Pakistan Economic and Social Review
Volume 48, No. 2 (Winter 2010), pp. 167-182

EXPLORING THE LINK BETWEEN TAX EVASION AND THE UNDERGROUND ECONOMY

CHOON YIN SAM*

Abstract. Often, the size of the underground economy is treated as equivalent to the amount of tax evaded. This may be misleading. It is possible to have income unreported to the tax authority, thus creating a serious tax evasion problem, while the official national product is not understated. This paper shows that the underground economy and tax evasion are related but they are not identical. To do so, a simple framework is developed to distinguish between tax evasion in the aboveground economy and the underground economy. Implications are drawn in the context of mitigating the size of the evaded tax and the underground economy.

I. INTRODUCTION

This paper investigates the connection between the underground economy (UGE) and tax evasion. Without clearly distinguishing them at the outset, it may be mistaken to treat the two as identical, leading to improper use and interpretation of the estimated magnitude of the UGE. In some cases, the UGE is treated synonymously with tax evasion. A possible reason is that unreported income includes those that are generated from economic activities that ought to pay their respective taxes if they were reported to the tax authority. For example, Schneider (2005, p. 600) classifies underground activities as market-based legal goods and services either monetary or non-monetary transactions unreported to the government "to avoid payments of

*The author is Lecturer in Economics at School of Business and Information Technology, PSB Academy, 355 Jalan Bukit Ho Swee, Singapore 169567
(E-mail: choon-yin.sam@psb-academy.edu.sg).

The author is grateful to the anonymous referees and the editors of *Pakistan Economic and Social Review* for their constructive comments and useful suggestions. The usual caveat applies.

income, value added or other taxes". But this is hardly accurate. Small businesses that failed to record their output with the relevant authority (even if they were registered) might not be liable to taxation simply because their income was below the tax threshold income level. There are reasons other than evading taxes that compel individuals to participate in the UGE, including the intensity of regulations and their unwillingness to bribe public officers (corruption can be seen as a form of regulation to drive entrepreneurs underground) (Schneider and Buehn, 2009).

More than a decade ago, Tanzi and Shome (1994) highlighted the less-than-satisfactory treatment in connecting tax evasion and the UGE. They argued that some people have defined the UGE as equivalent to tax evasion while others have referred the UGE as that part of the national income that is hidden, and "often they do not specify which of these definitions they have in mind" (*ibid*, p. 336). A quick search reveals that the confusion still exists. The website of the Californian State Government, for example, treats the UGE and tax evasion as essentially identical. The UGE is defined as "a term that refers to those individuals and businesses that deal in cash and/or use other schemes to conceal their activities and their true tax liability …." whereby the UGE "*is also referred to as tax evasion, tax fraud, cash pay, tax gap, payments under-the-table, and off-the-books*" [Emphasis added; http://www.edd.ca.gov, viewed on 2 July 2008].

This paper proposes a simple taxonomy of the UGE based on tax evasion as a way to reconcile some of the differences. This paper presents, to the author's knowledge, the first attempt to devise a way to measure tax evasion derived from the underground activities. It goes beyond the simplistic understanding of who is involved in the UGE to explore the question on whether the individuals are liable to taxation in the first place. The methodology adopted in this article is mainly descriptive and analytical. It should be mentioned at the outset that the paper does not offer any estimated size of the UGE or that of evaded tax. The task remains a difficult one. The results are at best 'guesstimates', and are particularly susceptible to exaggeration, distortion and manipulation. However, analysis to connect the UGE and tax evasion has certain relevance and is worth pursuing. For instance, tax agencies would like to know how much of the evaded tax were derived from the UGE and whether improvements in tax administration would curb the growth of the UGE. As this article will show, while attempts to curb the growth of the UGE (like legalizing gambling and prostitution) contribute to the government's coffer, measures to curb tax evasion (like lowering of the cost of tax compliance) do not necessarily reduce tax evasion from the underground sector. Regardless of the tax rate or ease of filing for

taxes, few if any illegal operators want to declare their income to the tax agency on a voluntarily basis.

The rest of the paper is organized in the following manner. Section II reviews the literature on the UGE. It highlights the concern with regards to the current usage of the UGE estimates, with particular reference to their use as proxies of evaded tax. Section III presents a simple framework to establish a link between UGE and tax evasion, recognizing that tax evasion does not necessarily imply participation in the UGE. Section IV offers the conclusion.

II. A BRIEF LITERATURE REVIEW

There are various terms to describe the group of activities that are supposedly recorded, but are concealed from the authorities. The underground economy, grey economy, hidden economy, cash economy, shadow economy, parallel economy and black economy have been used by various authors (OECD, 2002). Because the underground activities are deliberately hidden from the public authority, the recorded economic statistics tend to misrepresent the true economic status of the country's economy. For example, the official unemployment rate may over-estimate the actual situation in the labour market when some of the unemployed are gainfully employed in the UGE. The Balance of Payments (BOP) statistics can also be adversely affected in the presence of the UGE (Tanzi, 1983b). Improper declaration of trade transactions and improper measurement of capital and commodity flows create distortions in BOP statements.

It is not easy to obtain accurate information about the UGE because the participants deliberately avoid being identified.[1] It is therefore not unusual to obtain different estimates of the size of the UGE for the same country,

---

[1]Several methods have been developed over the years to estimate the size of the UGE. Guttman (1977) established the currency demand method to use monetary statistics as an indirect measure of the UGE. Feige (1979) developed the monetary transaction approach, and relaxed the constant transaction velocity currency circulation assumption in the currency demand model. Tanzi (1983a) derived a method that uses taxes and other independent variables to assess their statistical impact on the ratio of cash to total money demand. Kaufman and Kaliberda (1996) and Lacko (2000) developed the electricity consumption method. Using growth of total electricity consumption serves as an indicator of growth in overall (underground and aboveground) GDP, the size of the UGE is computed by subtracting this proxy with the estimates of official GDP. The Multiple Indicators and Multiple Causes model (MIMIC) approach, developed by Joreskog and Goldberg (1975), is based on the statistical theory of latent (unobserved) variable as a means to establish statistical relations between the UGE and a set of manifest (observed) variables.

depending on the methodology adopted and the time period in consideration. Tanzi (1999) reported a wide range of estimates for UGE, ranging from 6.2% to 19.4% of the GDP for the United States, from 1.4% to 47.1% for Canada, and from 14.5% to 31.4% for Germany. The disparities prompted Tanzi (1999, p. F339) to conclude that "the real progress made …. in measuring the underground economy in a reliable way has been relatively modest" and that "as long as the estimates remain as divergent as they have been, they cannot provide much of a guidance for policy" (*ibid*, p. F340). Naylor (2005, p. 137) is more skeptical, arguing that measurement of the UGE "almost guaranteed in advance to yield a large and, where possible, rising sum. If they did not, then variables could be altered, base years changed, and definitions modified, until the desired result emerged."

However, the demand for accurate estimates of the size of the UGE remains strong. This is not surprising since a large UGE creates embarrassment to the agencies responsible for compiling national income statistics. In the first place, national income figures are widely used as measure of the country's economic wealth. In the European Union, for example, the size of GNP of member countries is used to assess their contributions to the Community's budget. In the case where the GNP data were not reliable because of the presence of underground activities, the EU officials have the mandate to adjust the data, and increase the members' contribution to the budget (Tanzi, 1999). Estimates of the UGE also stir up national interests because they raise questions concerning the fairness of the tax system, and the strength of surveillance and monitoring system in the related agencies. The sensitivity of the estimates is clearly demonstrated in the Canadian case. When Giles and Tedds (2002) presented their estimates on Canada's UGE, approximating 15% to 16% of the GDP in the mid 1990s, a series of articles in the Canadian Tax Journal attacked the results, pointing out the flaws in the methodology and reliability of the estimates (Hills, 2002; Smith, 2002). In effect, different estimates of the size of the UGE have been derived using different definitions of underground activity. Statistics Canada used the national accounts approach from a value added perspective, putting Canada's UGE at merely 2.7% of measured GDP. Using the MIMIC approach to include both legal and illegal activities and both cash and barter transactions, Giles and Tedds (2002) reported a significantly larger size of the UGE for Canada. Various inferences on tax evasion can be drawn, depending on how the UGE is defined.

The tax agency is also interested to know how much tax revenue is loss as a result of intensive underground activities. A common method to estimate the size of tax evasion is to audit businesses and households' tax returns (*see*

Slemrod, 2007). This way, the regulatory agencies are able to assess the magnitude of non-compliance to tax regulations and design the optimum tax enforcement plan. In the United States, where tax evasion refers to willful non-compliance to tax rules, this approach is known as the Internal Revenue Service's Taxpayers Compliance Measurement Programme (TCMP). The TCMP conducts random audits on what the taxpayers reported and what the examiner thought as correct. However, not only that the method is costly, it estimates 'total' tax evasion, and not merely those that were attributed to underground activities — the TCMP includes taxes evaded from aboveground activities.

More than two decades ago, Tanzi (1983a) made an attempt to estimate the size of tax evasion incurred from the underground sector. Making a distinction between two measures of the UGE: (*i*) national income that escapes detection from the statistical officers (which results in the country richer than the official statistics show) and (*ii*) revenue not reported to the tax authority (to show that the government receives less revenue than it should), Tanzi estimated tax evasion by multiplying the average tax rate of the aboveground economy with the estimated size of the UGE. Two assumptions were crucial in doing this; first, the average tax rate is the same in the UGE as that for the aboveground economy and second, participants in the UGE do not pay taxes. Although the assumptions are necessary to provide a simplified way to calculate tax evasion, the approach does not consider the possibility that at least some of the income derived from the UGE is not liable to taxation for equity and/or political reasons (*see* Aranjo-Bonjean and Chambas, 2004). Consider the case where all the income derived from the UGE is non-taxable. Tax evasion estimated using Tanzi's approach would exceed the country's tax evasion caused by the existence of the UGE. In addition, the methodology makes use of the estimated size of the UGE. If the estimates are inaccurate in the first place, the estimated size of tax evasion is unlikely to provide much useful implications for policy makers.

The other concern in relation to the UGE and tax evasion is the use of the estimates of the UGE as a 'proxy' for tax evasion and hard-to-tax sector. Edlund and Aberg (2002), for example, rely on the estimate of the UGE provided by Schneider and Enste (2000) to represent tax evasion, and subsequently use the data to test its relationship with tax levels and social tax norms. Alm *et al.* (2004) used estimates of the UGE as proxy of the hard-to-tax sector, which comprised those activities that are more difficult to tax than the rest. Interestingly, the authors utilized the UGE data despite recognizing that individuals who participate in the hard-to-tax sector need not necessarily evade tax for they "eventually pay taxes either as presumptive tax or by other

means" (*ibid*, p. 5). The decision to use the size of the UGE as a proxy for the magnitude of tax evasion is not surprising given the strong correlation between the two measurements.[2] However, as was mentioned, tax evasion and UGE are related but they are hardly similar. If the logic that the hard-to-tax sector and tax evasion are synonymous, then the size of the UGE can also be used as a proxy for any phenomenon that we choose, for example, corruption, lack of transparency, bureaucratic behaviours or burden of government regulation.

The UGE and tax evasion have traditionally been very much intertwined. This section explains that the size of the UGE cannot accurately reflect the extensiveness of tax evasion derived from underground activities. It is also true that data on tax evasion obtained from tax audits cannot be similar to tax evasion attributable to underground activities. The tax audits may have captured tax evaded based on income derived from the aboveground economy, thus showing a more serious tax evasion, while no additional output is generated from the UGE.

III. A SIMPLE FRAMEWORK

This section sets out to introduce a simple taxonomy of the UGE. As far as the UGE is concerned, the markets can be presented along a spectrum, comprising those that are legal, illegal but tolerated and those that are entirely criminal. In all cases, the size of the activities fails to enter the official national income statistics. The complication arises with the introduction of tax evasion. Distinguishing between *taxable income* and *non-taxable income* in the UGE is a useful starting point, considering the fact that some but not all economic activities are taxable. Petty enterprises, for example, are hardly taxed because their income is often below the tax threshold income level.

For simplicity, *taxable income* in the UGE shall be classified as the '*underground tax-paying* (*UTP*) *economy*' while the *non-taxable income* in the UGE shall be called the '*underground non-tax-paying* (*UNP*) *economy*'. The *UTP economy* comprises market-based activities that operate underground, and they are subject to taxation. Being market-based implies that the activities ought to be recorded in the national income statistics regardless of whether they are legal or illegal (that being said, the distinction

[2]Using the measures of parallel economy and tax evasion obtained from the World Competitiveness Report for the year 2008, the coefficient of correlation records a statistically significant value of 0.87.

between legal and illegal activities with the UTP economy is still an important one as we shall see later).[3] The *UNP economy,* on the other hand, includes market-based activities that are not liable to taxation. Again, because there are willing buyers and sellers for the goods/services, the size of the market transactions ought to be recorded by the statistical officers. The activities include cash-based activities like paying cash for household maintenance, childcare, private tuition, car repairs and laundry. Clearly, it is not a crime to receive or pay cash. The problem arises when the income generated is concealed from the statistical authorities for computation of the national income.

Within the 'UTP economy' it is useful to further ask whether the activities are legal or illegal. The '*legal UTP economy*' consists of activities that are hidden from the government. The sector includes persons with legitimate businesses, but they under-declare their taxable income and/or the size of the market activities to the tax authority and statistical agency, respectively. A legitimate business is able to access to the courts or other dispute resolution mechanisms and obtain funds from formal financial institutions but incentives prevail to evade taxes undetected. Following Tanzi's (1983b) argument, high tax rates, poor tax administrative procedures, and the inability to relate to the benefits of paying taxes can motivate individuals and businesses to operate in the 'legal UTP economy'. They are also others who choose to evade taxes simply to cheat the government or reduce their tax liabilities. It is important to note that such tax evasion has minimal, if any, relationship with the UGE. It is possible to have income unreported to the tax authority, thus creating a serious tax evasion problem, while the official national product is not understated.

The 'illegal UTP economy' consists of illegal market-based activities like sales and production of narcotic drugs, illegal gambling and illegal prostitution. Because there is ready demand and supply, the size of the transactions ought to be recorded in the national accounts. It includes cross border economic activities that are *not* authorized by the sending and/or

---

[3]The System of National Accounts (SNA) classification has included illegal activities in the calculation of national income so long as there are willing buyers and sellers (SNA, 1993). What matters is market existence. At its core, therefore, the UGE comprises a widespread set of activities, entailing in some cases, behaviour such as advertising of sexual favours and selling of guns without permit as well as legal production that ought to be recorded by the statistical agency. The exclusion of the household production sector would not affect the identification of tax evasion attributed to underground activities since such activities are normally unpaid and hence not liable to taxes in the first place.

receiving states such as movements of commodities to evade tariffs and avoid enforcement of state prohibitions (*e.g.* movements of endangered animals and prohibited drugs). The participants' decision not to comply with the formal rules is largely due to the fact that the goods and services produced are illegal. This is an important consideration as the operators in the 'illegal UTP economy' are unlikely to respond sensitively to measures aimed to tackle tax evasion such as lowering of tax rates and cost of tax compliance. However, there are also individuals who participate in the 'illegal UTP economy' with the intention of evading taxes. Sookram *et al.* (2009), for example, found that higher tax burden forms as a strong incentive for individuals to deregister themselves from the formal sectors. They choose to operate illegally because of unfavourable tax regime. Lowering the cost of tax compliance and improving tax administrative processes are positive ways forward to bring the operators back to the mainstream and minimize loss of government revenue. Legalizing the sectors is also often used as the justification to collect taxes as in the case of the sex economy in Nevada (USA), Germany and Austria (*see* Sanders, 2008).

Moving on to individuals and businesses *not* liable to taxation, it is clear that they could operate either in the UNP economy or aboveground economy. For those who operate in the aboveground economy, the assumption is that the participants faithfully inform the relevant authority about the nature and size of their income and activities. In this regard, the official national statistics correctly reflect the size of the economic activities. On the other hand, the UNP economy indicates that the country's official national income statistics registered a lower figure than what it is supposed to be. Players in the UNP economy include small scale enterprises in the informal sector that prefer to remain unregistered or unlicensed in order to avoid compliance with regulations and thereby reduce production costs. They are not liable to taxation because their earned income is below the tax threshold income level. The informal sector is widespread in the Third World, and is generally tolerated despite the fact that the size of its activities escapes detection from the authorities. Largely individual or family oriented, its existence is tolerated on the basis that it promotes rural and urban development by supplementing the participants' income, providing inexpensive goods and services to lower income families and offering jobs to landless peasants and urban underclass (Freeman, 1996; Sookram *et al.*, 2009). The operators (such as petty enterprises) are considered as participants in the UGE on the basis that their presence distorts national accounts like national income and employment statistics. As most of the

transactions are carried out in cash, the relevant authorities have limited facilities to accurately observe their contributions.

Table 1 summarizes the various classifications of the UGE. As can be seen, the definition of the UGE remains crucial. From a value added perspective, the UGE comprises the legal and illegal (market based) activities that ought to be recorded in the national income statistics. Tax loss, as a result of under or non-recording of economic activities, represents tax evasion attributable to the UGE. It is worth noting that the framework excludes non-value adding illegal sector, which is left out in GDP computation by convention (SNA, 1993). Bribery, unreported transfer of assets and fraud are some of the improper practices in this category. They have not been counted as part of the UGE because these are transfer incomes and not factor incomes. Recovering them may be useful for the taxman — to collect the taxes missed — but such transactions do not decrease or affect the size of the UGE.

TABLE 1

Classification of the UGE (UTP Economy and UNP Economy)

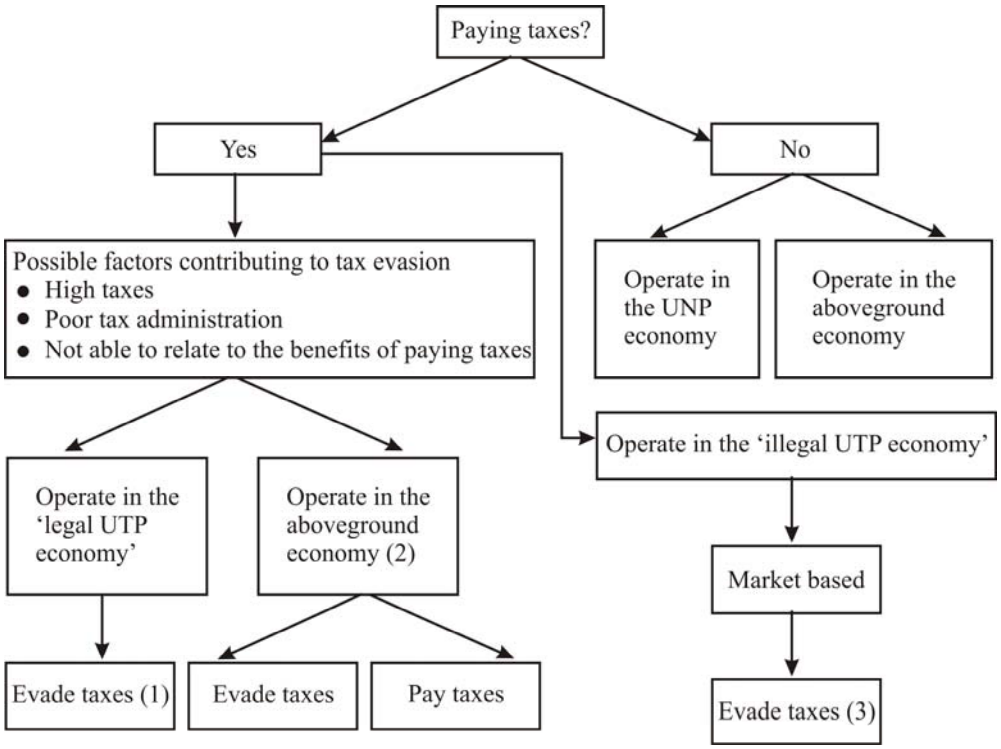
		Definition	Examples
Underground Tax-Paying (UTP) Economy	Legal UTP economy	Underground market-based legal activities; liable to taxation; under-report income, wages, etc. to evade taxes	Production and sales of housing, automobiles, restaurant meals, legal gambling, legal prostitution
	Illegal UTP economy	Underground market-based illegal activities; subject to taxation but less responsive to measures aimed in tackling tax evasion; non-compliance to formal rules because goods and services produced are illegal	Production and sales of narcotic drugs, illegal prostitution, illegal gambling, trade with stolen goods
Underground Non-Tax-Paying (UNP) economy		Underground market-based legal or illegal activities; not liable to taxation	Small firms with low level of organization, capital, productivity and profit; earned incomes are lower than the tax threshold level

Source: Author

Figure 1 provides an alternative way of illustrating the framework. It begins by asking whether the individuals and businesses are liable to taxation. If they are liable to taxation but they fail to report the size of the activities to the relevant authorities, they participate in the 'legal UTP economy'. Even if they report faithfully the size of the activities to the statistical agencies because the income earned is legitimate, there is no guarantee that they would pay their taxes conscientiously. High tax rates and the inability to relate to the benefits of paying taxes are some of the reasons

FIGURE 1

Relationship Between the UTP Economy, UNP Economy and Tax Evasion: A Schematic Representation



Notes:

- Lower tax rates, improve tax administrative procedures and linking the benefits of paying taxes with tax burden incurred by the taxpayers allow for transition from (1) to (2).
- Tax evasion attributable to UGE = (1) + (3)

Source: Author

why they might choose to evade taxes. These individuals operate in the aboveground economy *and* evade taxes. The ideal case is that the entities report their activities to the statistical agencies and file their taxes according to the prevailing rules.

The remaining persons who are liable to taxation operate in the illegal sector such as illegal gambling dens ('illegal UTP economy'). Because the market comprises willing buyers and sellers, the size of the market ought to be captured in the official statistics and their income taxed but the illegal nature of the activities means that both are unfulfilled. Measures to deal with tax evasion such as lowering the tax rates and improving tax procedures will not increase the tax base so long as the activities remain illegal. Taken together, the size of tax evasion attributed to the UGE is represented by cells (1) and (3). For entities that are not liable to taxation such as small scale enterprises, tax evasion is not a serious problem since they are not subject to paying taxes in the first place.

In light of this framework, the following implications can be drawn.

Firstly, *the task of segregating tax evasion caused by underground activities from the UGE is an important one to undertake.* The framework shows that tax evasion and the UGE are related but they are not similar phenomenon. As Tanzi and Shome (1994, p. 336) noted, if the main participants in the UGE are people of low income who paid little or no taxes to the government (a progressive tax system), then the existence of the UGE may not necessarily indicate a serious tax evasion problem. In this regard, it is misleading to use the size of the underground economy as a proxy of the size of the UGE as often practiced in empirical studies.

Secondly, *measures aimed to mitigate the size of the UGE cannot eradicate tax evasion.* Even when there is an apparent link between the UGE and tax evasion, the relationship is often more complex that what it appears to show. For one thing, there are obviously factors other than tax-related matters which contribute to tax evasion. Taxpayers evade taxes if they perceive that they are being treated unfairly (Cowell, 1992; Kim, 2002; Richardson, 2006). Tax evasion also prevails if individuals distrust the politicians, perceiving that the government is not utilizing the tax revenue optimally or to their satisfaction (Torgler, 2003; Hammar *et al.*, 2009). Even if measures like legalizing the hard to detect sectors such as gambling and prostitution and removing cumbersome regulations on transactions and business registration — as means to mitigate the size of the UGE — are successful, tax evasion can remain a problem if the cost of compliance is high and the taxpayers perceive that their contributions are improperly

utilized. To be more effective in reducing the size of tax evasion and the UGE, the state has to raise the governance standards of the public sector and strengthen trust in government and government institutions, including addressing forces such as income inequality, inflation, poverty and civil unrest.

Thirdly, *measures aimed to reduce tax evasion cannot eradicate the UGE*. The framework shows that measures to curb tax evasion need not necessarily reduce the magnitude of underground activities. The size of the UGE is partly associated with the size of the UNP economy which by definition is not liable to taxation in the first place. The informal sector, in particular, emerges from a large UGE that operated outside the control of the government. The operators choose to remain unregistered to reduce production cost, which means that their contributions to the national income escaped detection from the relevant authorities.

Furthermore, the illegal UTP economy has no serious relationship with the tax rate or tax administrative matters since income from this sector is hidden from the tax agency regardless of the tax rate and cost of tax compliance. This can be illustrated in the following way. Suppose that Y_U is the size of the UGE and Y_A is the size of the aboveground economy. The proper size of the economy, Y, is rightfully the sum of Y_U and Y_A. The UGE consists of income generated from the UNP, illegal UTP (denoted as 'UTP_I') and the legal UTP ('UTP_L'). Therefore, we have Y_U = UNP + UTP_I + UTP_L. As was mentioned, tax evaders include entities that are registered with the relevant authorizes but choose to evade taxes because they perceive that there were being treated unfairly or that the cost of tax compliance, including the tax rate, is deemed excessive. If α is the proportion of aboveground activities that falls into this category and t is the marginal tax rate, we have:

$$Y_A = A_0 + C_0 (1 - t\alpha)\, Y_A$$

$$UTP_L = A_0' + C_0' (1 - t)\, UTP_L$$

$$UTP_I = A_0'' + C_0'' (UTP_I - T_I)$$

where A_0, A_0' and A_0'' are the autonomous expenditures and C_0, C_0' and C_0'' are the marginal propensities to consume. Tax evasion that is attributed to the UGE is $t.UTP_L + T_I$ and total evasion is $t.\alpha.Y_A + t.UTP_L + T_I$. As can be seen, change in the marginal tax rate can affect the size of tax evasion but it would have no impact on the size of the UTP_I. The illegal operators in the UGE choose not to register their activities and would continue to evade taxes (T_I) regardless of the tax rate. That being said, it is imperative to ensure a continued effort to:

(*i*) reform the tax system based on lower uniform taxes,

(*ii*) improve tax administrative procedures, and

(*iii*) link the benefit of paying taxes with tax burden incurred by the taxpayers, at least to contain the size of evaded tax from the aboveground economy as well as that of the UGE via the legal UTP economy channel.

IV. CONCLUDING REMARKS

This paper sets up a simple framework to connect the UGE and tax evasion, taking into consideration the fact that individuals and businesses who evade taxes need not necessarily participate in the UGE. For example, it is possible for taxpayers to under-declare their 'legitimate' income to the tax authority. The new taxonomy of the UGE based on taxation identifies the nature of the underground activities and how they are connected with tax evasion. This paper shows that eradicating tax evasion cannot possibly eradicate the UGE. More must be done, including measures to curb corruption, reduce poverty, improve public administration, and others. Nevertheless, tax evasion caused by the existence of the UGE poses consequences that ought to be taken seriously. For example, tax evasion leads to reduction in government revenues, creating limitations to the government in financing its expenditure programmes. This may lead to a chain of events, like higher taxes paid by some parties and lower quantity and poorer quality of public services.

REFERENCES

Alms, J., J. Martinez-Vazquez and F. Schneider (2004), 'Sizing' the problem of the hard-to-tax. In J. Alm, J. Martinez-Vasquez and S. Wallace (eds.), *Taxing the Hard-To-Tax*: *Lessons from Theory and Practice*. Elsevier, Amsterdam, pp. 11-76.

Araujo-Bonjean, A. and G. Chambas (2004), Taxing the urban unrecorded economy in Sub-Saharan Africa. In J. Alm, J. Martinez-Vasquez and S. Wallace (eds.), *Taxing the Hard-To-Tax*: *Lessons from Theory and Practice*. Elsevier, Amsterdam, pp. 313-330.

Cowell, F. (1992), Tax evasion and equity. *Journal of Economic Psychology*, Volume 13, pp. 521-543.

Edlund, J. and R. Aberg (2002), Social norms and tax compliance. *Swedish Economic Policy Review*, Volume 9, pp. 201-228.

Feige, E. L. (1979), How big is the irregular economy. *Challenge*, Volume 22, pp. 5-13.

Freeman, D. B. (1996), Doi Moi policy and the small-enterprise boom in Ho Chi Minh city, Vietnam. *The Geographical Review*, Volume 86(2), pp. 178-197.

Giles, D. E. A. and L. M. Tedds (2002), *Taxes and the Canadian Underground Economy*, working paper, Canadian Tax Paper No. 106. Canadian Tax Foundation, Toronto.

Guttman, P. M. (1977), The subterranean economy. *Financial Analyst Journal*, November-December, pp. 26-34.

Hammar, H., S. Jagers and K. Nordblom (2009), Perceived tax evasion and the importance of trust. *Journal of Socio-Economics*, Volume 38, pp. 238-245.

Hill, R. (2002), The underground economy in Canada: Boom or bust? *Canadian Tax Journal*, Volume 50, No. 5, pp. 1641-1654.

Joreskog, K. and A. S. Goldberger (1975), Estimation of a model with multiple indicators and multiple causes of a single latent variable. *Journal of the American Statistical Association*, Volume 70, pp. 631-639.

Kaufman, D. and A. Kaliberda (1996), Integrating the unofficial economy into the dynamics of post socialist economies: A framework of analysis and evidence. In B. Kaminski (ed.), *Economic Transition in Russia and the New States of Eurasia*. M.E. Sharpe, Inc, New York, pp. 81-120.

Kim, C. K. (2002), Does fairness matter in tax reporting behaviour? *Journal of Economic Psychology*, Volume 23, pp. 771-785.

Lacko, M. (2000), Hidden economy – an unknown quantity? Comparative analysis of hidden economies in transition countries, 1989-95. *Economics of Transition*, Volume 8, No. 1, pp. 117-149.

Naylor, R. T. (2005), The rise and fall of the underground economy. *Brown Journal of World Affairs*, Volume XI, No. 2, pp. 131-143.

OCED (2002), Measuring the Non-Observed Economy: A Handbook, Paris.

Richardson, G. (2006), Determinants of tax evasion: A cross country investigation. *Journal of International Accounting, Auditing and Taxation*, Volume 15, pp. 150-169.

Sanders, T. (2008), Selling sex in the shadow economy. *International Journal of Social Economics*, Volume 35(10), pp. 704-716.

Schneider, F. (1994), Measuring the size and development of the shadow economy: Can the cause be found and the obstacles be overcome? In H. Brandstaettetr and W. Guth (eds.), *Essays on Economic Psychology*. Springer Publishing Company, Berlin, pp. 193-212.

Schneider, F. and A. Buehn (2009), Shadow economies and corruption all over the world: Revised estimates for 120 countries. *Economics: The Open-Access, Open-Assessment E-Journal* (version 2). Available in http://www.economics-ejournal.org/economics/journalarticles/2007-9 (Accessed: 25 June 2010).

Schneider, F. and D. Enste (2000), Shadow economies: Size, causes, and consequences. *Journal of Economic Literature*, Volume 38, pp. 77-114.

Slemrod, J. (2007), Cheating ourselves: The economies of tax evasion. *Journal of Economic Perspectives*, Volume 21, No. 1, pp. 25-48.

Smith, R. S. (2002), The underground economy: Guidance for policy makers? *Canadian Tax Journal*, Volume 50, No. 5, pp. 1655-1661.

SNA (1993), *System of National Accounts*. Prepared under the auspices of the Inter-Secretariat Working Group on National Accounts, Brussels/ Luxembourg: Commission of the European Communities; Washington, D.C.: International Monetary Fund; Paris: Organization for Economic Co-operation and Development; New York: United Nations; Washington, D.C.: World Bank.

Sookram, A., P. K. Watson and F. Schneider (2009), Characteristics of households in the informal sector of an emerging economy. *Applied Economics*, Volume 41, pp. 3545-3559.

Tanzi, V. (1983a), *The Underground Economy in the United States*: *Annual Estimates, 1930-1980*, working paper, International Monetary Fund (WP83/30).

Tanzi, V. (1983b), The underground economy: The causes and consequences of this worldwide phenomenon. *Finance and Development*, December, pp. 10-13.

Tanzi, V. (1999), Uses and abuses of estimates of the underground economy. *The Economic Journal*, Volume 109, pp. F338-347.

Tanzi, V. and P. Shome (1994), A primer of tax evasion. *Bulletin for International Fiscal Documentation*, Volume 48, No. 617, pp. 328-337.

Torgler, B. (2003), Tax morale, rule-governed behaviour and trust. *Constitutional Political Economy*, Volume 14, pp. 119-140.