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Explaining participation in the undeclared economy in Central and Eastern Europe: a demand-side approach

Abstract

To explain participation in the undeclared economy, the conventional supply-side approach evaluates the reasons people work in this sphere. This paper for the first time in Central and Eastern Europe explains the undeclared economy using a demand-side approach which evaluates citizens' motives for purchasing undeclared goods and services. Here, three potential explanations for purchasing undeclared goods and services, grounded in rational economic actor, social actor and institutional imperfections theoretical perspectives, are evaluated. Reporting data from 11,131 face-to-face interviews conducted in 11 Central and Eastern European countries in 2013, the finding is that all three explanations are used by consumers, displaying the need for a synthesis of these approaches, whilst a multinomial regression analysis identifies the specific groups variously using the undeclared economy to obtain a lower price, for social or redistributive rationales, or due to formal institutional imperfections. The implications for theorising and tackling the undeclared economy are then explored.

Keywords: informal sector; shadow economy; consumer behaviour; Central and Eastern Europe.

Introduction

Over the past decade or so, considerable advances have been made in explaining the extent and character of the undeclared economy in Central and Eastern Europe (Wallace and Latcheva 2006, Kapelyushnikov et al. 2010, Likic-Brboric et al. 2013, Williams et al. 2013, Kukk and Staehr 2014, Aliyev 2015, Davies and Polese 2015, Lukiyanova 2015,). Until now, however, this has been done largely from a supply-side perspective by evaluating the reasons people work in the undeclared economy, resulting in the emergence of heated theoretical debates about whether undeclared workers do so out of necessity or as a matter of choice (Maloney 2004, Williams 2015a,b, Morris and Polese 2015, 2016). Few studies on the undeclared economy in Central and Eastern Europe, with one or two notable exceptions that focus on businesses (Putniņš and Sauka 2015, Antonetti and Anesa 2017), have considered adopting a demand-side perspective, and none have focused upon citizens and evaluated the reasons they acquire undeclared goods and services. This is important. The undeclared economy is not only a result of people being willing to supply work. It is also the result of the existence of the demand for undeclared goods and services. Indeed, undeclared work can be often driven not by suppliers but by purchasers, exemplified by purchasers persistently asking traders 'how much for cash?'. The aim of this paper, therefore, is to evaluate empirically for the first time the reasons for consumers in Central and Eastern Europe seeking to purchase goods and services in the undeclared economy.

To achieve this, the first section briefly reviews a range of competing explanations for consumers seeking to obtain undeclared goods and services. These variously represent consumers purchasing in the undeclared economy firstly, as rational economic actors seeking to obtain a lower price, secondly, social actors doing so for social and/or redistributive rationales and third and finally, as doing so due to the failures of formal sector provision. To evaluate these competing theorisations and which groups acquire undeclared goods and services for each of these reasons, the second section reports the data set, namely an 11-nation survey involving 11,131 face-to-face interviews, and multinomial logit model used. Reporting the findings, the third section will reveal the prevalence of these explanations among

consumers in Central and Eastern Europe, and which groups are most likely to state which rationales. The final section then discusses how this new demand-side approach both advances theoretical understandings of the undeclared economy and explores the implications for tackling the undeclared economy.

At the outset, nevertheless, the undeclared economy needs to be defined. The strong consensus among academics and policy-makers is that the undeclared economy refers to monetary transactions that are unregistered by or hidden from the state, for tax, social security and/or labour law purposes but are legal in all other respects (European Commission 1998, 2007, OECD 2002, Williams 2004, Sepulveda and Syrett 2007). If the transactions are not legal in all other respects, such exchanges are not defined as part of the undeclared economy. If the goods or services acquired are illegal for instance (e.g., illegal drugs), then these exchanges are not part of the undeclared economy, but the broader criminal economy. Although it might be argued that consumers do not know whether suppliers declare the income for tax, social security and/or labour law purposes, and therefore if their purchase is in the undeclared economy, this is not a problem. Many undeclared transactions are in practice instigated by the purchaser, such as by asking ‘how much for cash?’, and this paper only examines transactions where the consumer has knowingly or deliberately acquired goods or services in the undeclared economy.

Competing explanations for the purchase of undeclared goods and services

Until now, studies of the undeclared economy in Central and Eastern Europe, as well as beyond, have focused upon the supply-side, examining those who engage in undeclared work and developing policies to reduce the supply of undeclared work (European Commission 2007, OECD 2012, Aliyev 2015). So far, little attention has been given to the demand-side. The only known studies of who purchases undeclared goods and services, and their reasons for doing so, have been conducted at the level of the European Union (Williams 2008, Williams and Martinez 2014a,b). No studies have been conducted of Central and Eastern Europe. To start to fill this gap, therefore, we here draw upon these previous EU-level studies to outline three possible explanations for consumers in Central and Eastern Europe purchasing undeclared goods and services.

Rational economic actors explanation

Since the 1970s, participants in the undeclared economy have been predominantly viewed as rational economic actors pursuing financial gain. This derives from the seminal work of Allingham and Sandmo (1972) who represented the non-compliant as rational actors weighing up the rewards and risks of their actions and disobeying the law when the expected penalty and probability of detection are smaller than the profits to be gained. Since then, this utility maximising view of the individual pursuing monetary gain has been widely adopted by both scholars and policy-makers. Not only are undeclared workers commonly viewed as rational economic actors doing so for the purpose of financial gain (Castells and Portes 1989, Rose 1995, Gallin 2001, Davis 2006), but consumers are depicted as purchasing undeclared goods and services simply because they benefit from cheaper prices and this outweighs any potential costs of doing so (Fortin et al. 1996, Bajada 2002). To evaluate this explanation, therefore, the following hypothesis can be tested:

Rational economic actor hypothesis (H1): citizens purchase undeclared goods and services in order to obtain a lower price.

The result of this view that those engaged in the undeclared economy are rational economic actors is that attempts have been made to tackle this realm by altering the cost-benefit ratio confronting suppliers and consumers. This has been largely done by focusing upon changing the cost side of the equation. Most governments have pursued a deterrence approach which seeks to increase the actual and/or perceived risks and costs of engaging in the undeclared economy by firstly, increasing the perceived and/or actual likelihood of being detected and secondly, raising the sanctions for those caught (Hasseldine and Li 1999, Sandford 1999, Grabiner 2000, Richardson and Sawyer 2001). Recently, however, other explanations have begun to emerge that question this portrayal of those engaged in the undeclared economy as rational economic actors. No longer are consumers of undeclared goods and services asserted to be motivated to do solely by the lower costs of the goods and services and thus the pursuit of monetary gain.

Social actors explanation

Rather than represent those participating in the undeclared economy as rational economic actors reacting to the cost/benefit ratios confronting them, a pro-social representation of such actors has recently emerged. A body of critical, post-structuralist, post-colonial, post-capitalist and post-development thought has started to question the conventional 'thin' view of monetary transactions as always market-like and profit-driven. Instead, a 'thicker' depiction has been adopted which unravels the multifarious logics, including social logics, within which monetary transactions are embedded (Escobar 1995, Bourdieu 2001, Leyshon et al. 2003, Gibson-Graham 2006).

Applying this to participation in undeclared work, a small but burgeoning literature has started to highlight how undeclared work is often conducted by and for close social relations (kin, neighbours, friends and acquaintances) for social reasons rather than purely for market-oriented logics (Nelson and Smith 1999, White and Williams 2010). Those obtaining undeclared goods and services are therefore portrayed as social actors rather than rational economic actors. For example, they are asserted to pay close social relations for goods or to undertake a task (e.g., a small repair) in order to give them money (e.g., when the supplier is unemployed or having financial difficulties), thus avoiding any notion that charity is involved, which might stop the recipient from accepting the money (Kempson 1996). These undeclared purchases of goods and services from close social relations are therefore more akin to mutual aid than market-oriented transactions pursued for financial gain (Williams 2004). As Zelizer (2005) asserts, introducing money into transactions does not always turn them into market-like exchanges. This social actor representation, in consequence, has challenged the depiction of participants in undeclared work as rational economic actors pursuing financial gain. To evaluate this explanation, therefore, the following hypothesis can be tested:

Social actor hypothesis (H2): citizens purchase undeclared goods and services for social and/or redistributive rationales.

Formal sector imperfections explanation

A third possible explanation for consumers purchasing undeclared goods and services derives from institutional theory. All societies have laws and regulations (i.e. formal institutions) that define the legal rules of the game (North 1990, Denzau and North 1994, Baumol and Blinder 2008, Mathias et al. 2014, Williams and Horodnic 2015a,b,c). All societies, however, also have informal institutions, which can be defined as the 'socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels' (Helmke and Levitsky 2004: 727). Although undeclared work is illegal in terms of the formal institutions, in many societies due to the formal sector imperfections that exist,

participating in the undeclared economy is often deemed a socially legitimate activity (De Soto 1989, Hodosi 2015, Williams et al. 2015, 2016a,b).

From this institutional perspective, therefore, the undeclared economy can be explained in terms of the existence of formal imperfections (Polese 2016, Polese et al. 2016, 2017a,b). Just as undeclared workers are viewed as voluntarily exiting the declared economy due to the problems they witness in working on a declared basis, such as registering a business, high taxes, the demanding of bribes by corrupt state officials and the burden of regulations (De Soto 1989, Maloney 2004, Small Business Council 2004, Cross and Morales 2007), a similar argument might be made about consumers purchasing undeclared goods and services. These consumers do so due to the failures of the declared economy to deliver goods and services. In Central and Eastern Europe, these failings might include firstly, the lack of availability and reliability of registered businesses (e.g., they may simply not exist to do various tasks or, if they do exist, be unreliable), secondly, the speed of delivery of the goods and services by these formal businesses, and third and finally, the quality of the goods and services provision. As such, ‘the real problem is not so much informality as formality’ (De Soto 1989: 255), namely the availability, speed and quality of provision in the declared economy and unless these failings are resolved, consumers will continue to purchase on an undeclared basis.

Indeed, in recent years, these formal sector failures are seen result in a lack of alignment between the formal and informal institutions and thus the greater prevalence of undeclared work. In such situations, undeclared practices becomes viewed as socially legitimate even if formally illegal (Williams and Horodnic, 2015a,b). The greater prevalence of the undeclared economy is therefore due to the failings of the declared economy resulting in an asymmetry between formal and informal institutions (Williams et al., 2015, 2016a,b). This institutional asymmetry has been measured in recent years using the proxy of tax morale, which is the intrinsic motivation to pay taxes (Torgler 2007), with tax morale shown to be higher among older people, women, married people, those without financial difficulties and the employed (Lago-Peñas and Lago-Peñas 2010, Daude et al. 2013). To evaluate this formal sector failings explanation, therefore, the following hypothesis can be tested:

Formal institutional imperfections hypothesis (H3): citizens purchase undeclared goods and services due to poor formal sector provision.

Despite these different theories which explain the acquisition of undeclared goods and services in various ways, no known studies have so far evaluated the reasons for purchasing goods and services from the undeclared economy in Central and Eastern Europe. Here, therefore, attention turns to outlining a study that examines why they do so and how the reasons vary across populations. In doing so, we will set the scene for an evaluation of which, if any, of these contrasting explanations are relevant and to which groups in Central and Eastern Europe.

Methodology: purchasing undeclared goods and services in Central and Eastern Europe

To evaluate consumers’ rationales for participating in the informal economy and therefore, these various theoretical explanations, we analyse Eurobarometer survey no. 402, which involved 11,131 face-to-face interviews in 11 Central and East European countries in 2013 (for a review of the criticisms of this survey method, see Williams, 2015c). Using the same methodology as all Eurobarometer surveys, 500 face-to-face interviews were conducted in smaller countries and 1,500 in larger nations. The sampling methodology is based on ensuring that on the variables of gender, age, region and locality size, each country and each level of

the sample is representative in proportion to its population size. Therefore, for the univariate analysis, sample weighting was used, as proposed in both the wider literature (Winship and Radbill 1994, Solon et al. 2013) as well as the Eurobarometer methodology, so as to obtain meaningful descriptive results. For the multivariate analysis however, there is a debate over whether a weighting scheme should be used (Pfefferman 1993, Winship and Radbill 1994, Solon et al. 2013). Reflecting the dominant viewpoint, a weighting scheme was not used.

In each face-to-face interview, a gradual approach was adopted with the sensitive questions asked later. Firstly participants were asked about their attitudes towards the undeclared economy and having established some rapport, they were asked about their purchase of goods and services from the undeclared economy in the last 12 months along with their reasons for doing so and finally, they were asked about their supply of informal work. Here, the focus is on the demand-side questions. Participants were first asked 'Have you in the last 12 months paid for any goods or services of which you had a good reason to assume that they included undeclared work (e.g. because there was no invoice or VAT receipt)?'. If so, they were then asked 'What made you acquire it from this source instead of acquiring it on the open market?' (lower price, faster service, better quality, in order to help someone who is in need of money, as a favour amongst friends/relatives/colleagues, good or service is not or hardly available on the regular market).

To analyse consumers' motives for purchasing undeclared goods and services, a multinomial logit model is here used. Given that the question on the reasons for purchasing undeclared was asked only of those reporting an undeclared purchase over the last 12 months, the result is a reduced sample size. In order to better estimate the model, those reporting not having purchased on an undeclared basis over the last year have been included as a reference category. Therefore, the obtained dependent variable used in analysis is a categorical variable coded as follows: value 1 for respondents reporting not having purchased goods and services in the informal economy, value 2 for those purchasing for lower price alone, 3 for social and/or redistributive reasons alone, 4 for poor formal provision alone, 5 for mixture of lower price & social and/or redistributive reasons, 6 for mixture of lower price and & poor formal provision, 7 for mixture of social and/or redistributive reasons & poor formal provision, 8 for mixture of lower price, social and/or redistributive reasons & poor formal provision, and 9 for other motives, refuse to answer or do not know.

The explanatory variables in the empirical analyses, which previous studies conducted at a European Union level reveal to be significantly correlated with the decision to purchase undeclared goods and services (Williams 2008, Williams and Martinez 2014a,b), include:

- *Tax morality*: a constructed index of self-reported tolerance towards tax non-compliance, where 1 represents higher tax morale and 10 lower tax morale. The reliability Cronbach's alpha of the index is 0.87.
- *Gender*: a dummy variable with value 0 for females and 1 for males.
- *Age*: a continuous variable indicating the exact age of a respondent.
- *Marital status*: a categorical variable for the marital status of the respondent with value 1 for married/ remarried individuals or living with partner, value 2 for singles, value 3 for those separated or divorced, and value 4 for widowed and for other form of marital status.
- *Occupation*: a categorical variable grouping respondents by their occupation with value 1 for unemployed, value 2 for self-employed, value 3 for managers, value 4 for other white collars, value 5 for manual workers, value 6 for house persons, value 7 for retired individuals, and value 8 for students.
- *Difficulties paying bills*: a categorical variable for the respondent 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.

- *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, and value 4 for 4 persons or more.
- *Children*: a dummy variable for the presence of children up to 14 years old in the household with value 0 for individuals with no children and value 1 for those having children.
- *Area*: a categorical variable for the area where the respondent lives with value 1 for rural area or village, value 2 for small or middle sized town, and value 3 for large town.

Before analysing the results nevertheless, the reliability of the data collected needs to be briefly discussed, especially given the sensitive topic involved. The finding is that in 90% of the interviews, the interviewers reported good or excellent cooperation from the participant, and fair cooperation in 9% of cases. Cooperation was asserted to be bad in only 1% of cases and this poor cooperation was largely in relation to discussing their supply of undeclared work, not their purchase of undeclared goods and services. Given this, attention turns to an analysis of the results.

Results: explaining the purchase of undeclared goods and services

Analysing whether participants across Central and Eastern Europe reported purchasing undeclared goods and services during the last 12 months, the finding is that 1 in 8 (12%) reported knowingly doing so. Examining the type of goods and services acquired on an undeclared basis, the finding is that 4.5% of participants had purchased housecleaning services on an undeclared basis in the last 12 months, 4.2% home maintenance and improvement services, 4.2% car repair services, 3.8% food products, 3.1% other products, 3.0% other services (to those mentioned elsewhere on this list), 1.4% healthcare services, 1.1% gardening services, 0.8% tutoring, 0.6% help moving house, 0.4% elder care, 0.4% babysitting at home, 0.2% childcare outside the home, 0.2% ironing. The propensity to acquire goods and services on an undeclared basis, however, is also unevenly distributed across countries, ranging from 31% of the population in Latvia to 5% in Poland.

Why, therefore, do consumers acquire undeclared goods and services? Are they rational economic actors seeking a lower price (*H1*)? Are they social actors doing so for social or redistributive reasons (*H2*)? Or is it due to the failings of the declared economy in terms of the availability, speed and quality of the goods and services provided (*H3*)? Analysing this, Table 1 reveals that the explanation that consumers purchase undeclared in order to pay a lower price is the sole motive in just 27% of cases, one of several rationales in 36% of cases and not cited as a rationale in the remaining 37% of cases. Rationales other than a lower price, therefore, prevail in some three-quarters (73%) of cases where consumers purchased undeclared goods and services. Adopting the rational economic actor explanation that consumers do so in order to achieve a lower price, therefore, fails to explain the vast majority of undeclared purchases.

INSERT TABLE 1 ABOUT HERE

Examining the extent to which purchasers view themselves as social actors purchasing undeclared for social or redistributive rationales, meanwhile, the finding is that social and/or redistributive rationales are the sole motive in 8% of all cases and one of several rationales in a further 23% of cases. It is similarly the case with formal sector imperfections. Some 15% of undeclared purchases are explained solely in terms of formal sector imperfections and in 31% of all cases formal sector imperfections were cited alongside other rationales as their reason for doing so.

In Central and Eastern Europe, in consequence, the acquisition of undeclared goods and services cannot be explained using just one or other of these explanations. Instead, to fully explain consumers' motives for purchasing undeclared, all these rationales must be employed. As Table 1 displays, however, the weight given to these different explanations varies across countries. For example, the rationale of a lower price is more prominent in Poland and Lithuania but less common in Slovakia, Slovenia and Romania. Similarly, social and/or redistributive motives are more commonly used as an explanation for purchasing undeclared in Slovenia and Croatia, but less common as a rationale in Poland and Lithuania, while the rationale of formal sector imperfections is relatively more common as an explanation in Bulgaria, Estonia and Romania but less common in Slovakia and Croatia.

The explanations for purchasing undeclared goods and services do not only vary across countries. Table 2 investigates which types of Central and East European citizen are more likely to cite each rationale. Despite the difficulties already mentioned of conducting a multivariate analysis, given the small sample size for some of the categories of the dependent variable, the results display the existence of relevant individual-level differences regarding consumers' motives. Those purchasing undeclared goods and services for the rational economic actor rationale of a lower price are significantly more likely to be men, younger people, the self-employed and managers, and people confronting difficulties paying bills all the time. Those statistically less inclined to cite the lower cost as their motive are single people, and thus are unlikely to be swayed by changes in the cost-benefit ratio confronting them.

INSERT TABLE 2 ABOUT HERE

Analysing the consumers significantly more likely to cite social or redistributive rationales, meanwhile, these tend to never or almost never face difficulties in paying their bills, to live in rural or village areas and to have attitudes towards compliance that are at odds with the codified laws and regulations (i.e., low tax morality). Such a rationale, therefore, is more prevalent among more affluent groups and those living in rural areas where mutual aid is more persistent as a livelihood strategy (Williams et al., 2013). Turning to the formal economy imperfections explanation, this is again significantly more applicable to some populations than others, namely those with lower tax morality and managers. Those significantly less inclined to cite this motive are those who are single.

Examining those likely to use a mixture of the three explanations, Table 2 reveals that for those citing both lower price as well as social and/or redistributive motives, the results resemble those who cite lower price alone. The only difference is that people living in households with three or more adults are also more likely to cite this mix of rationales. Those citing the mixture of lower price and poor formal provision are again more likely to be those with lower tax morale, younger, the employed and those living in larger households. So too are those who have children. Those citing the mixture of social and/or redistributive reasons and poor formal provision, meanwhile, are those with a lower tax morality, self-employed, retired, manual workers, managers and other white collars. Those statistically less inclined to do so for this mixture of rationales are those living in large towns.

Those citing all three motives, namely lower price, social and/or redistributive reasons and the poor formal provision, are again those with a lower tax morality, men, self-employed, manual workers, managers and other white collars and those living in middle sized or large towns compared with those living in rural area or villages. For those citing another motive or who declared they do not know or refuse to say the reason, no important correlations were revealed.

Discussion and conclusions

This paper has for the first time evaluated why consumers in Central and Eastern Europe acquire undeclared goods and services, and how various motives are significantly more likely to be cited by some groups than others. Reporting the results of an 11-country survey, the conventional rational economic actor explanation (*H1*) that consumers purchase in the undeclared sector to pay a lower price is the sole motive for doing so in just 27% of cases. Rationales other than a lower price therefore, prevail in 73% of cases where consumers made undeclared purchases. Social and/or redistributive rationales (*H2*) are the sole motive in 8% of all cases and one of several rationales in a further 23% of cases, whilst some 15% of undeclared purchases are explained solely in terms of poor formal provision (*H3*) and in 33% of all cases poor formal provision was cited alongside other rationales.

In Central and Eastern Europe, therefore, no one explanation for purchasing undeclared goods and services suffices. Instead, if consumers' motives are to be fully explained, all these rationales need to be employed. However, different types of Central and East European citizen are significantly more likely to explain their participation in particular ways. Consumers significantly more likely to cite the motive of a lower price, and thus consumers more susceptible to alterations in the cost/benefit ratio, are men, younger people, the self-employed and managers, and people confronting difficulties paying bills all the time. Consumers significantly more likely to cite social or redistributive rationales, in contrast, never or almost never face difficulties in paying their bills, live in rural or village areas, and have low tax morality. Those without financial difficulties, therefore, as might be expected, are significantly more likely to purchase on an undeclared basis for social or redistributive rationales, as are those in rural areas where the persistence of mutual aid as a coping strategy remains stronger (Williams et al 2013). Consumers likely to cite poor formal provision are significantly more likely to have a lower tax morality and to be managers, suggesting that only by tackling the poor formal provision will tax morality improve and the desire to purchase on an undeclared basis diminish.

Evaluating the theoretical implications, these findings thus reveal that these are not rival competing explanations which are mutually exclusive. Rather, if the reasons for purchasing undeclared goods and services are to be fully explained, all these contrasting explanations need to be employed. All three explanations are relevant, albeit with some groups being significantly more likely to purchase undeclared goods and services for different reasons. Whether similar patterns prevail elsewhere regarding the groups which are significantly more likely to purchase undeclared goods and services for particular reasons now needs to be evaluated. What is certain, however, is that studies can no longer simply treat participants in the undeclared economy as always being either rational economic actors, social actors or doing so solely due to poor formal provision.

This has important policy implications. The conventional policy approach adopted by most governments, based on the rational economic actor model, has been to alter the cost/benefit ratio confronting participants by concentrating on the cost side and increasing the penalties and likelihood of detection (e.g., Hasseldine and Li 1999, Grabiner 2000, Richardson and Sawyer 2001). These deterrence measures have been supplemented in recent years by policy measures that provide incentives for purchasing on a declared basis, including tax incentives such as service voucher schemes for consumers purchasing childcare, elder care, home maintenance and improvement, and domestic services (Small Business Council 2004, Williams 2006, European Commission 2007). The important finding of this study is that such policy measures to change the cost/benefit ratios confronting purchasers are unlikely to be everywhere and always effective. Purchasers of undeclared goods and services are not always rational economic actors swayed purely by the cost/benefit ratio confronting them.

Such endeavour also arises due to the shortcomings of formal sector provision in terms of availability, speed, reliability and quality, as well as due to consumers pursuing social ends.

To deal with those purchasing undeclared goods and services, therefore, not only does the poor formal provision need to be resolved but there also needs to be recognition that many purchase for social ends. Tackling poor formal provision will require an array of initiatives to improve the effectiveness of formal sector delivery, including local-level telephone hotlines and web-portals, along with one-stop shops for customers to find formal suppliers and where suppliers can advertise, so as to improve the availability and speed of formal provision, while the greater use of kite-marks can help tackle the issue of reliability and quality. In relation to transactions for social ends, meanwhile, various options exist, including 'doing nothing' about such purchases, changing regulations to make them legal, and developing new institutions so that citizens can engage in acts of paid mutual aid legitimately, such as Local Exchange and Trading Schemes (LETS) or time banks (Aldridge et al. 2001). Such options will require further evaluation. Moreover, different policy mixes will be required in different contexts, depending on the weight accorded to various rationales. If this paper thus leads to a move beyond unidimensional theorisations of consumer motives and towards a more nuanced theorisation that recognises the multifarious logics and drivers in different populations, then this paper will have fulfilled one of its major goals. If this then leads to greater consideration of the multifarious policy measures required to tackle the demand-side of the undeclared economy, then the fuller intention of this paper will have been achieved.

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Table 1. Reasons Central and East European consumers purchase undeclared goods and services: by country

	Lower price alone	Social and/or redistributive reasons alone	Poor formal provision alone	Mixture of lower price & social and/or redistributive reasons	Mixture of lower price and & poor formal provision	Mixture of social and/or redistributive reasons & poor formal provision	Mixture of lower price, social and/or redistributive reasons & poor formal provision	Other motive/ Refusal/ DK
<i>All countries</i>	27	8	15	10	18	5	8	9
Bulgaria	18	6	32	4	22	6	4	8
Croatia	22	11	9	13	18	7	14	6
Czech Republic	26	6	14	11	23	4	10	6
Estonia	25	9	20	12	19	3	6	6
Hungary	24	8	18	11	18	3	7	11
Latvia	34	4	16	8	19	5	9	5
Lithuania	42	3	15	5	13	5	8	9
Poland	53	4	10	9	10	0	4	10
Slovakia	17	9	7	16	24	4	20	3
Slovenia	17	10	11	13	18	8	14	9
Romania	14	13	18	9	13	12	5	16

Table 2. Multinomial logit regression of motives for purchasing undeclared goods and services in Central and Eastern Europe

Variables	Reference category: not having purchased good or services over the last 12 months							
	Lower price alone	Social and/or redistributive reasons alone	Poor formal provision alone	Mixture of lower price & social and/or redistributive reasons	Mixture of lower price and & poor formal provision	Mixture of social and/or redistributive reasons & poor formal provision	Mixture of lower price, social and/or redistributive reasons & poor formal provision	Other motive/ Refusal/ DK
Tax morality	0.287*** (0.025)	0.160*** (0.049)	0.137*** (0.035)	0.291*** (0.038)	0.221*** (0.029)	0.172*** (0.056)	0.298*** (0.038)	-0.037 (0.057)
Gender (CG: Female)								
Male	0.513*** (0.110)	0.306 (0.196)	0.143 (0.137)	0.411** (0.171)	0.197 (0.123)	0.321 (0.226)	0.454*** (0.170)	0.104 (0.193)
Age (exact age)	-0.014*** (0.005)	0.010 (0.010)	-0.007 (0.007)	-0.015* (0.009)	-0.012* (0.006)	-0.010 (0.012)	-0.013 (0.008)	-0.015 (0.010)
Marital status (CG: (Re-) Married/ Living with partner)								
Single	-0.614*** (0.177)	0.249 (0.313)	-0.738*** (0.255)	-0.521* (0.291)	-0.318 (0.209)	-0.304 (0.408)	-0.098 (0.271)	0.185 (0.303)
Divorced or separated	-0.204 (0.210)	-0.267 (0.430)	0.005 (0.256)	0.080 (0.329)	0.013 (0.239)	0.461 (0.389)	0.388 (0.294)	0.010 (0.389)
Widow/ other	-0.353 (0.238)	-0.194 (0.390)	-0.120 (0.269)	-0.176 (0.352)	-0.123 (0.266)	0.270 (0.431)	0.345 (0.327)	0.350 (0.344)
Occupation (CG: Unemployed)								
Self-employed	0.423* (0.248)	0.376 (0.410)	0.393 (0.346)	0.634* (0.382)	0.875*** (0.275)	2.670*** (0.761)	0.793* (0.452)	0.536 (0.474)
Managers	0.577** (0.225)	0.093 (0.412)	0.968*** (0.288)	0.004 (0.418)	0.544** (0.272)	2.617*** (0.756)	1.125*** (0.402)	0.799* (0.410)
Other white collars	0.325 (0.217)	-0.313 (0.415)	0.268 (0.304)	0.264 (0.359)	0.274 (0.265)	1.511* (0.791)	0.848** (0.394)	0.048 (0.442)
Manual workers	0.059 (0.196)	-0.463 (0.370)	-0.026 (0.284)	0.168 (0.324)	0.400* (0.234)	1.290* (0.758)	0.883** (0.357)	0.141 (0.385)
House persons	0.245 (0.281)	0.049 (0.513)	0.209 (0.382)	0.265 (0.446)	0.042 (0.346)	-12.27 (462.3)	0.237 (0.564)	-0.824 (0.786)
Retired	-0.257	-0.483	0.089	0.437	0.116	1.644**	0.510	0.241

	(0.252)	(0.406)	(0.324)	(0.394)	(0.298)	(0.802)	(0.443)	(0.452)
Students	0.403	-0.336	0.471	0.116	-0.222	1.264	0.365	0.173
	(0.258)	(0.528)	(0.372)	(0.429)	(0.343)	(0.886)	(0.464)	(0.483)
Difficulties paying bills (CG: Most of the time)								
From time to time	-0.328**	0.120	0.159	0.372	0.169	0.173	0.090	0.066
	(0.147)	(0.349)	(0.216)	(0.276)	(0.189)	(0.368)	(0.247)	(0.302)
Almost never/ never	-0.576***	0.602*	0.088	0.297	0.066	-0.039	-0.239	0.027
	(0.149)	(0.325)	(0.212)	(0.274)	(0.188)	(0.363)	(0.252)	(0.293)
People 15+ years in own household (CG: One)								
Two	-0.152	0.320	0.026	0.227	0.179	-0.093	0.067	0.105
	(0.175)	(0.322)	(0.225)	(0.309)	(0.217)	(0.364)	(0.274)	(0.293)
Three	-0.256	0.283	-0.181	0.586*	0.411*	0.034	0.155	-0.119
	(0.193)	(0.355)	(0.256)	(0.321)	(0.229)	(0.397)	(0.300)	(0.333)
Four and more	-0.311	-0.124	-0.142	0.499	0.408*	-0.066	0.488	-0.492
	(0.207)	(0.409)	(0.271)	(0.339)	(0.241)	(0.431)	(0.302)	(0.390)
Children (CG: No children)								
Having children	-0.100	-0.383	0.018	0.144	0.264*	0.354	0.199	-0.083
	(0.127)	(0.267)	(0.163)	(0.194)	(0.138)	(0.260)	(0.192)	(0.239)
Area (CG: Rural area or village)								
Small or middle sized town	0.177	-0.391*	0.050	-0.122	-0.075	-0.412	0.420**	-0.167
	(0.128)	(0.221)	(0.165)	(0.193)	(0.147)	(0.257)	(0.204)	(0.231)
Large town	0.099	-0.507**	0.219	-0.144	0.225	-0.605**	0.385*	0.022
	(0.137)	(0.247)	(0.167)	(0.211)	(0.147)	(0.286)	(0.217)	(0.231)
Constant	-3.020***	-5.274***	-3.908***	-5.086***	-4.169***	-6.185***	-5.664***	-3.703***
	(0.381)	(0.747)	(0.510)	(0.645)	(0.462)	(1.038)	(0.648)	(0.707)
Observations					9,361			
Pseudo R ²					0.05			

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.

We kept in the analysis the individuals for which data on each and every independent variable is available.

Appendix

Table A1. Variables used in the analysis: definitions and descriptive statistics (N = 9,361)

Variables	Definition	Mode or mean	Min/ Max
<i>Dependent variable</i>			
Motives for purchasing goods and services in the informal economy	Respondent motives for purchasing goods and services in the informal economy in the last 12 months in categories (respondents reporting not purchasing goods and services in the informal economy were considered as a reference category).	Not purchase undeclared goods and services (88%)	1 / 9
<i>Independent variables</i>			
Tax morality	Constructed index of self-reported tolerance towards tax non-compliance	2.8	1 / 10
Gender	Dummy for the gender of the respondent	Female (52%)	0 / 1
Age	Respondent exact age	45 years	15 / 96
Marital status	Respondent marital status in categories	(Re-)Married/ Living with partner (62%)	1 / 4
Occupation	Respondent occupation in categories	Retired (26%)	1 / 8
Difficulties paying bills	Respondent difficulties in paying bills in categories	Almost never/ never (57%)	1 / 3
People 15+ years in own household	People 15+ years in respondent`s household (including the respondent) in categories	Two (45%)	1 / 4
Children	Dummy for the presence of children (up to 14 years old) in the household	No children (72%)	0 / 1
Area	Size of the area where the respondent lives in categories	Rural area or village (36%)	1 / 3