; Taxes and/or social security contributions are too high; Working undeclared is common practice in your region or sector of activity so there is no real alternative; The State does not do anything for you, so why should you pay taxes; It is difficult to live on social welfare benefits; You have no other means of income; Other (SPONTANEOUS); Refusal (SPONTANEOUS); Don't know'.

⁽²⁷⁾ Also the answer 'Undeclared work is common in region or work sector so no real choice', was cited by 25–39 year olds (20%), by those who left full-time education aged 15 or under (21%), and by the unemployed (20%).

- those who are self-employed (24%), particularly when compared with the retired (5%) and students (10%);
- people who struggle to pay household bills most of the time (21%), particularly when compared with those who almost never struggle (14%);
- those who know anyone who undertakes undeclared work (17%), compared with those who do not (9%).

The income situation ('No other means of income') is relevant for:

- women (19%), compared with men (12%);
- those who left full-time education aged 15 or under (22%), particularly when compared with those who finished their education aged 20 or over (7%);
- house persons (31%) and the unemployed (26%), particularly when compared with managers (0%) and other white collar workers (3%);
- people who struggle to pay household bills most of the time (29%), particularly when compared with those who almost never struggle (7%).

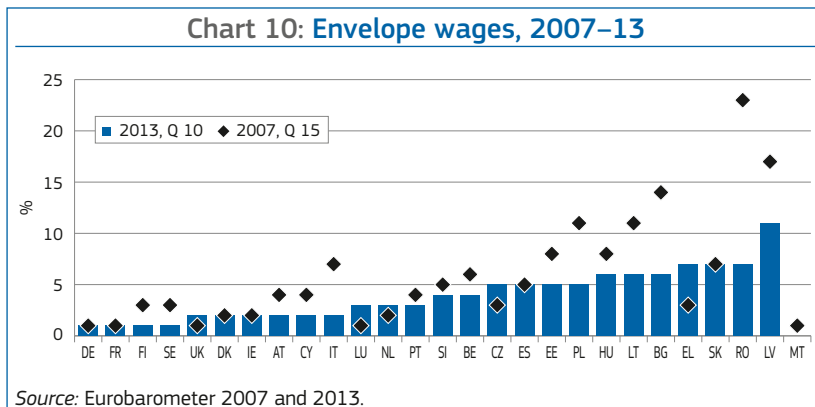
2.4. Envelope wages

This section addresses a specific form of undeclared work — namely cash-in-hand, or 'envelope' wages. It focuses on the group where such forms of payment are relevant: those who work and rely on an employer to pay their income (i.e. dependent employees, excluding the self-employed). Evidence is presented concerning the extent of such practices, whether this form of payment is being used for regular work and/or for overtime, and what share of total income is paid in this manner.

2.4.1. Share of employees paid cash-in-hand

For a dependent employee in receipt of 'envelope' wages, the employer may pay all, or part, of their regular salary and/or remuneration on a cash-in-hand basis, without declaring the amount to the relevant authorities. This could mean one of the following:

- No salary or only a relatively small salary (e.g. the legal minimum wage)



is paid to the employee in a formal way that would imply the payment of taxes and social security contributions. Instead of a regular salary, or in addition to it, the employee receives an 'envelope wage' for an agreed regular amount of work,

or

- Contractually agreed hours are paid in a formal way, but additional hours are remunerated on a cash-in-hand basis, without declaration to tax or social security institutions.

In each case, both the employer and employee may profit, at least in the short run. The employer avoids paying social security contributions for the salary of the employee or part of their salary, and the employee may receive more than the net salary she or he would receive if they were formally paid. In some instances, though, employees may have no choice — they either accept the 'envelope' wages or they do not get the work.

Respondents who fell into the category of dependent employees were asked if their employer had paid any of their income in the last 12 months in cash, without declaring it to the tax or social security authorities⁽²⁸⁾.

The vast majority of dependent employees say they had not received any part of their salary as 'envelope' wages within

the past year (93%). A very small minority (3%) said that they received all or part of their remuneration in cash.

Compared with the results from 2007, there appears to have been a reduction in the proportion of dependent employees who report that they had received all or part of their salary as envelope wages within the past 12 months (– 2 percentage points from 5% to 3%)⁽²⁹⁾.

All countries within the Central and Eastern Europe region had dependent employees in receipt of envelope wages above the EU average, while the Nordic countries were all below. In 'Continental' countries, only Belgium (4%) reported a share above the EU average and in Southern Europe only Greece (7%) and Spain (5%) reported higher than average shares.

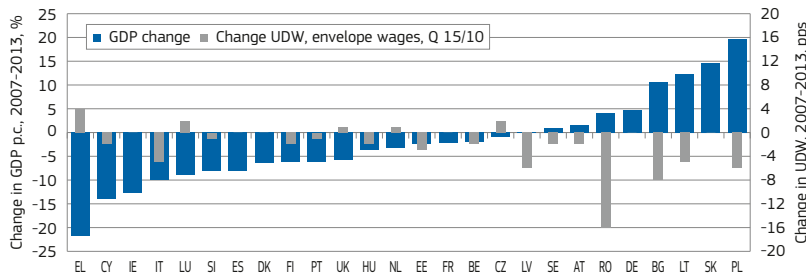
In the majority of countries the proportion of dependent employees in receipt of envelope wages was broadly similar to the level reported in 2007. The most notable increase was in Greece (+4 percentage points). The most marked decreases were noted in Romania (– 16 points), Bulgaria (– 8 points), Latvia and Poland (– 6 points), Lithuania and Italy (– 5 points), as illustrated in Chart 10.

Dependent employees in receipt of envelope wages are more likely to be working for smaller organisations, with more than half (56%) employed in organisations employing fewer than twenty people,

⁽²⁸⁾ ASK Q10 TO Q13 IF 'DEPENDENT EMPLOYEES' CODE 10 TO 18 IN D15a — OTHERS GO TO Q14
Q10. 'Sometimes employers prefer to pay all or part of the regular salary or the remuneration (for extra work, overtime hours or the part above a legal minimum) in cash and without declaring it to tax or social security authorities. Has your employer paid you any of your income in the last 12 months in this way? (ONE ANSWER ONLY) (PLEASE REMIND THE INTERVIEWEE THAT ALL ANSWERS WILL REMAIN ANONYMOUS) Yes; No; Refusal (SPONTANEOUS); Don't know'.

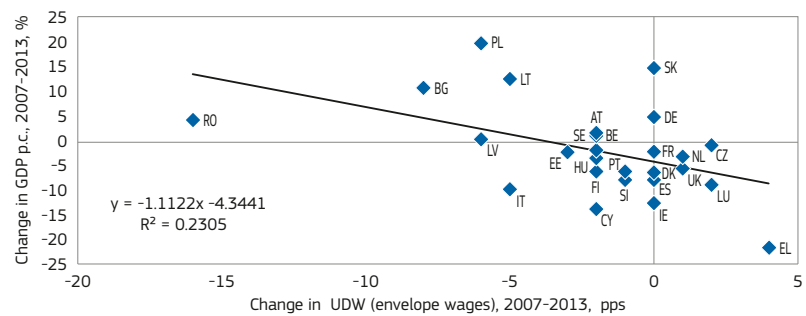
⁽²⁹⁾ In this connection, it is also important to note that in most countries there has been a drop since 2007 in the proportion of respondents thinking that there is only a small risk of being detected. This is most notable in Denmark (–17 percentage points), the Netherlands (–10 points), Malta, Slovakia and Sweden (–8 points in each) and France (–7 points). A few countries show an increase in the proportion thinking the risk of being detected is small, with the most notable shifts in Cyprus (+ 10 points), and Portugal and Romania (+ 8 points in each).

Chart 11: Changes in the GDP p.c. and undeclared work measured by envelope wages



Source: Eurostat, National Accounts [namq_aux_gph] and Eurobarometer, 2013.

Chart 12: Changes in the GDP p.c. and undeclared work in the form of envelope wages



Source: Eurostat, National Accounts [namq_aux_gph] and Eurobarometer, 2013 ⁽¹⁾.

⁽¹⁾ Malta — missing data on envelope wages for 2013; Croatia — missing data on envelope wages for 2007. Data for GDP is quarterly (i.e. average of quarter one and two in the respective year, 2007 and 2013), index 2005 = 100, seasonally adjusted and adjusted by working days, Eurostat table namq_aux_gph. Data on Greece and Romania is based on spring forecast for 2013.

compared with three in ten (30%) of those who have not.

Around one in six dependent employees who had been paid envelope wages (17%) worked in organisations of 1–4 people, with a similar proportion (18%) in organisations with 5–9 employees, and a fifth (21%) for an employer with 10–19 staff. These proportions compare with 9%, 10% and 11% respectively for those who have not been paid envelope wages.

Conversely, only one in seven employees who had been paid envelope wages worked for organisations of 100 or more employees (15%), with only 7% employed by companies with 500 or more staff, compared with four in ten (39%) and a quarter (24%) respectively among those who had not been paid envelope wages.

Dependent employees, who had received income in the previous year as cash, but without it being declared to the tax or social security authorities, were asked if this was for regular

work, overtime or both ⁽³⁰⁾. Over a third (37%) said it was for regular work, with a little less than a third (31%) saying that it was for overtime or extra work, and a quarter (25%) reporting that it was for both. Compared with the results from the 2007 survey, there has been a notable drop in the proportion saying that they had received envelope wages for both regular and overtime work (– 11 percentage points — down from 36% to 25%).

In contrast to the private supply of undeclared work, the incidence of envelope wages seems to increase when GDP per head falls (see Chart 11 and Chart 12). The correlation between the changes in the UDW in the form of envelope wages and changes in GDP is strong (– 0.5) and significant at the 1% level.

⁽³⁰⁾ ASK Q11 AND Q12 IF 'YES', CODE 1 IN Q10 — OTHERS GO TO Q13 Q11. 'Was this income part of the remuneration for your regular work, was it payment for overtime hours or was it both? (ONE ANSWER ONLY) Part of the remuneration of the regular work; Overtime, extra work; Both regular and overtime work; Refusal (SPONTANEOUS); Don't know'.

A notable example is Greece where GDP declined by more than 20% during the crisis and where the incidence of envelope wages increased by 10 pps. Similar patterns, but of a smaller magnitude, are evidenced in Luxembourg, the Netherlands and the UK. On the other hand some New Member States such as Bulgaria, Romania, Lithuania and Poland saw a reduction in the incidence of envelope wages, and GDP per head rose during those years.

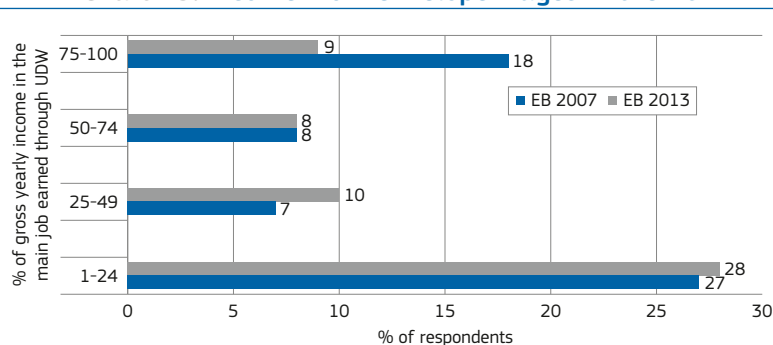
2.4.2. Proportion of gross annual income paid cash-in-hand

Dependent employees who had received any of their income in the previous year in cash, without it being declared to the relevant authorities, were asked to estimate the proportion of their gross annual income in their main job that it represented ⁽³¹⁾. As shown in Chart 13, 28% of recipients of envelope wages said that less than 25% of their gross yearly income in their main job was paid in this way, while one in ten (10%) reported that the cash payments accounted for 25–49% of their gross annual income, with slightly smaller proportions (8% and 9% respectively) saying that envelope wages amounted to 50–74% and 75–100% of their total annual income.

Compared with the results from the 2007 survey, there has been a notable drop in the proportion reporting that their envelope wages accounted for 75% or more of the gross yearly income from their main job (– 9 percentage points from 18% to 9%). There was also a small increase in the proportion refusing to give an answer (+5 points).

As shown in Table 10, among recipients of envelope wages the average proportion of gross yearly income from the main job received in this form was 36%. Compared with the results from 2007, and reflecting the drop in the proportion who say that envelope wages accounted for more than 75% of their salary, there was a notable decrease in the average proportion of gross annual income received as envelope wages (– 7 percentage points from 43% in 2007).

⁽³¹⁾ Q12. 'Approximately which percentage of your gross yearly income in your main job did you get this way? (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'DON'T REMEMBER' CODE '997' — IF 'REFUSAL' CODE '998' — IF 'DON'T KNOW' CODE '999') __ %'.

Chart 13: Income from envelope wages in the EU

Source: Eurobarometer 2007 and 2013, question 12.

Table 10: Income from envelope wages by country groups

	1–24 %	25–49%	50–74%	75–100%	Average
EU-27	28%	10%	8%	9%	36%
Continental Europe	36%	13%	4%	0%	17%
Eastern and Central Europe	32%	9%	14%	3%	29%
Southern Europe	10%	8%	5%	31%	69%
Nordic countries	92%	0%	0%	0%	7%

Source: Eurobarometer 2013, question 12.

As Table 10 shows, there were differences between the four country groups. Recipients of envelope wages in Southern Europe were given, on average, more than two thirds (69%) of their total remuneration in the form of cash — an exceptionally high proportion compared with other regions. In Eastern and Central Europe the average was less than a third (29%), in ‘Continental’ countries it was less than a fifth (17%), and in the Nordic countries it was less than a tenth (7%).

3. ECONOMETRIC ANALYSIS OF DRIVING FACTORS USING THE EUROBAROMETER

In order to better understand the relative importance of the different forces encouraging the use of undeclared work — general labour market conditions, unemployment, poverty and fiscal situation — a wide-ranging econometric analysis was undertaken, at both macro and micro-level, using the Eurobarometer (EB) data.

The findings from the macro-analysis (Subsections 3.1–3.4) are based on EB data from the two years 2007 and 2013, notably the questions that focus on people’s involvement in undeclared work, either because they had been a private

supplier⁽³²⁾ of undeclared services, or because they had received envelope wages in an employer–employee relationship⁽³³⁾. Although these two forms of undeclared work are different, the substantial correlation between them⁽³⁴⁾ justifies a joint analysis.

The findings from the micro-analysis, using individual replies to the EB questions, are summarised in Subsection 3.5 and Annex 2.

3.1. Labour market conditions are driving more visibly the practice of envelope wages, rather than the private supply of undeclared work

The severe downturn in 2008–09 reduced the prospects of finding regular

⁽³²⁾ ‘... have you yourself carried out any undeclared paid activities in the last months’ (respectively question 14 in the EB 2013 and question 19 in the EB 2007).

⁽³³⁾ ‘Sometimes employers prefer to pay all or part of the salary (...) without declaring it to tax and social security authorities. Has your employer paid you any of your income in the last 12 months in this way’ (respectively question 10 in the EB 2013 and question 14 in the EB 2007).

⁽³⁴⁾ See for example the high share of those receiving envelope wages (26%) answering positively to Q14.

work in most Member States, compared to 2007 when the first EB was held, resulting in a reduction in total employment of around 2% between 2007 and 2013, and an increase in the unemployment rate from below 7% to more than 11%, reaching particularly high levels in Latvia, Spain, Ireland, Greece and Bulgaria.

Table 11 and Table 12 show the correlations between the various national level indicators of unemployment and job vacancies, and of undeclared work, for the two years 2007 and 2013. The following explanatory variables were considered: the unemployment rate (UE Rate), long-term unemployed measured as a share of the active population (LTU Rate) or as a share of the unemployed (LTU % UE), transition rate into long-term unemployment (TRANS.LTU)⁽³⁵⁾, job vacancy rate (JVR), youth unemployment rate (YOUTH UE), and share of young people neither in employment nor in education (NEET).

Based on the UDW data from the latest survey, all the coefficients were highly significant, at least for envelope wages, whether one looked at indicators of the unemployment situation or at the job vacancy rates. In both surveys, the highest significant correlations were observed for the indicator of envelope wages, in particular in relation to the transition rate into long-term unemployment (TRANS.LTU)⁽³⁶⁾. The two charts below (Chart 14 and Chart 15) additionally show the relation between UDW (envelope wages) and, respectively, LTU (as per cent of unemployment) and the job vacancy rate, which were also highly correlated in the latest year.

This evidence suggests that a difficult labour market tends to push people into UDW, or at least increases their readiness to accept envelope wages. This is also confirmed by the evidence that, in the 2013 EB, 21% of the respondents said that the main reason for doing undeclared work was an inability to find a regular job — a much higher percentage than reported in the 2007 EB survey.

⁽³⁵⁾ This indicator was used in European Commission (2012), pp. 77–79. It represents the ratio between the number of long-term unemployed in year t and the short-term unemployed in t-1.

⁽³⁶⁾ Also, the World Bank found that the length of the unemployment spell is clearly correlated with the participation in undeclared work in nearly all countries. See World Bank (2012), p. 47.

The correlations between labour market indicators and the private supply of undeclared work are, however, much less significant. A possible explanation is that other factors are at work, such as stagnating demand for undeclared work at a time of recession ⁽³⁷⁾. It is also possible that it is due to a strong country bias as a result of greater inaccuracies in answering the question on the supply of UDW, compared to the question on envelope wages. This latter issue is better addressed in the micro-econometric analysis (see Subsection 3.5), which allows country effects to be isolated from the impact of the presumed explanatory variables.

Another approach to overcome the country bias consists in comparing variations in the variables for the period 2007–13. Chart 16 and Chart 17, which plot the variation in the unemployment rate against that in undeclared work (private supply and envelope wages respectively), suggest a weak positive link between the increase in the unemployment rate, on one hand, and the increase in each of the two measures of UDW, on the other.

3.2. Poverty: apparent influence on the readiness to accept envelope wages

Whereas the private supply of undeclared work shows no significant relationship with poverty in the year-by-year analysis, the incidence of envelope wages is strongly and positively correlated with all the poverty indicators: the at-risk-of-poverty rate of the unemployed (AROP UE); the share of people at risk of poverty or social exclusion (AROPE); the in-work poverty rate (IWP); and the share of people experiencing severe material deprivation in terms of at least four items (SMD) ⁽³⁸⁾.

⁽³⁷⁾ As highlighted in the overall results, demand for UDW stayed broadly at the same level between 2007 and 2013.

⁽³⁸⁾ Europe 2020 poverty composite indicator is People at risk of poverty or social exclusion (AROPE), which has three dimensions, namely People living in households with very low work intensity, People at risk of poverty and People severely materially deprived. On the exact definitions, see Eurostat website http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators. Additionally, European Commission (2011), Chapter 3 makes a thorough review of the inter-linkages between the three dimensions of the composite headline indicator. See also European Commission (2011), Chapter 4 for an analysis based on the indicator of in-work poverty.

Table 11: Labour market & UDW, EB 2007

	Envelope wages	Private supply
UE Rate	0.11	- 0.34*
LTU Rate	0.19	- 0.27
LTU % UE	0.27	- 0.22
TRANS.LTU	0.5***	0.1
JVR	- 0.15	0.14
YOUTH UE	0.16	- 0.43**
NEET	0.47***	- 0.44**

Source: DG EMPL calculations based on Eurostat LFS [lfsa_urgan, une_ltu_a, jvs_q_nace2 and edat_lfse_20] and Eurobarometer 2013.

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Table 12: Labour market & UDW, EB 2013 ⁽¹⁾

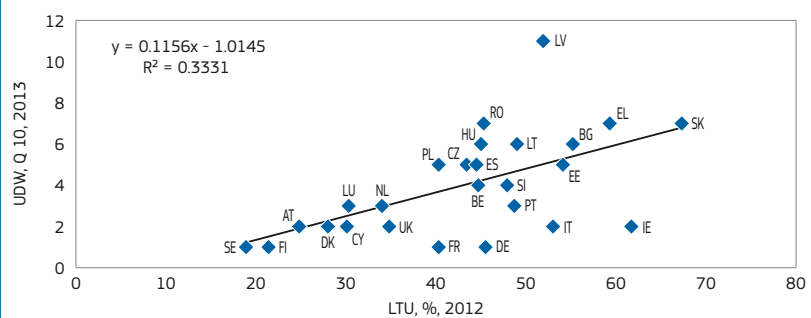
	Envelope wages	Private supply
UE Rate	0.44**	- 0.06
LTU Rate	0.54***	- 0.07
LTU % UE	0.58***	- 0.09
TRANS.LTU	0.6***	- 0.2
JVR	- 0.6***	- 0.1
YOUTH UE	0.4**	- 0.2
NEET	0.38**	- 0.36*

Source: DG EMPL calculations based on Eurostat LFS [lfsa_urgan, une_ltu_a, jvs_q_nace2 and edat_lfse_20] and Eurobarometer 2013.

⁽¹⁾ The tables show the correlation between various labour market indicators and two measures of undeclared work. The stars show the significance level: *** - 1%, ** - 5%, and * - 10%. Correlations are estimated on most recently available data, i.e. for UDW — the EB 2013; UE rate, LTU rate, LTU as per cent of unemployed, job vacancy rate, youth unemployment, and the NEET rate — 2012.

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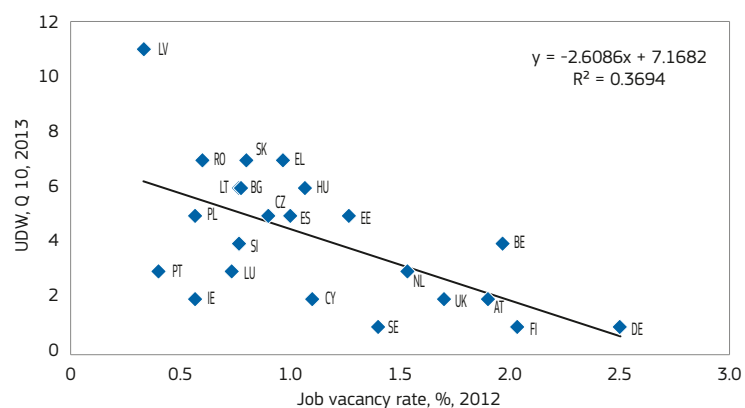
Chart 14: LTU and UDW, 2013



Source: Eurostat LFS [une_ltu_a] and Eurobarometer 2013.

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Chart 15: Job vacancy rate and UDW



Source: Eurostat Labour Market statistics [jvs_q_nace2] and Eurobarometer 2013.

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Table 13: Poverty and UDW, EB 2007

	Envelope wages	Private supply
AROP UE	0.4**	- 0.04
AROPE	0.8***	- 0.13
IWP	0.55***	- 0.23
SMD	0.8***	- 0.04

Source: DG EMPL calculations based on Eurostat SILC [ilc_li04 , ilc_peps01, ilc_iw01 and ilc_mddd11 respectively] and Eurobarometer 2013.

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Table 14: Poverty and UDW, EB 2013 (1)

	Envelope wages	Private supply
AROP UE	0.26	- 0.11
AROPE	0.68***	0
IWP	0.39**	- 0.11
SMD	0.72***	- 0.08

Source: DG EMPL calculations based on Eurostat SILC [ilc_li04 , ilc_peps01, ilc_iw01 and ilc_mddd11 respectively] and Eurobarometer 2013.

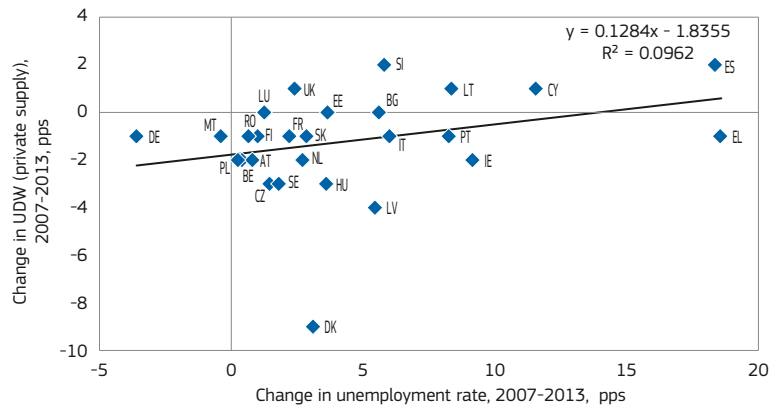
(1) The tables show the correlation between various poverty indicators and two measures of undeclared work. The stars show the significance level: *** - 1%, ** - 5%, and * - 10%. The data on the poverty indicators is for 2011, which was the most recently available data at the time the manuscript was prepared. The income reference period is 2010, except for UK and Ireland.

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The correlations in Table 13 and Table 14 show that, for both years, the envelope wages indicator is highly significant (mostly at the 1% level) with a correlation coefficient of 0.8 for the share of people at risk of poverty and social exclusion, and the share of people experiencing severe material deprivation. This could be interpreted in the sense that the risk of poverty, severe material deprivation and/or in-work poverty makes people more inclined to accept envelope wages.

While the correlations with the private supply of UDW are insignificant in this macro-analysis, the analysis of micro-data in Subsection 3.5, where one of the explanatory variables is 'difficulties to pay bills', identifies results that are more in line with expectations.

Chart 16: Changes in the private supply of undeclared work and unemployment

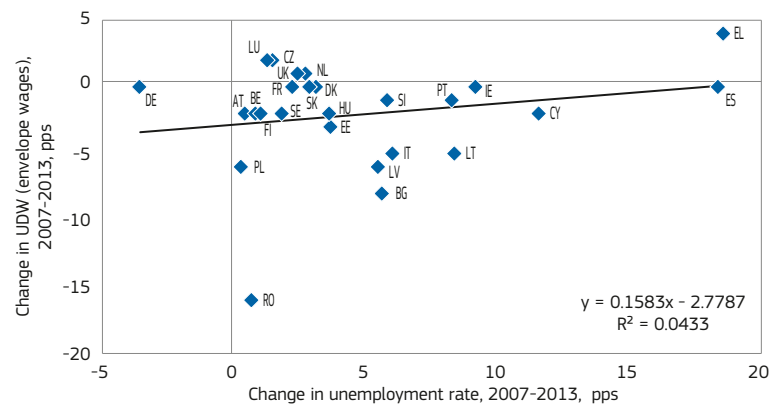


Source: DG EMPL calculations based on Eurostat, LFS [lfsa_urgan] and Eurobarometer, 2013 (1).

(1) Data on the unemployment rate is quarterly data (i.e. the change is taken as a difference between the average of quarter one and two in 2013, on one hand, and the average of quarter one and two in 2007, on the other. Data for Lithuania and Portugal on the unemployment rate 2007 is estimated.

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Chart 17: Changes in the incidence of envelope wages and unemployment

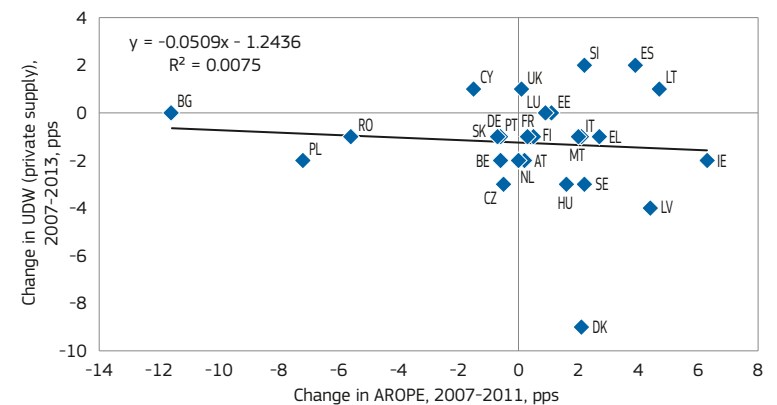


Source: DG EMPL calculations based on Eurostat, LFS [lfsa_urgan] and Eurobarometer, 2013 (1).

(1) Data on the unemployment rate is quarterly data (i.e. the change is taken as a difference between the average of quarter one and two in 2013, on one hand, and the average of quarter one and two in 2007, on the other. Data for Lithuania and Portugal on the unemployment rate 2007 is estimated. Data on the incidence of envelope wages is missing for Croatia (2007) and Malta (2013).

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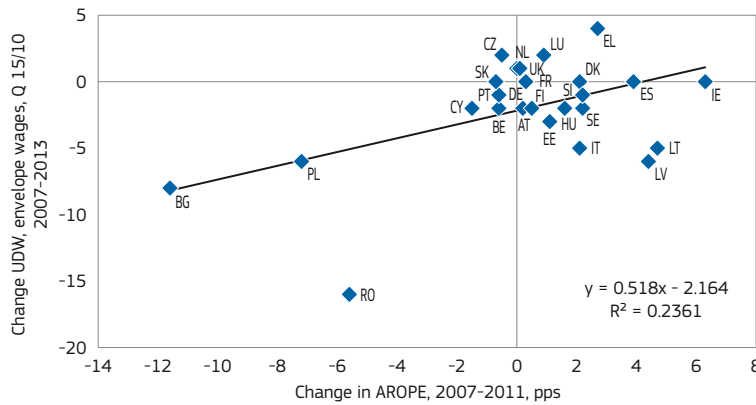
Chart 18: Changes in the poverty rate (AROPE) and the private supply of undeclared work



Source: DG EMPL calculations based on Eurostat, SILC [ilc_peps01] and Eurobarometer 2013.

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Chart 19: Changes in the poverty rate (AROPE) and the incidence of envelope wages



Source: DG EMPL calculations based on Eurostat, SILC [ilc_peps01] and Eurobarometer 2013.

These findings are confirmed by a comparison of variations in the respective variables for the period 2007–13. The correlation between an increase in one of the poverty indicators (namely, AROPE) and the increase in undeclared work seems to hold only for envelope wages (see Chart 18 and Chart 19) ⁽³⁹⁾.

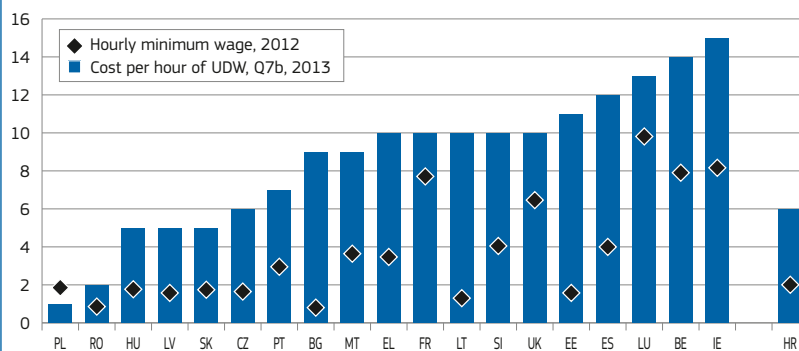
⁽³⁹⁾ The slope is slightly negative in Chart 18 plotting the private supply of UDW but the R-squared is very low (0.008).

Box 1: The unit price of undeclared work and the minimum wage

One might expect hourly income from undeclared work to be lower than official minimum wages, since high minimum wages might be assumed to make undeclared work more attractive. Moreover, obtaining goods or services at lower prices is mentioned as one of the principal reasons for making purchases of undeclared work in most Member States (60% on average in the 2013 EB).

Contrary to these expectations, however, the cost for undeclared work on an *hourly basis* is higher than the hourly minimum wage in all countries except Poland ⁽¹⁾. Possible explanations include the fact that, in most countries, minimum wages cover those who usually work full-time while undeclared work activities are often supplied for shorter periods and on an irregular basis. With this in mind, even though hourly pay for undeclared work is higher, it makes a significant difference in the income earned/cost over a longer period of time: monthly gross income from minimum wage is between 6 (in Portugal) and 74 (in the Netherlands) times higher than monthly income from undeclared work ⁽²⁾. Even if taxes and social security contributions are accounted for, the difference still remains large, quite apart from issues of quality and reliability ⁽³⁾.

Chart 20: Hourly minimum wage (gross) and hourly cost of UDW



Source: DG EMPL calculations based on Eurostat, Earnings Survey [earn_mw_cur] and LFS [lfsa_ewhuis], and Eurobarometer 2013.

Another explanation might be that much of the undeclared work (e.g. repairs and renovation) is of at least a semi-skilled nature, and therefore normally remunerated at above minimum wage levels. In fact the high hourly labour cost may, of itself, encourage those involved to avoid declaring it.

⁽¹⁾ Data on hourly cost is based on question 7b, Eurobarometer 2013. It refers only to undeclared services most frequently bought. The hourly minimum wage is computed by dividing the monthly minimum wage (Eurostat table *earn_mw_cur*) by the average usual monthly hours (full-time). The latter is obtained by multiplying the average weekly hours (Eurostat table *lfsa_ewhuis*) by 4.5.

⁽²⁾ The monthly income from undeclared work is computed using EB (2013), question 15b ‘Approximately how much money have you earned from these undeclared activities in the last 12 months?’. Yearly income from the EB survey is divided by 12 to obtain the monthly income. Number should be treated with caution because of small sample sizes in some cases.

⁽³⁾ This is based on the OECD tax-benefit model, which computes net monthly income of minimum wage earners working full-time applying the corresponding rules of the country regarding taxation and social contributions for various family types (single person, single parent, couple with 2 children, couple with no children). For more details, see OECD (2007), Annex A.

3.3. Taxation alone does not explain variations in UDW

Taxation is often put forward as a reason for work being undeclared. Using data from the Eurobarometer survey 2013, high taxes and social contributions are mentioned as a factor for doing undeclared work particularly in Hungary, Greece, Lithuania and Portugal (between 25 and 35% of respondents involved in undeclared work claim that they do it because taxes/social security contributions in the country are too high).

Another indication that taxation in general plays a role in the considerations of firms comes from surveys like the World Bank enterprise surveys which reveal that, on average, 45 % of firms in the EU's new Member States and Croatia cited tax rates as a major obstacle to doing business in 2009 (40).

Table 15 and Table 16 show the relationship between three indicators of the tax burden on labour and undeclared work: the implicit tax rate on labour (ITR_L); the share of labour taxes in total taxes (TAX_L); and the tax wedge (41). The last two indicators are significantly positively correlated with the private supply of undeclared work in 2007, suggesting that the incidence of undeclared work increases with the increase in the tax burden. However, in 2013, they were all insignificant (42). Chart 21 plotting the UDW indicator against a tax indicator for 2011 shows a very low R-squared (0.04) with observations widely scattered around the line of fit.

Hence the analysis suggests that the manner in which taxation can influence undeclared work is far from clear-cut, which also reflects the findings of Eurofound (see Williams and Renooy,

(40) World Bank (2012), pp. 73–74.

(41) The implicit tax rate on labour is calculated as the ratio of taxes and social security contributions on employed labour income to total compensation of employees and payroll taxes. It is an indicator of tax burden labour on macro level. The tax wedge on labour is an indicator of the tax burden on labour on micro level: it is the tax wedge for a single worker without children at two thirds of average earnings, i.e. it shows the tax wedge on low-wage workers.

(42) Looking at changes, i.e. change in the tax indicators and change in the two indicators of undeclared work over 2007–13, yields similar results: the only significant cases are for the indicator on share of labour taxation (0.4 at 5% level for the UDW_q19 and -0.4 at 10% for UDW_q10), which leaves the picture inconclusive.

Table 15: Taxation and UDW, EB 2007

	Envelope wages	Private supply
ITR_L	- 0.08	0.3
TAX_L	- 0.13	0.5***
TAX_WEDGE	0.24	0.33***

Source: DG EMPL calculations based on Eurostat, Taxation trends in the European Union, 2013 and Eurobarometer 2013.

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Table 16: Taxation and UDW, EB 2013 (1)

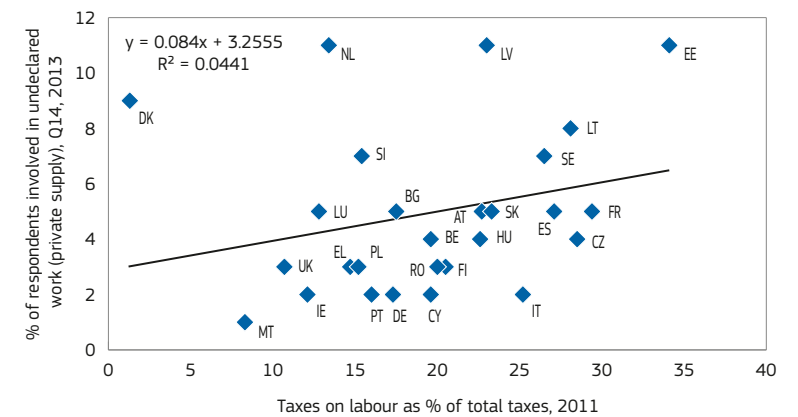
	Envelope wages	Private supply
ITR_L	- 0.26	0.25
TAX_L	0.2	0.21
TAX_WEDGE	- 0.04	0.03

Source: DG EMPL calculations based on Eurostat, Taxation trends in the European Union, 2013 and Eurobarometer 2013.

(1) The tables show the correlation between various tax indicators and two measures of undeclared work. The stars show the significance level: ***-1%, **-5%, and *-10%. The tax indicators are the most recently available at the time the manuscript was prepared and refer to 2011.

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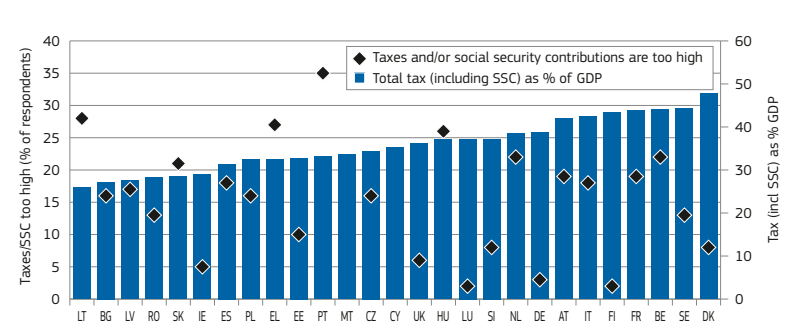
Chart 21: Share of labour taxation and private supply of UDW



Source: DG EMPL calculations based on Eurostat and Eurobarometer 2013.

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Chart 22: Real vs. perceived tax burden



Source: DG EMPL calculations based on Eurobarometer 2013 and Eurostat.

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2013) using a macro-indicator of UDW based on a monetary method (43).

During the current crisis, factors other than tax levels and to some extent tax changes may have had an impact on the size of the

shadow economy. It is also possible that rather than being concerned just by the level of taxes, citizens may be looking at the way their governments are using their tax revenues: if they consider that they are receiving appropriate levels of public services and social security support in return for their taxes, they may be more willing to contribute than if they judge otherwise.

(43) <http://www.eurofound.europa.eu/pubdocs/2013/243/en/1/EF13243EN.pdf>, see section 4.

In fact the 2013 EB survey results show that perceptions of the effective tax burden may well deviate from reality. Chart 22 plots the level of taxation as a percentage of GDP along with the perceptions of people as to how far taxes influence decisions to undertake UDW. It shows that it is not necessarily in the countries with the highest rates of taxation (e.g. FI, DK, SE, DE) that people perceive taxes as a driver for UDW, which may reflect dissatisfaction with the public services they receive for the taxes that they pay.

3.4. An effective welfare state may strengthen tax morale and contain UDW

How people feel about the efficiency with which tax revenues are spent, and what they are spent on, may influence decisions as to whether or not to evade taxes. In the Northern countries of the EU, higher taxes may be more acceptable in so far as government spending on public goods is higher. Furthermore, these countries tend to have more effective tax accountability

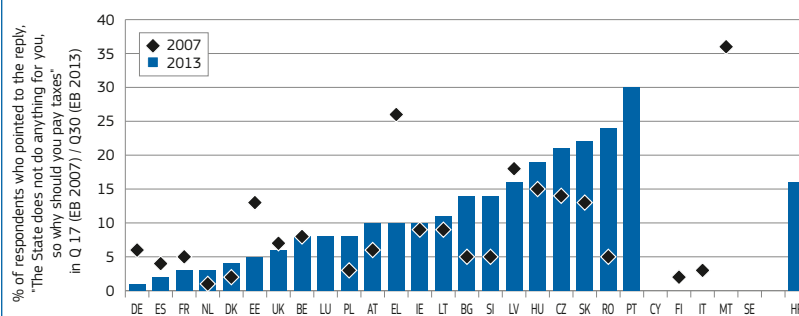
regimes that may enable them to sustain higher levels of ‘tax morale’.

In this respect the Eurobarometer survey includes a specific response possibility — ‘The State does not do anything for you, so why should you pay taxes’ — as part of question 17. Chart 23 plots the percentage of respondents who indicated this reply by Member States in both 2007 and 2013.

The percentage of respondents who saw an inadequate return from the State as a possible driver for UDW was the highest in some of the new Member States (Romania, Slovakia, Czech Republic, Hungary) and Portugal. Moreover, the percentage has increased following the crisis.

In the Nordic countries (Denmark, Finland), Netherlands, Germany and France, on the other hand, the percentage of people giving this response is small, and has even slightly decreased, which may reflect the increased role of governments in these countries in cushioning the negative social effects of the crisis through such actions as temporary increases in unemployment benefits duration, larger social protection benefits/or larger coverage, investment in active labour market policies, etc.

Chart 23: Trends in people’s confidence in the fairness of the tax system according to the Eurobarometer survey, 2007–13



Source: Eurobarometer 2013 (1).

(1) Question 17 in the Special Eurobarometer 2013 and question 30 in the Special Eurobarometer 2007 read as follows: ‘Among the following, what were the reasons for doing these activities undeclared? (MULTIPLE ANSWERS POSSIBLE)’. One of the reply categories is: ‘The State does not do anything for you, so why should you pay taxes’; for the other reply categories, see the Questionnaire in Annex 1.

Table 17: Government spending & UDW, EB 2007

	Envelope wages	Private supply
NRRs/6 months	-0.55***	0
NRRs/12 months	-0.68***	-0.02
GOV spend_tot	-0.4**	0.09
Soc Prot BE	-0.7***	0.16
SPB_cofog	-0.5***	0.09
health exp	-0.67***	0.15
educ exp	-0.2	0.38**

Source: DG EMPL calculations based on OECD-European Commission Tax-benefit model, Eurostat ESSPROS [spr_exp_sum] and General Government Expenditure by Function, COFOG, [gov_a_exp] and Eurobarometer 2013.

Table 18: Government spending & UDW, EB 2013

	Envelope wages	Private supply
NRRs/6 months	-0.54***	-0.13
NRRs/12 months	-0.67***	0.02
GOV spend_tot	-0.64*	-0.13
Soc Prot BE	-0.70***	0.02
SPB_cofog	-0.66***	-0.1
health exp	-0.61***	0.02
educ exp	-0.41**	0.32

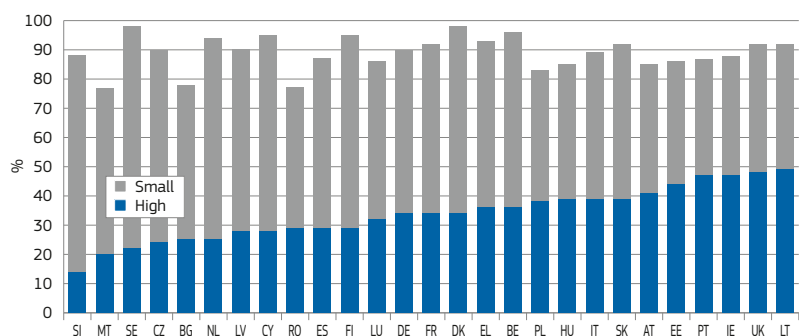
Source: DG EMPL calculations based on OECD-European Commission Tax-benefit model, Eurostat ESSPROS [spr_exp_sum] and General Government Expenditure by Function, COFOG, [gov_a_exp] and Eurobarometer 2013.

Table 17 and Table 18 present evidence on how some indicators of government spending on public services relate to undeclared work (44). The indicators taken into account are the: net replacement rates after six and twelve months of unemployment (NRRs/6 or NRRs/12); total government spending (GOVspend) as a per cent of GDP; two indicators of spending on social protection benefits (Soc Prot BE and SPB_cofog) as a per cent of GDP; expenditure on health (health exp) as a per cent of GDP; and expenditure on education (educ exp) as a per cent of GDP (45).

(44) We present correlations for both indicators of undeclared work, based on question 14 (2013) and on question 10 (2013), which is envelope wages. The first indicator however is insignificant all the time, except for one case in 2007. For this reason we comment only based on the indicator of envelope wages.

(45) NRRs/6 or NRRs/12 are based on the OECD-European Commission tax benefit model. They are calculated for a single person with no children earning 67% of the average wage. Soc Prot BE is based on Eurostat ESSPROS data [spr_exp_sum]. Old-age pensions and survivors are excluded. The other indicator of social protection benefits, SPB_cofog, is based on the Eurostat COFOG data [gov_a_exp]. Total general government expenditure (GOV_spend_tot) and expenditure on health and on education are also based on the Eurostat COFOG database [gov_a_exp].

Chart 24: Risk of detection



Source: Eurobarometer 2013, question 3.

3.5.1. Analysis of private supply of undeclared work

In a first regression, a dichotomous dependent variable is considered, using question 14 ('Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?') with the value set at '0' if the respondent answered 'no', and at '1' in case of 'yes' (47). As Q14 is not continuous, a logistic regression was done with an array of explanatory independent variables on the right-hand side of the equation (X).

A number of socio-demographic control variables were included covering: gender; age; education; degree of urbanisation; and size of household. Other independent variables reflected potential driving factors behind undeclared work — these included the subjective risk of being detected when working undeclared; general difficulties to make ends meet; and the employment status. In addition, country fixed effects were included, reflecting contextual differences such as overall attitudes and openness towards undeclared work.

The results are detailed in **Annex 2**; they are in line with the analysis presented above.

A reference category was defined for each explanatory variable X. The estimated coefficients are shown in the second column in Annex 2. They reflect the chance that for a certain variable X a category will fall into Q14=1 ('have carried out undeclared work'), relative to the reference category. If the estimated coefficient is positive (negative), this means that the category will have a higher (lower) chance of Q14=1 than the reference category. The respective significance levels for a test of coefficients to be equal to zero are given in the column 'Sig.'. The coefficient is written in bold if statistical significance is 1% or below.

The respective **odds ratio** is given in the third column. In order to assist the interpretation of the results, the following illustrations are based on odds ratios which are linked in a non-linear way to the coefficients (48). It tells us how much higher or lower the odds is of finding a

(47) 'Don't know' and refusals were ignored.

(48) Given the logarithmic nature of the regression, the relation between the estimated coefficient β and the odds ratio OR is in fact exponential: $OR = \exp(\beta)$. See, for example, Backhaus *et al.* (2008), p. 260.

The correlations show that, as expected, the level of government spending and the incidence of envelope wages are inversely, and statistically significantly, related. For example, the higher the net replacement rates, the lower the rate of undeclared work, whereby the net replacement rates for those unemployed for more than 12 months exhibit a higher correlation (-0.7 against -0.55), significant at the 1% level (46). Social protection spending is, likewise, strongly correlated (-0.7) and highly significant.

The tables also show a significantly high negative correlation between spending on health and education and undeclared work (-0.6 and -0.4 respectively for 2013).

Over the period 2007–13 the correlation between undeclared work and government spending increased (from -0.4 to -0.64) and become more significant, which may well reflect the greater importance of this type of spending in the years of the crisis.

Last but not least, how compliant other citizens are is another factor that influences decisions to evade taxes or not. In countries where corruption is systematic, the obligation to pay taxes quickly drops as a social norm. Therefore, control of corruption is critical to improving tax morale. Chart 24 plots the responses from within the different Member States from EB 2013 (question 3) with respect to perceptions of the risk of detection.

In the EU-27, the proportion believing there was a high level of risk of detection increased slightly between 2007 and 2013 — from 33% to 36%. At Member State level, the highest percentage of people who believed in 2013 that the risk was very high or fairly high (summarised by HIGH in the chart) were found in the UK, Ireland, two of the Baltic countries (Lithuania and Estonia) and Portugal. On the other hand, the Member States with the highest percentage of people saying that the risk was very small or fairly small (SMALL in the chart) were the Nordic countries (Sweden, Denmark and Finland), the Netherlands as well as some of the new Member States like Slovenia, the Czech Republic and Cyprus.

In Subsection 3.5, the micro-data analysis tests more rigorously the impact of public trust on the probability of taking up undeclared work by considering an available international index.

3.5. Results of a micro-data analysis

As a complement to the general presentation of the evidence available concerning the factors likely to be behind undeclared work, a logistic regression analysis was carried out using the results of EB 2013.

(46) To note is that high replacement rates, especially for the long-term unemployed, can affect incentives to take up regular work (e.g. unemployment trap) and thus may lead to higher long-term unemployment. This effect can be cushioned by counterbalancing measures for incentives like for example steeper profile of benefits over the unemployment spell, active labour market policies, etc. (see European Commission 2012, Chapter 1, Section 3 or European Commission 2011, Chapter 4 on in-work poverty). Hazans (2011) found that the impact of unemployment insurance varies across Europe. In the southern and new Member States, where spending on unemployment insurance benefits is modest, it seems to keep job seekers from having to accept informal work without distorting incentives to take up regular work. In contrast, in Western and Northern European countries, higher spending on unemployment benefits increases informal dependent employment.

person for which Q14=1 for a certain category, relative to the reference category. An odds ratio of 1 (coefficient of 0) would mean that the odds of finding a person who states Q14=1 is equal for category X as for the reference category.

To visualise the results from the regression, the odds ratios relative to the respective reference category are illustrated in Chart 25 for the set of independent variables. The bars for respective reference categories are darker.

In relation to the control variables, it appears that men were much more likely to have undertaken undeclared work over the previous 12 months than women (**gender** variable D10 with an odds ratio higher than 2 for males). In terms of **age** (D11), the younger the person the higher the probability of having had recent

experience with undeclared work when compared with the 55+ age group.

Household size (D40a) remains insignificant (only for people living alone does there seem to be a somewhat higher probability of having had recent experience with black work, compared to large households) whereas, for the degree of **urbanity** (D25), it appears that the probability is higher outside urban areas.

The **education** variable (D8) (proxied by the age at which full-time education stopped) was found to be insignificant in this model specification although this changes if the last variable reflecting **social hardship** (D60 on difficulties to get bills paid) is left out of the list of independent variables. In that case, there is strong evidence that lower education will result in a greater inclination to undertake

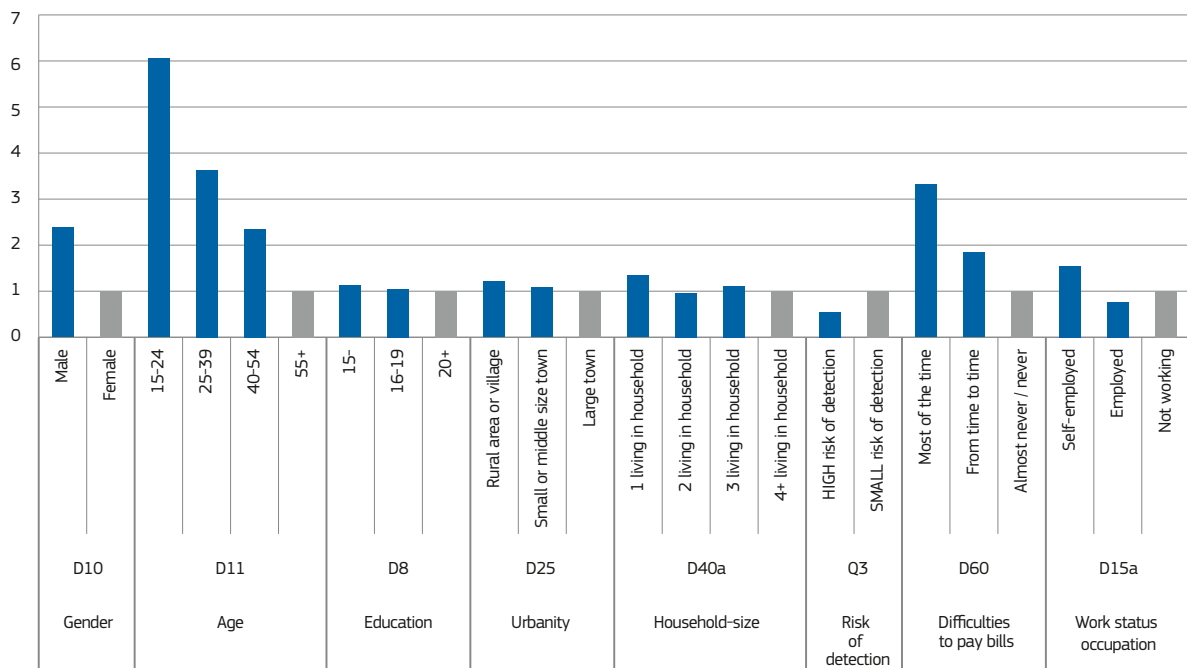
undeclared work. This reflects the presence of multi-collinearity between D60 and D8. In fact, the results for D60 alone show that the more people are confronted with difficulties in paying their bills at the end of the month, the greater the (statistically significant) probability of having had experience with undeclared work.

Another strong determinant is the individually perceived **risk of being detected** (Q3) when working undeclared. Perhaps understandably, those who consider such risk 'high' have only half the odds of having worked in this way recently compared with those who considered the risk of detection as 'low'.

In line with expectations, **employment status** (D15a) is a highly significant determinant. With non-working people as a reference, employed people face a

Chart 25: Logistic regression for Q14, odds ratios relative to the respective reference categories (=1, grey bars)

Q14: *Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?*

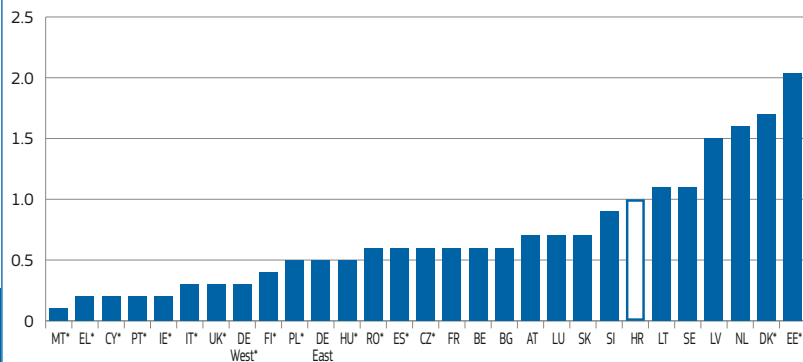


- D10 Gender
- D11 How old are you?
- D8 How old were you when you stopped full-time education?
- D25 Would you say you live in a...?
- D40a Could you tell me how many people aged 15 years or more live in your household, yourself included?
- Q19a You are employed WITHOUT a formal contract?
- Q19b Your salary is variable, with a substantial part based on results?
- Q19c You work unpaid (either part or full-time) for a partner or family business?
- Q3 People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)?
- D60 During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...?
- Q13 Thinking about the organisation you work for APPROXIMATELY how many employees does it have?

Source: DG EMPL calculations based on EB 2013.

Chart 26: Country fixed effects in the logistic regression for Q14, odds ratios for the country fixed effects relative to Croatia (=1)

Q14: Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?



Source: DG EMPL calculations based on EB 2013 (1).

(1) The * marks the country fixed effects which are significant at the 1% level or lower.

23% lower risk of having experience with black work. In contrast, the risk for self-employed people is much higher than for non-working peers (+55%).

Those results are in line with expectations and confirm earlier descriptive analysis. However, given the large sample size (21 600 observations out of 27 600 in total), it was also possible to control **country fixed effects** in the regression equation in order to capture unobserved differences in the institutional surrounding or cultural differences which could lead to a different understanding of questions by respondents. Chart 26 illustrates the odds ratio for the country fixed effects relative to Croatia as the reference country (=1).

The odds ratios reflect the chance of finding people with experience in undeclared work over the previous 12 months (Q14), relative to Croatia (49). Most odds ratios are below 1, indicating that, relative to Croatia, the odds of working undeclared appears to be systematically lower in most countries, although this is not the case in the Baltic countries or in Denmark, Sweden or the Netherlands. A possible explanation for this finding could be the relatively high proportion of neighbourhood services (especially childcare) in the latter countries.

(49) Croatia was selected as a reference by the algorithm because it is the last country of the series.

3.5.2. Analysis of drivers of envelope wages

In order to consolidate these results, a second regression analysis was undertaken using a similar set of independent variables X, but with a dependent variable that asked specifically about people's experience with undeclared payments made in cash (50).

Q10: *Sometimes employers prefer to pay all or part of the salary or the remuneration (for extra work, overtime hours or the part above a legal minimum) in cash and without declaring it to tax or social security authorities. Has your employer paid you any of your income in the last 12 months in this way?*

The most significant differences to the estimation for Q14 are the perceived risk of being detected, on the one hand, and country specific effects, on the other.

The perceived risk of being detected when working undeclared (Q3) ceases to be significant in terms of whether or not the person has *received parts of supplementary payments undeclared* in cash. On the other hand, the danger

(50) Again, the dummy is set equal to 1 in case of the respondent answering 'yes', 0 in case of 'no'. For the variables included in this regression, there are more invalid answers and refusals compared to the regression done above on Q14, so that the number of valid observations reduces to a less optimal 9.500. However, the results shown in Table Y broadly confirm what could be observed with Q14 as outcome variable which has a very similar target.

of being detected seems to be a strong barrier to working undeclared, as seen in the regression for Q14 above. In fact, it appears that people feel safer when part of their pay is handled legally, but supplemented by an undeclared part paid in cash, although they are less inclined to work undeclared if the general risk of detection is higher.

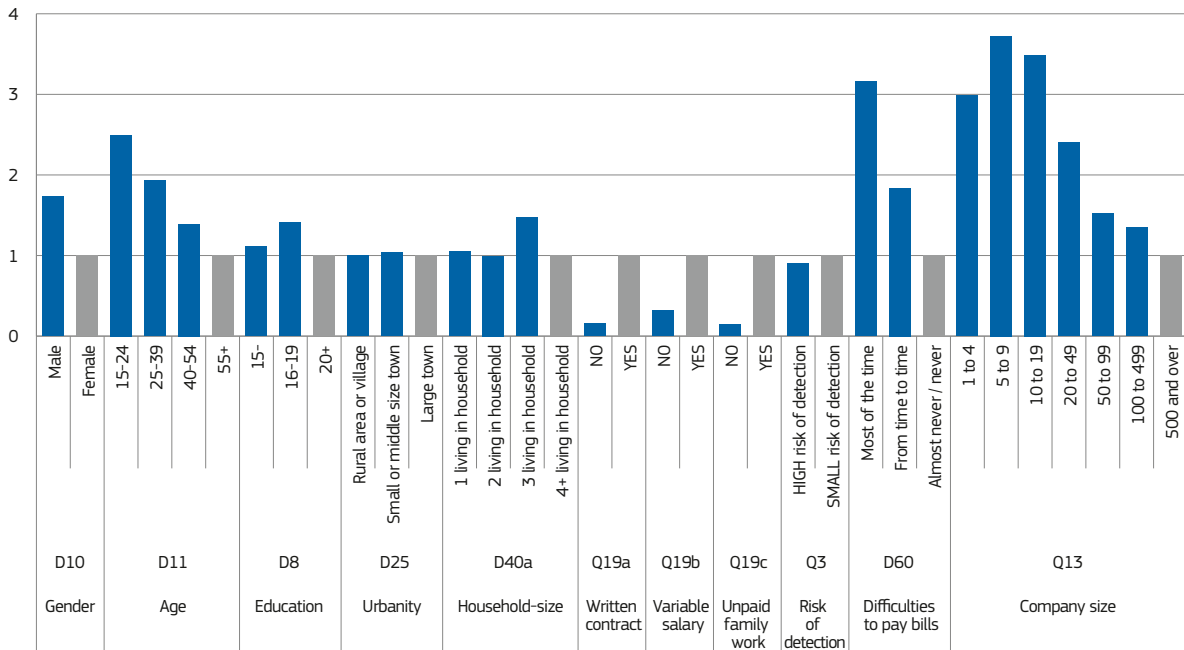
Country fixed effects continue to show the mostly negative parameters vis-à-vis Croatia as reference. In contrast to the regression for Q14 above, this is also true for the Netherlands, Denmark and (especially) Sweden. In these countries, working undeclared at all seems to play a more dominant role than receiving supplementary undeclared payments in an envelope, which tends to support the explanation concerning the impact of neighbourhood services in these countries, which are usually paid for entirely in cash.

There are four additional explanatory variables which appear significant for the regression on Q10 on top of the list for the regression on Q14 shown above.

- The risk of having cash undeclared as part of one's salary is six times higher for people who are employed **without a formal contract**, compared to those with a formal contract. Having no written contract is a good indicator of people being at risk of being paid undeclared.
- It is three times higher for people with **variable parts of their salary** compared to those without since performance-based pay variations obviously make it easier to hide undeclared parts of the salary.
- It is six times higher for people who **work unpaid (at least part-time) for a partner or family business** compared to the complementary group. In this respect it is possible that many respondents who work in family businesses receive substantial parts of their pay undeclared while replying they did unpaid work for their family business.
- The **size of the organisation** where people work (Q13) is particularly significant concerning a person's inclination to receive in-cash payments without declaring them, with small organisations much more prone to envelope payments than large ones.

Chart 27: Logistic regression for Q10, odds ratios relative to the respective reference categories (=1, grey bars)

Q10: Has your employer paid you any of your income in the last 12 months [cash without declaration]?



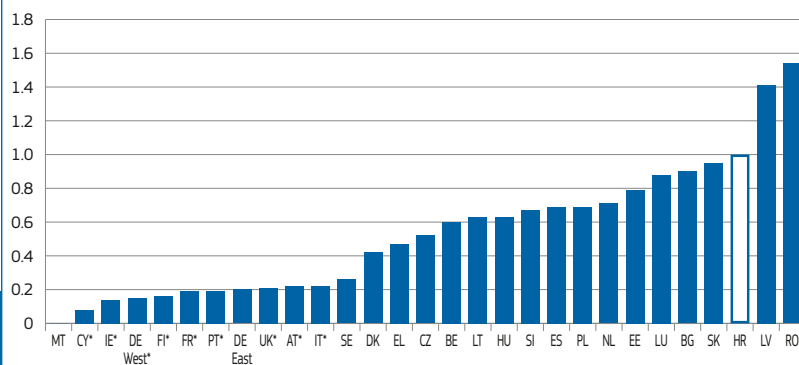
- D10 Gender
- D11 How old are you?
- D8 How old were you when you stopped full-time education?
- D25 Would you say you live in a...?
- D40a Could you tell me how many people aged 15 years or more live in your household, yourself included?
- Q19a You are employed WITHOUT a formal contract?
- Q19b Your salary is variable, with a substantial part based on results?
- Q 19c You work unpaid (either part or full-time) for a partner or family business?
- Q3 People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)?
- D60 During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...?
- Q13 Thinking about the organisation you work for APPROXIMATELY how many employees does it have?

Source: DG EMPL calculations based on EB 2013.

gif excel file

Chart 28: Country fixed effects in the logistic regression for Q10, odds ratios for the country fixed effects relative to Croatia (=1)

Q10: Has your employer paid you any of your income in the last 12 months [cash without declaration]?



Source: DG EMPL calculations based on EB 2013 (¹).

(¹) The * marks the country fixed effects which are significant at the 1% level or lower.

gif excel file

3.5.3. Perceived corruption and undeclared work

Since country effects were particularly significant in both the regression on recent experience with private undeclared work (Q14) and the one on envelope wages (Q10), the question arises as to whether these country effects hide differences which are more than just unobservable biases, or cultural differences in interpreting the questions. One determinant taken on board for a control regression analysis is Transparency International's Corruption Perception Index (CPI) for 2012, which reflects people's estimation of how transparent and reliable their public sector is seen

to be ⁽⁵¹⁾ with a higher CPI indicating less confidence.

In the analysis the dataset was amended by assigning the CPI of his/her country to each respondent. CPI is a macro-variable which is included as covariate in the regression. As every country has its CPI, country fixed effects and CPI cannot be included together in the same regression. Hence, for the analysis that follows, the CPI replaces the country effects in both equations (Q14 and Q10).

It appears that for the question about recent experience with private supply of undeclared work (Q14), CPI is not significant at levels below 10%, whereas it is highly significant for the question on undeclared envelope wages (Q10). The higher the CPI (the better the perceived situation in the respondent's country), the lower the probability of having part of the salary paid as envelope wage is. This is strong evidence that the existence of a public sector in which people have confidence serves to discourage them from working undeclared or at least accepting undeclared parts of their remuneration.

4. THE ROLE OF POLICIES IN TRANSFORMING UNDECLARED WORK INTO DECLARED WORK

4.1. Introduction

A variety of measures have been implemented across the EU Member States in order to address problems of undeclared work and the black economy more generally.

These measures can be classified into three broad groups as shown in Table 19 ⁽⁵²⁾. First, the compliance-oriented approach focuses on measures that create incentives to formalise undeclared work; the commitment approach focuses on measures that foster higher tax morale and a culture of commitment; and the deterrence approach includes measures that discourage people from

⁽⁵¹⁾ It is a composite index — a combination of polls — drawing on corruption-related data collected by a variety of reputable institutions. The CPI reflects the views of observers from around the world, including experts living and working in the countries and territories evaluated. See <http://www.transparency.org/cpi2012/results>.

⁽⁵²⁾ The classification in the table is derived from an inventory developed by Eurofound, see <http://www.eurofound.europa.eu/areas/labourmarket/tackling/search.php>.

Table 19: Policy measures for transforming undeclared work into declared work ⁽¹⁾

Approach	Focus	Typical measures
1. Compliance-oriented approach	Prevention	New categories of legitimate work Technological interventions to limit the use of cash Administrative simplification, notably for self-employment and new companies Increasing social protection for regular employment Safeguards in tax collection
	Corrective	Direct tax incentives targeted at buyers Service vouchers Amnesties
2. Commitment approach	Tax morality	Normative appeals Awareness-raising campaigns Changing perceptions of tax fairness
3. Deterrence approach	Improved detection	Better cooperation/coordination between labour and tax administration, including — improved exchange of information — joint operations
	Increased penalties	Increased penalties for evasion
	Increased perception of risk	Advertising the penalties for undeclared work Advertising the effectiveness of detection procedures

⁽¹⁾ For an analysis of public policies to turn undeclared domestic work into declared see also TUDWA (2012), Williams and Renooy (2008).

gjf excel file

working undeclared, e.g. by making the expected cost of being caught and punished greater than the economic benefit of engagement.

The rest of this section serves to illustrate recent policy examples from the Member States which may have brought about noteworthy changes in the incidence of undeclared work, or which are considered to have the potential to do so.

However, to the extent that the 'deterrence' approach is usually facilitating both the compliance and commitment approach, this section will not focus on inspections and penalties in their own right. In this respect, more information can be found in the impact assessment of the Commission's proposal to launch a platform of inspectorates and other enforcement bodies ⁽⁵³⁾.

The chosen policy examples are a mix of horizontal and sector-specific measures, in which social partners often play a key role. It should be nevertheless noted that the impact of individual measures is difficult to judge a priori, let alone quantify, not only because of the general measurement difficulties specific to undeclared work, but also because of the possibility of apparently irrational economic behaviour.

In the 'compliance-oriented' approach (and also in the 'deterrence' approach), the starting point is that undeclared workers and their employers are 'rational economic actors' who evade tax, social security and labour law obligations when the pay-off to be obtained by evading them is greater than the expected cost of being caught and punished ⁽⁵⁴⁾. However, the evidence from the Eurobarometer surveys appears to suggest that many of those engaged in undeclared work do not appear to be rational economic actors in that sense but rather social actors

⁽⁵³⁾ Forthcoming.

⁽⁵⁴⁾ Allingham, M. and Sandmo (1972), pp. 323–338.

Box 2: Action plan(s) to combat UDW in Latvia

In Latvia, the government adopted two action plans to combat undeclared work in 2010:

1. 'Action plan for combating the shadow economy and ensuring fair competition for 2010–13' developed by the Ministry of Finance. It includes 63 measures grouped in 14 directions of action, of which seven are general and six are related to selected economy sectors like construction, transports and logistics, and retail trade.
2. 'Action plan for combating undeclared employment 2010–13', developed by the Ministry of Welfare. This plan includes 25 measures, in four groups.

The general objective of both action plans is to reduce the size of the shadow economy and undeclared work, and to ensure fair competition. For this, it is planned that undeclared activities should be made as disadvantageous as possible, and activities in the formal economy made as advantageous as possible, by facilitating transfer to the formal economy and improving communication between legal public management and society. Both plans include measures aimed at deterrence as well as measures to improve compliance.

Among them, the most interesting is the simplification of the tax regime for micro-enterprises by the consolidation of several taxes into one so-called micro-enterprise tax introduced in 2010 (including personal income tax, social contribution and risk fee regarding employees of micro-enterprises, corporate tax if the company meets requirements of this tax or personal income tax payments due from the owner of the micro-enterprise). In terms of deterrence, the controlling authorities were strengthened both by training the existing staff and by adding staff to the authorities with the Revenue Service taking on 82 new auditors in 2012. In terms of punishment and sanctions, those caught using undeclared work risked losing permits and licenses.

motivated by goals such as redistribution⁽⁵⁵⁾.

Partly in recognition of the above, a 'soft' tax morality policy approach has begun to emerge that shifts attention away from using incentives or disincentives to focus instead on developing a culture of commitment amongst citizens, by educating people about the benefits of declared work and not evading tax, social security and labour laws⁽⁵⁶⁾.

All three approaches are mutually reinforcing, however, and can be effectively combined as demonstrated in the example of Latvia which saw one of the sharpest reductions in undeclared work between 2007 and 2013, in terms of both private supply and envelope wages.

⁽⁵⁵⁾ As the 2013 Eurobarometer survey displays, 49% of undeclared workers conducted this activity for friends, colleagues or acquaintances, 27% for relatives and 18% for neighbours, and of those acquiring undeclared goods and services, 42% obtain these from friends, colleagues and acquaintances, 9% from relatives and 9% from neighbours. Examining the motives of purchasers of undeclared goods and services, moreover, in 22% of cases it is a favour amongst friends, relatives or colleagues (up from 14% in 2007) and in 20% of cases it is in order to help someone who is in need of money (up from 11% in 2007).

⁽⁵⁶⁾ Williams, C. C. and Renooy, P. (2013).

4.2. 'Compliance-oriented' approach

4.2.1. Preventive measures

In order to make it easier and/or more beneficial to work in a legitimate way, at least five broad policy measures can be envisaged, namely: introducing new categories of legitimate work; technological innovations; administrative simplification for new companies and self-employment; increasing social protection; and safeguards in the tax collection system.

• New categories of legitimate work

One possibility for encouraging people and businesses to engage in declared work is to introduce new categories of declared work so that activities conducted as undeclared work can be declared. Yet, this should not lead to a proliferation of contract types and to labour market segmentation⁽⁵⁷⁾.

Given the limited scale of much of the undeclared work in the EU and the extent to which much undeclared work involves odd jobs, many conducted for and by close social relations, the creation of an appropriate employment status is seen as an important means of legitimising a significant portion of the undeclared economy. A well-known example of this is the 'mini-jobs' category of employment adopted in Germany, which has one of the lowest rates of supply of undeclared work (2% according to the most recent EB based on question 14).

The creation of new categories of legitimate work to enable odd jobs to move from the undeclared to the declared realm has also been used elsewhere. However, the unlimited proliferation of such atypical forms of regular employment (e.g. odd jobs, mini-jobs, etc.) needs a word of caution. As shown in European Commission (2011), Chapter 4, such jobs are often associated with a higher risk of in-work poverty and can in no way represent a long-term substitute for permanent jobs.

Box 3: Mini-jobs, Germany⁽¹⁾

Until 1999, 'minor employment' was allowed up to a certain income level (DM 630) and with a weekly working time cap of 15 hours. This work was exempt from social security payments for employers and employees alike. Employers had to pay a lump-sum tax of 23% with employees paying no tax at all. This minor employment could be combined with declared regular employment and could still be exempt from tax and social security contributions. At the start of 1999, there were over 6.5 million minor jobs, representing almost 70% of all jobs in catering and 60% of jobs in cleaning.

In 1999, the government reformed the minor employment scheme, aimed at limiting its growth, which drove much of this work into the undeclared sphere.

In 2002, the German government introduced three new types of mini-jobs:

1. €400 jobs — the income limit of the former DM 630 jobs was raised to €400. However, the 15 hours per week limit was lifted. In 2013 the upper limit was raised to €450 tax free. At the same time as the upper earnings limit was raised, the statutory duty to have pension insurance was also introduced for anyone commencing a mini-job. The employer pays all of a reduced contribution of 15% (as opposed to half of the regular 19.6%) of the monthly gross wage. Marginal employees earn correspondingly lower pension entitlements but they can bring this up to the full entitlement by voluntarily paying the remaining sum (4.6%) into the pension scheme.

2. Mini-jobs in the household sector — introduced to combat undeclared work in this sphere. The employer pays a levy of 12% and can deduct a certain amount from their tax payments.

3. Mini-jobs — to ease the transfer from minor to normal employment, a transition zone now ranging between €450 and 850 was introduced, with social security contributions for the employee rising gradually from around 4% to the full 21%.

While 4.1 million employees were in minor employment in September 2002, this had risen to 5.5 million at the end of April 2003, one month after the introduction of mini-jobs. Some 1.21 million were people already in a formal job, about 580 000 of whom are estimated to have transferred their add-on job from the undeclared to the declared realm⁽²⁾.

In 2013, there were about 7.5 million €400 mini-jobs and every fourth newly created job is a mini-job; in the hospitality sector 50% of all jobs are mini-jobs⁽³⁾. Many are undertaken by married women, not least because the income tax thresholds for family income and child allowances are not affected.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/de016.htm>.

⁽²⁾ Baumann, A. and Wienges, S. (2003).

⁽³⁾ Woudwijk, J. (2012), pp. 23–33.

⁽⁵⁷⁾ In order to avoid a potential proliferation of contracts, the creation of new categories of legitimate work can go together with improving existing contract types, reducing administrative burden, etc.

Box 4: Voucher scheme in the agricultural sector, Italy

A 2008 pilot service voucher scheme introduced in Italy in the agricultural sector during the grape harvest ('Il sistema dei voucher nel settore agricolo') sought to regularise the students and pensioners who supply their labour on an occasional basis during the grape harvest. Each worker can work for a maximum of 30 days and the maximum remuneration is €5 000 in a calendar year. Each employer can use the voucher scheme up to a maximum of €10 000 per annum. The workers are paid in these vouchers, credited on a magnetic card, and then cash withdrawals can be made with them at ATMs. The magnetic card also carries information about the worker relevant to the social security agency (INPS) and the workplace accident insurance agency (INAIL).

Within a year of its introduction in August 2008, 540 000 vouchers (worth €10 each) were sold to employers, resulting in the regularisation of 36 000 workers for 108 000 working days.

This voucher scheme has now been extended to all agricultural activities and a maximum of €7 000 of vouchers can be used by each employer. By early 2013, almost 5 million vouchers of €10 each had been sold, meaning work for 110 000 workers⁽¹⁾. This scheme could be further extended to other sectors and activities, including private coaching (such as music lessons), gardening, holiday work by young people and door-to-door deliveries.

⁽¹⁾ <http://www.reggio-emilia.coldiretti.it/focus-voucher-in-agricoltura.aspx?>

Box 4, Box 5 and Box 6 provide examples from Italy, Hungary (where participation rates in undeclared work have significantly declined from 7% to 4% of the population between 2007 and 2013), and Denmark (which has witnessed the largest decline in the participation rate in undeclared work — 9 pps — between 2007 and 2013).

However, all such measures need limits. If paid favours are encouraged as a type of employment rather than as a form of active citizenship, this might have the side effect of expanding the labour system to incorporate working conditions that were previously seen as unacceptable and precarious and liable to result in unfair competition and an overall loss of tax revenue.

- **Technological interventions to limit the use of cash**

Since the onset of the recession, greater use has been made of technological interventions to address issues of undeclared work, notably including 'cash registers'. Box 7 reviews their introduction in Sweden and Poland, where undeclared work declined by around 3 pps between 2007 and 2013. Similar schemes have also been introduced in Belgium (mandatory from 2014 in the hospitality sector), Denmark, Greece, Italy and Hungary.

Box 5: Seasonal and casual work in Hungary: the Simplified Employment Act, 2010

With the introduction of the Simplified Employment Act in 2010, Hungary encouraged a new category of minor employment by simplifying obligations for employers linked to seasonal employment and casual or temporary work⁽¹⁾. In particular, the Act enables an employer to notify this work either by a simple text message (SMS) or electronically via the Client Gate System once they are registered on the system. For seasonal work, the employer has to pay taxes of HUF 500 (€1.75) and for casual work HUF 1 000 (€3.50) on a daily basis.

According to the National Tax and Customs Administration, between April and May 2010, over 505 000 simplified employment cases were registered, of which nearly 420 000 were for ad hoc or casual employment, 16 000 for seasonal agricultural employment, 6 500 for seasonal tourism employment, and over 10 000 in plant cultivation. Around 500 000 of these jobs lasted less than five days. Between 1 August 2010 and 31 December 2011, around 12.5 million working days were registered and HUF 8 billion (€28 million) flowed into the State treasury⁽²⁾.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/hu015.htm>

⁽²⁾ http://hvg.hu/gazdasag/20120312_alkalmi_munkasok_bevetel

Box 6: Legitimising odd jobs in Denmark

In Denmark, family and friendly favours in private homes are now tax-free, thus legalising the bulk of previously existing undeclared work in Denmark. Furthermore, young people under 16 years of age can also be paid for domestic work or child-care for other private households without paying tax. Pensioners can earn up to DKK 10 000 annually (€1 341) by working in private homes with no consequence for their State pension.

It can be noted that the demand for cleaning (21 %) is the fifth largest in Denmark, and that the supply of other domestic services (e.g. repairs/ renovations) is 29 %, just 4 pps lower than the highest level in the Union. Efforts to formalise this type of work can significantly contribute to reducing the level of UDW in the country.

Box 7: Cash register legislation in Sweden ⁽¹⁾ and Poland ⁽²⁾

In Sweden, as of 1 January 2010, businesses selling goods and services in return for cash payments must have a certified cash register which has a black box attached to it that reads these transactions. Only staff at the Swedish Tax Agency can access the information in the black box. Non-complying companies can be fined SEK 10 000 (€1 190). If they fail to comply once again within a year, a fee of SEK 200 000 (€23 800) is imposed. Cash payments registered include those made by debit (bank) card. It is too early to evaluate the overall effect, but statistics from the Swedish Tax Agency indicate that in 2010 the reported VAT for restaurants rose by 7 %, and in the hairdressing industry by 11 %.

In Poland, in 2010 the Ministry of Finance made electronic fiscal cash registers mandatory in a range of professions (for example doctors, lawyers, tax advisers, physicians running private practices, funeral homes and translators). The immediate effect was weaker than expected, as less than 30 % of the estimated number notified the tax administration of having acquired fiscal cash registers within a month of the law coming into force. The exact figure of those who complied in subsequent months is not known. Another problem is that it remains possible to avoid recording sales despite the introduction of the cash registers. For example, doctors reportedly only have to record sales during official opening hours, thus excluding patients seen after hours, those seen on home visits and those patients agreeing to a lower fee if no 'paperwork' is involved.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/se017.htm>

⁽²⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/pl017.htm>

Another possible use of technology to reduce undeclared work is the pre-filling of tax forms, applied already in 10 Member States (Belgium, Denmark, Finland, Lithuania, Malta, the Netherlands, Portugal, Romania, Spain and Sweden). They are seen to reduce opportunities for both error and fraud, to reduce the administrative burden, and to improve the relationship between taxpayers and public administration.

Furthermore, making the electronic payment for any transaction compulsory over a certain threshold — which for instance, has been set at DKK 10 000 (€1 341) in Denmark, €1 000 in Italy and €1 500 in Greece — is also an effective way of tracking large transactions. However this measure offers only partial coverage since transactions under the threshold still remain susceptible to being done under-the-counter. Moreover, the effectiveness of the scheme partly depends on the ability of the tax authorities to trace the individuals' electronic payments or bank accounts. This is currently not the case in all Member States, and is in general difficult to achieve because of confidentiality and data protection concerns.

• Administrative simplification, notably for self-employment and new companies

Simplifying the compliance procedures has been stepped up in many Member States since the onset of the recession as a way to induce more tax compliance. This can take the form of reducing the number of tax forms and returns, or pursuing an integrated approach to audit with a single visit to inspect records rather than separate inspections for different taxes ⁽⁵⁸⁾. These are often incremental changes, but when taken as a cumulative whole have major impacts on compliance behaviour.

The risk of people drifting into undeclared work can also be prevented by making the transition into self-employment easier for both the employed as well as the unemployed on whom most Member States tend to focus. One such initiative is the start-up premium in Germany (see Box 8).

⁽⁵⁸⁾ More details to be found in the impact assessment of the Commission's proposal to launch a platform of inspectorates and other enforcement bodies, forthcoming.

Box 8: Start-up premium (Gründungszuschuss, Ich AG), Germany ⁽¹⁾

In 2002, the Hartz Commission was asked to present reform proposals for national labour market policy. One aspect was the introduction of a new public subsidy for business start-ups (Existenzgründungszuschuss). Introduced in 2003, this subsidy became known as 'Ich-AG', or 'Me PLC'. In the beginning, the scheme was criticized for performing the same function as a second, existing scheme, the 'bridging grant' (Überbrückungsgeld), resulting in the federal government fusing the two initiatives together in 2006 in the form of the 'start-up premium' (Gründungszuschuss, GZ). This GZ can be granted to recipients of the unemployment benefit wanting to start up their own business. In addition to their continued unemployment benefit, recipients receive an additional monthly grant of €300 in the first six months. If, after these six months, the recipient proves intense business activity and initial successes, the additional €300 monthly grant is paid for another nine months. Until the end of 2011, the timing of the two stages was reversed, lasting nine months and six months respectively. The prerequisites for participation in the scheme are being entitled to 150 days of unemployment benefit on the day of the company's foundation, proof of capability to do self-employed work and the possession of an economically viable business plan.

According to a study, more women applied for GZ-funds ⁽²⁾ than previously. GZ participants are also older and have higher educational qualifications compared with participants in the two earlier schemes ⁽³⁾. Between 119 000 and 147 000 recipients of the unemployment benefit enrolled annually in the GZ scheme between 2007 and 2010 ⁽⁴⁾. There is also a high survival rate: 19 months after start-up, 75–84% of former GZ recipients were still in business ⁽⁵⁾. No evidence has been provided, however, of the scheme's effectiveness in reducing undeclared work.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/de017.htm>

⁽²⁾ Bernhard, S. and Wolff, J. (2011).

⁽³⁾ Caliendo, M., Hogenacker, J., Künn, S. and Wießner, F. (2011).

⁽⁴⁾ Bernhard, S. and Wolff, J. (2011).

⁽⁵⁾ Caliendo *et al.* (2011).

Box 9: Simplifying legislation, Portugal

In 2005, Portugal's Ministry of Justice (Ministério da Justiça) announced the Simplex programme whose aim is to encourage administrative and legislative simplification. One initiative was the 'on the spot firm' ('Empresa na Hora'), which seeks to alleviate the processes and procedures necessary to set up a new company. This initiative makes it possible to establish a company in a single office (one-stop shop) in a single day. On completion, the definitive legal person ID card is handed over, the social security number is assigned and the company immediately receives its memorandum and articles of association, as well as an extract of the entry in the Commercial Register. The security of the incorporation procedure for new enterprises is thus ensured by having all the details sent to the tax authorities. Between 2005 when the initiative started, and September 2008, some 59 068 new enterprises were established, including 23 560 sole trader businesses (40%).

Since the onset of recession, most Member States have continued to pursue simplifications within their compliance procedures including actions such as reducing the number of tax forms and returns. These are often small incremental changes, but when viewed overall, can have a major impact on compliance. Compliance can also be simplified without deregulating, as the Portuguese example of the 'on the spot firm' shows (see Box 9) ⁽⁵⁹⁾. Many other countries have explored the transferability of this initiative, including Finland, Hungary, Slovenia, Sweden, Brazil and China.

• Increasing social protection for regular employment

Increasing social protection for those who are engaged in declared activities has a twofold advantage. Firstly, the connection between formal work, paying social premiums, and the benefits of unemployment payments or pensions, makes formal work attractive. Secondly, welfare provisions during periods of unemployment take away the need to do undeclared work in order to obtain an income. Moreover, the provision of such social protection does not always have to be government-led, as the example of Romania shows (see Box 10).

⁽⁵⁹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/pt003.htm>

Box 10: Builders Social House, Romania ⁽¹⁾

In Romania, 'The Construction Sector Social Agreement for 2007–09' ('Acordul Social Sectorial Pentru Construcții 2007–09') estimated that about one-third of the active workforce was undeclared and highlighted the importance of tackling this sphere. The Builders Social House (Casa Socială a Constructorilor, CSC) is one prominent initiative being used to incentivise the transformation of undeclared work into declared work. The CSC was established in 1998 as a privately run welfare organisation, to which the representative trade unions and employer organisations in the construction and building materials sector contribute in equal measure. It provides welfare during the winter months (1 November – 31 March), when the construction sector slumbers, to people who are in registered formal jobs and in doing so, provides an incentive for workers to be in declared rather than undeclared work in the construction and building materials sector.

CSC members are construction companies and manufacturers of building materials. Entitlement to welfare provision during these winter months is only available to declared employees — that is, those with employment contracts recorded with the local labour inspectorates, and whose social security contributions due by both the employer and employee have been paid. Corporate contributors pay 1.5% of their turnover into the CSC scheme, and employees contribute 1% of their gross base salary. In 2008, CSC had 573 member organisations accounting for 40% of all employment in the construction and building materials industries. During the 2007–08 winter period, 102 387 benefited from this scheme as welfare recipients.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/ro001.htm>

Box 11: Reverse charges in the construction industry, Sweden ⁽¹⁾ and reverse VAT in Finland

To tackle VAT fraud and undeclared work in the construction industry, the Swedish government introduced a law on reverse charge VAT effective from 1 July 2007. A reverse charge means that the buyer, not the seller, must file and pay VAT. This system is similar to the one used in the trade of goods and services between companies in different countries within the EU. A company which performs and sells construction services, must pay VAT for its subcontractors. If the purchaser of the service is not a construction company, the vendor adds VAT to the invoice. If the purchaser of the service is a construction company, the vendor does not add VAT to the invoice. Instead, the purchaser will be responsible for reporting the output VAT. Reverse VAT liability does not apply to sales which consist solely of materials.

According to a survey by the Swedish Tax Agency, around 39% of the surveyed companies believed that the reverse charge reduced the extent of undeclared work in the construction sector. The Swedish Tax Agency did not find support for this argument when investigating any increase in payroll taxes. The Tax Agency does however find that the reverse charge has had positive effects in terms of increased reporting of output tax in the construction sector by SEK 700 million (€82.3 million) in 2008 ⁽²⁾.

In April 2011, Finland introduced reverse VAT, only with construction services, not materials, and private individuals as buyers are excluded. In the legislative proposal, the increase in VAT revenue was estimated to be €80–120 million.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/se016.htm>.

⁽²⁾ Swedish Tax Agency (2010).

This approach is potentially transferable to other economic sectors where work is largely seasonal, such as agriculture and forestry, and also to other countries.

• Introducing safeguards in the tax collection system

Tax fraud creates significant distortion in the functioning of the internal market, prevents fair competition and also erodes revenues that should be used for the implementation of public services at national level. In particular, VAT fraud is highly important in several Member States involving relatively few persons but the amounts at stake are considerable. In addition VAT fraud is also often linked to the black economy, false deductions, falsified invoices or under-reported supplies which also contribute to the losses in VAT revenues. Moreover, undeclared work is often associated with the avoidance of paying VAT. One option to ensure that VAT is paid in the production chain is to use the so-called reverse charge mechanism which implies shifting the tax liability from the supplier to the recipient with respect to domestic commercial transactions. The tax liability does not disappear into the production chain. The main suppliers tend to be large VAT-registered companies and there is no VAT charged to the main supplier responsible. The last supplier in the production chain is responsible for the VAT filing. This is one option advocated for tackling undeclared work as well. As such, the mechanism is tackling mainly the problem of the so-called carousel or missing trader fraud. However, a generalised reverse charge mechanism is still under consideration taking into account that the effects of such a change have to be considered carefully. These effects are linked mainly to the need to control the movement of untaxed goods, to the need for the identification of the customer (taxable or non-taxable person), cash flow, etc.

So far, such a reverse charge mechanism has been introduced in many EU Member States for specific, and limited,

Box 12: Tax deductions for household work in Sweden ⁽¹⁾ and Denmark ⁽²⁾

Since December 2008, Swedish citizens can receive a 50% tax deduction on labour costs for household services (RUT) and the renovation, conversion and extension of homes (ROT), up to a maximum of SEK 50 000 (€6 000) per annum. Companies charge the customer the costs of materials and half the labour costs, including VAT. The company requests the outstanding sum from the Swedish Tax Agency. In 2010, 1.1 million people used this scheme and the Swedish Tax Agency paid out SEK 1.4 billion (€16.6 million) in RUT deductions and SEK 13.5 billion (€1.6 billion) in ROT deductions. Some 7.6 million hours of RUT services and 53 million hours of ROT services were performed.

The Swedish Tax Agency estimates that undeclared work decreased by 10% between 2005 and 2011 in these sectors ⁽³⁾. In the autumn of 2009, the Swedish Federation of Business Owners conducted a survey among 1 857 companies in the construction sector. The result showed that nearly 80% of the surveyed companies felt that the measure had a positive impact on reducing undeclared work.

From 1 June 2011 until the end of 2014, it is possible in Denmark for each household member over 18 years of age to deduct from their taxes up to DKK 15 000 (€2 000) for the costs of employing craftspeople and domestic helpers under a pilot project called 'Home-Job Plan' (Bolig-Jobplan). The expenses that can be deducted include payment for cleaning, indoor-outdoor maintenance of the house, gardening and babysitting and since April 2013 it has also included subsidies to summerhouses.

The cost to the government was estimated to be DKK 1 billion (€134 million) in 2011 and around 1.75 billion (€234 million) in 2012 and 2013. Relative to expectations, the pilot project has so far been a success; 270 000 people used the deduction in 2011 and most of the work involved home improvement, maintenance and repair. They have on average reported deductions of DKK 9 800 (€1 315) per person. In total, the deductions reported constitute DKK 2.7 billion (€362 million). The tax value of those deductions is around DKK 900 million (€121 million). The success of the measure was partly due to the simplified way of realizing the deduction. The Danish tax authority introduced an electronic system to pay for services and at the same time for the deduction on the tax return of the buyer and for reporting the income on the tax returns of the person performing the work.

The major difference between Sweden and Denmark is that Sweden has a tax deduction of €6 600 compared with €2 000 in Denmark. Similar measures have also been initiated in Finland and Germany.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/se015.htm>

⁽²⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/dk015.htm>

⁽³⁾ Swedish Tax Agency (2011).

goods and services vulnerable to VAT fraud (mobile phones, construction services, etc.).

The example of Sweden shows a significant decline in undeclared work in the construction sector where it had traditionally been heavily concentrated.

4.2.2. Corrective measures

In addition to measures to prevent people working in an undeclared way, initiatives have been introduced to make it easier and more beneficial for those already participating in undeclared work to declare their earnings. Many of the measures under consideration concern sectors that are sensitive to undeclared work (household services, construction etc.) as well as regularisations more generally.

• Direct tax incentives targeted at buyers of undeclared work

Targeted direct tax incentives to encourage consumers to purchase declared goods and services have been pursued in relation, for example, to household repairs, maintenance and improvements. Tax rebates on home maintenance expenses have been available in France since 2000, and there are tax reductions for house repairs in Italy and Luxembourg. The impact of such measures however has to be assessed.

Schemes in Sweden, where undeclared work decreased by 3 pps between 2007 and 2013, and Denmark, where undeclared work has decreased by 9 pps, are reviewed below. These schemes both target household services (e.g., cleaning,

babysitting, gardening), where undeclared work is heavily concentrated, as well as the household repair, maintenance and improvement area, and have been associated with a steep decline in undeclared work in these countries (see Box 12).

Instead of tax rebates, demand can also be stimulated with subsidies since they can also reduce the price of goods and services to consumers. In Austria, for example, specific types of elderly care are supported through targeted subsidies with associated measures to formalise these activities such as an amnesty for the many foreign workers working undeclared as private nurses.

Box 13: Subsidies for private geriatric nurses, Austria ⁽¹⁾

In Austria, older people often engage foreign workers on an undeclared basis for private nursing care at home. To bring this into the declared realm, in 2007, the Nursing in the Home Act (Hausbetreuungsgesetz, HBeG) offered two alternatives for geriatric nurses. Firstly, the person requiring care can employ either one or two geriatric nurses under the terms of the existing Private Household Workers' Act (Hausgehilfen- und Hausangestelltengesetz). Secondly, nurses have the option of becoming self-employed under the new 2007 legislation, which means that they need to apply for a general trading licence and register with the Social Insurance Association for Entrepreneurs and Self-Employed Workers (Sozialversicherungsanstalt der gewerblichen Wirtschaft, SVA).

The purchaser can claim subsidies for these formal workers of up to €400 per nurse each month under the former legislation and up to a maximum of €112.50 per self-employed nurse each month. Only persons requiring 24-hour stand-by care, and who do not possess assets worth over €5 000 (excluding their house), can claim these wage subsidies.

The measure has not been evaluated. According to the Federal Ministry of Economy and Labour Affairs (Bundesministerium für Wirtschaft und Arbeit, BMWA), 15 000 people have entered the self-employment scheme and applied for a general trade licence under the HBeG.

According to estimates from the Federal Ministry of Social Affairs and Consumer Protection (Bundesministerium für Soziales und Konsumentenschutz, BMSK), effective monthly costs of the new 24-hour care schemes amount to €1 500–€2 000 in the case of self-employment and to €2 600–€2 850 for regular employment. For many older people, these costs are still not affordable; as a result, they are forced to continue engaging the services of undeclared foreign workers for private nursing care at home.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/at001.htm>

- **Service vouchers (notably in the household services sector)**

Many countries have developed service voucher schemes to encourage customers to purchase from the declared economy in areas where undeclared work occurs frequently such as in household services. Service vouchers are a form of a direct intervention with the user paying only part of the real cost (close to the price on the informal black market) and the difference paid by the public authorities. In this way it encourages suppliers of these services to enter the formal labour market.

Vouchers are seen as flexible, and easy to use, tools, making them especially attractive to the elderly people in need of assistance. They also simplify administrative procedures, allow for a continuous verification of where support has been given, and favour local businesses since they are usually targeted at specific tasks ⁽⁶⁰⁾. Box 14 presents an example from Belgium.

⁽⁶⁰⁾ See also European Commission (2012a).

Box 14: Service Vouchers, Belgium ⁽¹⁾

Service vouchers in Belgium can be used for activities done at home (cleaning, laundry and ironing, cooking, sewing) and outside the house (shopping, ironing, assistance with transportation under certain conditions). In 2013, the user pays €8.50 per hour for the first 400 vouchers (one voucher being used for one hour of work) and €9.50 for the next 100, but the real cost is €22.04 and the difference is financed by the government. Each individual is allowed to buy 500 vouchers a year, or 1 000 vouchers for each family ⁽²⁾. Up to €1 350 per year is tax deductible.

Every voucher can be used to pay for an hour of work from certified companies that hire unemployed people. At first, the unemployed person can be hired by the company on a part-time, temporary basis. After six months, the company has to offer the worker a permanent employment contract for at least part-time employment if the person was registered as unemployed.

In 2011, the total cost of the voucher scheme in 2011 was some €500 million; per employee net costs amounted to €3 520 in 2011 ⁽³⁾.

During 2011, around 150 000 persons were employed through the voucher system. Only 4.6% of employees (10.2% in Brussels) stated that they started working in the voucher system to avoid the undeclared economy. Examining the labour force of the voucher system, it is mainly women (97% of all the employees) aged 30–55 with low educational levels. This profile is growing stronger over time; the proportion aged 50 and over is growing (11% in 2006, 19% in 2011), as is the proportion that are non-Belgian nationals. Some 20% of all voucher workers (55% in Brussels) are non-Belgian EU-28 nationals, and a further 10% are from outside the EU-28. In 2007 only 14% of the voucher workers were non-Belgian ⁽⁴⁾.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/be004.htm>

⁽²⁾ Some categories, like single parents or young mothers starting to work, are allowed more vouchers.

⁽³⁾ Gerard, M., Neyens, I. and Valsamis, D. (2012).

⁽⁴⁾ Peeters, A., Pelt, A. van and Valsamis, D. (2008).

Box 15: Amnesty for undeclared workers, Spain ⁽¹⁾

On 26th May 2011, the Spanish Parliament enacted a Royal Decree (5/2011) to tackle undeclared work. In the first phase, an amnesty was granted allowing employers to register any undeclared employees with the Social Security authorities and to sign a contract of employment with them lasting at least six months, regardless of whether it is fixed-term or open-ended. Businesses following these procedures before 31st July 2011 were not penalised and did not have any backdated social security contributions charged. They were only required to pay social security contributions from the point of registration onwards.

In the second phase starting 31st July 2011, new measures and sanctions were applied to businesses continuing to employ undeclared workers. Sanctions became stricter with offences punished with a fine of between €3 126 and €6 250 for minor infractions (a fivefold increase), €6 251 and €8 000 for medium offences and €8 001 and €10 000 for major infringements (1.5 times as high as it used to be). The fines for 'very serious offences' did not change. They remain at €10 001 to €25 000 for minor infractions, €25 001 to €100 005 for medium offences, and €100 006 to €187 515 for major breaches. Any enterprise sanctioned as a result of a serious or very serious offence will not be eligible to apply for public contracts for a period of five years. No evaluation is currently available of the outcomes of this amnesty.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/es015.htm>

Other countries have developed service voucher schemes covering similar services, the system in France (CESU vouchers) ⁽⁶¹⁾ being an example.

• **Amnesties and gradual formalisation schemes**

Society-wide amnesties on an individual basis for those who voluntarily disclose that they have been working undeclared can sometimes be an effective way of transforming undeclared work into declared work. However, they should be one-off, and coupled with measures (e.g. more effective enforcement and stronger deterrence) that ensure that they will not morph into successive rounds of amnesties, where tax avoidance and undeclared work persists amid strong expectations of further amnesties. Box 15 presents an example from Spain.

In Italy, for example, a six-month amnesty in 2001 generated €1.4 billion

of additional tax revenue, adding some 0.4% to total tax revenues ⁽⁶²⁾. However, such an amount needs to be compared to the revenue foregone originally, and furthermore a tax amnesty can create incentives for future tax avoidance.

4.3. Commitment approach

In contrast to the approach outlined above, the commitment approach seeks to foster commitment to working in a declared way, and to contributing to the society through the payment of taxes. In other words, there is a shift from compliance to commitment.

Since the onset of recession, measures to foster such commitment have grown throughout the EU as governments and social partners have sought to educate and raise awareness about the importance of paying taxes, fostering decent working conditions and generally seeking

to strengthen the psychological 'contract' between the State and its citizens.

4.3.1. Normative appeals to people to declare their activities

Whether appeals are effective at eliciting a change in behaviour depends, not only on the nature of the appeal, but also on the individuals addressed, their perceptions of the social norms, the fairness of the tax system, and whether procedural justice is embedded in the tax administration.

In Estonia, for example, an initiative was undertaken that appears to have been relatively successful given that there has been a significant increase in the perceived risk of being caught relative to other countries, and also a significant decrease in the proportion of formal employees receiving envelope wage payments (see Box 16).

⁽⁶¹⁾ CESU voucher (Cheque Emploi service Universel): <http://www.cesu.urssaf.fr/cesuweb/home.jsp>

⁽⁶²⁾ Schaltegger, C. A. and Torgler, B. (2005).

Box 16: Normative appeals on envelope wages, Estonia ⁽¹⁾

In January 2008, the Estonian Tax and Customs Board (Maksu-ja Tolliamet) sent notification letters to companies with low wage levels compared to the average level in the region and their respective business sector, which might suggest that 'envelope wages' were present. The notification letters informed the employers of the low competitiveness of their wage levels compared with average wage levels. Letters were sent to 2 000 employees and 1 000 enterprises in three groups — letters were sent either only to employees, only employers or both the employers and employees of the same company. Employees were informed about the risks that accompany undeclared wages, such as losing social guarantees. Firms were first given an opportunity to make necessary corrections in their declarations voluntarily. Strict control measures were then employed for the firms which did not formalise their practices after receiving notification letters.

According to the audit department of the Tax and Customs Board, 46% of enterprises that received the notification letters in 2008 adjusted their wage levels and started paying more taxes. 43% did not react to the letters and in 8% of the companies their tax behaviour worsened. After four months, the notification letters had brought an additional EEK 10 million (about €640 000) of tax income, including EEK 8.8 million from notifications sent to enterprises and EEK 1.2 million from those sent to individual employees.

When comparing different methods of sending notification letters, the most successful in terms of improved tax behaviour was when both the employer and employees received the letters. 56% of such enterprises improved their tax behaviour and just 36% did not react.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/ee001.htm>

Box 17: Awareness-raising campaign, Lithuania

The VDI campaign embarked on a fundamental change of approach for tackling undeclared work, placing greater emphasis on business consulting, public information and awareness-raising. These activities were implemented through various media channels, such as radio, television, press, the internet, information screens in shopping centres and public transport. According to the VDI, this reduced the tolerance towards undeclared work in Lithuania. As a result, a growing number of alerts are made by members of the public about undeclared workers. In 2011, 2 400 people reported incidents of undeclared work anonymously. More than 50% of the total registered anonymous calls proved to be valid.

Box 18: Awareness-raising campaign, Latvia

In October 2011, the Latvian Employers' Confederation Latvijas Darba Devejū Konfederacija (LDDK) conducted an awareness-raising and educational campaign 'Against the shadow economy — for fair competition' ⁽¹⁾. It included an online test for measuring the impact of one's undeclared activity on public welfare. Answering 11 questions in the test, individuals could become aware of their undeclared behaviour in shops, markets and with service providers (taking or leaving a receipt when purchasing), in hospitals (extra payments to doctors), transport (extra payments to officers), employment (working with or without an employment contract, undeclared income from work and accepting 'envelope wages') and its effects on the quality of public services and the efficiency of the State management.

Around 12 000 individuals participated in the online test. Participants were advised how to reduce their own undeclared economy impact, for example by paying official prices for services, acquiring a receipt in shops and other shopping places, ensuring that a taxi meter was working, and only purchasing certified car fuel.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/lv015.htm>

4.3.2. Awareness-raising campaigns

Awareness-raising and educational campaigns have been pursued in many Member States in order to improve tax morale and encourage a better understanding of the benefit of contributing fully through the payment of taxes. Such campaigns typically focus on the costs and risks of undeclared work and the benefits of declared work.

Many examples exist of awareness-raising campaigns implemented since the onset of the recession. Box 17, Box 18 and Box 19 present examples from Lithuania, Latvia and Bulgaria. In Lithuania, for example, the EB 2013 reports that its citizens perceived the risks of being caught as being much higher than in most other Member States. Not least, this can be a result of a public information and awareness-raising campaign ⁽⁶³⁾ by the Lithuanian State Labour Inspectorate (VDI) launched in 2009.

4.3.3. Changing perceptions of distributive fairness

Taxes are the price paid for the goods and services provided by governments. Citizens see themselves as more justified in breaking the psychological contract with the government, if they do not believe that the price is fair and/or they do not adhere to the distributive principles of the government. In other words the tax system needs to be perceived as fair by citizens, who also need to know how their money is being spent.

A 2009 survey in Estonia ⁽⁶⁴⁾ revealed that awareness of the services people receive from the State was relatively low; 26% of respondents did not know what kind of services they received from the State, while around half of those (11%) said that they received nothing. In 2010 and 2011 an information campaign, 'Unpaid taxes will leave a mark', was implemented by the Estonian Tax and Customs Board with the aim of raising awareness among the population regarding how tax payer money is used by the State by explaining why it is important to pay taxes and what each citizen receives in return (see Box 20).

⁽⁶³⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/lt015.htm>

⁽⁶⁴⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/ee015.htm>

Box 19: Example of Bulgaria

The Bulgarian National Rules for Business Centre ⁽¹⁾ was established in 2010 to change the attitudes of employers and employees towards undeclared work and to increase public awareness of its damaging impact and consequences. The target groups were employers and employees, as well as State employees engaged in the detection and prevention of undeclared work.

The pilot sectors included mechanical engineering, electrical engineering, information technology, infrastructure construction, light industry, perfumery and cosmetics, dairying, tourism, non-bank financial services and services of general interest. The total project budget was some BGN 8.9 million (€4.5 million) covering the following activities:

- national representative surveys and branch and company audits were conducted;
- round tables and national and regional awareness-raising campaigns were organised;
- an information system, including a distance learning platform, a forum on the web, a hotline for reporting informal economy practices and e-alerts, was established;
- a draft strategic plan for the restriction and prevention of the informal economy was elaborated.

⁽¹⁾ <https://eurofound.europa.eu/areas/labourmarket/tackling/cases/bg015.htm>

Box 20: Changing perceptions, Estonia

The campaign was implemented in two parts. The first part was conducted in nine Estonian cities during 2010. The main message of the campaign was: 'Unpaid taxes will leave a mark. You like highways in order, a good ambulance, fire and police service. So do we.' For instance, a message was displayed on the back of buses together with a picture of rescue workers 'Should we take the trolley bus to an emergency call-out? This can happen if you do not pay your taxes.' In addition, a thank you message was attached to rescue cars in Tallinn, Harju and Virumaa counties and ambulance cars in Tallinn saying that these cars have been bought with tax payers' money. The aim was to raise awareness of what is financed by tax income and to bring to the fore the services citizens receive for their tax payments. Thus, even after the campaign ended, the adverts remained visible on rescue and ambulance cars.

The second part of the campaign was conducted in eight Estonian cities during October 2011. Next to the main message 'Unpaid taxes will leave a mark' it included sub-messages relevant to the Estonian context. For instance, the lack of facilities for children in schools and the provision of childcare and kindergarten places were widely held to be important problems by the Estonian population. Accordingly, a sub-message pointed out the number of computers that could be bought or the number of new kindergartens (almost 300) that could be built if taxes were fully paid. Given that it was the 100th anniversary of the Estonian film industry, a further sub-message pointed out that 722 domestic films could be produced each year instead of the current three films.

Compared to other State campaigns, the average results of the 'unpaid taxes will leave a mark' campaign were relatively good. The second part of the campaign was noticed by 59% of the respondents aged 15–74 which compared well with an average result of 45% for other campaigns. Overall 65% of respondents found that the campaign was suitable for increasing awareness of unpaid taxes.

5. CONCLUSIONS

Undeclared work (UDW) does not appear to account for a significant part of the average income of the average citizen or household unit in the EU. However, it remains a disruptive form of tax evasion in the labour market, with nearly 1 in 20 citizens admitting to occasionally acting as a supplier of undeclared goods and services, and 1 in 30 being paid partly in cash by his or her employer — a practice known as 'envelope wages' or 'cash-in-hand'.

As these are the figures revealed by face-to-face interviews of individuals, and do not include other types of (legal or otherwise) tax evasion at the level of companies, apart from the payment of envelope wages, the real incidence of undeclared work is generally assumed to be considerably higher.

Besides losses in tax revenue – which are significant in some sectors in particular – the main concern associated with undeclared forms of payment is that they tend to undermine the general workings of the economy and the social consensus over taxation and public services, if they are not challenged and addressed.

This chapter has focused particularly on the findings from the Eurobarometer (EB) surveys held before and during the economic and financial crisis (respectively in 2007 and 2013) which, while they may not capture the true scale of tax evasion, do provide timely information and provide the necessary research material to enable a reliable assessment to be made of the strength and relative importance of the various factors that lead to the existence of undeclared work. It should nevertheless be stressed that the survey method does not lend itself to mapping all forms of UDW originating within the enterprise sphere (e.g. through subcontracting).

The EB surveys show that:

- the general belief that UDW is more widespread in Southern, Central and Eastern European countries, due to the lack of jobs or lack of trust in the welfare state, tends to be confirmed in the case of envelope wages, while some continental or Northern European countries rank above the

EU average for the private supply and demand of UDW;

- UDW, when privately supplied, typically takes the form of repair and renovation, various household and personal services (cleaning, gardening, babysitting, tutoring), and waiter services, but trading activities also generate undeclared income; the composition of these activities differs between groups of countries;
- UDW tends to be undertaken more frequently by students and the unemployed, as well as those facing financial difficulties;
- envelope wages, or cash-in-hand, are relatively marginal phenomena, and mostly paid as a top-up of normal pay.

Among the stated reasons for doing undeclared work are the lack of jobs, insufficient income or perceived high tax burden, but the most cited reason is the sense that parties benefit mutually from UDW, suggesting the importance of personal favours.

When comparing the latest EB survey with its predecessor from just before the crisis, the extent of UDW appears rather stable, but there are distinct country developments which appear not to be necessarily related to the impact of the recession:

- some countries with a high level of UDW (e.g. LV) saw a strong reduction while a few others (e.g. ES, SI) saw a limited increase;
- the demand for UDW remained stable, but a spectacular increase was noted in EL and SI;
- the incidence of envelope wages has reduced during the crisis, especially

in countries of Central and Eastern Europe, although it increased in EL.

An analysis of country results investigated the extent to which the different national situations brought about by the crisis, whether in terms of unemployment, poverty, the fiscal context or trust in the welfare state, affected the incidence of UDW. The comparison of national results of the EB suggested the following:

- there is some evidence that the weakening of the labour market since 2007 has led to an increase in the private supply of UDW, but the link between growing poverty and the private supply of UDW is much less apparent;
- however, both higher unemployment and growing poverty seem to have the capacity to increase the acceptance of envelope wages;
- taxation does not appear to be a strong driver in itself but much seems to depend on whether citizens believe their governments are making good use of their taxes.

When the various pieces of micro-data from the survey are pooled and analysed, however, the expected influences of the economic, social and labour market context come out more strongly, such as:

- financial hardship appears to be a strong factor in individual behaviour;
- SMEs are particularly exposed to envelope wages.

Behind the above factors, the impact of policy may well have been an important determining factor in recent trend changes. Moreover, given that a high proportion of undeclared work appears to be embedded in familial and community relations and solidarity, there

is considerable scope for policy to, not simply discourage undeclared work but rather transform it into regular work in line with the wider goals such as economic growth, fuller employment and social cohesion.

Several successful measures are reviewed, ranging from the introduction of new categories of work status, use of technological and regulatory innovations, better tax and social protection systems, and initiatives by public authorities and social partners to raise public awareness and commitment.

The overall conclusion appears to be that there is no individual 'cure-all' measure but that success depends on an effective mix of various tools if undeclared work is to be combated successfully, and this mix is very much country-specific. For example, governments may choose to simplify regulatory compliance as well as introduce incentives to enable people to move into the declared realm; at the same time, they may implement tougher sanctions for those who fail to comply. At any time, these might be complemented by awareness-raising campaigns to elicit greater commitment amongst the public.

Importantly, the right mix depends on the effective organisation of the public administration, the structure of the labour market and the special characteristics of the undeclared economy. Tackling an undeclared economy dominated by a system of envelope wage payments will require a different approach from that required to deal with an undeclared economy dominated by small-scale paid favours between close social relations related to the provision of domestic services. Hence, further research and evaluations could usefully focus on the effectiveness of measures already taken in different Member States, including an assessment of their potential transferability.

ANNEX 1: QUESTIONNAIRE

Target: population 15+

Coverage: EU-27 + HR

Total question units: 25.5 QU

DK = don't know/no answer — always spontaneous

(OUR COUNTRY) will be replaced by the name of the country in each country

(NATIONALITY) will be replaced by the nationality of the country in each country

Q1 is always the question about nationality

SPLIT BALLOT: ⁽⁶⁵⁾ not needed

(M) stands for a modified item or wording

(N) stands for a new item.

Usual socio-demographic variables:

D7 — Marital status of the respondent

D8 — Age of end of education of the respondent

D10 — Gender of the respondent

D11 — Age of the respondent

D15a — Current occupation of the respondent — TO BE ASKED AT THE BEGINNING OF THE QUESTIONNAIRE

D15b — If no current occupation, the last occupation of the respondent — TO BE ASKED AT THE BEGINNING OF THE QUESTIONNAIRE

D25 — Subjective urbanisation

D40 — Household composition

D43 — Telephone availability

D46 — Equipment of the household

D60 — Difficulties in paying bills

D61 — Self-positioning on the social scale

D62 — Use of the Internet by the respondent

D63 — Social level belonging

The following questions are of a sensitive nature and I would like to confirm you that all the information collected is handled in strict confidentiality and anonymity. Your answers to the following questions therefore will remain absolutely ANONYMOUS. (M)

It is widely known that part of the population is engaged in undeclared work, in the sense of activities which avoid partly or entirely declaration to tax authorities or social security institutions, but which are otherwise legal. This could be people working in certain sectors of activity like construction, transport or agriculture for example but also in hotels, restaurants and cafes. Often it concerns only part of their income from work like remuneration of overtime or other extras. Undeclared work is also common in a whole range of household services — such as gardening, babysitting and elderly care —, personal services — like hairdressing, cosmetic or medical treatment — and repair services for cars, clothes or computers. (M)

⁽⁶⁵⁾ A Split Ballot is a procedure where a sample is divided into two halves and each receives a slightly different questionnaire — ESOMAR definition.

ASK ALL

Q1	Do you personally know any people who work without declaring their income or part of their income to tax or social security institutions? (ONE ANSWER ONLY)	
	Yes	1
	No	2
	Refusal (SPONTANEOUS)	3
	DK	4

1 QU EB67.3 QB2

Q2	What sanction, if any, do you imagine someone would receive if the authorities find out that they receive an income from work which was not declared to tax or social security authorities? (ONE ANSWER ONLY)	
	Normal tax or social security contributions due	1
	Normal tax or social security contributions due, plus a fine	2
	Prison	3
	Other (SPONTANEOUS)	4
	Refusal (SPONTANEOUS)	5
	DK	6

1 QU NEW (BASED ON EB67.3 QB4)

Q3	People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)? (M) (READ OUT — ONE ANSWER ONLY)	
	Very high	1
	Fairly high	
	Fairly small	
	Very small	2
	Refusal (SPONTANEOUS)	3
	DK	4

1 QU EB67.3 QB3

Q4a	What are in your opinion the reasons for doing undeclared work? Firstly?	
Q4b	And secondly? (SHOW CARD — ONE ANSWER PER COLUMN)	
(READ OUT)	Q4a FIRSTLY	Q4b SECONDLY
Bureaucracy or red tape for a regular economic activity is too complicated (M)	1	1
Bureaucracy or red tape for minor or occasional economic activities is too complicated (N)	2	2
Lack of control by authorities	3	3
Sanctions are too weak	4	4
In certain sectors or regions there is no real alternative	5	5
Salaries in the regular businesses are too low	6	6
Lack of regular jobs on the labour market	7	7
The State does not do anything for the people, so why should they pay taxes	8	8
Nobody would buy these goods or services at normal market prices (M)	9	9
Taxes and/or social security contributions are too high	10	10
It is difficult to live on social welfare benefits (N)	11	11
Other (SPONTANEOUS)	12	12
Refusal (SPONTANEOUS)	13	13
DK	14	14

1.5QU EB67.3 QB7a&b TREND MODIFIED

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It is widely known that many people to some extent accept 'undeclared work' — i.e. activities which are not declared to tax authorities or social security institutions. As mentioned earlier this work can include a variety of goods and services — such as gardening, babysitting, hairdressing, and many other things. (M)

Q5	Have you in the last 12 months paid for any goods or services of which you had a good reason to assume that they included undeclared work (e.g. because there was no invoice or VAT receipt)? (M) (ONE ANSWER ONLY)	
	Yes	1
	No	2
	Refusal (SPONTANEOUS)	3
	DK	4

1 QU EB67.3 QB8 TREND MODIFIED

ASK Q6 TO Q9 IF 'YES', CODE 1 IN Q5 – OTHERS GO TO Q10

Q6	Which of the following goods or services have you paid for during the last 12 months, where you had a good reason to believe that they included undeclared work, i.e. that the income was not completely reported to tax or social security institutions? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	Babysitting at your home	1
	Babysitting outside of your home	2
	Healthcare services	3
	Cleaning your home	4
	Ironing clothes	5
	Repairs or renovations of your home	6
	Gardening	7
	Tutoring	8
	Help moving house	9
	Assistance for a dependant or elderly relative	10
	Administrative or IT assistance	11
	Car repairs	12
	Buying food (e.g. farm produce)	13
	Buying other goods	14
	Buying other services	15
	Refusal (SPONTANEOUS)	16
	DK	17

1 QU NEW

Q7a	And approximately how much have you spent on all these undeclared goods and services in the last 12 months (M) (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'DON'T REMEMBER' CODE '99997' — IF 'REFUSAL' CODE '99998' — IF 'DON'T KNOW' CODE '99999')	
		EUROS

1 QU NEW (BASED ON EB67.3 QB11)

Q7b	When considering only the undeclared services which you buy most frequently, how much do they cost you approximately per hour? (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'NEVER BUY SERVICES' CODE '99996' — IF 'DON'T REMEMBER' CODE '99997' — IF 'REFUSAL' CODE '99998' — IF 'DON'T KNOW' CODE '99999')	
		EUROS

1 QU NEW NEW (BASED ON EB67.3 QB11)

Q8	Among the following, could you please indicate from whom did you buy these goods or services? (M) (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	Friends, colleagues or acquaintances	1
	Relatives	2
	Neighbours	3
	Healthcare providers (N)	4
	Other private persons or households	5
	Firms or businesses	6
	Other (SPONTANEOUS) (M)	7
	Refusal (SPONTANEOUS) (M)	8
	DK	9

1 QU EB67.3 QB12 TREND MODIFIED

Q9	From the following, what made you buy it undeclared instead of buying it on the regular market? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	Lower price	1
	Faster service	2
	Better quality	3
	In order to help someone who is in need of money	4
	It was a favour amongst friends, relatives or colleagues (M)	5
	The good or service is not or hardly available on the regular market (M)	6
	Other (SPONTANEOUS) (M)	7
	Refusal (SPONTANEOUS) (M)	8
	DK	9

1 QU EB67.3 QB13

ASK Q10 TO Q13 IF 'DEPENDENT EMPLOYEES', CODE 10 TO 18 IN D15a — OTHERS GO TO Q14

Q10	Sometimes employers prefer to pay all or part of the salary or the remuneration (for extra work, overtime hours or the part above a legal minimum) in cash and without declaring it to tax or social security authorities. Has your employer paid you any of your income in the last 12 months in this way? (M) (ONE ANSWER ONLY) (PLEASE REMIND THE INTERVIEWEE THAT ALL ANSWERS WILL REMAIN ANONYMOUS)	
	Yes	1
	No	2
	Refusal (SPONTANEOUS)	3
	DK	4

1 QU EB67.3 QB15 TREND MODIFIED

ASK Q11 AND Q12 IF 'YES', CODE 1 IN Q10 — OTHERS GO TO Q13

Q11	Was this income part of the remuneration for your regular work, was it payment for overtime hours or was it both? (ONE ANSWER ONLY)	
	Part of the remuneration of the regular work	1
	Overtime, extra-work	2
	Both regular and overtime work	3
	Refusal (SPONTANEOUS)	4
	DK	5

1 QU EB67.3 QB16

Q12	Approximately what percentage of your gross yearly income in your main job did you get this way? (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'DON'T REMEMBER' CODE '997' — IF 'REFUSAL' CODE '998' — IF 'DON'T KNOW' CODE '999')	
		%

1 QU EB67.3 QB17

Q13	Thinking about the organisation you work for, APPROXIMATELY how many employees does it have (including both full and part time)?	
	1-4	1
	5-9	2
	10-19	3
	20-49	4
	50-99	5
	100-499	6
	500 or more	7
	Refusal (SPONTANEOUS)	8
	DK	9

1 QU NEW

ASK ALL

Q14	Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months? (M) (READ OUT — ONE ANSWER ONLY) (PLEASE REMIND THE INTERVIEWEE THAT ALL ANSWERS WILL REMAIN ANONYMOUS)	
	Yes	1
	No	2
	Refusal (SPONTANEOUS)	3

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Q14	Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months? (M) (READ OUT — ONE ANSWER ONLY) (PLEASE REMIND THE INTERVIEWEE THAT ALL ANSWERS WILL REMAIN ANONYMOUS)	
	DK	4

1 QU EB67.3 QB19 TREND MODIFIED

ASK Q15a TO Q18 IF 'YES', CODE 1 IN Q14 — OTHERS GO TO Q19

Q15a	Which of the following activities have you carried out undeclared in the last 12 months? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	Babysitting	1
	Cleaning	2
	Ironing clothes	3
	Repairs or renovations	4
	Gardening	5
	As a waiter or waitress	6
	Tutoring	7
	Help moving house	8
	Assistance for a dependant or elderly relative	9
	Administrative or IT assistance	10
	Car repairs	11
	Selling food (e.g. farm produce)	12
	Selling other goods	13
	Selling other services	14
	Refusal (SPONTANEOUS)	15
	DK	16

1 QU NEW

Q15b	APPROXIMATELY how much money have you earned from these undeclared activities in the last 12 months?? (WRITE DOWN — ONE ANSWER ONLY) (NO DECIMALS — IF 'DON'T REMEMBER' CODE '99997' — IF 'REFUSAL' CODE '99998' — IF 'DON'T KNOW' CODE '99999')	
		EUROS

1 QU NEW

Q16	Would you please indicate for whom you carried out any of these activities?(M) (READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	Friends, colleagues or acquaintances	1
	Relatives	2
	Neighbours	3
	Other private persons or households	4
	Firms or businesses	5
	Other (SPONTANEOUS)	6
	Refusal (SPONTANEOUS)	7
	DK	8

1 QU EB67.3 QB29 TREND MODIFIED

Q17	Among the following, what were the reasons for doing these activities undeclared? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	The person(s) who acquired it insisted on the non-declaration	1
	Bureaucracy or red tape for a regular economic activity is too complicated	2
	Bureaucracy or red tape for minor or occasional activities is too complicated	3
	You could not find a regular job	4
	You were able to ask for a higher fee for your work	5
	Both parties benefited from it	6
	Taxes and/or social security contributions are too high	7
	Working undeclared is common practice in your region or sector of activity so there is no real alternative	8
	The State does not do anything for you, so why should you pay taxes	9
	It is difficult to live on social welfare benefits	10
	You have no other means of income	11

Q17	Among the following, what were the reasons for doing these activities undeclared? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	Other (SPONTANEOUS)	12
	Refusal (SPONTANEOUS)	13
	DK	14

1 QU NEW BASED ON EB67.3 QB30

Q18	Apart from financial considerations, did you experience any of the following consequences when working undeclared? (SHOW CARD — READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	A higher risk of accidents as compared to a regular job	1
	Lack of insurance against accidents	2
	Harder physical working conditions as compared to a regular job	3
	A higher risk of losing your job	4
	No social security entitlements (N)	5
	Other (SPONTANEOUS)	6
	None (SPONTANEOUS) (N)	7
	Refusal (SPONTANEOUS)	8
	DK	9

1 QU EB67.3 QB18b TREND MODIFIED

ASK ALL

Q19	Does the following apply to you? (READ OUT — MULTIPLE ANSWERS POSSIBLE)	
	(ONLY IF 'DEPENDENT EMPLOYEE') You are employed WITHOUT a formal written contract	1
	(ONLY IF 'DEPENDENT EMPLOYEE') Your salary is variable, with a substantial part based on results	2
	You work unpaid (either part or full-time) for a partner or family business	3
	Other (SPONTANEOUS)	4
	Refusal (SPONTANEOUS)	5
	DK	6

1 QU NEW

Q20	Now I would like to know how you assess various behaviours. For each of them, please tell me to what extent you find it acceptable or not. Please use the following scale: '1' means that you find it 'absolutely unacceptable' and '10' means that you find it 'absolutely acceptable'. (SHOW CARD WITH SCALE — ONE ANSWER PER LINE)												
	(READ OUT)	1 Absolutely unacceptable					10 Absolutely acceptable					Refusal (SPONTANEOUS)	DK
1	Someone receives welfare payments without entitlement	1	2	3	4	5	6	7	8	9	10	11	12
2	Someone uses public transport without a valid ticket	1	2	3	4	5	6	7	8	9	10	11	12
3	A private person is hired by a private household for work and he or she does not report the payment received in return to tax or social security institutions although it should be reported	1	2	3	4	5	6	7	8	9	10	11	12
4	A firm is hired by a private household for work and it does not report the payment received in return to tax or social security institutions	1	2	3	4	5	6	7	8	9	10	11	12
5	A firm is hired by another firm for work and it does not report its activity to tax or social security institutions	1	2	3	4	5	6	7	8	9	10	11	12
6	A firm hires a private person and all or a part of the salary paid to him or her is not officially registered	1	2	3	4	5	6	7	8	9	10	11	12
7	Someone evades taxes by not or only partially declaring income	1	2	3	4	5	6	7	8	9	10	11	12

4 QU EB67.3 QB32

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ANNEX 2: LOGISTIC REGRESSION PARAMETER ESTIMATION RESULTS

Table 20: Logistic regression parameter estimation. Dependent variable: Q14 (Apart from regular employment, have you yourself carried out undeclared activities in the last 12 months?); with country effects

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
Country	BE	-.50	.61	.04	-.98	-.03
	DK	.53	1.70	.01	.12	.94
	EL	-1.72	.18	.00	-2.24	-1.20
	ES	-.59	.56	.01	-1.04	-.14
	FI	-.96	.38	.00	-1.54	-.37
	FR	-.51	.60	.02	-.95	-.07
	IE	-1.49	.22	.00	-2.08	-.91
	IT	-1.35	.26	.00	-1.93	-.77
	LU	-.35	.71	.25	-.95	.25
	NL	.45	1.57	.02	.07	.84
	AT	-.37	.69	.12	-.84	.10
	PT	-1.69	.19	.00	-2.31	-1.06
	SE	.11	1.11	.64	-.34	.55
	DE WEST	-1.05	.35	.00	-1.63	-.47
	DE EAST	-.62	.54	.04	-1.20	-.04
	UK	-1.16	.31	.00	-1.73	-.58
	NIE	-2.01	.13	.01	-3.44	-.59
	BG	-.45	.64	.05	-.88	-.01
	CY	-1.70	.18	.00	-2.43	-.97
	CZ	-.57	.56	.01	-1.02	-.13
EE	.71	2.04	.00	.34	1.09	
HU	-.61	.54	.01	-1.06	-.15	
LV	.40	1.49	.03	.04	.76	
LT	.07	1.07	.72	-.32	.46	
MT	-2.50	.08	.00	-3.92	-1.08	
PL	-.68	.51	.01	-1.20	-.16	
RO	-.59	.55	.01	-1.06	-.13	
SK	-.32	.73	.16	-.76	.12	
SI	-.06	.94	.76	-.47	.35	
HR	Reference		.	.	.	
D10 Gender:	Male	.87	2.38	.00	.73	1.00
	Female	0a		.	.	.
D11 How old are you?	15-24	1.80	6.05	.00	1.53	2.07
	25-39	1.29	3.63	.00	1.08	1.50
	40-54	.86	2.35	.00	.65	1.06
	55+	Reference		.	.	.
D8 How old were you when you stopped full-time education?	15-	.11	1.12	.37	-.13	.36
	16-19	.05	1.05	.52	-.11	.21
	20+	Reference		.	.	.
D25 Would you say you live in a...?	Rural area or village	.19	1.21	.03	.02	.37
	Small or middle size town	.08	1.08	.38	-.10	.25
	Large town	Reference		.	.	.
D40a Could you tell me how many people aged 15 years or more live in your household, yourself included?	1 living in household	.29	1.34	.02	.05	.54
	2 living in household	-.04	.96	.76	-.26	.19
	3 living in household	.11	1.11	.41	-.15	.36
	4+ living in household	Reference		.	.	.
Q3 People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)?	HIGH risk of detection	-.60	.55	.00	-.75	-.44
	SMALL risk of detection	Reference		.	.	.

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
D60 During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...?	Most of the time	1.20	3.32	.00	1.01	1.40
	From time to time	.61	1.84	.00	.45	.78
	Almost never / never	Reference		.	.	.
D15a What is your current occupation?	Self-employed	.44	1.55	.00	.20	.67
	Employed	-.26	.77	.00	-.43	-.09
	Not working	Reference		.	.	.

Source: DG EMPL calculations based on Eurobarometer 2013.

**Table 21: Logistic regression parameter estimation:
Question Q14 — without country effects, but with Corruption Index 2012 (as covariate)**

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
Amnesty International: Corruption Perception Index 2012 (CPI 2012)		.006	1.01	.010	.001	.011
D10 Gender.	Male	.82	2.28	.00	.69	.96
	Female	Reference		.	.	.
D11 How old are you?	15-24	1.69	5.40	.00	1.42	1.95
	25-39	1.20	3.33	.00	1.00	1.41
	40-54	.82	2.26	.00	.61	1.02
	55+	Reference		.	.	.
D8 How old were you when you stopped full-time education?	15-	-.32	.72	.01	-.56	-.09
	16-19	-.04	.96	.60	-.19	.11
	20+	Reference		.	.	.
D25 Would you say you live in a...?	Rural area or village	.26	1.30	.00	.09	.43
	Small or middle size town	.09	1.09	.32	-.08	.25
	Large town	Reference		.	.	.
D40a Could you tell me how many people aged 15 years or more live in your household, yourself included?	1 living in household	.36	1.43	.00	.12	.60
	2 living in household	.03	1.03	.82	-.19	.25
	3 living in household	.15	1.16	.23	-.10	.40
	4+ living in household	Reference		.	.	.
Q3 People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)?	HIGH risk of detection	-.64	.53	.00	-.79	-.50
	SMALL risk of detection	0a		.	.	.
D60 During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...?	Most of the time	1.02	2.78	.00	.84	1.21
	From time to time	.51	1.66	.00	.35	.67
	Almost never / never	Reference		.	.	.
D15a What is your current occupation?	Self-employed	.29	1.34	.01	.07	.52
	Employed	-.25	.78	.00	-.41	-.09
	Not working	Reference		.	.	.

Source: DG EMPL calculations based on Eurobarometer 2013.

Table 22: Logistic regression parameter estimation. Dependent variable: Q10 (part of or whole remuneration paid undeclared in cash), with country effects

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
Country	BE	-0.52	0.60	0.20	-1.30	0.27
	DK	-0.87	0.42	0.08	-1.85	0.12
	EL	-0.75	0.47	0.05	-1.51	0.00
	ES	-0.38	0.69	0.35	-1.16	0.41
	FI	-1.83	0.16	0.01	-3.13	-0.53
	FR	-1.65	0.19	0.00	-2.67	-0.62
	IE	-1.97	0.14	0.00	-2.94	-1.01
	IT	-1.50	0.22	0.00	-2.34	-0.67
	LU	-0.13	0.88	0.78	-1.05	0.79
	NL	-0.34	0.71	0.42	-1.18	0.49
	AT	-1.53	0.22	0.00	-2.49	-0.57
	PT	-1.65	0.19	0.00	-2.50	-0.79
	SE	-1.37	0.26	0.04	-2.64	-0.09
	DE WEST	-1.87	0.15	0.00	-3.11	-0.62
	DE EAST	-1.61	0.20	0.03	-3.10	-0.12
	UK	-1.57	0.21	0.00	-2.60	-0.53
	NIE	-1.48	0.23	0.16	-3.54	0.59
	BG	-0.10	0.90	0.76	-0.76	0.55
	CY	-2.55	0.08	0.00	-3.71	-1.39
	CZ	-0.66	0.52	0.06	-1.34	0.02
	EE	-0.24	0.79	0.49	-0.91	0.43
HU	-0.46	0.63	0.17	-1.13	0.20	
LV	0.34	1.41	0.24	-0.23	0.91	
LT	-0.47	0.63	0.18	-1.15	0.21	
MT	-21.38	0.00	.	-21.38	-21.38	
PL	-0.37	0.69	0.32	-1.09	0.36	
RO	0.43	1.54	0.19	-0.22	1.08	
SK	-0.06	0.95	0.86	-0.68	0.57	
SI	-0.40	0.67	0.32	-1.18	0.39	
HR	Reference		.	.	.	
D10 Gender.	Male	0.55	1.73	0.00	0.32	0.78
	Female	Reference		.	.	.
D11 How old are you?	15-24	0.91	2.50	0.00	0.40	1.43
	25-39	0.66	1.93	0.00	0.24	1.07
	40-54	0.33	1.39	0.12	-0.09	0.75
	55+	Reference		.	.	.
D8 How old were you when you stopped full-time education?	15-	0.11	1.11	0.69	-0.43	0.65
	16-19	0.34	1.41	0.01	0.08	0.61
	20+	Reference		.	.	.
D25 Would you say you live in a...?	Rural area or village	0.00	1.00	0.99	-0.29	0.29
	Small or middle size town	0.04	1.04	0.79	-0.24	0.32
	Large town	Reference		.	.	.
D40a Could you tell me how many people aged 15 years or more live in your household, yourself included?	1 living in household	0.05	1.05	0.82	-0.37	0.47
	2 living in household	-0.01	0.99	0.97	-0.36	0.35
	3 living in household	0.39	1.48	0.04	0.01	0.76
	4+ living in household	Reference		.	.	.
Q19 You are employed WITHOUT a formal written contract?	NO	-1.88	0.15	0.00	-2.24	-1.53
	YES	Reference		.	.	.
Q19 Your salary is variable, with a substantial part based on results?	NO	-1.15	0.32	0.00	-1.40	-0.90
	YES	Reference		.	.	.
Q19 You work unpaid (either part or full time) for a partner or family business	NO	-1.92	0.15	0.00	-2.57	-1.28
	YES	Reference		.	.	.

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
Q3 People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)?	HIGH risk of detection	-0.10	0.90	0.39	-0.34	0.13
	SMALL risk of detection	Reference	.	.	.	.
D60 During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...?	Most of the time	1.15	3.16	0.00	0.82	1.48
	From time to time	0.61	1.84	0.00	0.34	0.87
	Almost never / never	Reference	.	.	.	.
Q13 Thinking about the organisation you work for, APPROXIMATELY how many employees does it have?	1 to 4	1.09	2.98	0.00	0.57	1.62
	5 to 9	1.31	3.72	0.00	0.79	1.84
	10 to 19	1.25	3.49	0.00	0.74	1.76
	20 to 49	0.88	2.40	0.00	0.35	1.40
	50 to 99	0.42	1.52	0.16	-0.17	1.01
	100 to 499	0.30	1.35	0.31	-0.28	0.88
	500 and over	Reference	.	.	.	.

Source: DG EMPL calculations based on Eurobarometer 2013.

Table 23: Logistic regression parameter estimation.
Question Q10 — without country effects, but with Corruption Index 2012 (as covariate)

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
Amnesty International: Corruption Perception Index 2012 (CPI 2012)		-0.03	0.97	0.00	-0.03	-0.02
D10 Gender.	Male	0.51	1.67	0.00	0.29	0.74
	Female	Reference	.	.	.	.
D11 How old are you?	15-24	0.87	2.39	0.00	0.37	1.37
	25-39	0.59	1.81	0.00	0.19	1.00
	40-54	0.32	1.37	0.13	-0.09	0.73
	55+	Reference	.	.	.	.
D8 How old were you when you stopped full-time education?	15-	-0.26	0.77	0.31	-0.77	0.25
	16-19	0.30	1.35	0.02	0.05	0.55
	20+	Reference	.	.	.	.
D25 Would you say you live in a...?	Rural area or village	0.10	1.10	0.50	-0.18	0.37
	Small or middle size town	-0.02	0.98	0.91	-0.29	0.25
	Large town	Reference	.	.	.	.
D40a Could you tell me how many people aged 15 years or more live in your household, yourself included?	1 living in household	0.13	1.13	0.54	-0.28	0.53
	2 living in household	0.05	1.05	0.76	-0.29	0.40
	3 living in household	0.40	1.49	0.03	0.03	0.77
	4+ living in household	Reference	.	.	.	.
Q19 You are employed WITHOUT a formal written contract?	NO	-1.47	0.23	0.00	-1.80	-1.15
	YES	Reference	.	.	.	.
Q19 Your salary is variable, with a substantial part based on results?	NO	-1.24	0.29	0.00	-1.48	-0.99
	YES	Reference	.	.	.	.
Q19 You work unpaid (either part or full time) for a partner or family business	NO	-1.81	0.16	0.00	-2.43	-1.20
	YES	Reference	.	.	.	.
Q3 People who work without declaring income, run the risk that tax or social security institutions find out and issue supplementary tax bills and perhaps fines. How would you describe the risk of being detected in (OUR COUNTRY)?	HIGH risk of detection	-0.15	0.86	0.21	-0.37	0.08
	SMALL risk of detection	Reference	.	.	.	.

		Parameter estimation	Odds Ratio relative to reference	Sig.	Confidence interval 95 %	
					Lower threshold	Upper threshold
D60 During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...?	Most of the time	0.93	2.53	0.00	0.62	1.24
	From time to time	0.48	1.61	0.00	0.22	0.73
	Almost never / never	Reference	.	.	.	.
Q13 Thinking about the organisation you work for, APPROXIMATELY how many employees does it have?	1 to 4	1.00	2.73	0.00	0.49	1.52
	5 to 9	1.18	3.26	0.00	0.67	1.69
	10 to 19	1.19	3.30	0.00	0.69	1.70
	20 to 49	0.89	2.43	0.00	0.37	1.40
	50 to 99	0.45	1.56	0.13	-0.13	1.03
	100 to 499	0.35	1.42	0.23	-0.22	0.93
	500 and over	Reference	.	.	.	.

excel file

gif

Source: DG EMPL calculations based on Eurobarometer 2013.

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