



Deposited via The University of Sheffield.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/127143/>

Version: Accepted Version

---

**Article:**

Williams, C.C. and Bezeredi, S. (2018) Explaining and tackling the informal economy: a dual informal labour market approach. *Employee Relations*, 40 (5). pp. 889-902. ISSN: 0142-5455

<https://doi.org/10.1108/ER-04-2017-0085>

---

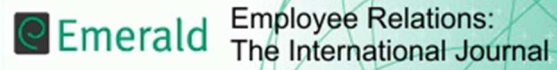
© 2018 Emerald Publishing Limited. This is an author produced version of a paper subsequently published in *Employee Relations*. This version is distributed under the terms of the Creative Commons Attribution-NonCommercial Licence (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. You may not use the material for commercial purposes.

**Reuse**

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial (CC BY-NC) licence. This licence allows you to remix, tweak, and build upon this work non-commercially, and any new works must also acknowledge the authors and be non-commercial. You don't have to license any derivative works on the same terms. More information and the full terms of the licence here: <https://creativecommons.org/licenses/>

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



**Explaining and tackling the informal economy: a dual informal labour market approach**

Journal:	<i>Employee Relations</i>
Manuscript ID	ER-04-2017-0085.R1
Manuscript Type:	Research Paper
Keywords:	Employee relations, Labour market, Informal economy, dual economy, South-East Europe, undeclared work

SCHOLARONE™  
Manuscripts

Employee Relations

## Explaining and tackling the informal economy: a dual informal labour market approach

### Abstract

#### *Purpose*

To transcend the long-standing debate regarding whether workers are driven into the informal economy by either their involuntary “exclusion” or voluntary “exit” from the formal economy, the aim of this paper is to propose and evaluate the existence of a dual informal labour market composed of an exit-driven “upper tier” and an exclusion-driven “lower-tier” of informal workers, and to explore its policy implications.

#### *Methodology*

To do so, data is reported from a 2015 survey of the informal economy conducted in South-East Europe involving 6,019 face-to-face interviews in Bulgaria, Croatia and FYR of Macedonia.

#### *Findings*

Identifying a dual informal labour market with three exit-driven informal workers for every exclusion-driven informal worker, a multinomial logit regression analysis reveals that, compared to the exclusion-driven “lower tier”, the exit-driven “upper tier” is significantly more likely to be populated by the formally employed, retired and those not struggling financially. Participation is not affected by the perceived severity of penalties and likely risks of detection, but relative to those in the exclusion-driven “lower tier”, there is a significant correlation between those doing so for exit rationales and their lack of both horizontal trust as well as vertical trust in formal institutions.

#### *Practical implications*

The outcome is a call to transcend the conventional deterrence approach of increasing the penalties and risks of detection. Instead, to tackle those driven by exit rationales, tackling both the lack of horizontal trust that other citizens are operating in a compliant manner and the lack of vertical trust in formal institutions is advocated. To tackle exclusion-driven informal workers, meanwhile, a focus upon the macro-level economic and social conditions which lead to their participation is required.

#### *Originality/value*

This is the first paper to empirically evaluate the existence of a dual informal labour market and to evaluate its policy implications.

**Keywords:** informal sector; shadow economy; employment relations; dual economy; South-East Europe.

### Introduction

During the twentieth century, the informal economy was widely portrayed as a residual sector that was disappearing as economies modernised. However, there is today recognition that the informal economy persists, with 60 per cent of the global workforce having their main job in this realm (Jütting and Laiglesia, 2009). To explain participation in the informal economy, scholars have adopted either a structuralist theoretical perspective that portrays workers as involved in the

1  
2  
3 informal economy due to their “exclusion” from the formal economy and state benefits (Davis,  
4 2006; Gallin, 2001; Taiwo, 2013), or a view that informal workers voluntarily “exit” the formal  
5 economy, with neo-liberals representing this as a rational economic choice (De Soto, 1989, 2001;  
6 Maloney, 2004; Perry and Maloney, 2007) and institutionalists representing informal workers  
7 more as social actors who choose not to abide by the formal codified laws and regulations (Cross,  
8 2000; Gerxhani, 2004; Snyder, 2004). To move beyond such universal depictions of informal  
9 workers as either exclusion- or exit-driven, the aim of this paper is to propose and evaluate the  
10 existence of a dual informal labour market in which there is an exit-driven “upper tier” and an  
11 exclusion-driven “lower-tier” of informal workers. Until now, there are no empirical evaluations  
12 of whether such a dual informal labour market exists. To begin to fill this lacuna therefore, a  
13 survey of workers’ motives for engaging in the informal economy in South-East Europe is here  
14 evaluated.

15  
16 Throughout this paper, and reflecting the strong consensus in Europe, the informal  
17 economy refers to paid activities not declared to the authorities for tax, social security and/or  
18 labour law purposes but which are legal in all other respects (European Commission, 2007; OECD  
19 2012; Schneider and Williams 2013; Williams, 2014). If activities differ in additional ways to the  
20 formal economy, then this activity is not part of the informal economy. If the goods and/or  
21 services traded are illegal (e.g., illegal drugs) for example, then it is part of the wider “criminal”  
22 economy rather than the informal economy. If the activity is unpaid, meanwhile, then it is part of  
23 the separate unpaid economy (Williams and Horodnic, 2016a).

24 Based on this, the next section reviews the competing explanations that depict the informal  
25 economy to result from either the exclusion of workers from the formal economy or their chosen  
26 exit from the formal economy, as well as how the informal economy might be tackled, followed  
27 by the small literature which has proposed that the informal economy is composed of a dual  
28 labour market. Secondly, and to begin to evaluate the validity of viewing the informal economy as  
29 a dual labour market, the methodology employed is set out, including the data set used, namely a  
30 2015 survey of workers’ motives for engaging in the informal economy in three South-East  
31 European countries with some of the highest rates of involvement in the informal economy in  
32 Europe, and the analytical techniques employed. In the fourth section, the results are reported.  
33 This will display that workers involvement in the informal economy results from neither purely  
34 exit nor purely exclusion motives. Instead, some engage for exclusion and others exit motives,  
35 thus portraying the validity of representing the informal economy as a dual labour market. Using  
36 **multinomial** logit regression analysis, the groups of worker with significantly greater likelihood of  
37 inhabiting the exclusion-driven “lower tier” and exit-driven “upper tier” in these countries are  
38 then reported, along with whether different policy measures and approaches are significantly  
39 correlated with participation by those in the exclusion-driven lower tier and exit-driven upper tier.  
40 The final section concludes by discussing the theoretical and policy implications, and future  
41 research required.  
42  
43  
44

### 45 **Explaining workers involvement in the informal economy**

46  
47 A common belief during the last century was that the informal economy was gradually being  
48 replaced by the formal economy. The informal economy was thus represented as a sign of  
49 “backwardness” and the formal economy a signal of “development”, “advancement” and  
50 “progress” (Geertz, 1963; Lewis, 1959). In the past few decades, nevertheless, it has been  
51 recognised that workers involvement in the informal economy is an enduring and extensive  
52 feature of economies across all global regions (ILO, 2013; Jütting and Laiglesia, 2009; Williams,  
53 2014, 2015). To explain this, two broad theoretical perspectives have been adopted.

54  
55 *Workers involvement in the informal economy: a result of exclusion*

1  
2  
3  
4 To explain the enduring and extensive involvement of workers in the informal economy, a  
5 structuralist approach has argued that it is a result of the advent of an increasingly de-regulated  
6 global economy (Davis, 2006; Slavnic, 2010). On the one hand, the informal economy is seen as a  
7 direct outcome of employers seeking to reduce costs by sub-contracting and outsourcing  
8 production to the informal economy, such as small informal micro-enterprises in their supply  
9 chains (Gallin, 2001; Portes and Roberts, 2005). The informal economy is therefore depicted as an  
10 efficient “strategy used by firms - both large and small - to cut costs, improve competitiveness,  
11 and guarantee flexibility in firm management and employment” (Rakowski, 1994: 504).

12 On the other hand, the informal economy is also seen as an absorber of surplus labour and  
13 source of work for those excluded from the formal economy, who are off-loaded into the informal  
14 economy. Involvement in the informal economy is therefore more prevalent among excluded  
15 populations where it is a substitute for the formal economy, and conducted out of necessity as a  
16 survival tactic (Castells and Portes, 1989; Sassen, 1997). Employment in the informal economy is  
17 thus represented as existing at the bottom of a hierarchy of employment and such workers as akin  
18 to “downgraded labour”, receiving low wages, few benefits, and operating under poor working  
19 conditions (Castells and Portes, 1989; Gallin, 2001). The informal economy thus provides a  
20 source of income for those excluded from the formal economy (Tokman, 2001). **This is also a  
21 common view in studies conducted in the three countries focused upon in this paper (e.g.,  
22 Chavdarova, 2013; Garvanlieva et al., 2012).**

#### 23 *Workers involvement in the informal economy: a result of exit*

24  
25  
26  
27 Conversely, other scholars view engagement in the informal economy as a matter of choice rather  
28 than due to a lack of choice. Informal workers voluntarily “exit” the formal economy. On the one  
29 hand, this is argued by neo-liberal scholars who portray informal workers as making a rational  
30 economic decision to exit the formal economy (De Soto, 1989, 2001; Maloney, 2004; Perry and  
31 Maloney, 2007). Participation in the informal economy is here depicted as a populist reaction and  
32 rational economic strategy pursued by workers confronting state-imposed institutional constraints  
33 and burdensome regulations. As such, engagement in the informal economy is seen to offer  
34 potential benefits not found in formal economy, including avoidance of taxes, escape from  
35 inefficient government regulation, ease of entry to the labour market, and even better wages  
36 (Maloney, 2004; Packard, 2007).

37  
38 On the other hand, this exit perspective is also argued by scholars adopting institutional  
39 theory who again see engagement as a choice but view participants more as social actors  
40 (Godfrey, 2015; Webb et al, 2009; Williams and Horodnic, 2015, 2016a,b,c). Adopting this  
41 perspective, institutions are “the rules of the game” which prescribe, monitor, enforce and support  
42 what is socially acceptable (Baumol and Blinder, 2008; North, 1990). In all societies, there are  
43 both formal institutions (i.e., laws and regulations) that are the legal rules of the game, as well as  
44 informal institutions which are the “socially shared rules, usually unwritten, that are created,  
45 communicated and enforced outside of officially sanctioned channels” (Helmke and Levitsky,  
46 2004: 727). Engagement in the informal economy is viewed as falling outside of formal  
47 institutional prescriptions but within the norms, values and beliefs of informal institutions  
48 (Godfrey, 2011; Siqueira et al., 2016; Webb et al., 2009; Welter et al., 2015). The informal  
49 economy thus arises from formal institutional failings that result in the laws and regulations of  
50 formal institutions not being in symmetry with the norms, values and beliefs that constitute the  
51 informal institutions (Webb and Ireland, 2015; Webb et al., 2009; Williams and Horodnic, 2015).  
52 If there is symmetry between formal and informal institutions, engagement in the informal  
53 economy only occurs unintentionally, such as when there is a lack of understanding of the laws  
54 and regulations. If there is institutional asymmetry however, the outcome is more informal work.

1  
2  
3 Indeed, the higher the level of asymmetry, the greater is the level of engagement in the informal  
4 economy (Williams and Shahid, 2016; Williams et al., 2016a,b). In recent years, moreover, it has  
5 been proposed that it is not just the lack of vertical trust (i.e., formal/informal institutional  
6 asymmetry) that leads to work in the informal economy, but also the lack of horizontal trust that  
7 other citizens are operating in a compliant manner (Baric, 2016; Williams et al., 2017).

8 Based on these two exit-driven theoretical approaches, two alternative policy approaches  
9 have been adopted for tackling the informal economy. Drawing on the rational economic actor  
10 explanation, the view has been that citizens are non-compliant if the expected penalty and risk of  
11 being caught is smaller than the benefits they receive (Allingham and Sandmo, 1972). The  
12 resultant policy approach has been to change the cost/benefit ratio confronting those considering  
13 or participating in the informal economy, achieved by raising the actual and/or perceived penalties  
14 and risks of detection (e.g., Hasseldine and Li, 1999; Job et al., 2007). For those adopting a social  
15 actor approach, meanwhile, the policy approach towards the informal economy has been to seek  
16 to reduce firstly, the asymmetry between the formal institutions (i.e., the laws and regulations) and  
17 informal institutions (citizens norms, values and beliefs about the acceptability of working in the  
18 informal economy), and secondly, the lack of horizontal trust which results from the view that  
19 other citizens are operating in a non-compliant manner. The objective, therefore, is to improve  
20 vertical and horizontal trust so as to encourage voluntary compliance or what can be termed self-  
21 regulation.  
22  
23

#### 24 *Beyond either exit or exclusion explanations*

25  
26 Reviewing explanations for workers involvement in the informal economy, most studies view  
27 these as competing perspectives and adopt either an exit- or exclusion-driven explanation (e.g., De  
28 Soto, 2001; Snyder, 2004). In other words, they are seen as mutually exclusive explanations. In  
29 recent years, however, a small body of literature has begun to move beyond this view that the  
30 informal economy is universally a result of either exit or exclusion. As Perry and Maloney (2007:  
31 2) assert, “These two lenses, focusing, respectively, on informality driven by exclusion from state  
32 benefits and on voluntary exit decisions resulting from private cost-benefit calculations, are  
33 complementary rather than competing analytical frameworks”. There is a growing recognition that  
34 the informal economy is a dual labour market. The roots of this view lie in the work of Fields  
35 (1990, 2005) who depicts workers in the informal economy as a dual labour market comprised of  
36 an “upper tier” of exit-driven informal workers and a “lower tier” of exclusion-driven informal  
37 workers.  
38  
39

40 Grounded in this view, it has been argued that exit-driven informal workers are more  
41 dominant in developed countries and exclusion-driven informal workers in developing nations  
42 (Gërkhani, 2004; Maloney, 2004), or that exclusion motives are more common in lower-income  
43 populations and exit motives in higher-income groups (Williams and Windebank, 2001). Until  
44 now, however, there have been no known empirical evaluations of whether the informal economy  
45 is composed of a dual labour market and the ratio of exit-driven to exclusion-driven participants.  
46 Neither have the population groups more likely to be in the exclusion-driven “lower tier” and exit-  
47 driven “upper tier” been evaluated. Nor have there been any evaluations of whether the policy  
48 approaches required for tackling those in the exclusion-driven lower tier need to be different to  
49 those required for tackling the exit-driven upper tier. To begin to fill these lacunae, therefore,  
50 attention here turns to an empirical survey conducted in three South-East European countries.  
51

#### 52 **Methodology**

53  
54 To evaluate the thesis that the informal economy is a dual labour market, along with the ratio of  
55 informal workers in the exit-driven “upper tier” and exclusion-driven “lower-tier”, the population  
56  
57  
58  
59  
60

groups significantly more likely to be found in these two tiers, and the policy approaches required to tackle these tiers, the results are reported of a survey conducted in Bulgaria, Croatia and FYR of Macedonia by well-known market research agencies, who were commissioned by the European Commission's Framework 7 Industry-Academia Partnerships Programme (IAPP) project on "Developing capacities and capabilities for tackling undeclared work in Bulgaria, Croatia and FYR of Macedonia" (GREY). These countries were selected for investigation because they have some of the largest informal economies in Europe (Schneider and Williams, 2016). This survey comprised some 2,000 face-to-face interviews in each country (i.e., 6,019 interviews in total) undertaken in late 2015. Individuals were interviewed aged 16 years and older in the national language based on a multi-stage random (probability) sampling methodology, which ensured that on the issues of gender, age, region and locality size, each country and also each level of sample, was representative in proportion to its population size. Hence, for both the univariate and multivariate analysis, sample weighting was used, as recommended in the wider literature (Pfefferman, 1993; Winship and Radbill, 1994).

Given that studying the informal economy is a sensitive issue, the face-to-face interview schedule firstly sought information on the participants' attitudes towards engagement in the informal economy and only after establishing some rapport, were questions asked regarding their purchase of goods and services in the informal economy over the year prior to the survey along with their reasons for doing so and finally, questions concerning their participation in the informal economy and reasons for doing so. On this latter issue, participants were first asked "Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?". If so, they were then asked "What were the reasons for doing these activities undeclared?" among the following: bureaucracy/red tape to carry out a regular economic activity is too complicated; you were able to ask for a higher fee for your work; both parties benefited from it; taxes and/or social security contributions are too high; it is just seasonal work and so it is not worth declaring it; the state does not do anything for you, so why should you pay taxes; in order to help someone out; this is the normal way how this is done among friends, neighbours or relatives; the person(s) who acquired it insisted on its non-declaration; you could not find a regular job; and working undeclared is common practice in your region/sector of activity so there is no real alternative.

To analyse whether the informal economy is a dual labour market with an exit-driven upper tier and exclusion-driven lower tier, along with who engages in each tier, and the policy approaches required for tackling each tier, a multinomial logit regression analysis provides a suitable technique and the following variables are analysed.

*Dependent variables:*

- *Workers involvement in the informal economy:* a dichotomous variable with recorded value 1 for persons who answered "yes" to the question "Apart from a regular employment, have you yourself carried out any undeclared paid activities in the last 12 months?", and recorded value 0 otherwise.
- *Reasons for engaging in informal economy:* a categorical variable with recorded value 1 for persons who reported at least one "exit" motive for working in the informal economy (i.e., bureaucracy/red tape to carry out a regular economic activity is too complicated; you were able to ask for a higher fee for your work; both parties benefited from it; taxes and/or social security contributions are too high; it is just seasonal work and so it is not worth declaring it; the state does not do anything for you, so why should you pay taxes; in order to help someone out; this is the normal way how this is done among friends, neighbours or relatives) and none of the 'exclusion' motives, value 2 for persons who reported at least one "exclusion" motive (i.e., the person(s) who acquired it insisted on its non-declaration; you could not find a regular job; and working undeclared is common practice in your region/sector of activity so there is

no real alternative) and none of the 'exit' motives, and value 3 for persons who reported at least one "exit" motive and at least one "exclusion" motive.

*Independent variables:*

- *Gender*: a dummy variable with value 0 for men and 1 for women.
- *Age*: an interval variable indicating the exact age of the respondent.
- *Employment status*: a categorical variable with value 1 for employed, value 2 for self-employed, value 3 for unemployed, value 4 for retired, and value 5 for student and inactive.
- *Financial situation*: a categorical variable with value 1 for struggling, value 2 for maintaining, value 3 for just comfortable, and value 4 for no money problems.
- *Type of locality*: a categorical variable with value 1 for rural area or village, value 2 for small or middle-sized town, value 3 for large town.
- *Perceived detection risk*: a categorical variable with value 1 for a very small risk, value 2 for fairly small risk, value 3 for fairly high risk and value 4 for very high risk.
- *Expected sanctions*: a categorical variable with value 1 for those asserting that the normal tax or social security contributions would be due, value 2 for those stating that the normal tax or social security contributions due, plus there would be a fine or value 3 for imprisonment.
- *Estimated share*: a categorical variable for respondents perceived estimate of the proportion of the population engaged in undeclared work with value 1 for less than 5 per cent, value 2 for 5 to 10 per cent, value 3 for 10 to 20 per cent, value 4 for 20 to 50 per cent, and value 5 for over 50 per cent.
- *Asymmetry index*: an interval variable was used by constructing an index of attitudes towards the acceptability of participating in the informal economy based on a 10-point Likert scale. This was constructed by evaluating on a 10-point scale where "1" means that you find it absolutely unacceptable and "10" means that you find it absolutely acceptable their views of: (1) someone receives welfare payments without entitlement; (2) an individual is hired by a household for work and s/he does not declare the payment received to the tax or social security authorities even though it should be declared; (3) A firm is hired by a household for work and it does not declare the payment received to the tax or social security authorities; (4) a firm is hired by another firm for work and it does not declare its activities to the tax or social security authorities; (5) a firm hires an individual and all or a part of the wages paid to him/her are not officially declared and (6) someone evades taxes by not declaring or only partially declaring their income. Collating the responses to these six questions, and giving equal weighting to each response, an aggregate 'asymmetry index' is constructed for each individual. The higher the index value, the greater is asymmetry between the formal institutions (laws and regulations) and the informal institutions (social norms, values and beliefs regarding the acceptability of working in the informal economy).
- *Country*: a categorical variable with value 1 for FYR of Macedonia, value 2 for Bulgaria and value 3 for Croatia

Given that there were some variables with missing values and inconclusive answers (i.e., refusal and 'don't know'), multiple imputation was used to predict the values. This is done using a system of chained equations for each variable with missing values, with 25 imputations simulated for each missing value. Furthermore, population weights are applied based on age and gender to correct for under- and over-representation in the sample.

Before turning to the findings, and given the sensitive subject under investigation, a comment is required on the reliability of the answers. In 93 per cent of the interviews, the interviewers reported good or excellent cooperation from the participant, and average cooperation in 6 per cent of cases. Cooperation was found to be poor in only 1 per cent of cases. Below, we report the results

## Findings

This study of a representative sample of the population in each country found that 8.1 per cent (1 in 12) of the total surveyed population in Bulgaria, Croatia and FYR of Macedonia had worked in the informal economy during the 12 months prior to the survey. There are, nevertheless, variations across populations (see Table 1). Not only is the participation rate higher in Croatia and Bulgaria than FYR of Macedonia, but also among men, younger people, the unemployed and self-employed, those with no money problems, and living in rural areas. Participation is also more prevalent among those viewing the detection risk as very small and the sanctions lower, as well as among those whose norms, values and beliefs are not in symmetry with the laws and regulations, and those perceiving a greater share of the population to be engaged in the informal economy.

Turning to whether they do so for exclusion- or exit-driven rationales, Table 1 reveals that there is no one single universal logic. Instead, 54 per cent of informal workers are purely exit-driven, 16.9 per cent purely exclusion-driven, 26.6 per cent a mixture of both exclusion- and exit-driven rationales, and 2.5 per cent either did not answer or did not know. Hence, there is a 3.2:1 ratio of those purely exit-driven compared with those exclusion-driven. Importantly, this ratio is not uniform across all populations. In Bulgaria, there is a 4.8:1 ratio of those purely exit-driven compared with those purely exclusion-driven, whilst in Croatia this ratio is 4.1:1 and in FYR of Macedonia just 1.7:1. Consequently, the relative sizes of the exit-driven upper tier and exclusion-driven lower tier markedly vary across countries.

INSERT TABLE 1 ABOUT HERE

There are also marked variations across population groups. Exclusion-driven motives are more common (measured in terms of the ratio of exit- to exclusion-driven informal workers) among women, older people, the unemployed, students and inactive, and self-employed, those struggling financially, and those living in rural areas or smaller towns. They are also more common among those who view only a small proportion of the population to engage in the informal economy and those whose norms, values and beliefs are in symmetry with the laws and regulations. Exit-driven rationales, meanwhile, are more common among men, younger people (with the exception of those aged over 65 years old), the employed and retired, those who are not struggling financially, and living in larger towns. They are also more common among those who perceive a large proportion of the population to engage in the informal economy and whose norms, values and beliefs are not aligned with the laws and regulations, as well as among those who view there to be a high risk of detection and higher penalties to be involved.

To evaluate which types of South-East European citizen display a greater propensity to participate in the informal economy, when other variables are introduced and held constant, model 1 (see Table 2) reports a logit regression analysis. Model 1 shows that men, younger citizens, the unemployed and those living in more rural areas are significantly more likely to do so. Evaluating whether these participants in the informal economy are more rational economic actors as neo-liberals suggest, or more social actors who do so when there is a lack of horizontal and vertical trust, model 1 reveals that those perceiving the expected sanctions and risk of detection as higher are less likely to engage in the informal economy, but so too are participants more likely to engage when there is less horizontal and vertical trust. Those who perceive a larger proportion of the population to be engaged in the informal economy, and those whose norms differ to the laws and regulations, display a significantly greater likelihood of participating in the informal economy.

INSERT TABLE 2 ABOUT HERE

1  
2  
3 Which populations, therefore, are significantly more likely to be in the exit-driven upper tier and  
4 exclusion-driven lower tier? To evaluate which populations groups are significantly more likely to  
5 be found in these two tiers, and the policy approaches required to tackle these tiers, when other  
6 variables are introduced and held constant, model 2 (see Table 2) reports a multinomial logit  
7 regression analysis. Model 2 reveals that, relative to the exclusion-driven lower tier, participants  
8 in the exit-driven upper tier are significantly more likely to be employed or retired than  
9 unemployed, those who are not struggling financially, those whose norms, values and beliefs do  
10 not conform with the laws and regulations, and those who view a larger proportion of the  
11 population to be engaged in the informal economy. Interestingly, compared to the exclusion-  
12 driven lower tier, the risk of detection and expected sanctions are not significantly associated with  
13 those who engage in the informal economy for exit-driven rationales, suggesting that increasing  
14 the penalties and risks of detection will have no impact on participation for those who voluntarily  
15 choose to engage in the informal economy. However, tackling the lack of vertical and horizontal  
16 trust will have a positive effect.  
17

18 Furthermore, relative to the exclusion-driven lower tier, those significantly likely to cite a  
19 combination of exclusion and exit rationales perceive a larger proportion of the population to  
20 operate informally (i.e., there is a lack of horizontal trust) and have a higher asymmetry index  
21 (i.e., there is a lack of vertical trust). Again, the level of penalties and risks of detection are not  
22 significantly correlated with engagement in the informal economy for this group.  
23

## 24 Discussion and Conclusions

25  
26 This paper has evaluated the thesis that the informal economy is a dual labour market composed  
27 of an exit-driven “upper tier” and exclusion-driven “lower-tier”, along with the population groups  
28 significantly more likely to be found in these two tiers, and the policy approaches required to  
29 tackle these tiers. Reporting a survey conducted in Bulgaria, Croatia and FYR of Macedonia, the  
30 finding is that involvement that 16.9 per cent are purely exclusion-driven and they are more likely  
31 to be unemployed and to be struggling financially, 54 per cent purely exit-driven and are more  
32 likely to be employed and not to be struggling financially, and 26.6 per cent to do so for a mixture  
33 of both exclusion- and exit-driven rationales.  
34

35 Theoretically, therefore, this paper advances understanding of workers involvement in the  
36 informal economy. Conventionally, scholars have adopted an either/or approach viewing  
37 participation in the informal economy to be driven either by purely exclusion- or exit-driven  
38 rationales. This paper has revealed that a both/and approach is required. Not only is there an exit-  
39 driven upper tier but also an exclusion-driven lower tier of informal workers. However, the  
40 identification that a quarter of all informal workers do so for a mixture of both exclusion- and  
41 exit-driven rationales reveals that a spectrum of rationales should be conceptualised ranging from  
42 those driven by purely exit rationales at one end to those driven by purely exclusion rationales at  
43 the other end. To further advance understanding of workers involvement in the informal economy,  
44 therefore, what is now needed is for wider research on where informal workers are positioned on  
45 this spectrum in a range of individual countries and global regions, along with the population  
46 groups which populate different positions on this spectrum in various geographical contexts.  
47

48 In terms of the policy implications, this paper has revealed the policy approaches required  
49 to tackle these different tiers. The conventional deterrence approach that seeks to raise the costs of  
50 participation in the informal economy by increasing the penalties and risks of detection has been  
51 shown to have no effect on those driven by exclusion rationales and neither does it have any  
52 influence on those driven by exit rationales. Instead, to tackle those driven by exit rationales,  
53 tackling both the lack of horizontal trust that other citizens are operating in a compliant manner  
54 and the lack of vertical trust in formal institutions is advocated, both of which are significantly  
55 correlated with exit-driven participation in the informal economy. Those who voluntarily engage  
56

1  
2  
3 in the informal economy have a higher propensity to participate when they believe that many  
4 others do so (i.e., there is a lack of horizontal trust) and also when their norms, values and beliefs  
5 are not in symmetry with the laws and regulations (i.e., when there is a lack of vertical trust).  
6 How, therefore, can this be achieved? Firstly, policy measures are required to alter the norms,  
7 values and beliefs regarding both the extensiveness of the informal economy and the acceptability  
8 of participation. This requires marketing and education campaigns to raise awareness about both  
9 the limited extent of participation as well as the benefits of formality and costs of operating in the  
10 informal economy. Secondly, however, changes are also needed in the formal institutions,  
11 especially in the countries studied here where formal institutional deficiencies result in a lack of  
12 trust in government. On the one hand, and to tackle the lack of vertical trust, there is a need to  
13 modernise the formal institutions and quality of governance, by which is here meant pursuing  
14 improvement in the view of citizens that: the state authorities treat them in a respectful, impartial  
15 and responsible manner (Murphy, 2005); they pay their fair share compared with others (Molero  
16 and Pujol, 2012), and they receive the goods and services they deserve for the taxes they pay  
17 (McGee, 2005). On the other hand, and to tackle the problem of informal workers driven by  
18 exclusion into the informal economy, policy initiatives are needed to change the macro-level  
19 economic and social conditions. As previous empirical studies reveal, this includes policy  
20 initiatives to increase the level of expenditure on active labour market policies to support  
21 vulnerable groups, and the level of expenditure on social protection (Autio and Fu, 2015;  
22 Horodnic, 2016; Thai and Turkina, 2014; Williams and Horodnic, 2015a,b; Williams and  
23 Kayaoglu, 2017). Such initiatives reduce exclusion-driven participation in the informal economy  
24 by addressing the macro-level economic and social conditions which cause their participation.  
25

26 In sum, if this paper stimulates a shift away from the current either/or debates and towards  
27 a both/and approach which recognises the existence of both exclusion- and exit-driven informal  
28 workers along a spectrum, along with research on what proportion of informal workers are  
29 positioned at different positions on this spectrum in a wider range of nations and global regions,  
30 then one intention of this paper will have been achieved. If this recognition then results in wider  
31 research being undertaken on the various policy approaches required to tackle these different  
32 types of informal worker, then its fuller intention will have been achieved. What is certain,  
33 however, is that the informal sector can no longer be argued to be either purely a necessity-driven  
34 realm for excluded populations or purely a result of a desire to exit an over-regulated and  
35 burdensome declared economy, and neither can it be assumed that the conventional deterrence  
36 approach is everywhere appropriate for tackling this sphere.  
37  
38

### 39 References

- 40  
41 Allingham, M. and Sandmo, A. (1972), "Income tax evasion: a theoretical analysis", *Journal of*  
42 *Public Economics*, Vol. 1, pp. 323-38.  
43  
44 Autio, E. and Fu, K. (2015), "Economic and political institutions and entry into formal and  
45 informal entrepreneurship", *Asia Pacific Journal of Management*, Vol. 32 No. 1, pp. 67-  
46 94.  
47  
48 Baric, M. (2016), *Undeclared work in Croatia: a social exchange perspective*, PhD thesis,  
49 Management School, University of Sheffield, Sheffield.  
50  
51 Baumol, W.J. and Blinder, A. (2008), *Macroeconomics: principles and policy*, South-Western  
52 Publishing, Cincinnati, OH.  
53  
54 Castells, M. and Portes, A. (1989), "World underneath: the origins, dynamics and effects of the  
55 informal economy", in Portes, A., Castells, M. and Benton, L.A. (eds.), *The Informal*  
56 *Economy: studies in advanced and less developing countries*, John Hopkins University  
57 Press, Baltimore, pp. 19-42.  
58  
59  
60

- 1  
2  
3 **Chavdarova, T. (2013), "Risky businesses? young people in informal self-employment in Sofia",**  
4 ***International Journal of Urban and Regional Research*, Vol. 38 No. 6, pp. 2060-2077.**
- 5 Cross, J.C. (2000), "Street vendors, modernity and postmodernity: conflict and compromise in the  
6 global economy", *International Journal of Sociology and Social Policy*, Vol. 20 No. 1, pp.  
7 29-51.
- 8 Davis, M. (2006), *Planet of Slums*, Verso, London.
- 9 De Soto, H. (1989), *The Other Path: the economic answer to terrorism*, Harper and Row, London.
- 10 De Soto, H. (2001), *The Mystery of Capital: why capitalism triumphs in the West and fails*  
11 *everywhere else*, Black Swan, London.
- 12 European Commission (2007), *Stepping up the Fight against Undeclared Work*, European  
13 Commission, Brussels.
- 14 Fields, G. S. (1990), "Labour market modelling and the urban informal sector: theory and  
15 evidence", in Turnham, D., Salome, B. and Schwarz, A. (eds.), *The Informal Sector*  
16 *Revisited*, OECD, Paris, pp. 49-69.
- 17 Fields, G.S. (2005), *A Guide to Multisector Labor Market Models*, World Bank Social Protection  
18 Discussion Paper 0505, Washington DC.
- 19 Gallin, D. (2001), "Propositions on trade unions and informal employment in time of  
20 globalization", *Antipode*, Vol. 19 No. 4, pp. 531-549.
- 21 **Garvanlieva, V., Andonov, V., Nikolov, M. (2012), *Shadow Economy in Macedonia*, Center for**  
22 **Economic Analyses, Skopje.**
- 23 Geertz, C. (1963), *Peddlers and Princes: social change and economic modernization in two*  
24 *Indonesian towns*, University of Chicago, Chicago.
- 25 Gërxfhani, K. (2004), "The informal sector in developed and less developed countries: a literature  
26 survey", *Public Choice*, Vol. 120, pp. 267-300.
- 27 Godfrey, P.C. (2011), "Towards a theory of the informal economy", *Academy of Management*  
28 *Annals*, Vol. 5, pp. 231-277.
- 29 Godfrey, P.C. (2015), "Introduction: Why the informal economy matters to management", in  
30 Godfrey, P.C. (ed.), *Management, society, and the informal economy*, Routledge, London,  
31 pp. 1-20.
- 32 Gurtoo, A. and Williams, C.C. (2009), "Entrepreneurship and the informal sector: some lessons  
33 from India", *International Journal of Entrepreneurship and Innovation*, Vol. 10 No. 1, pp.  
34 55-62.
- 35 Hasseldine, J. and Li, Z. (1999), "More tax evasion research required in new millennium", *Crime,*  
36 *Law and Social Change*, Vol. 31 No. 1, pp. 91-104.
- 37 Helmke, G. and Levitsky, S. (2004), "Informal institutions and comparative politics: a research  
38 agenda", *Perspectives on Politics*, Vol. 2 No. 4, pp. 725-740.
- 39 Horodnic, I. (2016), *Cash wage payments in transition economies: consequences of envelope*  
40 *wages*, IZA World of Labour, Berlin.
- 41 ILO (2013), *Statistical Update on Employment in the Informal Economy*, International Labour  
42 Organisation, Geneva.
- 43 Job, J., Stout, A. and Smith, R. (2007), "Culture change in three taxation administrations: from  
44 command and control to responsive regulation", *Law and Policy*, Vol. 29 No. 1, pp. 84-  
45 101.
- 46 Jütting, J.P. and Laiglesia, J.R. (2009), "Employment, poverty reduction and development: what's  
47 new?", in Jütting, J.P. and Laiglesia, J.R. (eds.), *Is Informal Normal? Towards more and*  
48 *better jobs in developing countries*, OECD, Paris, pp. 19-42.
- 49 Lewis, A. (1959), *The Theory of Economic Growth*, Allen and Unwin, London.
- 50 Maloney, W.F. (2004), "Informality revisited", *World Development*, Vol. 32 No. 7, pp. 1159-  
51 1178.
- 52  
53  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3 McGee, R.W. (2005), *The ethics of tax evasion: a survey of international business academics*,  
4 Paper presented at the 60<sup>th</sup> International Atlantic Economic Conference, New York,  
5 October 6-9.
- 6 Molero, J.C. and Pujol, F. (2012), "Walking inside the potential tax evader's mind: tax morale  
7 does matter", *Journal of Business Ethics*, Vol. 105, pp. 151-162.
- 8 Murphy, K. (2005), "Regulating more effectively: the relationship between procedural justice,  
9 legitimacy and tax non-compliance", *Journal of Law and Society*, Vol. 32 No. 4, pp. 562-  
10 89.
- 11 North, D.C. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge  
12 University Press, Cambridge.
- 13 OECD (2012), *Reducing opportunities for tax non-compliance in the underground economy*,  
14 OECD, Paris.
- 15 Packard, T. (2007), *Do workers in Chile choose informal employment? a dynamic analysis of*  
16 *sector choice*, World Bank Latin American and the Caribbean Region Social Projection  
17 Unit, Washington DC.
- 18 Perry, G.E. and Maloney, W.F. (2007), "Overview: Informality – exit and exclusion", in Perry,  
19 G.E., Maloney, W.F., Arias, O.S., Fajnzylber, P., Mason, A.D. and Saavedra-Chanduvi, J.  
20 (eds.), *Informality: exit and exclusion*, World Bank, Washington DC, pp. 1-20.
- 21 Pfeffermann, D. (1993), "The role of sampling weights when modelling survey data",  
22 *International Statistical Review*, Vol. 61 No. 2, pp. 317-337.
- 23 Portes, A. and Roberts, B. (2005), "The free-market city: Latin American urbanization in the years  
24 of the neoliberal experiment", *Studies in Comparative International Development*, Vol. 40  
25 No. 1, pp. 43-82.
- 26 Rakowski, C.A. (1994), "Convergence and divergence in the informal sector debate: a focus on  
27 Latin America, 1984-92", *World Development*, Vol. 22 No. 4, pp. 501-516.
- 28 Sassen, S. (1997), *Informalisation in Advanced Market Economies*, Issues in Development  
29 Discussion Paper 20. International Labour Organisation, Geneva.
- 30 Schneider, F. and Williams, C.C. (2013), *The Shadow Economy*, Institute of Economic Affairs,  
31 London.
- 32 Siqueira, A.C.O., Webb, J.W. and Bruton, G.D. (2016), "Informal Entrepreneurship and Industry  
33 Conditions", *Entrepreneurship Theory and Practice*, Vol. 40 No. 1, pp. 177-200.
- 34 Slavnic, Z. (2010), "Political economy of informalisation", *European Societies*, Vol. 12 No. 1, pp.  
35 3-23.
- 36 Snyder, K.A. (2004), "Routes to the Informal economy in New York's East village: crisis,  
37 economics and identity", *Sociological Perspectives*, Vol. 47 No. 2, pp. 215-240.
- 38 Taiwo, O. (2013), "Employment choice and mobility in multi-sector labour markets: theoretical  
39 model and evidence from Ghana", *International Labour Review*, Vol. 152 No. 3-4, pp.  
40 469-492.
- 41 Thai, M.T.T. and Turkina, E. (2014), "Macro-level determinants of formal entrepreneurship  
42 versus informal entrepreneurship", *Journal of Business Venturing*, Vol. 29 No. 4, pp. 490-  
43 510.
- 44 Tokman, V. (2001), "Integrating the informal sector in the modernization process", *SAIS Review*,  
45 Vol. 21 No. 1, pp. 45-60.
- 46 Webb, J.W. and Ireland, R.D. (2015), "Laying the foundation for a theory of informal  
47 adjustments", in Godfrey, P.C. (ed.), *Management, society, and the informal economy*,  
48 Routledge, London, pp. 21-41.
- 49 Webb, J.W., Tihanyi, L. Ireland, R.D. and Sirmon, D.G. (2009), "You say illegal, I say legitimate:  
50 entrepreneurship in the informal economy", *Academy of Management Review*, Vol. 34 No.  
51 3, pp. 492-510.
- 52  
53  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3 Welter, F., Smallbone, D. and Pobol, A. (2015), “Entrepreneurial activity in the informal  
4 economy: a missing piece of the jigsaw puzzle”, *Entrepreneurship and Regional*  
5 *Development*, Vol. 27 No. 5-6, pp. 292-306.
- 6 Williams, C.C. (2014), “Out of the shadows: a classification of economies by the size and  
7 character of their informal sector”, *Work, Employment and Society*, Vol. 28 No. 5, pp.  
8 735–53.
- 9 Williams, C.C. (2015), “Out of the margins: classifying economies by the prevalence and  
10 character of employment in the informal economy”, *International Labour Review*, Vol.  
11 154 No. 3, pp. 331-352.
- 12 Williams, C.C. and Horodnic, I. (2015), “Evaluating the prevalence of the undeclared economy in  
13 Central and Eastern Europe: an institutional asymmetry perspective”, *European Journal of*  
14 *Industrial Relations*, Vol. 21 No. 4, pp. 389-406.
- 15 Williams, C.C. and Horodnic, I. (2016a), “Evaluating the illegal employer practice of under-  
16 reporting employees’ salaries”, *British Journal of Industrial Relations*,  
17 DOI: 10.1111/bjir.12179
- 18 Williams, C.C. and Horodnic, I. (2016b), “Cross-country variations in the participation of small  
19 businesses in the informal economy: an institutional asymmetry perspective”, *Journal of*  
20 *Small Business and Enterprise Development*, Vol. 23 No. 1, pp. 3–24.
- 21 Williams, C.C. and Kayaoglu, A. (forthcoming 2017) “Evaluating the prevalence of employees  
22 without written terms of employment in the European Union”, *Employee Relations*,
- 23 Williams, C. C. and Shahid, M. (2016), “Informal entrepreneurship and institutional theory:  
24 explaining the varying degrees of (in)formalisation of entrepreneurs in Pakistan”,  
25 *Entrepreneurship and Regional Development*, Vol. 28 No. 1-2, pp. 1-25.
- 26 Williams, C.C. and Windebank, J. (2001), “Reconceptualising paid informal exchange: some  
27 lessons from English cities”, *Environment and Planning A*, Vol. 33 No. 1, pp. 121-140.
- 28 Williams, C.C., Shahid, M. and Martinez, A. (2016a), “Determinants of the level of informality of  
29 informal micro-enterprises: some evidence from the city of Lahore, Pakistan”, *World*  
30 *Development*, Vol. 84, pp. 312-325.
- 31 Williams, C.C., Martinez-Perez, A. and Kedir, A.M. (2016b), “Informal entrepreneurship in  
32 developing economies: the impacts of starting-up unregistered on firm performance”,  
33 *Entrepreneurship Theory and Practice*, doi: 10.1111/etap.12238
- 34 Williams, C.C., Radevsky, M. and Stefanik, M. (2017), *Evaluating the extent and nature of*  
35 *undeclared work in Croatia*, Croatian Ministry of Labour and Pensions, Zagreb.
- 36 Winship, C. and Radbill L. (1994), “Sampling weights and regression analysis”, *Sociological*  
37 *Methods and Research*, Vol. 23 No. 2, pp. 230-257.
- 38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Table 1. Participation in the informal economy in Bulgaria, Croatia and FYR of Macedonia

	Work in the informal economy (%)	Reasons for engaging in informal economy (%)				Ratio of purely exit- to purely exclusion driven
		To exit formal economy	Exclusion from formal economy	Both exit and exclusion	Refusal/ do not know	
Total	8.1	54.0	16.9	26.6	2.5	3.2:1
Gender:						
Male	11.2	55.4	16.6	25.4	2.7	3.3:1
Female	5.3	51.2	17.6	29.0	2.2	2.9:1
Age groups:						
15-24	9.7	55.7	14.8	28.3	1.2	3.8:1
25-39	10.4	53.1	16.6	26.9	3.4	3.2:1
40-54	9.3	50.5	16.7	30.4	2.4	3.0:1
55-64	8.2	54.4	22.2	20.2	3.1	2.5:1
65+	2.4	69.7	10.8	19.5	0.0	6.5:1
Employment status:						
Employed	7.7	65.2	11.6	20.1	3.1	5.6:1
Self-employed	15.7	48.6	20.8	30.6	0.0	2.3:1
Unemployed	14.3	31.2	24.9	40.1	3.8	1.3:1
Retired	3.7	74.9	12.5	11.2	1.4	6.0:1
Student and inactive	7.7	57.4	16.3	26.3	0.0	3.5:1
Financial situation:						
Struggling	8.4	36.9	25.3	37.1	0.7	1.5:1
Maintaining	7.9	64.0	12.8	20.2	3.0	5.0:1
Just comfortable	7.5	65.2	8.6	23.2	3.0	7.6:1
No money problems	12.0	38.6	23.4	31.7	6.3	1.6:1
Type of locality:						
Rural area or village	9.5	51.2	17.9	29.2	1.7	2.9:1
Small or middle sized town	8.6	51.5	19.0	26.8	2.7	2.7:1
Large town	6.6	59.5	14.1	22.9	3.5	4.2:1
Detection risk:						
Very small	10.9	50.1	16.9	30.8	2.2	3.0:1
Fairly small	8.0	56.8	16.7	24.7	1.8	3.4:1
Fairly high	6.9	54.1	18.3	22.6	5.1	2.9:1
Very high	7.6	60.5	17.4	22.1	0.0	3.5:1
Expected sanctions:						
Normal taxes due, no fine	9.3	54.6	19.9	23.2	2.3	2.7:1
Normal taxes due, plus fine	7.0	53.7	16.5	26.7	3.1	3.3:1
Prison	6.3	68.2	21.2	10.6	0.0	3.2:1
Estimated share in informal economy:						
less than 5%	4.0	50.3	43.5	6.2	0.0	1.1:1
5 to 10%	3.9	67.7	23.6	5.5	3.2	2.9:1
10 to 20%	6.5	50.9	21.2	22.8	5.1	2.4:1
20 to 50%	9.1	56.6	15.6	25.6	2.3	3.6:1
50% or more	15.4	50.2	14.0	34.6	1.3	3.6:1
Asymmetry index:						
<2	5.4	50.6	21.0	25.7	2.7	2.4:1
2 do 4	9.5	51.6	18.5	27.6	2.4	2.8:1
4 do 6	15.2	58.6	11.1	27.8	2.4	5.3:1
6 do 8	13.8	67.6	8.9	23.6	0.0	7.6:1
8 do 10	24.8	56.0	11.7	25.2	7.1	4.8:1
Country:						
FYR of Macedonia	6.1	52.1	31.0	13.3	3.6	1.7:1
Bulgaria	9.2	55.3	11.5	31.7	1.6	4.8:1
Croatia	9.2	53.8	13.0	30.4	2.8	4.1:1

Source: Authors' own calculations based on the representative survey of 6,019 individuals in FYR of Macedonia, Bulgaria and Croatia

Table 2. Regressions of the reasons for participation in informal economy in FYR of Macedonia, Bulgaria and Croatia

	Model 1:	Model 2:	
	Participation in informal economy	Reasons for participation in informal economy	
	Logit regression Coeff. (S.E.)	Multinomial logit regression Baseline category: Exclusion rationales	
		Exit rationales Coeff. (S.E.)	Both exit and exclusion Coeff. (S.E.)
Female	-0.804 (0.108)***	0.066 (0.306)	0.321 (0.330)
Age	-0.009 (0.004)**	0.001 (0.012)	0.005 (0.013)
Employment status (RC: Unemployed):			
Employed	-0.783 (0.145)***	1.054 (0.375)***	-0.096 (0.410)
Self-employed	-0.049 (0.218)	0.311 (0.556)	0.095 (0.581)
Retired	-1.248 (0.217)***	1.636 (0.573)***	-0.678 (0.695)
Student and inactive	-0.719 (0.196)***	0.987 (0.504)**	0.405 (0.566)
Financial situation (RC: Struggling):			
Maintaining	-0.022 (0.126)	1.163 (0.336)***	0.236 (0.374)
Just comfortable	-0.082 (0.156)	1.636 (0.457)***	0.814 (0.530)
No money problems	0.468 (0.361)	-0.056 (0.890)	-0.098 (0.895)
Type of locality (RC: Rural area or village):			
Small or middle sized town	-0.242 (0.136)*	-0.523 (0.385)	-0.555 (0.434)
Large town	-0.273 (0.122)**	0.076 (0.351)	0.006 (0.397)
Detection risk (RC: Very small):			
Fairly small	-0.328 (0.136)**	0.139 (0.360)	-0.140 (0.421)
Fairly high	-0.391 (0.151)***	0.614 (0.411)	0.386 (0.498)
Very high	-0.317 (0.181)*	0.696 (0.523)	0.139 (0.623)
Expected sanctions (RC: Normal tax or social security contributions due, but no fine):			
Normal tax or social security contributions due, plus a fine	-0.259 (0.112)**	0.375 (0.367)	0.576 (0.389)
Prison	-0.426 (0.264)	0.671 (0.695)	-0.072 (0.872)
Estimated share (RC: 50% or more):			
less than 5%	-1.341 (0.349)***	-1.561 (0.807)**	-2.792 (1.153)**
5 to 10%	-1.323 (0.244)***	-0.608 (0.678)	-2.521 (1.115)**
10 to 20%	-0.848 (0.182)***	-0.466 (0.477)	-0.749 (0.535)
20 to 50%	-0.546 (0.130)***	-0.108 (0.355)	-0.273 (0.397)
Asymmetry index	0.236 (0.023)***	0.170 (0.079)**	0.196 (0.084)**
Country (RC: FYR of Macedonia):			
Bulgaria	0.553 (0.140)***	1.157 (0.366)***	1.991 (0.470)***
Croatia	0.680 (0.143)***	1.365 (0.396)***	2.243 (0.499)***
Const	-0.948 (0.273)***	-1.999 (0.768)***	-1.940 (0.873)**
Number of observations	6,019		482
Number of imputations	25		25
Prob > F	0.000		0.000
Pseudo R2	0.131		0.153

Significance: \*p<0.1, \*\*p<0.05, \*\*\*p<0.01

Abbreviations: Coeff. – simple coefficient of the regression, S.E. – standard errors of the individual regression coefficients.

Source: Authors' own calculations based on the representative survey of 6,019 individuals in FYR of Macedonia, Bulgaria and Croatia