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Extent and distribution of unregistered employment in the service industries

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Extent and distribution of unregistered employment in the service industries in Europe

Abstract

Although a voluminous literature exists on the prevalence of the informal economy, few studies evaluate unregistered employment and none its prevalence and distribution across the service industries. This paper fills that gap. Reporting a 2015 European Working Conditions Survey based on 43,850 face-to-face interviews, the finding is that 7% (1 in 14) of service industry employees have no written contract of employment across the 35 European countries surveyed, although this varies from 34% in Cyprus to 1% in Sweden. A logistic regression analysis at the European level reveals significant associations between the propensity to work with no contract and various individual-, household- and firm-related characteristics, with unregistered employment more prevalent among women, younger people, those with fewer years in education, migrants, those living in households unable to make ends meet, those working in smaller businesses, and the hospitality and household service sectors. The theoretical and policy implications are then discussed.

Keywords: informal employment; undeclared work; informal sector; marginalisation thesis; Europe

Introduction

Tackling unregistered employment is now high on the policy agenda of supra-national organisations and many governments both in Europe and well beyond, exemplified by the European Commission establishing the European Platform Tackling Undeclared

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3 Work (European Commission, 2016) and the International Labour Organisation passing
4 Recommendation 208 (ILO, 2015). The reason for this is due to the negative impacts of
5 unregistered employment on not only the employees without written contracts or terms
6 of employment, but also on formal employees, legitimate businesses, governments and
7 societies. Such unregistered employment has negative consequences for all societal
8 groups. The unregistered employees witness poor working conditions due to the
9 absence of a written contract. Formal employees indirectly suffer since it weakens trade
10 union power and effective collective bargaining. Formal businesses suffer due to the
11 unfair competition they witness due to their competitors reducing labour costs by using
12 unregistered employees. Governments suffer due to the loss of their ability to control
13 the quality of working conditions, collect social insurance contributions and to gather
14 taxes. And societies thus suffer because it limits the ability to foster social cohesion and
15 social inclusion. (Andrews, Caldera Sanchez, & Johansson, 2011; Williams, 2014).

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31 The aim of this paper, therefore, is to advance understanding by evaluating the
32 prevalence and distribution of unregistered employment, by which is meant where a
33 dependent employee has no written contract or terms of reference, across the service
34 industries. Although a voluminous literature exists on the prevalence of the wider
35 informal economy (for a review, see Williams & Schneider, 2016), only a handful of
36 studies have evaluated the extent of unregistered employment (Hazans, 2011; Lehmann,
37 2015; Williams & Kayagolu, 2017), and none so far as is known the prevalence and
38 distribution of unregistered employment in the service industries. This is rather
39 surprising considering that some of the service industries are seasonal (e.g. hospitality
40 services) and a large range of informal activities as well as the high threat of the
41 informal competition were previously documented for such services (Williams and
42 Horodnic, 2017). The intention here is to fill this gap by analysing not only the service
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3 industries by sector but also by providing a comparative perspective between the service
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5 industries and other economic sectors (i.e., agriculture, industry and construction).
6

7 In the first section, therefore, the literature is briefly reviewed on the wider
8
9 informal economy in general to highlight the importance of studying this phenomenon,
10
11 followed by what is known about the prevalence and distribution of unregistered
12
13 employment. This will display not only the extensiveness of the informal economy but
14
15 also how its distribution is widely theorised using a 'marginalisation' theoretical lens.
16
17 This views informal economic activity as precarious work conducted by population
18
19 groups marginalised from the formal labour market, such as women, unemployed
20
21 people and immigrants (Ahmad, 2008; Arnstberg & Boren, 2003; Brill, 2011; Castree,
22
23 Coe, Ward, & Samers, 2004; Katungi, Neale, & Barbour, 2006; Rubić, 2013; Slavnic,
24
25 2010; Taiwo, 2013; Williams & Horodnic, 2015a, 2015b, 2015c). Until now, however,
26
27 there have been few studies of the prevalence and distribution of unregistered
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29 employment by which is meant where a dependent employee has no written contract or
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31 terms of reference (for exceptions, see Hazans, 2011; Lehmann, 2015; Williams &
32
33 Kayaoglu, 2017), and no studies of the extent and distribution of unregistered
34
35 employment across the service industries. To start to do so, the second section will
36
37 introduce the methodology and data used, namely a 2015 European Working Conditions
38
39 Survey conducted across 35 European countries involving 43,850 face-to-face
40
41 interviews, followed in the third section by the results. The fourth and final section
42
43 concludes by discussing the implications of these findings for theory and policy.
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49 **Prevalence and distribution of unregistered employment: a literature review**

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52 In general terms, the non-observed economy, includes activities that are 'underground,
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54 illegal, informal sector, or undertaken by households for their own final use' (OECD,
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3 2002). Meanwhile, the informal economy, or what is sometimes called the ‘undeclared’,
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5 ‘shadow’, ‘underground’, ‘cash-in-hand’, ‘hidden’ or ‘off-the-books’ sector/economy
6
7 (Williams, 2005), includes work which is commonly defined as remunerated work that
8
9 is not registered by, or declared to, the authorities for tax, social security and/or labour
10
11 purposes (European Commission, 2007; Khan, 2017; OECD, 2012; Slack et al., 2017;
12
13 Williams, 2004, 2017; Williams & Windebank, 1998; Windebank & Horodnic, 2017).
14
15 Similarly, employment in the informal economy commonly refers to an employment
16
17 relationship which “is, in law or in practice, not subject to national labour legislation,
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19 income taxation, social protection or entitlement to certain employment benefits”
20
21 (Husmanns, 2005). Therefore, the major difference between work in formal and
22
23 informal economy therefore, is that informal work is not registered by, or declared to,
24
25 the authorities for tax, social security or labour law purposes when it should be declared
26
27 or registered. If other differences prevail, then the economic activity is not considered
28
29 part of the informal economy. If the goods and/or services traded are illegal (e.g., illegal
30
31 drugs) for example, then it is defined as the ‘criminal’ economy, and if there is no
32
33 remuneration, it is considered part of the unpaid economy.
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36

37
38 The reason the informal economy has attracted interest from both policymakers
39
40 and academics is because contrary to traditional modernisation theory, which viewed
41
42 the formal economy as expanding and the informal economy as a small disappearing
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44 realm persisting in a few marginal enclaves of the economic landscape (Geertz, 1963;
45
46 Gilbert, 1998; Lewis, 1959), it has been recognised that 60 per cent of jobs globally are
47
48 in the informal economy (Jütting & Laiglesia, 2009) and that this sphere is expanding
49
50 relative to the formal economy in many global regions (ILO, 2011; Williams, 2014;
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52 Williams & Schneider, 2016). Studying the formal economy, therefore, has started to be
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1
2
3 recognised as providing only a very partial portrait of the nature of economies and
4
5 labour markets.

6
7 The informal economy is composed of various economic practices. On the one
8
9 hand, there is unregistered employment, which is remunerated work where there is no
10
11 legal written contract or terms of employment (Hazans, 2011; Lehmann, 2015; Williams
12
13 & Kayaoglu, 2017). The present study focuses on this type of employment relationship,
14
15 namely cases where a dependent employee has no written contract or terms of
16
17 reference. On the other hand, however, other types of remunerated work exist not
18
19 declared to the authorities. This includes informal self-employment where some and/or
20
21 all of the remunerated work undertaken is not declared to the authorities, under-declared
22
23 work where formal employees receive from their formal employer both an official
24
25 declared wage and an undeclared ('envelope') wage, and a multifarious array of other
26
27 forms of tax and social insurance non-compliance and labour law violation by
28
29 employers (see ILO, 2015; Williams, 2017).
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32

33 Although the informal economy as a whole has been subject to widespread
34
35 evaluation in Europe in the recent years, unregistered employment, by which is meant
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37 where a dependent employee has no written contract or terms of reference has received
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39 little attention. While there are other studies beyond Europe (e.g., Lehmann, 2015), in
40
41 Europe the only exceptions are two studies by Hazans (2011) and Williams and
42
43 Kayaoglu (2017). Williams and Kayaoglu (2017) report the results of a 2013
44
45 Eurobarometer survey and find that in the 28 member states of the European Union, 5%
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47 of employees reported not having a written contract of employment, while Hazans
48
49 (2011), using European Social Survey data on 30 countries for the period between 2004
50
51 and 2009, finds that the proportion of employees without a contract is 2.7% in Nordic
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53 countries, 9.5% in Southern Europe, and 5% in Western and East-Central Europe.
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3 Similarly, a multitude of studies on the individual-, household-, firm- and
4
5 national-level variations in the informal economy have been conducted (e.g., Williams,
6
7 2014; Williams & Horodnic, 2015a, 2015b, 2017) but only a handful of studies on the
8
9 distribution of unregistered employment (Hazans, 2011; Lehmann, 2015; Williams &
10
11 Kayaoglu, 2017). When studying the informal economy, a marginalisation thesis
12
13 dominates, which argues that the informal economy is concentrated among individuals
14
15 and households marginalised from the formal labour market and social protection
16
17 (Ahmad, 2008; Arnstberg & Boren, 2003; Castree et al., 2004; Rubić, 2013;
18
19 Sasunkevich, 2014; Surdej & Ślęzak, 2009). Studies show how those working in the
20
21 informal economy are more likely to be individuals from population groups
22
23 marginalised from the formal labour market, including women, younger age groups,
24
25 those with fewer years in formal education, those with lower skills, those not born in
26
27 the country or without parents born in the country, and also individuals living in single
28
29 person households, and in households having difficulties making ends meet (Barbour &
30
31 Llanes, 2013; ILO, 2013; Leonard, 1994; Smith & Stenning, 2006; Stănculescu, 2004).
32
33 However, this is by no means clear-cut. A recent evaluation of this marginalisation
34
35 thesis in relation to the informal economy across the European Union reveals that
36
37 although younger people are more likely to work in the informal economy, this is not
38
39 the case for those with fewer years in education, women and those with difficulties
40
41 paying the household bills (Williams & Horodnic, 2015b). It has been also revealed that
42
43 firm-level characteristics are influential with the propensity to employ informal workers
44
45 being greater in smaller businesses and in some sectors such as construction, the
46
47 hospitality and restaurant industry, and household services (Williams & Horodnic,
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49 2016, 2017).
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3 The only known studies of the distribution of unregistered employment in
4 Europe produce mixed findings. Hazans (2011) finds that in relation to individual-
5 related characteristics, the likelihood of unregistered employment is inversely related to
6 education level, older and younger employees more likely, and women more likely than
7 men to work without a legal contract. **In contrast, Krasniqi & Williams (2017) find an
8 inverted U-shaped relationship between the participation in unregistered employment
9 and age, and that men are more likely to be involved in working unregistered.**
10
11 Meanwhile, Williams and Kayaoglu (2017) find no significant association between the
12 probability of unregistered employment and individual- and household related
13 characteristics such as gender, age, educational level, and occupational status, but a
14 significant association with firm-level characteristics such as firm size.
15
16

17
18 Until now, moreover, no known contemporary studies in Europe have been
19 conducted on how the prevalence of unregistered employment varies across sectors, not
20 least because the 2013 Eurobarometer survey reported by Williams and Kayaoglu
21 (2017) did not include sector as a variable. As such, little if anything is known about
22 how the prevalence of unregistered employment varies across the different service
23 industries. Neither have there been any studies of who engages in unregistered
24 employment in the service industries. Based on the above findings from the study of the
25 informal economy in general, and the only two studies of unregistered employment
26 across all sectors, we therefore here test for the first time the following propositions in
27 relation to the prevalence and distribution of unregistered employment in the service
28 industries:
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32 *Individual-level marginalisation hypothesis (H1):* In the service industries, the
33 individuals from marginalised populations are more likely to work without a written
34 contract or terms of employment compared with the rest of the population groups.
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3 H1a: The likelihood of participating in unregistered employment in service industries
4 is higher for women compared with men.
5

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7 H1b: The likelihood of participating in unregistered employment in service industries
8 is higher for younger age groups compared with older age groups.
9

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11 H1c: The likelihood of participating in unregistered employment in service industries
12 is higher for those who spent less time in formal education compared with to
13 those who spent longer time in formal education.
14
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17 H1d: Respondents who along with their parents were born in the country in which
18 they currently work are less likely to be in unregistered employment in service
19 industries than those where this is not the case.
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26 *Household-level marginalisation hypothesis (H2):* In the service industries, those
27 living in single-person households and households with financial difficulties in
28 making ends meet are more likely to participate in unregistered employment
29

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31 H2a: Those living in single person households are more likely to participate in
32 unregistered employment in service industries than those in larger households.
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36 H2b: Those living in households with financial difficulties in making ends meet are
37 more likely to participate in unregistered employment in service industries than
38 those who have few difficulties.
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46 *Firm-level and job related hypotheses (H3):* In the service industries, participation in
47 unregistered employment varies according to firm size, sector and type of job.
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50 H3a: Employees working in smaller service sector businesses are more likely to be in
51 unregistered employment than those in larger service sector businesses.
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3 H3b: There are significant variations in the prevalence of unregistered employment
4 across the service industries.

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7 H3c: Those having supervision positions are less likely to be in unregistered
8 employment than those not having supervision positions.

9
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11 H4d: Those having other jobs besides the main job are more likely to be in
12 unregistered employment than those not having other additional jobs.

13 14 15 16 17 **Data and Methodology**

18
19
20 To evaluate the prevalence and distribution of unregistered employment in the service
21 industries, we here report the 2015 European Working Conditions Survey (EWCS)
22 conducted in 35 countries and involving 43,850 face-to-face interviews. The EWCS
23 interviews those aged 15 and over (16 and over in Bulgaria, Norway, Spain and the UK)
24 living in private households and in employment who did at least one hour of work for
25 pay or profit during the week preceding the interview. In each country, a representative
26 sample is collected stratified by region (NUTS 2 or equivalent) and degree of
27 urbanization. The sixth edition of the EWCS covers the 28 member states of the
28 European Union, five EU candidate countries (Albania, the Former Yugoslav Republic
29 of Macedonia, Montenegro, Serbia and Turkey), plus Norway and Switzerland. Thus,
30 according to United Nations (United Nations, 2015), the dataset covers 30 developed
31 economies¹ and 5 economies in transition/developing economies². Besides the
32 individuals socio-demographic characteristics, the EWCS survey comprises a large
33 range set of information related with the employment arrangements, working place and
34 working conditions. The dataset collates the responses of the surveyed individuals and
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54 ¹ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France,
55 Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands,
56 Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK.

57 ² Albania, Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Turkey.

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3 thus, represents the subjective self-perception of the respondents.
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5 For both the descriptive statistics and regression analysis, weighting schemes
6 have been used as recommended in EWCS 2015 technical report. Country-level post-
7 stratification weights have been used for carrying out analysis for country comparisons.
8
9 When conducting analysis on an aggregate level, a different weighting scheme was used
10 based on the relative size of the workforce in each country. For the descriptives, we
11 analysed all cases available for each analysed variable (do not know and refusal were
12 excluded). However, we kept in the regression analysis the individuals for which data
13 on each and every independent variable was available.
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22 To analyse the results, the hypotheses are tested that participation in
23 unregistered employment varies according to individual-related variables (gender, age,
24 years spent in education, country where the respondents and their parents were born),
25 household-related variables (household size, household financial circumstances) and
26 firm-related characteristics (number of employees and sector). To investigate the
27 validity of these hypotheses, we here use a logistic regression analysis. The dependent
28 variable measures whether participants have a written contract or terms of employment
29 or not using the following question: '*What kind of employment contract do you have in*
30 *your main job?*', with value 1 for those stating that they have no written contract or
31 terms of employment and value 0 otherwise. Thus, the results need to be cautiously
32 interpreted considering potential biases related to the sincerity or readiness of the
33 respondents to give honest answers regarding an illegal working arrangement. Thus, the
34 percentages reported might be underestimated.
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50 The independent variables used to analyse whether marginalized populations are
51 more likely to engage in unregistered employment are divided into individual-,
52 household- and firm-level variables and are as follows:
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3 *Individual-level independent variables:*
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- 5 • *Gender*: a dummy variable with value 1 for men and 0 for women.
- 6
- 7 • *Age*: a categorical variable for the age of the participant with value 1 for those aged
8 15-24, value 2 for those aged 25-39, value 3 for those aged 40-54, value 4 for those
9 aged 55 and over.
- 10
- 11
- 12
- 13 • *Education*: a categorical variable for the education of the participant with value 1 for
14 up to lower secondary education, value 2 for upper secondary education, value 3 for
15 post-secondary non-tertiary education, value 4 for short-cycle tertiary education,
16 value 5 for bachelor or equivalent and value 6 for master/ doctorate or equivalent.
- 17
- 18
- 19
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- 21
- 22 • *Respondent and their parents born in the country*: a dummy variable with value
23 1 if both the respondent and their parents born in the country in which they
24 currently work and 0 otherwise.
25
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27
28

29 *Household-level independent variables:*
30

- 31 • *Household size*: a categorical variable for the size of the household with value 1 for
32 1 person, value 2 for 2 persons, value 3 for 3 persons and value 4 for 4 persons or
33 more.
34
- 35
- 36
- 37 • *Household ability to make ends meet*: a categorical variable for the ability of the
38 household to make ends meet with value 1 for very easily/ easy, value 2 fairly easy,
39 value 3 for with some difficulty and value 4 for with difficulty/ great difficulty.
40
41
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44 *Firm-level and job related independent variables:*
45

- 46 • *Number of employees in the company*: a categorical variable for company size with
47 value 1 for interviewee working alone, value 2 for 2-9 employees, value 3 for 10-
48 249 employees and value 4 for 250+ employees.
- 49
- 50
- 51
- 52
- 53 • *Sector*: a categorical variable for the sector where the respondent works with value 1
54 for other services, value 2 for commerce and hospitality, value 3 for transport, value
55
56
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3 4 for financial services, value 5 for public administration and health and value 6 for
4
5 education.

- 6
7 • *Supervision*: a dummy variable with value 0 for the respondents not having people
8
9 working under their supervision and with value 1 otherwise.
- 10
11 • *Multiple jobs*: a categorical variable for multiple jobs with value 1 if for those not
12
13 having any other paid job besides the main paid job, value 2 for those having
14
15 regularly other job(s) and value 3 for those having occasionally other job(s) or other
16
17 cases.
18

19
20 Below, we report the findings.
21

22 23 **Findings: unregistered employment in the service industries**

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27 The overarching finding is that 7% of all industries employees surveyed reported
28
29 working with no contract in the 35 European nations surveyed. This, therefore, is not
30
31 some minor form of employment; some 1 in 14 employees have no written contract or
32
33 terms of employment. Unregistered employment, however, is not evenly distributed
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35 nationally. As Table 1 displays, the proportion of employees with no contract or terms
36
37 of employment varies from 36% in Cyprus, 27% in Turkey, 23% in Malta, 17% in
38
39 Albania and 16% in Greece at the upper end, to 1% in Luxembourg and Sweden at the
40
41 lower end. These cross-national differences in the proportion of employees in
42
43 unregistered employment are statistically significant.
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49 [INSERT TABLE 1 ABOUT HERE]
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53 It is similarly the case when the prevalence of unregistered employment in the service
54
55 industries is analysed. Again, 7% of all service employees work without a contract or
56
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3 terms of employment, with the proportion of employees in the service industries in
4
5 unregistered employment ranging from 34% in Cyprus, 31% in Turkey, 24% in Malta,
6
7 20% in Albania and 16% in Greece at the upper end, to 1% in Luxembourg and Sweden
8
9 at the lower end. The prevalence of unregistered employment in the service industries is
10
11 therefore very similar to its prevalence in all employment in most nations, which is
12
13 unsurprising given that the vast majority (72.8%) of employees surveyed in these
14
15 countries is in the service industries.
16

17
18 Across the 35 countries, nevertheless, unregistered employment is highest in the
19
20 agricultural sector (where 14% of employees are in unregistered employment) followed
21
22 by the construction sector (where 10% are in unregistered employment), but is lower in
23
24 the manufacturing sector (where only 5% are in unregistered employment). It might be
25
26 suggested, therefore, that studying unregistered employment in these other sectors is
27
28 more important than studying unregistered employment in the service industries.
29
30 However, despite unregistered employment being more prevalent in agriculture and
31
32 construction compared with the service sector, Figure 1 reveals that the vast majority of
33
34 those in unregistered employment (70.8%) are working in the service industries. As
35
36 such, although 14% in agriculture are in unregistered employment and 10% in the
37
38 construction sector, these constitute just 10.8% and 7.9% respectively of those working
39
40 without a written contract or terms of employment.
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46 [INSERT FIGURE 1 ABOUT HERE]
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50 [INSERT TABLE 2 ABOUT HERE]
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2
3 Unregistered employment, however, is not evenly distributed across the service
4
5 industries. Analysing which service industries have a higher prevalence of unregistered
6
7 employment, Table 2 reveals that 43% of all service workers in the household services
8
9 sector (e.g., domestic cleaners) do not have a written contract or terms of employment,
10
11 and 15% of employees in the accommodation and food service industries. In
12
13 consequence, although employees in the household services sector constitute just 2.3%
14
15 of all service industry employees, 12.9% of all unregistered employment in the service
16
17 industries is in this sphere. Similarly, although the accommodation and food service
18
19 industries employ just 6.9% of all employees, 14.7% of all unregistered employees in
20
21 the service industries are in these sectors. Other service industries, however, have
22
23 relatively low levels of unregistered employment, namely financial and insurance
24
25 services, real estate services, and information and communication services where just
26
27 2% of all employment is unregistered. Similarly, unregistered employment by service
28
29 industries is unevenly distributed. For example, the unregistered unemployment in
30
31 commerce and hospitality as well as in transport and financial services is more prevalent
32
33 in Cyprus, while unregistered unemployment in public administration and health,
34
35 education and other services is more prevalent in Turkey (details in Table A1 in the
36
37 Appendix).

38
39
40
41 Unregistered employment, moreover, is not only unevenly distributed cross-
42
43 nationally and across different sectors. It is also the case that some employee groups are
44
45 more likely to be in unregistered employment than others. The marginalization thesis
46
47 asserts that unregistered employment is concentrated among groups who are
48
49 marginalised from the formal labour market. The descriptive statistics in Table 3 reveals
50
51 some partial support for this thesis. Although women employed in the service industries
52
53 are no more likely than men employed in the service industries to be in unregistered
54
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1
2
3 employment, and there is little difference between those living in large or single person
4 households, it is certainly the case that younger age groups, who are more likely to be
5 excluded from the formal labour market, are markedly more likely to be in unregistered
6 employment. Some 1 in 6 (15%) of all service industry employees aged 15-24 years old
7 have no written contract or terms of employment compared with just 6% of 25-39 year
8 olds and 5% of 40-54 year olds. So too are those with fewer years in formal education
9 markedly more likely to be in unregistered employment, those not having supervision
10 positions, as are those who live in households who make ends meet with difficulty or
11 great difficulty (16%), and those working in smaller businesses. Therefore, for the
12 service industries as a whole, most aspects of the marginalisation thesis appear to be
13 valid.
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29 [INSERT TABLE 3 ABOUT HERE]
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33 Table 3 also examines whether this is similarly the case when the service industries are
34 broken down into six sub-sectors. The finding is similar in that women employees are
35 not more likely to be in unregistered employment in all sectors, and neither are first or
36 second generation migrants, but younger age groups, those with fewer years in formal
37 education, those living in households with difficulties making ends meet, those working
38 in micro- and smaller businesses and those not having people working under their
39 supervision are more likely to work without a contract in most of the service industries.
40
41 The only variations on this finding are that in financial services, those living in
42 households with difficulty paying the bills are not more likely to be in unregistered
43 employment, in public administration and health services younger age groups are not
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3 more likely, and in other services, women are more likely to be in unregistered
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5 employment than men.

6
7 Analysing these descriptive statistics therefore, the tentative conclusion is that
8
9 the marginalization thesis is applicable when analysing some population groups, namely
10
11 younger age groups, those with fewer years in education or no supervision job, and
12
13 those living in households having difficulties making ends meet, and those working in
14
15 smaller businesses, but not others, namely women, those respondents and their parents
16
17 not born in the country in which they currently live and work, and single-households,
18
19 albeit with a few exceptions in specific service industries as stated above.

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22 To further analyse whether these findings continue to be valid regarding the
23
24 individual-, household-, job-related and firm-level variations in unregistered
25
26 employment, when other variables are taken into account and held constant, a logistic
27
28 regression analysis is reported in Table 4. This is based on an additive model. The first
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30 stage model (M1) includes solely the individual-level variables to examine their
31
32 relationship with the propensity to be in unregistered employment, while the second
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34 stage model (M2) adds household-level characteristics alongside the individual-level
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36 variables, and the third stage model (M3) adds firm-level factors and job-related
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38 characteristics to the individual-level and household-level characteristics to examine
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40 their association with the propensity to work with no contract.
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46 [INSERT TABLE 4 ABOUT HERE]

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50 Model 1 in Table 4 displays support for the marginalization thesis that women are
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52 significantly more likely to work with no contract than men (confirming *H1a*), and so
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54 too are younger people (15-24 years old) than other older age groups (confirming *H1b*).
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3 Similarly, those with fewer years in formal education are significantly more likely to
4 work with no contract (confirming *H1c*), as are those not born in the country of
5 residence and with parents not born in the country of residence (confirming *H1d*). Thus,
6
7 the individual-level marginalisation thesis (*H1*) is confirmed.
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11 When model 2 adds the household-level factors of household size and financial
12 circumstances households face to the individual-level characteristics, there are no major
13 changes in the influence of the individual-level characteristics on the propensity to work
14 with no contract. The additional finding in model 2 is that household size does not have
15 a significant impact on the likelihood of working with no contract (refuting *H2a*).
16
17 However, those who live in households with difficulties in making ends meet are
18 significantly more likely to work with no contract than those not having such difficulties
19 (confirming *H2b*). In other words, they are more likely to be forced to work with no
20 contract out of necessity to make ends meet than those with fewer financial difficulties.
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22 This therefore provides partial support for the household-level marginalization thesis
23 (*H2*).
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35 When firm-level and job-related characteristics are added in model 3 in Table 4,
36 the significance of all of the individual- and household-level characteristics discussed
37 above remain the same in relation to participation in unregistered employment. The one
38 difference is that when firm-level characteristics are introduced, the relevance of gender
39 disappears. The additional finding in model 3 is that those in smaller businesses are
40 significantly more likely to be engaged in unregistered employment than those working
41 in larger businesses (confirming *H3a*). Model 3 also reveals that those who work in the
42 commerce and hospitality sector, transport services, or financial services are
43 significantly less likely to work without contract than those who work in other services
44 (e.g., household services, arts, entertainment and recreation), thus displaying that there
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3 are significant variations in the prevalence of unregistered employment across the
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5 service industries, even when individual- and household-level characteristics of the
6
7 labour force are taken into account and held constant (confirming *H3b*). Those not
8
9 having other people working under their supervision are more likely to be in
10
11 unregistered employment (confirming *H3c*) as well as those which besides the main job
12
13 take occasionally other jobs, compared with those which do not (partially confirming
14
15 *H3d*). These results are in line with the results related with socio-economic
16
17 characteristics and shows that those with lower skills (i.e., not having supervision
18
19 positions) or those which needs to take occasionally other jobs due to financially
20
21 constrains are more likely to work without a contract. Model 3 thus provides support for
22
23 *H3* that participation in unregistered employment varies according to job characteristics,
24
25 firm size and sector.
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30 **Discussion and Conclusions**

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33 To evaluate the prevalence and distribution of unregistered employment in the service
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35 industries, this paper has used descriptive statistics and logistic regression analysis to
36
37 reveal that in 35 European countries, there are: cross-national variations in the
38
39 prevalence of unregistered employment; individual-level variations in its prevalence,
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41 with women, younger age groups, those with fewer years in education and those
42
43 respondents which themselves or their parents were not born in the country where they
44
45 are currently living are significantly more likely to work with no contract; household-
46
47 level variations with those living in households having difficulties making ends meet
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49 being more likely to be in unregistered employment; and firm-level variations with
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51 those working in smaller firms and other services (e.g., household services) being more
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53 likely to operate without a written contract or terms of employment.
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3 Examining the theoretical implications, the most important finding is that the
4
5 marginalisation thesis is confirmed. It is largely those individuals and households who
6
7 have been conventionally seen as marginalised from the formal labour market that are
8
9 most likely to engage in unregistered employment. This finding in relation to the service
10
11 industries as a whole runs counter to the only previous extensive survey of unregistered
12
13 employment in the whole economy that used 2013 Eurobarometer survey data and
14
15 found that individual- and household-level characteristics were not significantly
16
17 associated with the likelihood of engaging in unregistered employment (Williams &
18
19 Kayagolu, 2017). The different findings in these two surveys thus highlight the need for
20
21 further research on the validity of the individual- and household-level marginalisation
22
23 thesis in relation to who participates in unregistered employment. At the national-level,
24
25 moreover, this study, akin to Williams and Kayagolu (2017), reveals significant cross-
26
27 national variations in the prevalence of unregistered employment. Future research is
28
29 now required on what structural conditions might be significantly associated with the
30
31 greater prevalence of unregistered employment. Studies of the wider informal economy
32
33 highlight the variables that might be correlated with the greater prevalence of
34
35 unregistered employment, namely lower levels of GDP per capita, unmodernised
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37 government, including less trust in authorities and higher levels of corruption, and lower
38
39 levels of state intervention in the labour market to protect vulnerable groups and lower
40
41 levels of social expenditure (Williams & Horodnic, 2016, 2017). A future study needs
42
43 to evaluate whether this is indeed the case in relation to cross-national variations in the
44
45 prevalence of unregistered employment, and more particularly, cross-national variations
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47 in the extent of unregistered employment in the service industries.
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52 It has also been revealed that unregistered employment is far higher in some
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54 service industries than others. This requires further investigation to reveal why this is
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3 the case. Unregistered employment is doubtless higher in smaller firms due to the
4
5 absence of human resource management professionals in such businesses, thus allowing
6
7 employers to adopt illegal labour practices such as employing people without written
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9 contracts or terms of employment (Barrett & Mayson, 2007; Benmore & Palmer, 2006).
10
11 It is perhaps also the case that service industries requiring higher skills are less likely to
12
13 employ unregistered workers, and therefore that unregistered employment is more
14
15 prevalent in service industries requiring lower skills. This, however, requires more in-
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17 depth analysis, including additional questions on this issue. Furthermore, whether the
18
19 findings are similar when examining other global regions, and other spatial scales such
20
21 as particular nations, regions and localities, now requires evaluation.
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24 Turning to the policy implications, the first important finding is that these results
25
26 display the specific countries, population groups, firm-types and sectors that need
27
28 targeting when seeking to tackle unregistered employment. This displays that it is
29
30 primarily South-East European (e.g., Cyprus, Turkey, Albania, Greece, Serbia, FYR of
31
32 Macedonia) and Southern European (e.g., Malta, Italy) countries where unregistered
33
34 employment is rife, and need to be targeted. This requires EU initiatives and structural
35
36 funds that seek to modernise enforcement authorities, such as labour inspectorates, to be
37
38 concentrated on this EU region and the accession countries in this region, rather than
39
40 elsewhere. Indeed, under the framework of European Platform for Tackling Undeclared
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42 Work established through Decision (EU) 2016/344, the enforcement authorities
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44 involved in tackling undeclared work, including the unregistered employment (e.g.,
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46 labour inspectorates, fiscal agencies, social partners etc.) from Southern and South-East
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48 European countries can learn good practices from their peers from other European
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50 countries where this phenomenon is less widespread. This can include through seminar
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52 participation, mutual learning activities, participation in joint actions with authorities
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3 from different EU countries, sharing knowledge and so on. The results of the study also
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5 displays that for initiatives tackling unregistered employment to be effective, they
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7 should target smaller businesses operating in specific service sectors, including
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9 household services, arts, entertainment and recreation, and accommodation and food
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11 services, and that if they are effective, then they will act to protect workers from
12
13 marginal populations (such as women, the younger groups, the less educated, migrants,
14
15 and those in households with financial difficulties). This analysis, in other words,
16
17 provides a useful assessment of the target countries, sectors and firm-types for
18
19 enforcement authorities, and the different marginalised populations that will be
20
21 protected by taking action against unregistered employment in the service industries.
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24 In sum, this paper has revealed for the first time the prevalence and distribution
25
26 of unregistered employment, by which is meant where a dependent employee has no
27
28 written contract or terms of reference, across the service industries in 35 European
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30 countries. This has revealed that tackling unregistered employment across the service
31
32 industries will indeed address the working conditions of marginalised populations, and
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34 has begun to identify the countries, service industries and firm-types that need to be
35
36 targeted to do so. If this paper therefore, stimulates further studies to develop a deeper
37
38 understanding of the service industries where unregistered employment is concentrated,
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40 along with why this is the case, then it will have fulfilled one of its intentions. If this
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42 then leads to a more nuanced policy approach to tackle this phenomenon, in terms of the
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44 populations targeted and how resources are allocated, then it will have fulfilled its wider
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46 intention.
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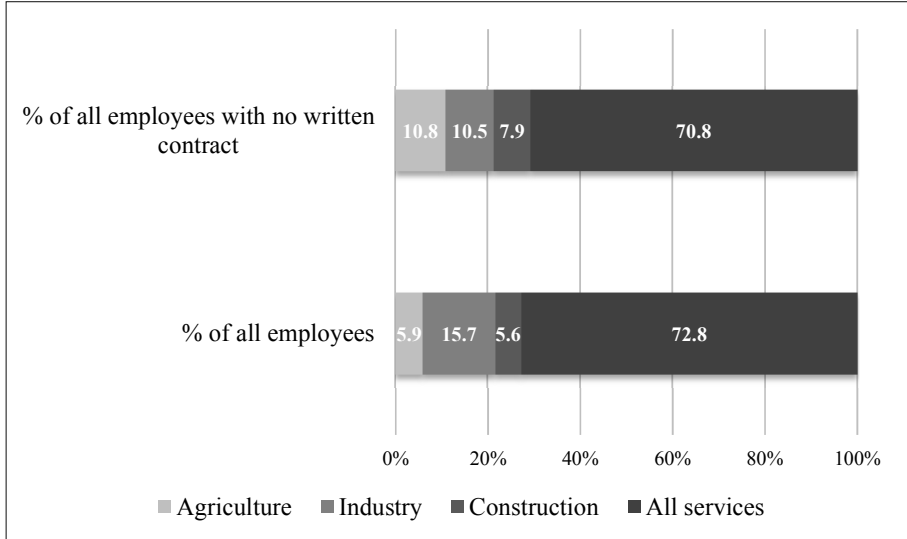
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Figure 1. Unregistered employment in Europe by economic sector, as percent of all employees with no written contract and percent of all employees



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Table 1. Cross-national variations in the prevalence of unregistered employment: by sector

Country	Working with no contract ¹	Working with no contract:			
		Agriculture	Industry	Construction	All services
	(%)	(%)	(%)	(%)	(%)
Cyprus	36	32	46	42	34
Turkey	27	12	32	36	31
Malta	23	6	22	14	24
Albania	17	2	27	46	20
Greece	16	22	9	17	16
Ireland	11	8	11	20	11
Serbia	11	10	5	14	12
FYROM	10	6	5	28	11
Italy	9	18	1	7	10
Poland	9	33	4	15	7
Portugal	9	6	2	24	9
Montenegro	8	4	8	19	8
Austria	7	18	4	11	7
Latvia	7	24	1	3	7
Romania	5	9	1	5	5
Spain	5	6	2	9	5
Bulgaria	4	23	0	19	3
Croatia	4	9	3	9	4
Finland	4	12	1	4	4
Hungary	4	9	1	9	3
Slovenia	4	21	1	13	3
UK	4	13	1	5	4
Switzerland	4	12	5	1	3
Czech Republic	3	6	0	5	3
Denmark	3	16	2	2	3
Germany	3	17	1	2	4
Netherlands	3	19	0	4	3
Norway	3	15	1	2	3
Belgium	2	13	1	1	2
Estonia	2	5	0	5	2
France	2	3	0	3	2
Lithuania	2	6	1	1	2
Slovakia	2	3	1	5	2
Luxembourg	1	20	0	0	1
Sweden	1	0	0	1	1
<i>All 35 countries</i>	7	14	5	10	7

Note: ¹ Chi-square test of independence (survey design) between unregistered employment participation and country, converted into F statistic, p<0.01.

Table 2. Prevalence of unregistered employment in Europe: by service industries

	Working with no written contract	% of all employees with no written contract	% of all employees
	(%)	(%)	(%)
<i>All services</i>	7	100	100
<i>Commerce and hospitality</i>			
▪ Wholesale and retail trade; repair of motor vehicles and motorcycles	5	14.3	19.7
▪ Accommodation and food service activities	15	14.7	6.9
<i>Transport</i>			
▪ Transportation and storage	4	4.2	6.8
<i>Financial services</i>			
▪ Financial and insurance activities	2	1.0	4.3
▪ Real estate activities	2	0.3	1.2
<i>Public administration and Health</i>			
▪ Public administration and defence; compulsory social security	6	6.5	7.9
▪ Human health and social work activities	5	11.1	15.2
<i>Education</i>			
▪ Education	5	7.8	11.3
<i>Other services</i>			
▪ Information and communication	2	1.1	3.1
▪ Professional, scientific and technical activities	4	3.0	5.7
▪ Administrative and support service activities	8	9.5	8.4
▪ Arts, entertainment and recreation	11	3.9	2.4
▪ Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	43	12.9	2.3
▪ Activities of extraterritorial organisations and bodies	12	0.2	0.1
▪ Other service activities	14	9.5	4.7

Table 3. Prevalence of unregistered employment in the service industries in Europe: by individual-, household- and firm-level characteristics

	All services	Service sector:					
		Commerce and hospitality	Transport	Financial services	Public administration and health	Education	Other services
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<i>TOTAL</i>	7	8	4	2	5	5	11
<i>Gender</i>	*	**			***	***	***
Female	7	6	2	1	4	4	12
Male	7	9	5	2	7	7	9
<i>Age</i>	***	***		**		***	***
15-24 years old	15	17	9	6	5	15	18
25-39 years	6	8	5	2	4	5	8
40-54 years old	5	4	4	1	5	4	9
55+ years old	8	6	2	2	6	3	14
<i>Education</i>	***	***	***	*	***	***	***
Up to Lower secondary	15	11	9	5	16	13	22
Upper secondary	7	8	3	2	4	3	10
Post-secondary/ non-tertiary	4	3	1	1	1	1	9
Short-cycle tertiary	5	5	8	2	4	3	10
Bachelor or equivalent	5	6	4	1	5	7	5
Master/ PhD. or equivalent	2	3	0	0	3	2	2
<i>Respondent and parents born in the country</i>	**					***	*
No	6	7	4	1	4	1	8
Yes	7	8	4	2	5	5	11
<i>Household size</i>	***		**		**		
1 person	6	7	3	1	4	5	9
2	6	7	2	1	4	3	10
3	7	7	4	2	5	7	10
4 and more	8	9	7	2	7	5	12
<i>Household ability to make ends meet</i>	***	***			***	**	***
Very easily/ easy	5	5	4	1	5	5	6
Fairly easily	5	5	3	3	3	2	7
With some difficulty	9	9	5	2	7	7	12
With difficulty/great difficulty	16	14	7	1	9	7	26
<i>Number of employees in the company</i>	***	***	***		***	***	***
1 – interviewee works alone	18	3	6	3	30	21	24
2-9 employees	11	13	11	2	9	4	11
10-249 employees	5	7	4	1	4	5	6
250+ employees	2	2	1	1	3	3	1
<i>Having people working under supervision</i>	***	***		**		***	***
No	8	9	4	2	6	5	12
Yes	2	2	3	0	3	1	1
<i>Other paid job(s) besides the main paid job</i>	***						***
No other paid job	7	7	4	2	5	5	10
Yes, regular	5	5	0	0	6	2	6
Yes, occasional/ Other	11	11	3	1	6	5	18

Note: Chi-square test of independence (survey design) converted into F statistic: *** p<0.01, ** p<0.05, * p<0.1.

Table 4. Logistic regression of the propensity to work with no contract in the service industries in Europe

Variables	Model 1			Model 2			Model 3		
	Coefficient β	Standard Error se(β)	Odds ratio Exp(β)	Coefficient β	Standard Error se(β)	Odds ratio Exp(β)	Coefficient β	Standard Error se(β)	Odds ratio Exp(β)
<i>Gender (Female)</i>									
Male	-0.214 **	0.090	0.808	-0.208 **	0.090	0.812	-0.004	0.096	0.996
<i>Age (15–24 years old)</i>									
25–39 years old	-0.957 ***	0.150	0.384	-0.984 ***	0.151	0.374	-1.025 ***	0.151	0.359
40–54 years old	-0.942 ***	0.154	0.390	-0.980 ***	0.155	0.375	-1.009 ***	0.156	0.365
55+ years old	-0.428 ***	0.164	0.652	-0.418 **	0.164	0.658	-0.534 ***	0.169	0.586
<i>Education (up to Lower secondary education)</i>									
Upper secondary	-0.575 ***	0.111	0.563	-0.464 ***	0.114	0.628	-0.350 ***	0.116	0.705
Post-secondary/ non-tertiary	-1.049 ***	0.222	0.350	-0.945 ***	0.219	0.389	-0.837 ***	0.211	0.433
Short-cycle tertiary	-0.815 ***	0.201	0.442	-0.667 ***	0.206	0.513	-0.528 ***	0.201	0.590
Bachelor or equivalent	-1.140 ***	0.147	0.320	-0.966 ***	0.156	0.381	-0.787 ***	0.159	0.455
Master/ Doctorate or equivalent	-1.318 ***	0.209	0.268	-1.139 ***	0.216	0.320	-1.002 ***	0.224	0.367
<i>Respondent and their parents born in the country (No)</i>									
Yes	-0.484 ***	0.141	0.616	-0.425 ***	0.142	0.654	-0.368 **	0.144	0.692
<i>Household size (1 person)</i>									
2				-0.088	0.120	0.915	-0.026	0.124	0.975
3				-0.160	0.137	0.852	-0.079	0.143	0.924
4 and more				0.001	0.126	1.001	0.110	0.132	1.116
<i>Household ability to make ends meet (Very easily/ easy)</i>									
Fairly easily				-0.108	0.130	0.897	-0.118	0.133	0.889
With some difficulty				0.264 **	0.121	1.302	0.226 *	0.125	1.253
With difficulty/ great difficulty				0.739 ***	0.131	2.094	0.639 ***	0.132	1.894
<i>Number of employees in the company (1 – interviewee works alone)</i>									
2–9 employees							-0.292 **	0.118	0.747
10–249 employees							-0.971 ***	0.129	0.379
250+ employees							-1.710 ***	0.157	0.181
<i>Having people working under supervision (No)</i>									
Yes							-1.233 ***	0.208	0.291
<i>Other paid job(s) besides the main paid job (No other paid job)</i>									
Yes, regular							-0.023	0.314	0.977
Yes, occasional/ Other							0.583 ***	0.182	1.791
<i>Sector (Other services)</i>									
Commerce and hospitality							-0.582 ***	0.111	0.559
Transport							-0.739 ***	0.215	0.477
Financial services							-1.512 ***	0.306	0.220
Public administration and health							-0.035	0.127	0.966
Education							-0.150	0.177	0.860
Constant	-0.754 ***	0.242	0.471	-0.961 ***	0.286	0.383	-0.089	0.319	0.915
Subpop. no. of obs.			28,589			28,589			28,589
F			38.81			35.47			27.90
Prob. > F			0.0000			0.0000			0.0000

Notes: *** p<0.01, ** p<0.05, * p<0.1; models controlled for country dummies.

APPENDIX

Table A1. Prevalence of unregistered employment in the service industries in Europe, by country

Country	Service sector:					
	Commerce and hospitality	Transport	Financial services	Public administration and health	Education	Other services
	(%)	(%)	(%)	(%)	(%)	(%)
Albania	26	17	7	8	11	27
Austria	9	3	3	5	2	10
Belgium	2	0	1	2	0	3
Bulgaria	3	0	0	1	0	7
Croatia	5	0	7	2	2	6
Cyprus	43	47	23	21	35	30
Czech Republic	4	0	0	1	2	8
Denmark	4	8	1	3	2	3
Estonia	3	1	0	2	0	3
Finland	3	2	0	2	3	6
France	0	0	0	3	1	5
FYROM	19	4	0	9	2	12
Germany	4	1	0	3	7	5
Greece	21	3	0	8	5	23
Hungary	2	0	0	3	0	7
Ireland	24	10	0	7	4	10
Italy	6	2	1	4	0	24
Latvia	5	1	9	1	0	18
Lithuania	0	0	0	3	2	7
Luxembourg	2	0	0	0	0	2
Malta	28	28	12	27	24	18
Montenegro	12	5	9	0	2	10
Netherlands	4	2	0	3	1	4
Norway	4	2	0	2	0	5
Poland	5	4	4	8	3	11
Portugal	8	3	12	2	8	18
Romania	2	1	0	1	2	15
Serbia	23	2	0	0	0	17
Slovakia	3	0	0	2	2	4
Slovenia	5	1	0	2	2	3
Spain	5	0	0	3	1	11
Sweden	2	0	0	1	1	1
Switzerland	4	0	2	2	4	5
Turkey	26	37	14	40	40	31
UK	9	4	0	2	1	4
<i>All 35 countries</i>	8	4	2	5	5	11

Note: Chi-square test of independence (survey design) between unregistered employment participation and country for each service sector, converted into F statistic, $p < 0.01$.