TAX MORALE AND TAX COMPLIANCE IN FRANCE, GERMANY AND AUSTRIA

Vasileios Vlachos, Aristidis Bitzenis & Panagiotis Kontakos
University of Macedonia, Greece

ABSTRACT[1]

This paper attempts to identify which factors have an impact on tax morale and tax compliance in a selected sample of developed countries, and particularly France, Germany and Austria. Empirical evidence retrieved from other contemporary studies is utilized for this purpose, based on an extended literature review performed by the authors. The methodology used is that of descriptive analysis. Comparative profiles for each of the three countries were developed, with reference to various aspects of shadow economy, including corruption, tax avoidance, social contribution avoidance, undeclared or illegal work, shelf consumption, illegal acts (black or underground economy). The determinants depicted in the findings of MIMIC approaches are underlined. Our ultimate aim is to use the three countries as benchmarks and input for future work; specifically, for the performance of a qualitative analysis and the comprehension of tax evasion in the case of Greece, so that we can reach essential and thorough proposals to the Greek government in order to contain the problem.

1. INTRODUCTION

The aim of this research paper is to perform a critical literature review survey related to the size of the shadow economy, its determinants, informal labour, tax evasion, the relationship between the shadow and the formal economy, and the determinants of corruption and its relation with the shadow economy. The studies reviewed in this report focus on each of the economies described in the title of this report.

The report is structured as follows. The next section provides a synopsis of some stylized facts pertaining to the shadow economy, i.e. its synthesis and determinants, the methods to measure it, its impact on the official economy and its relation with corruption. The same section also provides information about the studies reviewed. Sections 3 to 5 refer to the countries of interest. Finally, section 6 summarizes the findings of the studies reviewed and puts forward some policy recommendations for transferring part of the shadow economy to the official economy.

2. STYLIZED FACTS AND SCOPE OF THE STUDY

A wide range of methods has been developed to evaluate and understand the dimensions and causes of shadow economy and corruption, in their wider contexts, particularly in the past three decades. These can be generally grouped under two approaches: indirect (macroeconomic) and direct (microeconomic) methods of measurement. Both approaches are associated with specific advantages and disadvantages.

Indirect methods are mainly intended at measuring the size of shadow economy. The real meaning of these methods is that they construe observable phenomena as signs of the unseen part of the economy. The most famous are discrepancy methods based on data comparisons, e.g. between labour force surveys and business statistics, as well as monetary methods (see e.g. Schneider and Enste, 2000).

Direct methods of measurement refer to survey-based methods that depend on information directly retrieved by the population. Their main contribution is that they can measure not only the size but also the structure and motivations of the participants involved in undeclared work. Such methods have been applied in a number of countries in recent years.

The authors of the paper, in their final aim to reach a thorough comprehension of the problem tax evasion in the case of Greece, have argued that the shadow economy in Greece has been estimated only through indirect approaches, methods that are easily applicable although involve a high possibility of error, but simultaneously are not sufficient to establish the factors that drive economic agents to shift towards the underground economy. Our wider research project THALES, although it recognizes the time consuming and expensive nature of adopting a direct research approach (in order to administer a high volume of questionnaires), it aims to be a pioneer in understanding the phenomena of tax morale and tax behaviour in Greece by using and analyzing primary data. Particularly, the implementation of our interviews, scientific games and economic experiments (tax compliance games) involves 2,000 individuals and business owners (in majority small businesses), which have been identified via random or other statistically sound sampling methodologies. A high variety of professional classes and income clusters is utilized by the authors as endogenous variables in order to discriminate their behavioral patterns and attitudes triggered by a wide number of economic and tax variables, as e.g. the level of unemployment, undeclared work, etc. This approach is also in accordance with Cummings et al. (2005), who argue that in order to completely comprehend variations in compliance behavior across cultures is crucial to recognize differences in tax administration and citizen attitudes toward governments. Tax compliance is a multifaceted behavioral issue and its exploration necessitates the employment of a multiplicity of methods and data sources. Further, according to evidence from the pilot questionnaire survey and tax compliance experiments in the case of Greek SMEs which was performed by the authors (Bitzenis et al., 2014), their political, social psychological and economic determinants of their tax compliance were analyzed, by following a multifaceted approach. Definitely, as noted per Cummings et al. (2005), outcomes from laboratory experiments performed in various countries reveal that observed differences in tax compliance levels can be elucidated by "differences in the fairness of tax administration, in the perceived fiscal exchange, and in the overall attitude towards the respective governments. These experimental results are shown to be robust by replicating them for the same countries using survey response measures of tax compliance".

The commonly found macro estimations of the shadow economy in the international literature is based on cross-country panel estimates of the multiple indicators multiple causes (MIMIC) approach that succeeded the currency demand approach[2] (see the work of Schneider). The commonly explored determinants of the MIMIC approach are the tax burden (+), the self-employment quota (+), the unemployment rate (+), regulations (+), the quality of formal institutions measured (-) and the level of tax morale (-).[3]

With regard to the countries of interest to this report, the average estimates for the period 1999-2007 are 15 percent of GDP for France, 16 percent of GDP for Germany and 9.8 percent of GDP for Austria (Schneider et al., 2010).

Although the aim is to review studies that generate results from data concerning single countries, studies which focus on a small set of countries for comparative purposes (e.g. 2 to 4 countries) and generate for that reason their estimations from cross-country panel data sets, are also reviewed. Reference is also made to studies which generate estimations from large (in terms of number of countries) cross-country panel data sets, but only about their special focus (if there is any) on a country of interest to this report (every such reference is stated clearly in the text in order to avoid confusions). The aim is to avoid references to generalized estimates and conclusions that may be the outcome of analyses of data which concern a large number of countries. Drawing generalized conclusions from cross-cultural comparisons is not ideal (despite its practicality due to issues concerning data availability) because institutional and cultural frameworks that typify specific countries influences the size of the shadow economy and the significance of its determinants.

Moreover, the studies included in this report either generate estimates on the shadow economy and discuss relevant issues that concern shadow economic activity from the year 2000 onwards, or have been heavily cited (in the case that their findings and discussion concerns a period before the year 2000).

The shadow economy and other terms associated to it (i.e. informal employment, corruption, etc.) in all sections before section 6, refer to the country which is in the title of the section. The reason for doing this is for not being repetitive.

The terms included in this report are shadow/informal/underground economy, which have the same meaning. The total hidden or total unobserved economy includes criminal activities. The formal/official economy are terms that have the same meaning. Informal employment/labour and undeclared work have the same meaning and

constitute part of the shadow economy. Informal employment (either in the form of a complementary-secondary job or a main job due to high unemployment) and its obvious association with irregular immigration is a whole strand of literature in the subject of the shadow economy. Another term of particular importance that should not be confused with the shadow economy is tax evasion. The shadow economy is more than tax evasion as it is the sum of all forms of tax non-compliance which are irrelevant to tax evasion, such as tax avoidance and concerns other activities generating concealed income such as bribery (criminal activities are excluded thus the illegal economy is something completely different). Tax evasion has also developed into an autonomous literature strand.

Another issue discussed in this paper is the relation/effect of the shadow economy on the formal economy. It assumed that the shadow economy may be pro-cyclical (i.e. follow) or counter-cyclical to the business/economic cycle. Based on this notion a theory has been developed that the shadow economy and the formal economy may be substitutes (counter-cyclical shadow economy) or complementary (pro-cyclical shadow economy). For example, Schneider (2005) finds a negative correlation between the shadow and the official economy for developing countries and a positive relationship for developed and transition countries.

Finally, the determinants of corruption and more importantly its relation with the shadow economy also concern the literature. With regard to its determinants, both personal and country characteristics determine the likelihood of being asked for a bribe (Mocan, 2008). For example, males, wealthier and more educated individuals are more likely to be asked for a bribe. Moreover, the strength of institutions in the country (e.g. as measured by the rule of law) has the benefit of reducing the extent of corruption in the country.

As far as the relation between the shadow economy and corruption is concerned, the literature concedes on two main conclusions. Firstly, not only the shadow economy grows primarily due to weak institutions and rule of law, but institutional quality is also responsible for the levels of corruption. Secondly, the country-specific formal and informal institutions, which are primarily responsible for the sizes of both, corruption and the shadow economy, foster a complementary relationship for the mature economies in a fashion similar to that of transition economies.

3. FRANCE

Analyses and estimates of the French shadow economy date back to the 1980s (De Grazia, 1983; Barthelemy, 1989). In a contemporary approach, Dell'Anno et al. (2007) employ the MIMIC technique to estimate the French shadow economy and compare it with those of Greece's and Spain's. The authors indicate that the French shadow economy follows a downward trend for the period 1968-2002, being approximately 8.6 percent of GDP in 2002.[4] According to the statistically significant estimated coefficients, the rate of self-employment, unemployment and direct taxation (listed in terms of importance) are positively linked to the size of the shadow economy. The simulated effects of these estimates indicate that in the case of:

- a 1 percent increase of the self-employment ratio, the shadow economy will increase by 2.5 percent;
- a 1 percent increase of unemployment, the shadow economy will increase by 1.5 percent;
- a 1 percent increase of direct taxation, the shadow economy will increase by 0.6 percent.

Finally, the authors report a negative relationship between the shadow economy and GDP, which (along with the influence of unemployment) implies a substitution effect.

Based on experimental data, Fortin et al. (2007) explore tax evasion and social interactions. The authors report a fairness effect in terms of horizontal equity (i.e. in a group of individuals whose income is equal before tax, those with higher than mean group tax rate evade more in order to restore equity). The finding that perceived unfair taxation leads to increased tax evasion this means at the policy level that a taxation system that is more horizontally equitable is likely to improve tax compliance. Moreover, the authors report the existence of conformity effects (i.e. individuals resembling the average behaviour of their peers).

Based on experimental data, Coricelli et al. (2010) explore the emotional cost of tax evasion. The authors find that the intensity of anticipated and anticipatory emotions before reporting positively correlates with both the decision to evade taxes and the proportion of evaded income. As a result, the experienced emotional arousal of individuals after an audit increases with the monetary sanctions and it becomes even stronger when the evader's picture is publicly displayed, indicating that the risk of a public exposure of deception deters evasion. The authors also observe the presence of bomb-crater effect, which implies that the amount of fines encourages evasion (i.e. while being audited reduces the proportion of evaded income, the higher the fine is, the higher the dissimulation of income gets in the next period). Based on the above, the authors suggest that a policy which strengthens the emotional dimension of cheating favors compliance.

Based on cross-country experimental data, Lefebvre et al. (2011) explore tax evasion and welfare dodging (i.e. the welfare benefit from being informally rather than formally employed). The authors argue that higher frequency of fraud in the case of welfare dodging (i.e. being informally employed and receiving unemployment benefits) than in the case of tax evasion (which occurs only from self-employment in this experiment) is due to the choice of individuals not to base their decision on the expected profits of evasion but on the absolute difference between the net income in case they report and the net income in case they do not report their income.[5] Moreover, the authors report that there is a significant effect of social information about others' behaviour (i.e. a conformity effect) on the decision to engage in tax evasion, but not in welfare fraud.

With respect to the role of immigrants in the informal labour market, it appears that immigrants fit well to demands of modern firms for flexibility and docility (Samers, 1998) and attach more importance to work than French natives, with network effects potentially reinforcing or reducing the stigma attached to each minority (Senik and Verdier, 2011).[6]

Windebank (2004) explores how demand-side incentives might be used to complement supply-side deterrence measures for the reduction of the shadow economy in France and Belgium. The author refers to the "cheques employ" service and "titre employ" service schemes in France, whose the intention has been to evaluate the feasibility and effectiveness of using vouchers/checks as incentives for consumers to use formal rather than off-the-books provision in the domestic services realm where informal employment is dominant. The downside of this venture is that Local Employment Agencies oblige the unemployed to work on such schemes and thus, it is viewed by the beneficiaries as barter for goods and services. Finally, the author argues that if the scheme would expand its appeal beyond the unemployed and the domestic services realm, it could generate more promising results on the reduction of the demand for shadow economic activities.

Unlike the countries reviewed in the other sections, no study focusing exclusively on France explores the country's determinants of corruption in the contemporary era. Maybe because there is no such interest in the literature, since according to the Corruption Perceptions Index results for 2013, France is placed on the 22nd position.

4. GERMANY

Coming back to the work of Schneider (2009) and the questionnaire survey that he supervised in Germany (in 2003), several implications are made. Firstly, the wage rate in the German shadow economy is on average 22 (minimum) to 40 (maximum) percent of the respective wage rate of the official economy (indicating that cost efficiency drives the preference for purchasing services from the shadow economy). Secondly, the demand for shadow economic activities has risen from 55 percent (of the total sample interviewed) in 1996 to 67 percent in 2003, while undertaking shadow economic activities remained stable (from 36 to 38 percent, respectively). Thirdly, in 2003, 71 percent stated that without the shadow economy living standards will be reduced and only 3 percent stated that informal employment should be reported and prosecuted. Finally, Schneider (2009) refers to Enste and Schneider (2006) who estimate that the shadow economy in terms of informal employment is about 5-6 percent of GDP and approximately 33 to 40 percent of the total shadow economy.

In another estimation of the shadow economy with primary data, Feld and Larsen (2005) generate through the shadow economy wage rate, estimates of 1.3 percent of GDP in 2001 and 1 percent of GDP in 2004.[7] Moreover, in contrast to the fieldwork findings reported by Schneider (2009), Feld and Larsen (2005) report that the proportion of respondents who engage or would engage in the shadow economy if given the chance decreased from 25.5 percent in 2001 to 24.4 percent in 2004. In addition, Feld and Larsen (2005) report that most of informal employment took place in the construction and the agricultural sector.[8] Finally, Feld and Larsen (2005) report that age and marital status are the most important drivers for engaging in the shadow economy (i.e. younger individuals of 18-29 years old and self-employed assisting spouses).

Pedersen (2003)[9] also reports on the proportion of the German population engaging in the shadow economy and gives a much lower rate of 10.4 percent. The author also reports on the factors driving towards this engagement, of which the most important is occupation, i.e. skilled men are significantly more likely to carry out black activities than male salaried employees, while the same applies to skilled and unskilled women and female students.[10]

Turning to studies that focus on informal employment,[11] Enste (2011) focuses on the characteristics of individuals that work informally and performs an analysis, which is based on the results of representative surveys. The author reports that perceived norms in the social environment play by far the most important role in informal employment. The low acceptance of official institutions and formal norms by suppliers and individuals who demand

informal work, indicates the necessity of reforms in the institutional framework required to decrease the attractiveness and acceptance of shadow economic activities.[12]

Based on data obtained from a 2010 survey of German residents, Haigner et al. (2013) also explore the supply and demand for informal labour.[13] The authors report that unemployment, in general, and dissatisfaction with one's relative standing in society and annoyance at government inefficiency, especially for males, are the main drivers for the supply of informal labour. Informal labour demand, however, is not affected by these factors, but rather on flexibility (compared to official labour that has to conform to strict regulations) and the size of the tax burden.

Moving away from fieldworks, the rest of the estimates of the shadow economy concerning its development from the year 2000 onwards (and the mid-1990s) are the outcome of the currency demand approach and the MIMIC approach. Based on the currency demand approach, Schneider and Enste (2000) estimate the shadow economy at 14.7 percent of GDP (a little less than the MIMIC approach estimates).

Pickhardt and Pons (2006) develop (what they call) a joint model and their estimates of the shadow economy size are a bit smaller (approximately the same) from the respective derived from the MIMIC approach. Their findings also indicate that the tax and social security burdens are responsible for more than a third of the shadow economy. In addition, labour market variables (i.e. full/part-time employment and participation rate) also have great influence on the shadow economy. From that perspective, Pickhardt and Pons (2006) suggest that in the German case, labour market policy can be an important alternative or a complementary tool to fiscal policy as an instrument for controlling the size of the shadow economy. Finally, the authors report that the shadow economy is inversely related with unemployment and positively linked to GDP.

Pickhardt and Sarda (2011) employ (what they call) the modified-cash-deposit-ratio approach to Germany for the period 1960 to 2008. The authors indicate that the specific approach (which they present as more appropriate and econometrically fit than all others) generates much lower estimates of the shadow economy than the MIMIC approach (almost half their size). Moreover, according to the authors, the modified-cash-deposit-ratio approach, unlike the MIMIC approach, is free from the false inclusion of illegal activities and their consequent determination through tax pressures.

Mummert and Schneider (2001) explore the differences between shadow economic activities in the Western and Eastern part of Germany. The authors estimate a lesser extent of shadow economic activities in East Germany despite the comparatively higher unemployment rate. Since the institutional framework is the same for both parts of Germany, the authors look upon the other factors influencing the compliance decision rather than on formal institutions alone and emphasize on the role of informal labour supply.[14] Based on the findings of previous fieldwork studies that the individuals who engage in informal labour are those who are trained for a skilled trade or students and not those being unemployed, lead the authors to adopt the particular notion as an explanation.

Buehn et al. (2009) explore the size of the hidden economy, i.e. the shadow economy plus the do-it-yourself activities. The authors find that from the year 1999 onwards, the size of the shadow economy in terms of GDP is four times greater than the respective size of do-it-yourself activities and indifferent from the average MIMIC approach estimates of Schneider et al. (2010).[15]

With regard to the measures fostering tax compliance, Feld et al. (2011) argue that Germany is not an exception from the lack of evidence in support of the deterrence framework when it comes to data outside the United States. With the use of Granger causality tests, the authors explore the causal relationships between the long-run time series of measures for deterrence and the size of the shadow economy and obtain the evidence they need to reinforce their argument.

Finally, as far as corruption is concerned, the studies that focus exclusively on Germany, explore the properties of corruption within the business environment.[16] For example, Lord (2013) explores the properties of transnational corporate bribery and realizes that enforcement faces significant obstacles, as, for instance, corporations bribing overseas are likely to be able to negotiate civil solutions to criminal behaviours that incorporate financial penalties and more innovative mechanisms such as self-cleaning, monitoring and introducing adequate compliance systems to reduce the likelihood of future bribery. Another example of bribery in the business environment is the work of Arnold et al. (2012), who based data collected from 104 purchasing managers in Germany suggest that the factors of organizational complexity, corporate culture, internationality and functional complexity influence a firm's inclination towards corruption, which in turn manifest itself in the presence or absence of corruption control and prevention mechanisms.

5. AUSTRIA

The reason for referring to Schneider's (2009) work is due the author's discussion about a questionnaire survey that he supervised in Germany (in 2003) and Austria (in 2002). With respect to Austria, Schneider (2009) refers to estimates of the shadow economy from primary data on informal wage rates,[17] which are approximately between 31 and 52 percent[18] of the values estimated by the MIMIC approach.[19]

With respect to effects of the shadow economy on the official economy, Schneider (1999) indicates that in Germany and Austria, over 66 percent of the earnings in the shadow economy are immediately spent in the official economy and provide a considerable boost for the official economy.

Based on sample of 252 fiscal officers, economics and business students, business lawyers and entrepreneurs, Kirchler et al. (2003) explore the reception of the concepts of tax avoidance, tax evasion, and tax flight. The authors reveal through their findings the moral dimensions of individuals' perception of taxation. The results indicate that tax avoidance is perceived as legal and moral, and an intention to save taxes, characterized by cleverness and described as a good idea. At the same time, tax evasion is perceived as illegal and immoral, and should be prosecuted. Finally, tax flight is perceived as legal but considered immoral.

Based on a sample of 60 self-employed and 59 business entrepreneurs, Kirchler and Maciejovsky (2001) explore self-reported tax evasion. They find that self-reported tax compliance is dependent on the gain and loss situation (i.e. the presence of a tax payment or refund). The current versus the expected asset position is also reported to have an effect. Finally, the authors observe that while business entrepreneurs act very cautiously, self-employed individuals base their decisions on a short-term perspective.

Torgler and Schneider (2005) explore the significance of tax morale in Austria. The authors report that societal variables such as trust, national pride or religiosity have an impact on tax morale and emphasize on the phenomenon of conditional cooperation (i.e. when Austrians perceive that tax evasion is a common phenomenon, their intrinsic motivation to contribute to the society decreases). Finally, the authors assert that the Austrian tax morale is among the highest in Europe and that its marginal deterioration is related to the increase in the size of shadow economy.

Turning to studies that focus on informal employment, Schneider (2011) argues that the most influential factors on the shadow economy and shadow labour force are tax policies and state regulation. Based on previous research and own calculations, Schneider (2011) estimates that in 1997-1998, the size of informal employment in Austria was approximately 16 percent of the official labour force and in Germany about 19 to 23 percent.

6. CONCLUSION

The aim of this study is to report on the size and determinants of the shadow economy of France, Austria and Germany. However, by reviewing the findings of relevant studies about the shadow economic activities of the aforementioned countries, the opportunity arises to group the discussion according to the issues of tax evasion, informal employment, the relationship between the shadow and the formal economy and the influence of corruption.

With regard to the estimations of the shadow economies size, the findings of studies focusing on a single country differ from the generalized findings of the MIMIC approach discussed in section 2. In particular, all primary data estimates of the shadow economy are smaller than the respective estimates generated by macro data. This is not only due to the intrinsic nature of direct survey approaches, which results to lower estimates of the shadow economy, but also because some of the estimates are based exclusively on informal wages and as such, they represent the size of informal labour (which is only a part of the shadow economy).

On the other hand, estimates based on macro data, more or less resemble those of the MIMIC approach discussed in section 2. However, the modified-cash-deposit-ratio approach generates much lower estimates of the German shadow economy than the MIMIC approach.

Again, as far as the determinants of the shadow economy are concerned, the findings of studies focusing on a single country, more or less differ from the generalized findings of the MIMIC approach discussed in section 2 (mostly by becoming more detailed). Except from the determinants already stressed in section 2 it is stressed that societal variables impact on tax morale. Moreover, demographic variables also have a role that is neglected by the MIMIC approach.

Furthermore, some of the factors determining tax evasion are not explored in studies attempting to estimate the size of the shadow economy. For example, although tax compliance is dependent on personal economic gain and loss (except for the case of welfare dodging reported in France), conditional cooperation is also present (signifying the role of tax morale). The balance between these two distinct features seems to be explained by the effort to

maintain living standards and conforming to the influence of tax morale (i.e. it would be easier for a poor individual to evade taxes in a highly misanthropist and corrupt environment than in an environment where all of his/her peers would consider the action unethical and unacceptable and would behave as such).

Moreover, with regard to the dimensions of informal labour supply, the main feature of suppliers is skill, unemployment is often regarded as a driver and students are commonly found in the supply side. Alternatively, informal labour demand is affected by flexibility and the size of the tax burden and the requirement for continuous cost reduction.

Furthermore, the incidence of corruption signalling activities in the shadows concern mainly countries such as e.g. Italy, Spain and Turkey, whose economies face the consequences of corrupt political systems that damage the tax morale of taxpayers. Germany is also referred in studies, but due to bribery issues concerning large businesses in the private sector.

Last but not least, the relationship between the shadow economy and the formal economy arising by evidence from France indicates the existence of a substitution effect.

The aforementioned concluding remarks can be of assistance in the formulation of proposals that would lead towards a successful transfer of a part of the shadow economy to the formal. The achievement of a transfer and instead of a reduction is of extreme importance, since there is evidence from Austria and Germany that approximately 2/3 of informal income is immediately spent in the official economy and thus, in the case of a reduction apart of it would be lost.

But what do government officials think? Feld and Schneider (2011) observe that in most OECD countries the policy instrument of choice to prevent people from shadow economic activities has been deterrence. While deterrence policy is well-founded from a theoretical point of view, the empirical evidence on its success is rather weak. Moreover, deterrence becomes less important when it is compared to the impact of tax morale, or at least of equal importance from a theoretical point of view to that of incentives, when considering the slippery-slope framework. Support for the properties of the particular framework come from other studies (e.g. Italian) which indicate that the joint employment of incentives schemes and deterrence measures fosters compliance.

The main issue, however, is not whether policies beyond the deterrence measures used to date would be effective in the laboratory or in a simulation programme, which are more likely to be (as for example French studies already discussed indicate that the use of vouchers/checks as incentives for consumers to prefer formal rather than informal services would reduce informal labour and that public exposure deters tax evasion), but whether they would be given the chance to prove their effectiveness in the real world.

Lastly, we need to mention that the content of this manuscript is a byproduct from an ongoing EU funded project titled “The Shadow Economy (Informal Sector) in Greece: Size, Causes and Consequences”. Our wider project, named as THALES, aims to achieve numerous objectives, among which the development of a theoretical background and framework that will facilitate the understanding of the reasons of black/shadow economy in Greece, the typology of Greek taxpayers and of the factors that influence and shape his/her behavioural dynamics, perform cross-country comparisons at regional level, but also with country groups by advanced taxation systems (e.g. Austria, Germany, Switzerland, France), other Mediterranean countries (Italy, Spain), South Eastern (Bulgaria) and transition and developing economies (Turkey, Peru). A mixture of suggestions and structural policies are expected to be provided to the Greek Government at the conclusion of the research for the efficient confrontation of black/shadow economy and tax evasion in Greece.

ENDNOTES

1. The current paper is presented under the auspices of the THALES Research Programme. THALES Programme has been co-financed by the European Union (European Social Fund - ESF) and Greek national funds through the Operational Program “Education and Lifelong Learning” of the National Strategic Reference Framework (NSRF).

2. In fact, researchers employing the MIMIC approach use the currency demand approach to calibrate the MIMIC estimates. Therefore, it can be said that the MIMIC approach requires the estimates of a currency demand model.

3. The signs in brackets signify the relation of the determinants with the shadow economy.

4. In contrast to Dell'Anno et al. (2007), Williams and Windebank (2001) assert that the French economy has been undergoing a process of informalization in the last 25 years of the 20th century, which may be perceived as a manifestation of backwardness that is assumed to disappear with economic advancement and modernization.

5. Thus, the individuals in the category of welfare dodging have clearly no reason to report their income, because this report is punished with certainty by the withdrawal of the welfare benefit.

6. Studies covering an earlier period are easily reflected through Samers (2003) who explores the political economy and regulation of undocumented immigration in France during the 1990s.

7. When Feld and Larsen (2005) use the wage rate of the official economy, the shadow economy estimates reach 4.1 percent of GDP in 2001 and 3.1 percent of GDP in 2004.

8. Fel and Larsen (2005) report that in the construction sector, 29 percent of all shadow economic activities took place in 2001 and 49 percent in 2004. In agriculture, the share reduced from 15 percent in 2001 to 2.6 percent in 2004.

9. A study similar to Pedersen (2003) is that of Brodersen (2003), which concerns do-it-yourself activities. Since do-it-yourself activities fall outside the realm of the shadow economy and cannot be reported or prosecuted for tax evasion, the findings of this study are not discussed in this report.

10. Pedersen (2003) reports that single females and long-term unemployed males are more likely to engage in the shadow economy.

11. Contemporary fieldworks or studies based on secondary data about the informal employment of irregular immigrants that focus exclusively on Germany barely exist. An exception may be (as it does not concern irregular migration) the work of Lutz and Palenga-Mollenbeck (2010) about care labour. Earlier studies reveal that immigration is not responsible per se for the rising informal labour market, but rather the factors that transformed the German economy, such as technological change, growth of the service sector, increase of part-time labour, increase in temporary and precarious jobs and growing unemployment (Wilpert, 1998).

12. An assumption that may also be indicative of the conditions fostering informal labour is job searching through informal networks. An example of job searching through informal networks is the comparative study of employment matching in the United States and Germany by McDonald et al. (2012), who argue that institutional (and cultural) differences explain why informal job matching is more common in Germany than in the United States.

13. An interesting feature of the results from this survey is that on average, respondents do not agree with the statement that informal labour suppliers should be reported.

14. Mummert and Schneider (2001) also assume that do-it-yourself activities may also be responsible for this difference, because given the circumstances in East Germany they may be an even better alternative to exchanges in the official economy than shadow economic activities do. However, the authors do not provide any evidence for this argument.

15. Buehn and Karmann (2011) return to this issue and find that while institutional factors determine the shadow economy, do-it-yourself activities respond to individual constraints. Their findings suggest that goods and services produced by do-it-yourself activities are not complemented by the demand for services in the shadow economy and indicate that the shadow economy and do-it-yourself activities may substitute each other.

16. The lack of studies about corruption that focus exclusively in German speaking countries may be due to the relatively low levels of corruption in these countries. For example, according to the Corruption Perceptions Index results for 2013, Austria is placed on the 26th position, Germany is placed on the 12th position and Switzerland is placed on the 7th position.

17. Schneider (2009) also makes a reference on the fieldwork of Lamnek et al. (2000) who find that around one third of the population is illicitly employed and, as a result, avoids paying high taxes and other contributions and escapes the rigidity of regulations.

18. Schneider (2009) states that the range from 31 to 52 percent is due to the variations in the hourly wage rates of the interviewees.

19. Macroeconomic estimates of the Austrian shadow economy based on data concerning exclusively Austria are generated by Schneider and Neck (1993), who employ the currency demand approach.

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