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**EXPLAINING PARTICIPATION IN UNDECLARED WORK IN FRANCE: LESSONS FOR POLICY EVALUATION**

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## EXPLAINING PARTICIPATION IN UNDECLARED WORK IN FRANCE: LESSONS FOR POLICY EVALUATION

### Abstract

#### Purpose

France is as a model of best-practice in the European Union as regards policy to combat undeclared work. This paper takes the country as a case study with which to evaluate the competing explanations of why people engage in undeclared work which underpin such policy: namely, the dominant rational-economic actor approach and the more recent social-actor approach.

#### Methodology

To evaluate these approaches, the results of 1,027 interviews undertaken in 2013 with a representative sample of the French population are analysed.

#### Findings

The finding is that higher perceived penalties and risks of detection have no significant impact on the likelihood of conducting undeclared work in France. In contrast, the level of tax morale has a significant impact on engagement in the activity: the higher the tax morale, the lower is the likelihood of participation in the undeclared economy. Higher penalties and risks of detection only decrease the likelihood of participation in undeclared work amongst the small minority of the French population with very low tax morale.

#### Practical Implications

Current policy in France to counter undeclared work is informed principally by the rational economic actor approach based on a highly-developed infrastructure for detection and significant penalties alongside incentives to declare small-scale own-account work. The present analysis suggests that this approach needs to be supplemented with measures to improve citizens' commitment to compliance by enhancing tax morale.

#### Originality/value

This case study of a country with a well-developed policy framework to combat undeclared work provides evidence to support the social-actor approach to informing policy change.

**Keywords:** informal sector, shadow economy, tax evasion, tax morale, France

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## Introduction

In recent years, it has been recognised that the undeclared economy is a widespread phenomenon and that it is growing rather than declining in many countries and global regions (Williams, 2014a,b; Williams and Schneider, 2016). For example, one recent analysis estimates that 59% of all new businesses in OECD countries start-up unregistered and operate on an undeclared basis (Autio and Fu, 2015). This has significant negative consequences: economies lose their competitiveness due to productive registered formal enterprises suffering unfair competition from unproductive unregistered enterprises and registered enterprises operating partially off-the-books (Leal Ordóñez, 2014); governments lose tax revenue (Bajada and Schneider, 2005) and regulatory control over work conditions (ILO, 2014) and customers lack legal recourse and certainty that health and safety regulations have been followed (Williams and Martinez-Perez, 2014). Undeclared workers, moreover, lack entitlement to labour rights such as the minimum wage and sick pay, cannot build up rights to the state pension and access occupational pension schemes, and lack access to health and safety standards as well as bargaining rights and voice (Andrews *et al.*, 2011; European Commission, 2007). It is therefore important to consider how best undeclared work might be prevented which of course entails a clear understanding of what predisposes people to engage in undeclared work.

The aim of this paper, therefore, is to evaluate the different explanatory perspectives that inform policy measures to tackle undeclared work. The conventional approach adopted by governments based on the rational economic-actor model to explain participation in the activity views the undertaking of undeclared work as arising when the benefits from participation outweigh the expected cost of being caught and punished (Allingham and Sandmo, 1972). Adopting this explanatory framework, governments thus develop policies which increase the actual or perceived risks of detection and sanctions to deter participation. Nevertheless, it has been established that many citizens do not engage in undeclared work even when the pay-off is greater than the expected costs (Alm *et al.*, 2010; Kirchler, 2007; Murphy, 2008), a situation that the rational-economic actor approach cannot explain. In order to arrive at such an explanation, the “social-actor” approach has emerged more recently that explains participation in undeclared work as a product of low tax morality, defined as the intrinsic motivation to pay taxes (Cummings *et al.*, 2009). A current policy debate is therefore whether measures rooted solely in the conventional rational-economic actor approach need to be either replaced or combined with those arising from a social-actor approach that fosters improvements in tax morality so as to foster greater voluntary commitment to compliant behaviour (Alm and Torgler, 2011; Torgler, 2012).

Given this aim, the paper will take France as a case study since it is a country often viewed as a model within the European Union as regards policy towards tackling undeclared work. Indeed, France has been a policy ‘early bird’ within the rational-economic-actor frame. The country has developed both a coherent administrative framework for the detection and sanctioning of undeclared work as well as incentives to declare small-scale own-account work. For example, in the law of March 1997 for the reinforcement of the fight against illegal work created a new cross-departmental *Délégation interministérielle à la Lutte contre le Travail Illégal* (DILTI: Interministerial committee for the fight against illegal work) to coordinate the work of all relevant ministries and agencies alongside trade unions and employer organisations at local, regional and national level to detect and sanction

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3 undeclared work. Alongside this framework for detecting undeclared work and enforcing  
4 compliance, the French government has also invested in measures to lessen the relative  
5 benefits of undeclared work with schemes that offer tax breaks and the simplification of  
6 bureaucratic procedures within sectors particularly prone to undeclared work and for very  
7 small businesses. These include the 2006 'Chèque emploi service universel' (CESU -  
8 Universal personal services voucher) which simplifies the procedures for hiring a worker to  
9 provide services to the household and is accompanied by tax breaks (Windebank, 2009) and  
10 the 2009 creation of the status of 'autoentrepreneur' (self-employed entrepreneur)  
11 designed to facilitate formalized secondary- or multi-activity by greatly simplifying the  
12 declaration procedures of very-small self-employed concerns (Barreul, 2012).  
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15 In the following section the article therefore explains the rational-economic actor and  
16 social-actor approaches towards explaining and tackling the undeclared economy and  
17 whether they can be combined. The third section then introduces the data and methodology  
18 to evaluate these approaches, namely a logistic regression analysis of 1,027 interviews  
19 conducted in France during 2013. In the fourth section, the findings are reported. This  
20 reveals no association between participation in undeclared work and the perceived level of  
21 penalties and risk of detection amongst the French participants, but a significant positive  
22 association between participation in undeclared work and the level of tax morality, along  
23 with how deterrents only impact on the likelihood of participation when tax morale is low. In  
24 the fifth and final section, the implications for theory and policy are then discussed.  
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27 Before commencing, however, the undeclared economy must be defined. Here, and  
28 reflecting the consensus among academics and practitioners, we define undeclared work as  
29 paid activity that is legal in all respects other than it is not declared to the authorities for tax,  
30 social security or labour law purposes, when it should be declared (European Commission,  
31 2007; OECD, 2012; Williams and Windebank, 1998). If it is not legal in all other respects, it is  
32 not defined as undeclared work. If the goods or services traded are illegal for instance (e.g.,  
33 illegal drugs), then it is not part of the undeclared economy, but the wider criminal  
34 economy.  
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### 37 **Preventing undeclared work: a review of explanatory frameworks and related policy** 38 **approaches** 39

40  
41 Reviewing the literature on how to tackle the undeclared economy, two contrasting  
42 approaches can be identified. The rational-economic-actor approach has its origins in the  
43 classic utilitarian theory of crime that depicts citizens as engaging in such acts when the  
44 expected costs (that is, the probability of being caught and ensuing sanctions) do not  
45 outweigh the benefits (Bentham, 1788). This approach was popularised by Becker (1968)  
46 who argued that by increasing the sanctions and probability of detection confronting those  
47 considering or actually disobeying the law, acting legally would become the rational choice  
48 of citizens. This was subsequently applied to tax evasion by Allingham and Sandmo (1972)  
49 who viewed non-compliance as occurring when the benefits outweighed the expected costs  
50 of doing so. To change the cost/benefit ratio confronting citizens thinking about  
51 participating or actually engaging in tax evasion, the argument was that the actual and/or  
52 perceived risks of detection and sanctions must be increased. This approach was  
53 subsequently widely adopted when explaining and tackling the undeclared economy  
54 (Grabiner, 2000; Hasseldine and Li, 1999; Richardson and Sawyer, 2001).  
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3 Previous research has produced mixed results regarding the effectiveness of  
4 increasing the risks of detection and penalties in reducing undeclared work. Although some  
5 evaluations have found that increasing the probability of detection reduces engagement in  
6 undeclared work, at least for some income groups (Klepper and Nagin, 1989; Slemrod et al.,  
7 2001) and that increasing penalties decreases participation in undeclared work (Wenzel,  
8 2004), others have concluded that increasing the risks of detection does not lessen non-  
9 compliance (Shaw et al., 2008) and that raising the penalties results in either greater  
10 participation, has no effect, or only short-term effects (Feld and Frey, 2002; Murphy, 2005;  
11 Spicer and Lunstedt, 1976).

12  
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14 The present study will therefore seek to evaluate this rational economic actor  
15 approach by testing the following hypothesis:

16  
17 *Rational economic actor hypothesis (H1):* increasing the perceived penalties and  
18 probability of detection lowers the likelihood of participation in undeclared work.

19 *H1a:* increasing the perceived penalties lowers the likelihood of participation in  
20 undeclared work.

21 *H1b:* increasing the perceived probability of detection lowers the likelihood of  
22 participation in undeclared work.  
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26 Given that many citizens do not engage in undeclared work even when the benefits  
27 outweigh the costs (Alm et al., 2010; Murphy, 2008), a new approach has emerged that  
28 portrays citizens as social actors and explains engagement in undeclared work to result from  
29 low tax morality, by which is meant a low intrinsic motivation to pay taxes (Alm and Torgler,  
30 2006, 2011; McKerchar et al., 2013; Torgler, 2011; Torgler and Schneider, 2009; Williams  
31 and Shahid, 2016). Policy based on this explanation for participation in undeclared work  
32 would therefore seek to increase tax morality so as to improve the commitment of citizens  
33 to voluntarily comply (Kirchler, 2007; Torgler, 2011). This social-actor approach has its  
34 origins in the scholarship of Georg von Schanz (1890), the first scholar to highlight the  
35 existence of a tax contract between citizens and the state. Six decades later, the German  
36 “Cologne school of tax psychology” then popularised this approach and measured the level  
37 of tax morality (Schmölders, 1962; Strümpel, 1969). Although this social-actor approach  
38 declined in popularity with the emergence of the rational-economic-actor approach from  
39 the 1970s onwards, the last decade or so has seen its re-emergence (Alm et al., 2012;  
40 Kirchler, 2007; Torgler, 2011). Here, therefore, reductions in undeclared work are sought by  
41 engendering greater self-regulation. This voluntary commitment to compliant behaviour  
42 comes about when there is a high-commitment, high-trust culture in which citizens’ values  
43 align with the formal rules imposed by the state (Alm and Torgler, 2011; Torgler, 2012). It  
44 could be suggested therefore that the implementation of strong deterrents to enforce  
45 compliance may be counterproductive in that measures such as close supervision and  
46 monitoring of citizens, the imposition of tight rules and prescribed procedures and  
47 centralised structures engender a low-trust, low-commitment and adversarial culture.  
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49

50  
51 The social-actor perspective can be linked to institutional theory in which institutions  
52 represent “the rules of the game” and prescribe what activities are acceptable within a  
53 given society (Baumol and Blinder, 2008; Denzau and North 1994; Mathias et al., 2014;  
54 North, 1990, Williams *et al*, 2015). In all societies, there are both formal institutions (that is,  
55 codified laws and regulations) that set out the legal rules of the game and thus prescribe  
56 “state morality”, as well as informal institutions which are the “socially shared rules, usually  
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3 unwritten, that are created, communicated and enforced outside of officially sanctioned  
4 channels” (Helmke and Levitsky, 2004: 727) and prescribe “civic morality”. From a social-  
5 actor perspective, any asymmetry which arises when the formal institutions (“state  
6 morality”) and informal institutions (“civic morality”), measured by the level of tax morality,  
7 may result in participation in undeclared work. In order to reduce levels of undeclared  
8 work, therefore, it would be argued that policy should attempt to align civic morality with  
9 state. To evaluate such an approach therefore, the following hypothesis can be tested:  
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12 *Social actor hypothesis (H2):* improving tax morality lowers the likelihood of  
13 participation in undeclared work.  
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16 It should not be thought that policies inspired by the rational-economic actor and  
17 social-actor perspectives are mutually exclusive. Indeed, it can be argued that governments  
18 can pursue not only “enforced” compliance by increasing the sanctions and probabilities of  
19 detection and therefore the power of authorities, but also “voluntary” compliance by  
20 fostering tax morality and thus trust in government (Kirchler *et al.*, 2008; Kogler *et al.*, 2015;  
21 Kastlunger *et al.*, 2013; Khurana and Diwan, 2014; Muehlbacher *et al.*, 2011; Prinz *et al.*,  
22 2013; Wahl *et al.*, 2010). When there is no trust in authorities and they have no power, the  
23 argument is that there will be greater engagement in the undeclared economy. When trust  
24 in, and/or the power of, authorities increases nevertheless, engagement in undeclared work  
25 declines. Wahl *et al.* (2010) in a laboratory experiment randomly presented each participant  
26 with one of four different descriptions of a fictitious country, in which the authorities are  
27 portrayed as trustworthy or untrustworthy and as powerful or powerless. They found that  
28 participants paid significantly more taxes when both power and trust were high. The  
29 outcome has been an argument that combining these two policy approaches is the most  
30 effective way of tackling undeclared work (Kogler *et al.*, 2015; Muehlbacher *et al.*, 2011).  
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33 However, it is also necessary to take into account the possibility that a potentially  
34 complex interaction exists between increasing the power of authorities and trust in  
35 authorities and that the impacts of increasing the probability of detection and sanctions  
36 may vary at different levels of tax morality. Increasing the risks of detection and penalties  
37 might result in greater non-compliance when tax morality is high, due to a breakdown of  
38 trust between the state and its citizens (Chang and Lai, 2004; Kirchler *et al.*, 2014). In other  
39 words, tax morality might moderate the impacts of increasing the perceived probabilities of  
40 detection and sanctions on engagement in undeclared work. Until now, however, little if  
41 any research has been conducted on these moderating effects. In consequence, the  
42 following hypothesis will be tested in the present analysis:  
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46 *Moderating impacts hypothesis (H3):* the impacts of sanctions and risks of detection  
47 on engagement in undeclared work will vary according to the level of tax morality.

48 *H3a:* the impacts of the perceived penalties on participation on engagement in  
49 undeclared work will vary according to the level of tax morality.

50 *H3b:* the impacts of the perceived risk of detection on engagement in undeclared  
51 work will vary according to the level of tax morality.  
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## 55 **Methodology**

### 56 *Data*

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3 To evaluate these explanatory perspectives and related public policy approaches for tackling  
4 the undeclared economy, data is reported from special Eurobarometer survey no. 402 which  
5 included 1,027 face-to-face interviews conducted in France between April and May 2013 in  
6 the national language with adults aged 15 years and older. A multi-stage random  
7 (probability) sampling methodology ensured that on the issues of gender, age, region and  
8 locality size, each level of sample is representative in proportion to its population size. For  
9 the univariate analysis, a sample weighting scheme is used to obtain meaningful descriptive  
10 results, as recommended in the wider literature (Sharon and Liu, 1994; Solon *et al.*, 2013;  
11 Winship and Radbill, 1994) and the Eurobarometer methodology. For the multivariate  
12 analysis however, debate exists over whether to use a weighting scheme (Pfefferman, 1993;  
13 Sharon and Liu, 1994; Solon *et al.*, 2013; Winship and Radbill, 1994). Reflecting the  
14 majoritarian view, the decision was taken not to do so.  
15

16  
17 Adopting a gradual approach towards the more sensitive questions, the face-to-face  
18 interviews firstly asked participants attitudinal questions regarding the acceptability of  
19 various forms of undeclared work and their views of the expected penalties and risks of  
20 detection, followed by questions on whether they had purchased and supplied undeclared  
21 goods. Here, we focus firstly upon the questions on the supply of undeclared work and  
22 secondly on attitudinal questions examining the level of tax morale and the respondent  
23 perceived penalties and risk of detection in respect with participation in undeclared  
24 economy.  
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### 27 28 *Variables*

29 To evaluate the degree to which it is the penalties and risks of detection and/or the level of  
30 tax morality which reduce the likelihood of participation in undeclared work in France, the  
31 dependent variable used examines who engages in undeclared work and is a dummy  
32 variable with recorded value 1 for persons who answered 'yes' to the question: 'Apart from  
33 a regular employment, have you yourself carried out any undeclared paid activities in the  
34 last 12 months?'.  
35

36 To evaluate the association between participation in undeclared work and the policy  
37 measures, three explanatory variables are used. Firstly, to evaluate whether the perceived  
38 risk of detection influences participation, a dummy variable is used describing the perceived  
39 risk of being detected when engaging in undeclared work, with value 0 for a very small or  
40 fairly small risk and value 1 for a fairly high or very high risk. Secondly, to evaluate how  
41 penalties are associated with participation in undeclared economy, a dummy variable is  
42 used, describing the expected sanctions if caught doing undeclared work, with value 0 for  
43 normal tax or social security contributions due and value 1 for normal tax or social security  
44 contributions due, plus fine or prison.  
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46

47 Third and finally, to evaluate the association between participation in the undeclared  
48 economy and the level of tax morality, participants were asked to rate the acceptability of  
49 participating in six types of undeclared work using a 10-point Likert scale (where 1 means  
50 absolutely unacceptable and 10 means absolutely acceptable), namely: an individual is hired  
51 by a household for work and s/he does not declare the payment received to the tax or social  
52 security authorities even though it should be declared; a firm is hired by a household for  
53 work and it does not declare the payment received to the tax or social security authorities; a  
54 firm is hired by another firm for work and it does not declare its activities to the tax or social  
55 security authorities; a firm hires an individual and all or a part of the wages paid to him/her  
56 are not officially declared; someone receives welfare payments without entitlement; and  
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3 someone evades taxes by not declaring or only partially declaring their income. An  
4 aggregate tax morality index for each individual was then constructed by collating  
5 participants' responses to the six questions. The Cronbach's Alpha coefficient of the scale is  
6 0.854 which shows a good internal consistency of the scale (Kline, 2000). Here, the index is  
7 represented in the original 10-point Likert scale format, meaning that the lower the index  
8 value, the higher is their tax morality.

9  
10 Drawing upon previous studies evaluating participation in undeclared work from  
11 either the supply- and/or demand-side (Williams and Horodnic, 2015a,b), the control  
12 variables selected are:

- 13 ▪ *Gender*: a dummy variable with value 0 for females and 1 for males.
- 14 ▪ *Age*: a continuous variable indicating the exact age of a respondent.
- 15 ▪ *Occupation*: a categorical variable grouping respondents by their occupation with  
16 value 1 for self-employed, value 2 for employed, and value 3 for not working.
- 17 ▪ *People 15+ years in own household*: a categorical variable for people 15+ years in  
18 respondent's household (including the respondent) with value 1 for one person,  
19 value 2 for two persons, value 3 for 3 persons or more.
- 20 ▪ *Children*: a dummy variable for the presence of children up to 14 years old in the  
21 household with value 0 for individuals with no children and value 1 for those having  
22 children.
- 23 ▪ *Difficulties paying bills*: a categorical variable for the respondent difficulties in paying  
24 bills with value 1 for having difficulties most of the time, value 2 for occasionally, and  
25 value 3 for almost never/ never.
- 26 ▪ *Area*: a categorical variable for the area where the respondent lives with value 1 for  
27 rural area or village, value 2 for small or middle sized town, and value 3 for large  
28 town.
- 29
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### 33 *Analytical methods*

34 To evaluate the association between participation in undeclared work and the perceived  
35 penalties and risk of detection, and the level of tax morality, only those 854 respondents for  
36 whom data on each and every control variable was available are here used in the logistic  
37 regression analysis. Below, the results are reported.

### 40 **Findings**

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43 As Table 1 displays, 5 per cent of the 854 French interviewees who were interviewed face-  
44 to-face reported engaging in undeclared work during the 12 months prior to interview, a  
45 figure slightly higher than that of the Western European or EU28 average. Table 1 also  
46 reveals the variations between those who engage in undeclared work and those who do not  
47 regarding their perceptions of the expected sanctions against and risks of detection of  
48 participation in such work and their tax morality. Those participating in undeclared work  
49 perceive the expected sanctions as lower than those not engaged in undeclared work: 23%  
50 of those participating in undeclared work consider that only the normal tax or social security  
51 contributions will be due if caught compared with 18% of those not participating in  
52 undeclared work. Overall, a greater percentage of respondents in France, whether  
53 undertaking undeclared work or not, consider that sanctions will be high (including a fine or  
54 prison) than in Western Europe or the EU28. Meanwhile, 66% of French respondents doing  
55 undeclared work perceive the risk of being detected as very small or fairly small, compared  
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3 with 62% of those not participating in undeclared work. As compared with Western Europe  
4 and the EU 28, a higher percentage of those engaging in undeclared work believe the risk of  
5 detection to be fairly high or high in France whilst this percentage is lower in France than in  
6 the rest of Europe amongst those not engaging in undeclared work. Those participating in  
7 undeclared work in France, moreover, have a lower level of tax morale (3.9) compared with  
8 those not engaging in undeclared work (2.0) and in comparison with those engaging in  
9 undeclared work in Western Europe (3.7) and in the EU28 (3.5). Similarly those not engaging  
10 in undeclared work in France still have a lower tax morale (2.0) than those in Western  
11 Europe (2.1) and in the EU28 (2.2). In sum, French participants in undeclared work view the  
12 severity of the punishment as lower and the risk of detection smaller and have a lower level  
13 of tax morale than those not participating in undeclared work.  
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16  
17 INSERT TABLE 1 HERE  
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19  
20 Table 2 reports the results of a logistic regression analysis which evaluates the  
21 hypotheses regarding whether participation in undeclared work is significantly associated  
22 with firstly, the level of sanctions and risk of detection and secondly, tax morality. It also  
23 shows that the social groups in France most likely to participate in undeclared work are  
24 younger people and the self-employed. Examining whether participation in undeclared work  
25 in France is associated with the perceived level of penalties and risk of detection, no  
26 significant association is found between participation in undeclared work and the perceived  
27 level of sanctions (refuting H1a). As such, when respondents perceive the level of sanctions  
28 to be higher, this does not result in lower levels of participation in undeclared work.  
29 Similarly, we found no significant association between the perceived risk of detection and  
30 participation in undeclared work, when other variables are held constant (refuting H1b).  
31 However, there is a significant association between participation in undeclared work and tax  
32 morality. The greater the level of tax morality, the lower is the propensity to participate in  
33 undeclared work (confirming H2). The outcome of Model 1 is therefore that little or no  
34 association is found between the likelihood of participating in undeclared work and the level  
35 of punishments or risk of detection but a strong association is identified with the level of tax  
36 morality.  
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41 INSERT TABLE 2 HERE  
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43  
44 To examine whether tax morality moderates the impacts and effectiveness of  
45 penalties and detection risk, model 2 in Table 2 introduces the interaction terms between  
46 tax morality and the level of punishment and risk of detection. Overall, the finding is that  
47 the interaction terms between perceived penalties and risk of detection, and tax morality,  
48 are not significant (refuting H3a and H3b). However, although there is overall a lack of  
49 significance of the interaction terms, some important relationships exist at lower levels of  
50 tax morality that need to be reported. Figure 1 graphically portrays the impact of increasing  
51 the penalties and risks of detection on participation in undeclared work at various levels of  
52 tax morality for a “representative” French citizen, derived by taking the mean and modal  
53 values of the other independent variables. This representative French citizen is thus a 47  
54 year-old woman who does not work, living in a two person household in a small or middle  
55 sized town, with no children who never, or almost never, faces financial difficulties paying  
56 the household bills. Figure 1 reveals firstly that the expected probability of engaging in  
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3 undeclared work increases with worsening the tax morality from close to zero, when tax  
4 morality is high (i.e., the tax morality index is 1), to between 59% and 86% depending on the  
5 perceived level of punishments and detection risk when tax morality is very poor (i.e., the  
6 tax morality index equals 10).  
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9 INSERT FIGURE 1 HERE  
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11 Indeed, when tax morality is relatively high (i.e., below a score of 3), increasing the  
12 perceived level of sanctions and risks of detection has relatively little effect on the  
13 probability of participation in undeclared work. However, as tax morality worsens above a  
14 tax morality index score of 3, the perceived level of punishment and risk of detection  
15 becomes more influential in shaping the level of participation in undeclared work. In such  
16 low trust environments, it is largely the perceived risk of detection rather than the level of  
17 penalties which reduces participation in undeclared work. The higher the perceived risk of  
18 detection, the lower is the probability of participation in undeclared work. However, as  
19 mentioned above, the interaction terms are not statistically significant.  
20  
21

## 22 23 Discussion and Conclusions

24  
25 To evaluate the rational-economic-actor approach towards explaining and tackling  
26 undeclared work, the emergent social-actor approach and how the two might combine, we  
27 have examined how the expected risks of detection and sanctions and the level of tax  
28 morality is associated with participation in undeclared work in France. The finding is that  
29 there is no association between respondents perceiving higher risks of detection and levels  
30 of sanctions and lower rates of participation in undeclared work. However, higher levels of  
31 tax morality are associated with lower levels of participation in undeclared work.  
32 Furthermore, although when the expected risks of detection and penalties are higher, the  
33 likelihood of participation in undeclared work is lower when tax morality is low, overall the  
34 interaction effects between the level of penalties and risks of detection, and level of tax  
35 morality are not significant. In sum, therefore, these findings reveal that the model of the  
36 rational-economic actor perspective cannot adequately explain individuals' participation in  
37 undeclared work. Indeed, despite the highly developed nature of deterrent policies in  
38 France and the resultant level of fear of both detection and sanctions that is higher than the  
39 EU average in most categories, it has been shown that a greater percentage of French  
40 respondents than average in the EU undertake undeclared work. Conversely, the tax morale  
41 of the French is slightly lower than the EU28 average and indeed the average for Western  
42 Europe.  
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47 On the basis of these findings concerning how to explain individuals' participation in  
48 undeclared work, it might thus be tentatively suggested that further investment by the  
49 French government in structures such as the DILTI may not yield the desired results. It  
50 would seem rather that policy which focuses on improving tax morality may prove more  
51 effective in the long term than policy to enhance deterrents. Viewing low tax morality  
52 through the lens of institutional theory as a measure of the lack of alignment of the laws,  
53 codes and regulations of formal institutions, namely 'state morality', with the norms, beliefs  
54 and values of informal institutions, namely 'civic morality', (Helmke and Levitsky, 2004;  
55 North, 1990), the suggestion is that there is a need to reduce this institutional asymmetry.  
56 On the one hand, this requires changes in the norms, values and beliefs regarding the  
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3 acceptability of participating in undeclared work (that is, civic morality) but also, on the  
4 other hand, changes in formal institutions. As revealed in previous studies in other advanced  
5 economies, compliance improves when there are improvements in procedural justice, which  
6 refers to whether citizens perceive the government to treat them in a respectful, impartial  
7 and responsible manner (Gangl et al., 2013; Murphy, 2005), procedural fairness, which  
8 refers to the extent to which citizens believe that they are paying their fair share compared  
9 with others (Molero and Pujol, 2012) and redistributive justice, which refers to whether  
10 citizens believe they receive the goods and services they deserve given the taxes that they  
11 pay (Kirchgässner, 2011).  
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14 Policy change may therefore have to be much more wide-ranging to have an impact  
15 on civic morality than measures targeted specifically at undeclared work. There is debate,  
16 however, on what the direction of this change should be: for example, Williams (2014a) has  
17 argued that formal economic systems which are wealthier and more equal and where there  
18 is greater labour market intervention, higher levels of social protection and more effective  
19 redistribution via social transfers are significantly correlated with lower levels of  
20 informalisation and undeclared work. In contrast, it has been argued that the re-alignment  
21 of civic and state morality relies on the state drawing back from interference in citizens' lives  
22 through legislation and taxation (De Soto, 2001; London and Hart, 2004)  
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25 There are a number of aspects of the French economy, society and political life  
26 which may influence tax morality negatively but which would require deep transformations  
27 in 'state morality' and in the public perception of this state morality. First, although poverty  
28 and inequality in France have traditionally been below the OECD average (OECD, 2008) with  
29 high degrees of spending on benefits, the country suffers from strong labour-market  
30 segmentation by age and qualifications (Milner, 2015). There is a widespread perception  
31 that the core labour force, represented by trades unions which pressure state institutions,  
32 protects its advantages at the expense of the peripheral workforce of the young, low  
33 qualified and ethnic minorities who find themselves either unemployed or in very  
34 precarious work and who may therefore perceive undeclared work to be a preferable or  
35 indeed sole option to secure an income or to supplement a low formal income. Second,  
36 there is a long-standing dissatisfaction with the French state on the part of small business  
37 owners, retailers and the self-employed which dates back to the 1950s and beyond. In terms  
38 of varieties of capitalism, France has traditionally been located on "the statist end of the  
39 market-state spectrum" (Milner, 2015, p.229) since the period of rapid state-led  
40 modernization following the Second World War. During this period, small business owners  
41 felt that their interests were being sacrificed, a dissatisfaction which gave rise to the political  
42 movement of Poujadisme – a movement whose spirit lives on in right-wing politics today.  
43 This movement grew from an act of citizen resistance to the state in the form of a refusal to  
44 cooperate with tax inspections by small business owners led by Pierre Poujade in his  
45 department of the Lot (Souillac, 2007). Lastly, there is the question of the social  
46 contributions that employees and employers have to pay in France which are high relative  
47 to comparable countries. As Morel and Carbonnier (2015) suggest, the growth of formal  
48 low-end service sector jobs, such as those in household services, retail and the hotel and  
49 restaurant sector, have been constrained in France due to labour-market and welfare  
50 institutions where strongly regulated labour markets combine with a compressed wage  
51 structure and relatively high wages even for the low-skilled along with generous social  
52 protection schemes. Employers and employees alike may therefore feel it just to circumvent  
53 these constraining regulations in order to provide services or pay wages which are  
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3 affordable. The French policies which incentivise the regularisation of activities in the  
4 household services sector or in very small businesses have in fact been implemented to  
5 address exactly this problem.  
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7 In conclusion, if this paper results in re-evaluations of these various approaches  
8 towards explaining and tackling undeclared work, as well as the complex interplay between  
9 increasing deterrents and improving tax morality, in the French and wider European  
10 context, one of its principal aims will have been fulfilled. If this analysis has any impact on  
11 policy change, it will have fulfilled a broader intention. If there is one certainty arising out of  
12 this paper, however, it is that the French government and others can no longer simply  
13 assume that rebalancing the economic costs and benefits of engaging in undeclared work is  
14 the most effective way of reducing the level of such activity. Although much more difficult  
15 to operationalise, the way forward for tackling undeclared work must lie in improving tax  
16 morality amongst citizens.  
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Table 1. Expected sanctions, detection risk and tax morale: by whether engaged in undeclared work

	France	Western Europe	EU 28
<i>Engaged in undeclared work (%)</i>	5	4	4
Expected sanctions (%)			
Tax or social security contributions due	23	26	32
Tax or social security contributions + fine or prison	77	74	68
Detection risk (%)			
Very small/ Fairly small	66	70	72
Fairly high/ Very high	34	30	28
Tax morality (mean)	3.9	3.7	3.5
<i>Not engaged in undeclared work (%)</i>	95	96	96
Expected sanctions (%)			
Tax or social security contributions due	18	19	24
Tax or social security contributions + fine or prison	82	81	76
Detection risk (%)			
Very small/ Fairly small	62	59	59
Fairly high/ Very high	38	41	41
Tax morality (mean)	2.0	2.1	2.2

Table 2. Logistic regressions of the propensity to participate in undeclared work in France

	Model 1			Model 2		
	$\beta$	Robust se( $\beta$ )	Exp( $\beta$ )	$\beta$	Robust se( $\beta$ )	Exp( $\beta$ )
Expected sanctions (Tax or social security contributions due)						
Tax or social security contributions + fine or prison	-0.121	0.483	0.886	-0.410	0.824	0.664
Detection risk (Very small/ Fairly small)						
Fairly high/ Very high	-0.448	0.409	0.639	-0.070	0.811	0.933
Tax morality	0.646 ***	0.091	1.908	0.638 ** *	0.177	1.893
Gender (Female)						
Male	-0.478	0.408	0.620	-0.479	0.411	0.620
Age (Exact age)	-0.035 ***	0.012	0.966	-0.033 **	0.013	0.967
Occupation (Self-employed)						
Employed	-1.926 ***	0.642	0.146	-1.954 ** *	0.637	0.142
Not working	-1.460 **	0.640	0.232	-1.477 **	0.635	0.228
People 15+ years in own household (One)						
Two	-0.514	0.463	0.598	-0.495	0.465	0.610
Three and more	-0.210	0.545	0.811	-0.198	0.540	0.821
Children (No children)						
Having children	0.190	0.468	1.210	0.194	0.472	1.214
Difficulties paying bills (Most of the time)						
From time to time	-0.651	0.508	0.522	-0.625	0.514	0.535
Almost never/ never	-0.395	0.460	0.674	-0.368	0.468	0.692
Area (Rural area or village)						
Small or middle sized town	0.031	0.467	1.031	0.056	0.467	1.058
Large town	0.739	0.502	2.094	0.758	0.504	2.135
<i>Interactions</i>						
Tax or social security contributions + fine or prison x Tax morality				0.078	0.194	1.081
Fairly high/ Very high x Tax morality				-0.106	0.187	0.900
Constant	-0.980	1.199	0.375	-1.006	1.337	0.366
<hr/>						
	N		854			854
	Pseudo R <sup>2</sup>		0.2483			0.2497
	Log pseudolikelihood		-114.5093			-114.2896
	$\chi^2$		94.92			96.46
	p>		0.0000			0.0000

## Notes:

Significant at \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

All coefficients are compared to the benchmark category, shown in brackets.

When multiple imputation techniques are used (ten imputations were simulated through a system of chained equations for every missing value) for addressing the missing responses issue, the same variables are significantly associated with participation in the informal economy. Therefore, we use the available data, with no imputation, to keep minimize bias.

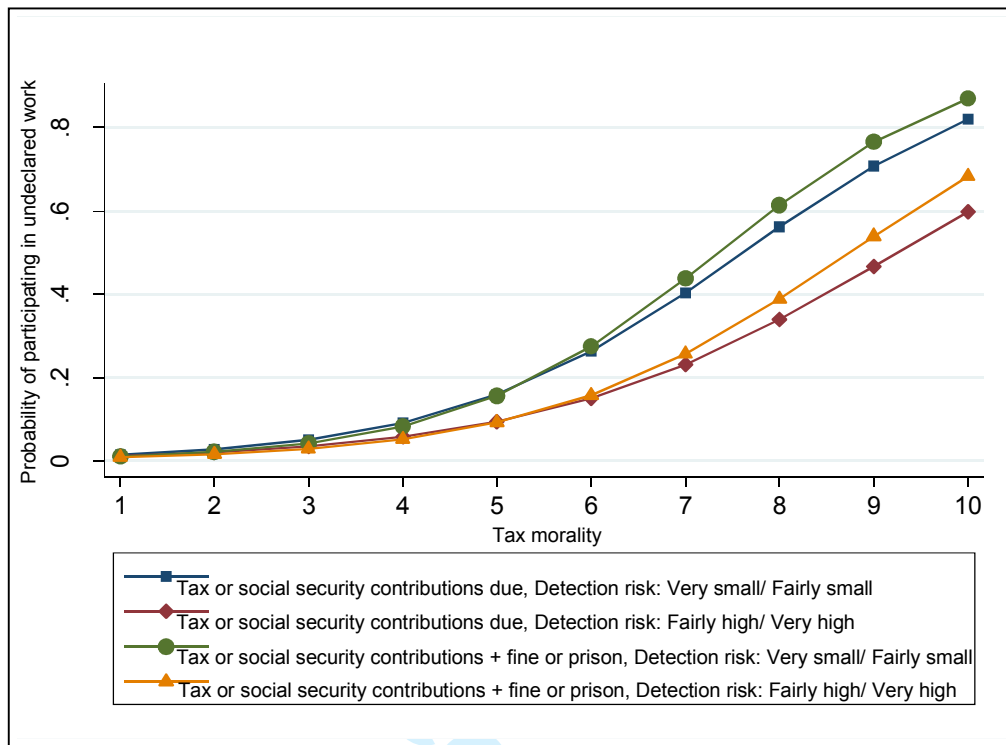


Figure 1. Predicted probability of participating in undeclared work of a “representative” citizen living in France: by expected sanctions, detection risk, and tax morality

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## Appendix

Table A1. Variables used in the analysis: definitions and descriptive statistics (N = 854)

Variables	Definition	Mode or mean	Min / Max
Supply of undeclared work (dependent variable)	Dummy variable of undeclared paid activities carry out in the last 12 months, apart from a regular employment	Not engaged in undeclared work (95%)	0 / 1
Expected sanctions	Dummy for the penalties associated with participation in undeclared activities	Tax or social security contributions + fine or prison (81%)	0 / 1
Detection risk	Dummy for the perceived risk of detection	Very small/ Fairly small (62%)	0 / 1
Tax morality	Constructed index of self-reported tolerance towards tax non-compliance	2.1	1 / 8.5
Gender	Dummy for the gender of the respondent	Female (51%)	0 / 1
Age	Respondent exact age	47 years	15 / 91
Occupation	Respondent occupation in categories	Employed (47%)	1 / 3
People 15+ years in own household	People 15+ years in respondent`s household (including the respondent) in categories	Two (50%)	1 / 3
Children	Dummy for the presence of children (up to 14 years old) in the household	No children (66%)	0 / 1
Difficulties paying bills	Respondent difficulties in paying bills in categories	Almost never/ never (59%)	1 / 3
Area	Size of the area where the respondent lives in categories	Small/ middle town (42%)	1 / 3