



This is a repository copy of *Beyond the marginalization thesis: evaluating participation in informal sector entrepreneurship*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/88082/>

Version: Accepted Version

Article:

Williams, C.C. and Horodnic, I. (2016) Beyond the marginalization thesis: evaluating participation in informal sector entrepreneurship. *International Journal of Entrepreneurship and Small Business*, 28 (2-3). pp. 234-254. ISSN 1741-8054

<https://doi.org/10.1504/IJESB.2016.076635>

Reuse

Unless indicated otherwise, fulltext items are protected by copyright with all rights reserved. The copyright exception in section 29 of the Copyright, Designs and Patents Act 1988 allows the making of a single copy solely for the purpose of non-commercial research or private study within the limits of fair dealing. The publisher or other rights-holder may allow further reproduction and re-use of this version - refer to the White Rose Research Online record for this item. Where records identify the publisher as the copyright holder, users can verify any specific terms of use on the publisher's website.

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 including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Beyond the marginalization thesis: evaluating participation in informal sector entrepreneurship

Colin C Williams
Professor of Public Policy
Management School
University of Sheffield
Sheffield S10 1FL
United Kingdom
Tel: +44 114 2223476
E-mail: C.C.Williams@sheffield.ac.uk

Dr. Ioana Alexandra Horodnic
Department of Management, Marketing and Business Administration
Alexandru Ioan Cuza University of Iasi
Iasi
Romania
E-mail: ursachi_ioana_alexandra@yahoo.com

Colin C Williams is Professor of Public Policy in Sheffield University Management School (SUMS) at the University of Sheffield in the United Kingdom. His research interests include the informal economy, entrepreneurship and economic development, subjects on which he has published some 20 monographs and over 300 journal articles over the past 25 years. His recent books include *Confronting the Shadow Economy* (2014, Edward Elgar), *The Shadow Economy* (2013, Institute of Economic Affairs) and *Informal Work in Developed Nations* (2010, Routledge).

Dr. Ioana Alexandra Horodnic is an associate teaching assistant at the Alexandru Ioan Cuza University of Iasi in Romania and a post-doctoral researcher at the Romanian Academy. Her current research interests are in the informal sector and academic performance.

Abstract

This paper evaluates which entrepreneurs participate in the informal sector. Until now, the dominant view has been that entrepreneurs from marginalized groups benefiting least from the formal sector are more likely to do so. To evaluate this marginalization thesis, we report a 2013 survey of 11 Central and East European countries involving 707 face-to-face interviews with entrepreneurs about their participation in the informal sector. Using logistic regression analysis, the finding is that the marginalization thesis applies when examining characteristics such as the household financial circumstances and age of entrepreneurs engaged in the informal sector. However, when gender variations are analysed, the thesis is negatively confirmed. Meanwhile, no association is found when analysing characteristics such as the educational level, social class and area inhabited. The outcome is a call to move beyond the marginalization thesis and towards a more nuanced understanding of which entrepreneurs participate in the informal sector.

Keywords: informal economy; undeclared work; self-employment; entrepreneurship; marginalization; Eastern and Central Europe.

Introduction

Over the past decade or so, a new sub-field of entrepreneurship scholarship has emerged which focuses upon those previously ignored entrepreneurs who conduct some or all of their transactions in the informal sector (Aidis et al., 2006; Barbour and Llanes, 2013; Bureau and Fendt, 2011; Dellot, 2012; Kus, 2014; Mróz, 2012; Thai and Turkina, 2013; Webb et al., 2013; Williams, 2006). This emergent sub-field of ‘informal sector entrepreneurship’ has so far analysed the magnitude of entrepreneurship in the informal sector (Autio and Fu, 2014; Williams, 2013), the extent to which entrepreneurs operate in the informal sector (De Castro et al., 2014; Williams and Shahid, 2014) and their reasons for doing so (Adom, 2014; Chen, 2012; Hudson et al., 2012; Williams, 2009; Williams et al., 2010). Until now however, there has been little investigation of which entrepreneurs display a greater propensity to participate in the informal sector. Instead, it has been simply assumed that the entrepreneurs more likely to do so are those from marginalized groups, benefiting least from the formal economy and more likely to be excluded from the formal labour market, who thus enter informal sector entrepreneurship as a last resort due to few other opportunities being open to them (Barbour and Llanes, 2013; Brill, 2011; Katungi et al. 2006; Llanes and Barbour, 2007). Given that this is more an assumption than a finding based on evidence, the aim of this paper is to evaluate for the first time the validity of this ‘marginalization thesis’. This is important to understand not only for theorising who participates in informal sector entrepreneurship but also for developing policy approaches for tackling this sphere.

In the first section therefore, we introduce the dominant view regarding which groups participate in informal sector entrepreneurship, namely the marginalization thesis, which asserts that it is predominantly marginalized groups who benefit least from the formal sector. To evaluate the various tenets of this marginalization thesis, the second section introduces the method and data used to do so, namely a logistic regression analysis of data collected in a 2013 Eurobarometer survey in 11 Central and East European (CEE) countries that examines which entrepreneurs participate in the informal sector. The third section then reports the descriptive findings followed in the fourth section by the results of a logistic regression analysis which identifies the type of entrepreneurs most likely to participate in the informal sector when other characteristics are held constant. The fifth and final section turns to the theoretical and policy implications of the findings. This will display the need for not only a

move beyond the marginalization thesis and towards a more nuanced theoretical understanding but also for a more variegated and finer-grained approach by policy-makers when targeting entrepreneurs in order to tackle the informal sector.

At the outset however, it is necessary to define informal sector entrepreneurship. Mirroring the broad consensus in both the scholarly and policy literature, the informal sector here refers to paid activities not declared to the authorities for tax, social security and/or labour law purposes when they should be declared but which are legal in all other respects (Dekker et al., 2010; European Commission, 2007; OECD, 2012; Schneider, 2008; Schneider and Williams, 2013). Meanwhile, an entrepreneur in this paper refers to those who self-report that they are self-employed, which is akin to the standard definition of an entrepreneur as somebody who is actively involved in starting a business or is the owner/manager of a business (Harding et al., 2006; Reynolds et al., 2002). Informal sector entrepreneurs, therefore, are here defined as the self-employed engaged in monetary transactions not declared to the authorities for tax, benefit and/or labour law purposes when they should be declared but which are legal in all other respects. The only illicit aspect of their activity in consequence, is that when trading licit goods and/or services, some or all of their monetary transactions are not declared. Entrepreneurs trading illicit goods and services (e.g., drug trafficking, gun-running) are not informal entrepreneurs. They are part of the much wider criminal economy participating in what has been termed 'criminal' entrepreneurship (McElwee et al., 2011, 2014; Smith and McElwee, 2013).

Informal sector entrepreneurship and marginalized populations

It is now widely recognised that many working in the informal sector are doing so on a self-employed basis. This was first recognised in emerging economies (Cross, 2000; Cross and Morales, 2007; De Soto, 1989, 2001; ILO, 2002a; Khan and Quaddus, 2015; Williams, 2015c; Williams and Shahid, 2014; Williams and Gurtoo, 2013). As the ILO (2002) find, in sub-Saharan Africa 70 per cent of those operating in the informal sector are doing so on a self-employed basis, 62 per cent in North Africa, 60 per cent in Latin America and 59 per cent in Asia. Subsequently, the self-employed have been similarly shown to constitute the vast majority of the informal labour force in advanced western economies (Boels, 2014; Evans et al. 2006; Katungi et al. 2006; Small Business Council, 2004; Snyder, 2004; Williams, 2014a,b; Williams et al., 2011) and also post-socialist transition economies (Aliyev, 2015; Chavdarova, 2014; Likic-Brboric et al., 2013; Round et al., 2008; Williams, 2014c; Williams and Horodnic, 2015; Williams et al., 2013, 2014, 2015).

It is also widely recognised that many entrepreneurs conduct some or all of their transactions in the informal economy (Aidis et al., 2006; Barbour and Llanes, 2013; Bureau and Fendt, 2011; De Castro et al., 2014; Kus, 2014; Mróz, 2012; Thai and Turkina, 2013; Webb et al., 2013; Williams, 2007, 2010, 2015a,b) and that a large proportion of enterprises start-up on an unregistered basis in the informal sector (Thai and Turkina, 2014; Williams, 2015a,b,c; Williams and Martinez, 2014a,b,c,d). As Autio and Fu (2014) highlight, some two-thirds of businesses start-up without registration in the informal sector not only in emerging and transition economies (where 0.62 informal businesses compared with 0.37 formal businesses are created annually for every 100 people) but also in OECD countries (where 0.62 informal businesses compared with 0.43 formal businesses are annually created for every 100 people). There is also a wealth of literature which evaluates their reasons for participating in the informal sector and reveals that not all are driven by necessity into informal sector entrepreneurship (Adom, 2014; Chen, 2012; Hudson et al., 2012; Williams et al., 2010).

Until now however, which entrepreneurs display a greater propensity to participate in the informal sector has been seldom investigated. Instead, there has been an assumption that

participation in the informal sector is higher amongst entrepreneurs who are ‘marginalized’, belonging to population groups more likely to be excluded from the formal labour market and who thus become informal entrepreneurs as a last resort due to few other opportunities being open to them (Barbour and Llanes, 2013; Copisarow, 2004, Copisarow and Barbour, 2004; Llanes and Barbour, 2007). To understand the why this ‘marginalization’ thesis predominates, it is necessary to discuss the wider theories from which this view derives. For much of the twentieth century, discourse of the informal sector was dominated by ‘modernization’ theory which viewed the formalization of goods and services provision to be natural and inevitable as economies became more ‘advanced’ (Geertz, 1963; Gilbert, 1998; Lewis, 1959). Seen through this lens, the existence of the supposedly traditional informal sector is a manifestation of ‘backwardness’. The informal sector is seen as primitive, traditional, stagnant, marginal, residual, weak and fading from view; a leftover of pre-capitalist formations which the inexorable and inevitable march of modernization and economic development will eradicate. Therefore, this work is seen to persist largely in peripheral ‘backward’ areas and in marginalized populations (Geertz, 1963; Lewis, 1959).

Since the turn of the millennium however, this view of the informal sector as a leftover from some previous mode of production has been rejected. There has been recognition that the informal sector is a persistent feature of the global economy and that the majority of workforce in many countries and regions work in the informal sector (ILO, 2012, 2013; Jütting and Laiglesia, 2009; Schneider et al., 2010; Williams, 2013, 2014b). Indeed, of the three billion people in the global workforce, an OECD report suggests that nearly two-thirds (1.8 billion) have their main employment in the informal economy (Jütting and Laiglesia, 2009).

Recent decades have thus seen an alternative ‘political economy’ theory emerge that views such work as a direct by-product of the advent of a de-regulated open world economy (Castells and Portes 1989; Gallin 2001; Harriss-White, 2012; Hudson 2005; Portes 1994; Sassen 1996; Slavnic 2010; Taiwo, 2013). The increasing functional integration of a single global economic system is seen as resulting in subcontracting and outsourcing becoming a primary means of integrating employment in the informal sector into contemporary capitalism. Viewed through this conceptual lens, the informal sector is an inherent feature of contemporary capitalism and a direct result of employers seeking to reduce costs, such as by sub-contracting to the ‘precarious’ or ‘false’ self-employed in the informal sector, and such work is again seen to be conducted by marginalized populations excluded from formal jobs and formal welfare support who conduct such work out of necessity and as a last resort (Castells and Portes 1989; Davis 2006; Gallin 2001; ILO 2002; Roberts, 2013; Slavnic, 2010).

Both the earlier modernization and current political economy perspectives, therefore, hold in common the view that the informal sector is a realm in which marginalized populations participate. Who, therefore, are these marginalized populations supposedly engaged in the informal sector in general and informal sector entrepreneurship more particularly? Reviewing the literature, they are often deemed to be those populations and entrepreneurs living in peripheral rural regions (Button, 1984; Williams, 2010), poorer nations (Schneider and Williams, 2013) and poorer regions of the global economy (ILO, 2012; Williams, 2013). It is similarly asserted that those working as entrepreneurs out of financial necessity are more likely to be informal entrepreneurs (Adom, 2014; Barbour and Llanes, 2013; Brill, 2011; Katungi et al., 2006), as are those with lower educational levels (Bhowmik, 2007), younger rather than older entrepreneurs (Barbour and Llanes, 2013; Katungi et al., 2006; Llanes and Barbour, 2007), single and divorced rather than married people (Brill, 2011), those of a lower social class (Brill, 2011; Katungi et al., 2006; Llanes and Barbour, 2007), women rather than men (ILO, 2013; Leonard, 1994; Stănculescu, 2004), street vendors and hawkers rather than professionals (Williams and Shahid, 2015) and those who do not hold

attitudes aligned with the codified laws and regulations of the formal institutions (Webb et al. 2009, 2013). To evaluate the validity of this ‘marginalization thesis’ that informal entrepreneurs are predominantly marginalized populations, the following hypotheses can be thus tested:

Gendered marginalization hypothesis (H1): women entrepreneurs are more likely than men who are entrepreneurs to participate in the informal sector, when other characteristics are held constant.

Social class marginalization hypothesis (H2): those from lower social classes are more likely than those from higher social classes to participate in informal sector entrepreneurship, when other characteristics are held constant.

Educational level marginalization hypothesis (H3): those with fewer years in formal education are more likely than those who are better educated to participate in informal entrepreneurship, when other characteristics are held constant.

Age marginalization hypothesis (H4): younger entrepreneurs are more likely than older entrepreneurs to participate in the informal sector, when other characteristics are held constant.

Social status marginalization hypothesis (H5): single, widowed or divorced entrepreneurs are more likely than married entrepreneurs to participate in the informal sector, when other characteristics are held constant.

Tax morale marginalization hypothesis (H6): those entrepreneurs whose values and beliefs are at odds with the codified laws and regulations are more likely than those whose morale is aligned to participate in the informal sector, when other characteristics are held constant.

Occupational marginalization hypothesis (H7): those entrepreneurs more professional groups (e.g., doctors, lawyers) are less likely than other entrepreneurial groups to occupational groups to participate in the informal sector, when other characteristics are held constant.

Financial marginalization hypothesis (H8): those entrepreneurs with financial difficulties are more likely than those without such difficulties to participate in the informal sector, when other characteristics are held constant.

Rural marginalization hypothesis (H9): entrepreneurs in peripheral rural areas are more likely than those living in urban areas to participate in the informal sector, when other characteristics are held constant.

The principal stimulus for questioning these marginalization hypotheses is that recent years have seen a contesting of the ‘exclusion’ view contested that informal entrepreneurs are driven out of necessity into the informal sector. An ‘exit’ perspective has emerged depicting informal entrepreneurs as choosing to voluntarily exit the formal sector (Cross, 2000; Gerxhani, 2004; Maloney, 2004; Snyder, 2004; Williams et al., 2010, 2011). This view has gained further credence by an emergent group of institutional theorists who highlight that many entrepreneurs choose to operate informally because the norms, values and beliefs

regarding compliance of entrepreneurs (informal institutions) are not in symmetry with the codified laws and regulations of the formal institutions (Thai and Turkina, 2013; Webb et al., 2009, 2013, 2014; Welter and Smallbone, 2011; Williams and Vorley, 2014). Indeed, evidence that the marginalized do not display a greater likelihood of participating in the informal sector is provided in small-scale studies revealing that relatively affluent, better educated, more professional groups are more likely to participate in the informal sector (Moldovan and Van de Walle, 2013; Williams et al., 2013), that women display a lower propensity to participate in the informal sector than men (Lemieux et al., 1994; McInnis-Dittrich, 1995) and that those with financial difficulties are less likely to operate informally (Williams et al., 2013).

Until now however, few have evaluated the validity of the marginalization thesis in relation to informal sector entrepreneurship. Here therefore, we fill this gap by analysing whether the marginalization thesis is valid when examining who engages in informal sector entrepreneurship in CEE countries.

Methodology

To evaluate the marginalization thesis in relation to participation in informal sector entrepreneurship, we here use data collected in Special Eurobarometer survey no. 284, conducted as part of wave 79.2 of Eurobarometer. This survey of participation in the informal sector was undertaken in April and May 2013 and involved 27,563 face-to-face interviews, of which 11,131 were conducted in eleven CEE countries, namely Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. In these 11 CEE countries, some 707 participants reported that they were self-employed and are here analysed.

All interviews were conducted face-to-face in the national language with adults aged 15 years and older. In every country, a multi-stage random (probability) sampling methodology was used (the number of interviews varying from 500 in smaller countries to 1,500 in larger nations). This methodology ensures that on the issues of gender, age, region and locality size, each country as well as each level of sample (European countries) is represented in proportion to its population size. Therefore, for the univariate analysis we employed the sampling weighting scheme, according to recommendations in both the wider literature (Sharon and Liu, 1994; Solon et al., 2013; Winship and Radbill, 1994) and the Eurobarometer No. 284 methodology itself which clearly specifies that the use of the weighting scheme is recommended to obtain meaningful descriptive results. Regarding the multivariate analysis, there is a debate if a weighting scheme should be used (Sharon and Liu, 1994; Pfeffermann, 1993; Solon et al., 2013; Winship and Radbill, 1994). Given that the majority opinion is that a weighting scheme should not be used, we chose not to use weighting for our multivariate analysis.

Given that this is a sensitive topic, the interview schedule built rapport with the participants before posing the more sensitive questions regarding their participation in the informal sector. Adopting a gradual approach to the more sensitive questions, the interview schedule thus started by asking about their attitudes towards the informal sector, followed by questions on whether they had purchased goods and services from the informal sector. Only after this were questions posed regarding their participation in the informal sector. Analysing the responses of interviewers regarding the perceived reliability of the interviews, the finding is that cooperation was deemed bad in only 0.71 per cent of the interviews. Cooperation was asserted to be excellent in 57.85 per cent, fair in 35.36 per cent and average in 6.08 per cent.

To evaluate the marginalization thesis in relation to which entrepreneurs participate in the informal sector, the hypothesis is that the participation of entrepreneurs in the informal

sector varies according to socio-demographic variables (gender, age, marital status, age when stopped full time education, people 15+ years in own household, number of children, tax morality), socio-economic variables (occupation, household financial circumstances) and spatial characteristics (urban-rural character of the area in which the respondent lives). We here use a logistic regression analysis to analyse this. The dependent variable measures whether those self-reporting themselves as self-employed participate in the informal sector and is based on the question 'Have you yourself carried out any undeclared paid activities in the last 12 months?'. The independent variables used to analyse which entrepreneurs are more likely to participate in the informal sector are grouped into socio-demographic, socio-economic and spatial variables and are as follows:

Socio-demographic independent variables:

- Gender: a dummy variable with value 1 for men and 0 for women.
- Age: a categorical variable for the age of the respondent with value 1 for those aged 15 to 24 years old, value 2 for those aged 25 to 39, value 3 for those aged 40 to 54, value 4 for those 55 years old or over.
- Marital Status: a categorical variable for the marital status of the respondent with value 1 for married/ remarried individuals, value 2 for single living with a partner, value 3 for singles, separated or divorced, widowed and for other form of marital status.
- Social class: a categorical variable for the respondent perception regarding social class of society to which s/he belongs with value 1 for the working class of society, value 2 for middle class of society, value 3 for higher class of society, other class or none.
- Age when stopped full time education: a categorical variable for age of the respondent when stopped full time education with value 1 for 15 years old and under, value 2 for 16-19 years old, value 3 for 20 years old or over.
- People 15+ years in own household: a categorical variable for people 15+ years in respondent`s household (including the respondent) with value 1 for one person, value 2 for two persons, value 3 for 3 persons or more.
- Children (up to 14 years old in the household): a categorical variable for number of children with value 1 for individuals with no children, value 2 for the presence of children less than 10 years old live in respondent`s household or the presence of children aged 10 to 14 years old live in respondent`s household and value 3 for the presence of children less than 10 years old and children aged 10 to 14 years old live in respondent`s household.
- Tax morality index: Constructed index of their attitude towards tax non-compliance. Participants were asked to rate how acceptable they viewed six tax non-compliant behaviours using a 10-point scale where 1 means 'absolutely unacceptable' and 10 means 'absolutely acceptable'. These are: someone receives welfare payments without entitlement; a firm is hired by another firm and does not report earnings; a firm hires a private person and all or part of their salary is not declared; a firm is hired by a household and doesn't report earnings; someone evades taxes by not or only partially declaring income; and a person hired by a household does not declare earnings when it should be declared. The tax morality index for each individual is calculated using the mean score across these six attitudinal questions.

Socio-economic independent variables:

- Occupation: a categorical variable grouping self-employed respondents by their occupation with value 1 for farmer/fisherman, value 2 for professional (lawyer, etc.), value 3 for owner of a shop, craftsmen, etc, and value 4 for business proprietors, etc.

- Difficulties paying bills: a categorical variable for whether the respondent witnessed difficulties in paying bills with value 1 for having difficulties most of the time, value 2 for occasionally, and value 3 for almost never/never.

Spatial independent variable:

- Area respondent lives: a dummy variable for the urban/rural area where the respondent lives with value 1 for small, middle or large sized town and 0 for rural area or village.

Below, we report the findings.

Findings

Given that governments in CEE countries and beyond usually target the self-employed when seeking to tackle the informal sector, Table 1 investigates whether this is valid by examining the participation rates of the self-employed, unemployed and employees in the informal sector. This reveals that the self-employed do indeed have a higher participation rate in the informal sector than employees and the economically inactive (excluding the registered unemployed), with 6 per cent of the self-employed reporting participation in the informal sector in the past 12 months. However, it also reveals that just 10 per cent of all informal work is conducted by the self-employed (who constitute 7 per cent of the surveyed population) and just 9 per cent of all informal income is earned by this group. As such, although entrepreneurs display a greater propensity to participate in the informal sector than the majority of the population (except the registered unemployed population), the informal sector will not be tackled by focusing exclusively upon entrepreneurs since they conduct only a small portion of all informal work.

INSERT TABLE 1 ABOUT HERE

Which entrepreneurs therefore, engage in the informal sector? Is it the case as the marginalization thesis asserts that it is entrepreneurs belonging to marginalized groups who benefit least from the formal sector (e.g., women, the working class, farmers/fisherman, younger age groups, and population living in rural areas) who are more likely to participate in the informal sector?

Table 2 reports descriptive statistics on the propensity of entrepreneurs to participate in the informal sector. Firstly, and supporting the marginalization thesis, the propensity of entrepreneurs to operate in the informal sector is greater among some marginalised populations. Younger entrepreneurs, those with fewer years in formal education, those reporting themselves as working class and those who define themselves as having difficulties paying the bills most of the time display a greater propensity to engage in informal entrepreneurship. It is also the case that those whose tax morale is not in symmetry with the formal institutions participate to a greater extent compared with those with higher tax morale.

INSERT TABLE 2 ABOUT HERE

However, the marginalization thesis does not apply when examining women entrepreneurs who are less likely than male entrepreneurs to participate in the informal sector, as are farmers/fisherman and business proprietors less likely to participate than shop owners, craftspeople and professionals (e.g., doctors, lawyers). It is also the case that the entrepreneurs in rural areas participate less than those living in urban areas.

The tentative suggestion from these descriptive statistics therefore, is that the marginalization thesis applies to some marginal groups, including younger age groups, those with a lower level of education, those who have difficulties paying household bills and those with low tax morale. However, the marginalization thesis does not apply when discussing women compared with men, occupations and those living in rural areas compared with urban areas. The tentative conclusion is therefore that it is not possible to assert that the marginalization thesis is universally applicable at all spatial scales and across all socio-demographic and socio-economic groups.

Analysis

To analyse whether these findings remain valid regarding which groups of entrepreneur participate in the informal sector when other independent variables are introduced and held constant, and given that the dependent variable is dichotomous, we here use a logistic regression. The binary response variable is whether or not the entrepreneur participated in the informal sector in the last 12 months. To analyse the association of the various independent variables with participation in the informal sector when other variables are held constant, an additive model is used. The first stage model (M1) includes solely the socio-demographic factors to examine their effects while the second stage model (M2) adds socio-economic factors alongside the socio-demographic factors, and the third stage model (M3) adds spatial factors to the socio-demographic and socio-economic factors to examine their association with the participation in the informal sector. Table 3 reports the results.

INSERT TABLE 3 HERE

Model 1 in Table 3 shows that the marginalization thesis is valid when analysing various socio-demographic disparities. Not only are younger entrepreneurs more likely to participate in the informal sector (confirming H4) but so too are those who are single or divorced more likely than married entrepreneurs (confirming H5), perhaps reflecting their need to hide income from the authorities in the case of divorcees. So too do those holding non-conformist attitudes towards tax compliance participate more in such endeavour, which positively confirms H6 and the view of institutional theorists that informal entrepreneurship results from the asymmetry between formal and informal institutions (Webb et al., 2009, 2013; Williams and Shahid, 2015). Contrary to the marginalization thesis however, male entrepreneurs are found to be significantly more likely to participate in the informal sector than women entrepreneurs, thus negatively confirming H1. No evidence is found to support the marginalization thesis moreover, when analysing social class (H2) or the age when they stopped full time education (H3). As such, when considering the socio-demographic variables, the finding is that a variegated understanding of the validity of the marginalization thesis is required. The marginalization thesis is valid in relation to some entrepreneurs from marginalized socio-demographic groups (e.g., younger people and those with non-conformist attitudes), but not for others (e.g., women).

When Model 2 adds the socio-economic factors of occupation and financial circumstances people face to the socio-demographic variables, there are no major changes to the influence of the socio-demographic variables on participation in informal sector entrepreneurship. However, the additional finding is that the occupation of the entrepreneur has an impact on participation in the informal economy. Compared with farmers and fishermen, entrepreneurs who are professionals (e.g., lawyers, doctors) are more likely to participate in the informal sector. This negatively confirms the marginalization thesis (H7). However, entrepreneurs having difficulties paying the household bills most of the time are

more likely to participate in the informal sector than those seldom having such difficulties, thus supporting the marginalization thesis (H8).

When spatial factors are added in Model 3, the finding is that there are no major changes to the significance of the socio-demographic and socio-economic characteristics discussed above in relation to participation in informal sector entrepreneurship. However, there is no evidence to support the marginalization thesis (H9) that entrepreneurs living in rural areas are more likely to participate in the informal sector compared with those living in more urban areas.

Discussion and conclusions

To evaluate the marginalization thesis which views the informal sector entrepreneurship to be more likely among entrepreneurs from marginalized groups who benefit least from the formal economy, this paper has reported the results of a 2013 survey involving 707 face-to-face interviews with entrepreneurs in 11 CEE countries. Using logistic regression analysis, and as Table 4 summarises, the marginalization thesis has been found to be valid in relation to younger entrepreneurs who display a significantly greater propensity to participate in the informal sector, as do those whose individual morality does not conform with state morality, and those who have difficulties paying household bills. However, the marginalization thesis has been negatively confirmed in relation to women entrepreneurs who display a significantly lower propensity to participate in the informal sector than male entrepreneurs, and also in relation to occupational status, with self-employed professionals displaying a significantly greater proclivity to participate in the informal sector. No association is found between the participation of entrepreneurs in the informal sector and their educational level, the area lived in, social class or marital status.

INSERT TABLE 4 ABOUT HERE

Analysing the theoretical implications, this analysis reveals that a finer-grained reading of the validity of the marginalization thesis is required when discussing informal sector entrepreneurship. The marginalization thesis applies when examining age, tax morality and household financial circumstances. However, when gender and occupational variations are analysed, the marginalization thesis is negatively confirmed. When other characteristics are examined furthermore, such as the urban-rural divide, educational level and social class, there is no association.

Examining the policy implications, this paper firstly displays that the focus of many national governments on entrepreneurs when tackling the informal sector is not a mistake (European Commission, 2007; Williams, 2014a). Entrepreneurs display a significantly greater propensity to participate in the informal sector. Nevertheless, given that informal sector entrepreneurs undertake just 10 per cent of all informal work and only 9 per cent of informal income is earned by this group, care needs to be taken not to pay too much attention to informal entrepreneurs. These results also show the specific populations that require targeting to tackle informal sector entrepreneurship, including men, younger people, professionals, those who have difficulties paying the household bills and those whose individual morality differs from state morality. In other words, this analysis provides a useful preliminary risk assessment of the groups of entrepreneur in CEE nations more likely to participate in the informal sector. As shown, this is not necessarily always marginalized groups (e.g., women, those living in rural areas, the less educated).

To tackle entrepreneurship in the informal sector, the dominant approach until now has been to use direct controls which seek to ensure that the benefits of operating in the

formal sector outweigh the costs of working in the informal sector (Allingham and Sandmo, 1972; Dekker et al., 2010; Williams, 2014a; Williams and Nadin 2014). However, this paper reveals a significant association between the level of tax morale and informal sector entrepreneurship. The intimation therefore, is that there should perhaps be greater emphasis given to indirect controls that focus upon improving the social contract between the state and entrepreneurs (see Kirchler, 2007; Torgler, 2007; Williams, 2015a). This fostering of a high trust high commitment culture requires policy measures to not only change attitudes towards compliance of entrepreneurs using for example tax education and awareness raising campaigns but also changes in formal institutions, such as procedural and redistributive justice and fairness to re-align formal institutions with the norms, values and beliefs of entrepreneurs (Williams, 2015b).

In sum, this paper has revealed the need for a variegated and finer-grained understanding of the validity of the marginalization thesis when explaining participation in informal sector entrepreneurship. Whether similar groups are identified when studying individual CEE nations as well as in other global regions now needs to be investigated, not least because most policy is implemented at the national level. If this paper stimulates such national evaluations, then it will have achieved one of its intentions. If it also leads governments to start adopting a more nuanced approach that targets particular informal sector entrepreneurs, and not always solely marginalized groups of entrepreneurs, then this paper will have achieved its wider intention.

References

- Adom, K. (2014) 'Beyond the marginalization thesis: an examination of the motivations of informal entrepreneurs in sub-Saharan Africa: insights from Ghana', *International Journal of Entrepreneurship and Innovation*, Vol. 15 No. 2, pp. 113 - 25.
- Aidis, R., Welter, F., Smallbone, D. and Isakova, N. (2006) 'Female entrepreneurship in transition economies: the case of Lithuania and Ukraine', *Feminist Economics*, Vol. 13 No. 2, pp. 157-83.
- Aliyev, H. (2015) 'Post-Soviet informality: towards theory-building: ', *International Journal of Sociology and Social Policy*, Vol. 35 No. 3-4
- Allingham, M. and Sandmo, A. (1972) 'Income tax evasion: a theoretical analysis', *Journal of Public Economics*, Vol. 1 No. 2, pp. 323-38.
- Autio, E. and Fu, K. (2014) 'Economic and political institutions and entry into formal and informal entrepreneurship', *Asian Pacific Management Journal*, doi 10.1007/s10490-014-9381-0.
- Barbour, A. and Llanes, M. (2013) *Supporting people to legitimise their informal businesses*, Joseph Rowntree Foundation, York.
- Bhowmik, S. K. (2007) 'Street vending in urban India: the struggle for recognition', in Cross, J. and Morales, A. (Eds.), *Street entrepreneurs: people, place and politics in local and global perspective*, Routledge, London, pp. 89–123.
- Boels, D. (2014) 'It's better than stealing: informal street selling in Brussels', *International Journal of Sociology and Social Policy*, Vol. 34 No. 9/10, pp. 670 – 693
- Brill, L. (2011) *Women's participation in the informal economy: what can we learn from Oxfam's work?*, Oxfam, Manchester.
- Bureau, S. and Fendt, J. (2011) 'Entrepreneurship in the informal economy: why it matters', *International Journal of Entrepreneurship and Innovation*, Vol. 12 No. 2, pp. 85-94.
- Button, K. (1984), 'Regional variations in the irregular economy: a study of possible trends', *Regional Studies*, Vol. 18 No. 3, pp. 385-92.

- Castells, M. and Portes, A. (1989) 'World underneath: the origins, dynamics and effects of the informal economy', in Portes, A., Castells, M. and Benton, L. (Eds.), *The Informal Economy: studies in advanced and less developing countries*, John Hopkins University Press, Baltimore, pp. 1-19.
- Chavdarova, T. (2014) 'Risky businesses? young people in informal self-employment in Sofia', *International Journal of Urban and Regional Research*, doi: 10.1111/1468-2427.12085
- Chen, M. (2012) *The Informal Economy: definitions, theories and policies*, Women in Informal Employment Global and Organising, Manchester.
- Copisarow, R. (2004) *Street UK - A micro-finance organisation: lessons learned from its first three years' operations*, Street UK, Birmingham.
- Copisarow, R. and Barbour, A. (2004) *Self-Employed People in the Informal Economy – cheats or contributors?*, Community Links, London.
- Cross, J. (2000) 'Street vendors, modernity and postmodernity: conflict and compromise in the global economy', *International Journal of Sociology and Social Policy*, Vol. 20 No. 1, pp. 29–51.
- Cross, J. and Morales, A. (2007) 'Introduction: locating street markets in the modern/postmodern world', in Cross, J. and Morales, A. (Eds.), *Street entrepreneurs: People, place and politics in local and global perspective*, Routledge, London, pp. 1–14.
- Davis, M. (2006) *Planet of Slums*, Verso, London.
- De Castro J.O., Khavul, S. and Bruton, G.D. (2014) 'Shades of grey: how do informal firms navigate between macro and meso institutional environments?', *Strategic Entrepreneurship Journal*, Vol. 8 No. 1, pp. 75-94.
- De Soto, H. (1989) *The Other Path*, Harper and Row, London.
- De Soto, H. (2001) *The Mystery of Capital: why capitalism triumphs in the West and fails everywhere else*, Black Swan, London.
- Dekker, H., Oranje, E., Renooy, P., Rosing, F. and Williams, C.C. (2010) *Joining up the Fight against Undeclared Work in the European Union*, DG Employment, Social Affairs and Equal Opportunities, Brussels.
- Dellot, B. (2012) *Untapped enterprise: learning to live with the informal economy*, Royal Society of the Arts, London.
- European Commission (2007) *Stepping up the fight against undeclared work*, Document COM(2007) 628 final, European Commission, Brussels.
- Evans, M., Syrett, S. and Williams, C.C. (2006) *Informal economic activities and deprived neighbourhoods*, Department for Communities and Local Government, London.
- Gallin, D. (2001) 'Propositions on trade unions and informal employment in time of globalisation', *Antipode*, Vol. 19 No. 4, pp. 531-49.
- Geertz C. (1963) *Old Societies and New States: the quest for modernity in Asia and Africa*, Free Press, Glencoe, IL.
- Gërzhani, K. (2004) 'Tax evasion in transition: outcome of an institutional clash? Testing Feige's conjecture in Albania', *European Economic Review*, Vol. 48 No. 7, pp. 729-45.
- Gilbert, A. (1998) *The Latin American City*, Latin American Bureau, London.
- Harding, R., Brooksbank, D., Hart, M., Jones-Evans, D., Levie, J. and O'Reilly, J. (2006) *Global Entrepreneurship Monitor United Kingdom 2005*, London Business School, London.
- Harriss-White, B. (2010) 'Globalization, The Financial Crisis and Petty Production in India's Socially Regulated Informal Economy', *Global Labour Journal*, Vol 1 No 1, pp 152-177.
- Hudson, R. (2005) *Economic Geographies: circuits, flows and spaces*, Sage, London.

- Hudson, J., Williams, C.C., Orviska, M. and Nadin, S. (2012) 'Evaluating the impact of the informal economy on businesses in South East Europe: some lessons from the 2009 World Bank Enterprise Survey', *The South-East European Journal of Economics and Business*, Vol. 7 No. 1, pp. 99-110.
- ILO (2002) *Women and men in the informal economy: A statistical picture*, International Labour Organisation, Geneva.
- ILO (2012) *Statistical Update on Employment in the Informal Economy*, International Labour Organisation, Geneva.
- ILO (2013) *Measuring informality: A statistical manual on the informal sector and informal employment*, International Labour Organisation, Geneva.
- Jütting, J.P. and Laiglesia, J.R. (2009) 'Employment, poverty reduction and development: what's new?', in Jütting, J.P. and Laiglesia, J.R. (Eds.), *Is informal normal? Towards more and better jobs in developing countries*, OECD, Paris, pp. 1-19.
- Khan, E.A. and Quaddus, M. (2015) 'Examining the influence of business environment on socio-economic performance of informal microenterprises: content analysis and partial least square approach', *International Journal of Sociology and Social Policy*, Vol. 35 no. 3-4,
- Katungi, D., Neale, E. and Barbour, A. (2006) *People in low-paid informal work*, Joseph Rowntree Foundation, York.
- Kirchler, E. (2007) *The Economic Psychology of Tax Behaviour*, Cambridge University Press, Cambridge.
- Kus, B. (2014) 'The informal road to markets: neoliberal reforms, private entrepreneurship and the informal economy in Turkey', *International Journal of Social Economics*, Vol. 41 No. 4, pp. 278-93.
- Lemieux, T., Fortin, B. and Frechette, P. (1994) 'The effect of taxes on labor supply in the underground economy', *American Economic Review*, Vol. 84 No. 1, pp. 231-54.
- Leonard, M. (1994) *Informal Economic Activity in Belfast*, Avebury, Aldershot.
- Lewis, A. (1959) *The Theory of Economic Growth*, Allen and Unwin, London.
- Likic-Brboric, L., Slavnic, Z. and Woolfson, C. (2013) 'Labour migration and informalisation: East meets West', *International Journal of Sociology and Social Policy*, Vol. 33 No. 11/12, pp. 677 – 692
- Llanes, M. and Barbour, A. (2007) *Self-Employed and Micro-Entrepreneurs: informal trading and the journey towards formalization*, Community Links, London.
- Maloney, W.F. (2004) 'Informality revisited', *World Development*, Vol. 32 No. 7, pp. 1159-78.
- McElwee, G., Smith, R. and Somerville, P. (2011) 'Theorising illegal rural enterprise: is everyone at it?', *International Journal of Rural Criminology*, Vol. 1 No. 1, pp. 40-62.
- McElwee, G., Smith, R. and Somerville, P. (2014) 'Developing a conceptual model of illegal rural enterprise', in Fayolle, A. (ed.), *Handbook of Research in entrepreneurship*, Edward Elgar, Cheltenham, pp. 367-388.
- McInnis-Dittrich, K. (1995) 'Women of the shadows: Appalachian women's participation in the informal economy', *Affilia: Journal of Women and Social Work*, Vol. 10 No. 4, pp. 398-412.
- Moldovan, A. and Van De Walle, S. (2013) 'Gifts or bribes: attitudes on informal payments in Romanian healthcare', *Public Integrity*, Vol. 15 No. 4, pp. 383-95.
- Mróz, B. (2012) 'Entrepreneurship in the shadow: faces and variations of Poland's informal economy', *International Journal of Economic Policy in Emerging Economies*, Vol. 5 No. 3, pp. 197-211.
- OECD (2012) *Reducing Opportunities for Tax Non-Compliance in the Underground Economy*, OECD, Paris.

- Pfeffermann, D. (1993) 'The role of sampling weights when modelling survey data', *International Statistical Review*, Vol. 61 No. 2, pp. 317-37.
- Portes, A. (1994), 'The informal economy and its paradoxes', in Smelser, N.J. and Swedberg, R. (Eds.), *The Handbook of Economic Sociology*, Princeton: Princeton University Press, pp. 19-42.
- Reynolds, P., Bygrave, W.D., Autio, E. and Hay, M. (2002) *Global Entrepreneurship Monitor: 2002 Executive Monitor*, London Business School, London.
- Roberts, A. (2013) 'Peripheral accumulation in the world economy: a cross-national analysis of the informal economy', *International Journal of Comparative Sociology*, Vol. 54 No. 5-6, pp. 420-44.
- Round, J., Williams, C.C. and Rodgers, P. (2008) 'Corruption in the post-Soviet workplace: the experiences of recent graduates in contemporary Ukraine', *Work, Employment & Society*, Vol. 22 No. 1, pp. 149-66.
- Sassen, S. (1996) 'Service employment regimes and the new inequality', in Mingione, E. (ed.), *Urban poverty and the underclass*, Basil Blackwell, Oxford, pp. 142-61.
- Schneider, F. (2008) (ed.), *The Hidden Economy*, Edward Elgar, Cheltenham.
- Schneider, F. and Williams, C.C. (2013) *The Shadow Economy*, Institute of Economic Affairs, London.
- Schneider, F., Buehn, A. and Montenegro, A. (2010) 'New estimates for the shadow economies all over the world', *International Economic Journal*, Vol. 24 No. 4, pp. 443-61.
- Sharon, S.L. and Liu, J. (1994) 'A comparison of weighted and unweighted analyses in the National Crime Victimization Survey', *Journal of Quantitative Criminology*, Vol. 10 No. 4, pp. 343-60.
- Slavnic, Z. (2010) 'Political economy of informalization', *European Societies*, Vol. 12 No. 1, pp. 3-23.
- Small Business Council (2004) *Small Business in the Informal Economy: making the transition to the formal economy*, Small Business Council, London.
- Smith, R. and McElwee, G. (2013) 'Confronting social constructions of rural criminality: a case story on 'illegal pluriactivity' in the farming community', *Sociologia Ruralis*, Vol. 53 No. 1, pp. 112-134.
- Snyder, K.A. (2004) 'Routes to the informal economy in New York's East village: crisis, economics and identity', *Sociological Perspectives*, Vol. 47 No. 2, pp. 215-40.
- Solon, G., Haider, S.J. and Wooldridge, J. (2013) *What are we weighting for?*, National Bureau of Economic Research Working Paper No. 8, Washington DC.
- Stănculescu, M. (2005) 'Working conditions in the informal sector', *South East Europe Review for Labour and Social Affairs*, Vol. 10 No. 3, pp. 79-93.
- Taiwo, O. (2013) 'Employment choice and mobility in multi-sector labour markets: theoretical model and evidence from Ghana', *International Labour Review*, Vol. 152 No. 3-4, pp. 469-92.
- Thai, M.T.T. and Turkina, E. (2013) (Eds.), *Entrepreneurship in the Informal Economy: models, approaches and prospects for economic development*, Routledge, London.
- Torgler, B. (2007) 'Tax morale in Central and Eastern European countries', in Hayoz, N. and Hug, S. (Eds.), *Tax Evasion, Trust and State Capacities: how good is tax morale in Central and Eastern Europe?*, Peter Lang, Bern, pp. 155-86.
- Webb, J.W., Tihanyi, L., Ireland, R.D. and Sirmon, D.G. (2009) 'You say illegal, I say legitimate: entrepreneurship in the informal economy', *Academy of Management Review*, Vol. 34 No. 3, pp. 492-510.

- Webb, J.W., Bruton, G.D., Tihanyi, L. and Ireland, R.D. (2013) 'Research on entrepreneurship in the informal economy: framing a research agenda', *Journal of Business Venturing*, Vol. 28 No. 4, pp. 598-614.
- Webb, J.W., Ireland, R.D. and Ketchen, D.J. (2014) 'Towards a greater understanding of entrepreneurship and strategy in the informal economy', *Strategic Entrepreneurship Journal*, Vol. 8 No. 1, pp. 1-15.
- Welter, F. and Smallbone, D. (2011) 'Institutional perspectives on entrepreneurial behavior in challenging environments', *Journal of Small Business Management*, Vol. 49 No. 1, pp. 107-125.
- Williams, C.C. (2006) *The Hidden Enterprise Culture: entrepreneurship in the underground economy*, Edward Elgar, Cheltenham.
- Williams, C.C. (2007) 'Small businesses and the informal economy: evidence from the UK', *International Journal of Entrepreneurial Behaviour and Research*, Vol. 13 No. 6, pp. 349-66.
- Williams, C.C. (2009) 'The hidden enterprise culture: entrepreneurs in the underground economy in England, Ukraine and Russia', *Journal of Applied Management and Entrepreneurship*, Vol. 14 No. 2, pp. 44-60.
- Williams, C.C. (2010) 'Spatial variations in the hidden enterprise culture: some lessons from England', *Entrepreneurship and Regional Development*, Vol. 22 No. 5, pp. 403-23.
- Williams, C.C. (2013) 'Beyond the formal economy: evaluating the level of employment in informal sector enterprises in global perspective', *Journal of Developmental Entrepreneurship*, Vol. 18 No. 4, pp. 1-18.
- Williams, C.C. (2014a) *Confronting the Shadow Economy: evaluating tax compliance and behaviour policies*, Edward Elgar, Cheltenham.
- Williams, C.C. (2014b) 'Out of the shadows: a classification of economies by the size and character of their informal sector', *Work, Employment and Society*, Vol. 28 No. 5, pp. 735-753.
- Williams, C.C. (2014c) 'Uncoupling enterprise culture from capitalism: some lessons from Moscow', *Journal of Enterprising Communities*, Vol. 8 No. 2, pp. 111-125.
- Williams, C.C. (2015a) *Informal Sector Entrepreneurship*, OECD, Paris.
- Williams, C.C. (2015b) 'Explaining cross-national variations in the commonality of informal sector entrepreneurship: an exploratory analysis of 38 emerging economies', *Journal of Small Business and Entrepreneurship*, <http://dx.doi.org/10.1080/08276331.2015.1004959>
- Williams, C.C. (2015c) 'Tackling informal employment in developing and transition economies: a critical evaluation of the neo-liberal approach', *International Journal of Business and Globalisation*, Vol. 14 No. 3, pp.251-270.
- Williams, C.C. and Gurtoo, A. (2013) 'Beyond entrepreneurs as heroic icons of capitalism: a case study of street entrepreneurs in India', *International Journal of Entrepreneurship and Small Business*, Vol. 19 No. 4, pp.421-437.
- Williams, C.C. and Horodnic, I. (2015) 'Evaluating the prevalence of the undeclared economy in Central and Eastern Europe: an institutional asymmetry perspective', *European Journal of Industrial Relations*, doi: 10.1177/0143831X14568835
- Williams, C.C. and Martinez-Perez, A. (2014a) 'Is the informal economy an incubator for new enterprise creation? a gender perspective', *International Journal of Entrepreneurial Behaviour and Research*, Vol. 20 No.1, pp. 4-19.
- Williams, C.C. and Martinez-Perez, A. (2014b) 'Why do consumers purchase goods and services in the informal economy?', *Journal of Business Research*, Vol. 67 No. 5, pp. 802-806.

- Williams, C.C. and Martinez-Perez, A. (2014c) 'Entrepreneurship in the informal economy: a product of too much or too little state intervention?', *International Journal of Entrepreneurship and Innovation*, Vol. 15 No. 4, pp. 227–237.
- Williams, C.C. and Martinez-Perez, A. (2014d) 'Do small business start-ups test-trade in the informal economy? Evidence from a UK small business survey', *International Journal of Entrepreneurship and Small Business*, Vol. 22 No. 1, pp. 1-16
- Williams, C.C. and Nadin, S. (2011) 'Theorising the hidden enterprise culture: the nature of entrepreneurship in the shadow economy', *International Journal of Entrepreneurship and Small Business*, Vol. 14 No.3, pp. 334-348.
- Williams, C.C. and M.S. Shahid (2014), 'Informal entrepreneurship and institutional theory: explaining the varying degrees of (in)formalization of entrepreneurs in Pakistan', *Entrepreneurship and Regional Development*, <http://dx.doi.org/10.1080/08985626.2014.963889>
- Williams, C.C., Round, J. and Rodgers, P. (2010) 'Explaining the off-the-books enterprise culture of Ukraine: reluctant or willing entrepreneurship?', *International Journal of Entrepreneurship and Small Business*, Vol. 10 No. 2, pp. 165 – 180.
- Williams, C.C., Nadin, S. and Baric, M. (2011), 'Evaluating the participation of the self-employed in undeclared work: some evidence from a 27-nation European survey', *International Entrepreneurship and Management Journal*, Vol. 7 No. 3, pp. 341-56.
- Williams, C.C., Round, J. and Rodgers, P. (2013), *The Role of Informal Economies in the post-Soviet world: the end of transition?*, London: Routledge.
- Williams, C.C., Franic, J. and Dzhokova, R. (2014) 'Explaining and tackling the undeclared economy in Bulgaria: an institutional asymmetry perspective', *The South-East European Journal of Economics and Business*, Vol. 9 No. 2, pp. 33-45.
- Williams, C.C., Dzhokova, R., Franic, J. and Mishkov, L. (2015) 'Evaluating the policy approach towards the undeclared economy in FYR Macedonia', *International Journal of Entrepreneurship and Small Business*, Vol. 24 No. 2, pp.268–286.
- Williams, C.C. Adom, K., Nadin, S. and Youssef, Y. (2012) 'Gender variations in the reasons for engaging in informal sector entrepreneurship: some lessons from urban Brazil', *International Journal of Entrepreneurship and Small Business*, Vol. 17 No. 4, pp. 478-494.
- Williams. N. and Vorley, T. (2014) 'Institutional asymmetry: how formal and informal institutions affect entrepreneurship in Bulgaria', *International Small Business Journal* doi: 10.1177/0266242614534280
- Winship, C. and Radbill, L. (1994), 'Sampling weights and regression analysis', *Sociological Methods and Research*, Vol. 23 No. 2, pp. 230-57.

Table 1. Extent of participation of the population of Central and Eastern Europe in the informal sector: by economic status, 2013

	% engaging in informal economy	% of all informal work conducted by:	% of surveyed population	Mean annual informal income/ informal worker (€)	% of total all informal income earned by:
East-Central Europe	4	100	100	511	100
Unemployed	12	25	9	789	29
Other non-employed	2	21	43	386	20
Formal employees	4	44	41	452	42
Self-employed	6	10	7	499	9

Table 2. Participation of entrepreneurs in the informal sector in Central and Eastern Europe: socio-demographic, socio-economic and spatial variations

		% engaged in informal economy	% of all informal work conducted by:	% of surveyed population
Gender	Men	8	85	63
	Women	2	15	37
Age	15-24	19	19	6
	25-39	10	57	35
	40-54	3	20	43
	55+	1	4	16
Marital status	Married/ remarried	4	48	69
	Single living with partner	16	23	9
	Single/ Divorced or separated/ Widow and other	8	29	22
Social class, self- assessment	Working class	7	50	44
	Middle class	6	49	49
	Higher class/ Other/ None	1	1	7
Age education ended	<15	11	13	7
	16-19	7	63	56
	20+	4	24	37
Adults in household	One	6	16	16
	Two	8	61	47
	Three and more	4	23	37
Number of children	No children	5	51	60
	<10 years old or 10-14 years old	6	29	31
	<10 years old and 10-14 years old	13	20	9
Tax morality	Below mean	2	20	56
	Above mean	11	80	44
Occupation of self- employed	Farmer/ Fisherman	4	19	31
	Professional (lawyer, etc.)	8	16	12
	Owner of a shop, craftsmen, etc.	8	48	38
	Business proprietors, etc.	5	17	19
Difficulties paying bills	Most of the time	18	21	8
	From time to time	9	43	30
	Almost never/never	4	36	62
Area	Rural area or village	5	40	51
	Small/middle/large sized town	7	60	49
Country	Czech Republic	9	19	13
	Estonia	31	4	1
	Hungary	5	4	5
	Latvia	16	4	1
	Lithuania	11	4	2
	Poland	3	15	37
	Slovakia	6	5	5
	Slovenia	11	4	2
	Bulgaria	7	5	5
	Romania	7	32	27
	Croatia	14	4	2

Table 3. Logistic regression of the participation of entrepreneurs in the informal sector in Central and Eastern Europe

Variable	Model 1	Model 2	Model 3
Gender (Female)			
Male	1.159*** (0.376)	1.224*** (0.390)	1.210*** (0.393)
Age (15-24):			
25-39	-1.246** (0.570)	-1.350** (0.591)	-1.337** (0.591)
40-54	-1.360** (0.577)	-1.521** (0.603)	-1.524** (0.603)
55+	-1.579** (0.700)	-1.665** (0.724)	-1.654** (0.726)
Marital status: (Married/Remarried)			
Single living with partner	0.990** (0.440)	0.794* (0.452)	0.798* (0.452)
Single/ Divorced or separated/ Widow and other	0.737* (0.444)	0.687 (0.458)	0.678 (0.460)
Social class, self-assessment (The working class of society)			
The middle class of society	0.258 (0.333)	0.171 (0.377)	0.179 (0.379)
The higher class of society/ Other/None	-1.032 (1.104)	-1.167 (1.188)	-1.156 (1.188)
Age stopped full time education (up to 15 years):			
16-19	-0.525 (0.807)	-1.048 (0.853)	-1.007 (0.861)
20+	-0.673 (0.826)	-1.383 (0.889)	-1.334 (0.900)
Number 15+ years in household (1 person):			
2 persons	0.497 (0.531)	0.497 (0.548)	0.488 (0.549)
3 + persons	0.170 (0.522)	0.243 (0.545)	0.224 (0.549)
Number of children: (No Children):			
At least one children < 10 or one children 10-14	-0.0693 (0.385)	-0.104 (0.392)	-0.109 (0.392)
At least one child<10 and at least one 10-14	0.274 (0.634)	0.202 (0.672)	0.154 (0.689)
Tax morality	0.435*** (0.0772)	0.455*** (0.0802)	0.456*** (0.0805)
Occupation (CG: Farmer/ Fisherman):			
Professional (lawyer, etc.)		1.311* (0.674)	1.362** (0.690)
Owner of a shop, craftsmen, etc.		0.641 (0.561)	0.688 (0.577)
Business proprietors, etc.		0.771 (0.610)	0.824 (0.629)
Difficulties paying bills last year (CG: Most of the time):			
From time to time		-0.413 (0.513)	-0.415 (0.513)
Almost never/never		-1.103** (0.521)	-1.108** (0.521)
Area respondent lives (Rural area or village):			
Small/middle/large sized town			-0.120 (0.363)
Constant	-3.547*** (1.134)	-2.891** (1.271)	-2.891** (1.273)
Observations	578	575	575
Pseudo R2	0.1954	0.2279	0.2282
Log likelihood	-153.28946	-146.84274	-146.7885
χ^2	74.46	86.71	86.82
p>	0.0000	0.0000	0.0000

Notes: significant at *** p<0.01, ** p<0.05, * p<0.1 (standard errors in parentheses). All coefficients are compared to the benchmark category, shown in brackets.

Table 4. Validity of marginalization thesis: by socio-demographic, socio-economic and spatial characteristics of entrepreneurs

Hypothesis	Type of entrepreneur significantly more likely to participate in informal sector	Validity of marginalization thesis
1 Gender	Men	Negatively confirmed
2 Social class	No significant association	Neither
3 Educational level	No significant association	Neither
4 Age	Younger age groups	Positively confirmed
5 Social/marital status	Single living with partner/ Single/ Divorced or separated/ Widow and other	Positively confirmed – but association vanishes when spatial variables added
6 Tax morale	Not conforming to state morality	Positively confirmed
7 Occupation	Professionals (lawyer, etc.)	Negatively confirmed
8 Household financial circumstance	Those having difficulties	Positively confirmed
9 Urban/rural area	No significant association	Neither

APPENDIX

Table A1. Variables used in the analysis: definitions and descriptive statistics

Variables	Definition	Mode or mean	Min / Max
Informal sector (dependent variable)	Dummy variable of whether participated in informal economy in the last 12 months	No informal activities (93.52%)	0 / 1
Gender	Dummy for the gender of the respondent	Male (63.20%)	0 / 1
Age	Respondent age in intervals	40 – 54 years old (42.66%)	1 / 4
Marital status	Respondent marital status in categories	Married/ Remarried (68.53%)	1 / 3
Social class	Respondent perception regarding social class of society to which it belongs in categories	Middle class of society (48.66%)	1 / 3
Age when stopped full time education	Respondent age when stopped full time education in categories	16 – 19 years old (56.34%)	1 / 3
People 15+ years in own household	People 15+ years in respondent`s household (including the respondent) in categories	Two people (47.28%)	1 / 3
Children	Presence of children (up to 14 years old) in the household in categories	No children (59.72%)	1 / 3
Tax morality index	Constructed index of self-reported tolerance towards tax non-compliance	2.81	1 / 10
Occupation	Respondent occupation in categories	Owner of a shop, craftsmen, etc. (38.07%)	1 / 4
Difficulties paying bills	Respondent difficulties in paying bills in categories	Almost never/never (62.42)	1 / 3
Area respondent lives	Dummy for the area where the respondent lives	Rural area or village (50.84%)	0 / 1