



The Effect of Deterrence Factors on Discourage Shadow Economy Level and Tax Evasion

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Abstract

A complex and great challenge cutting across almost all types of economies from developed to developing economies is the phenomena of shadow economies. A number of factors are responsible for peoples' involvement in such practices of shadow economies around the world. One of such factor is government policies especially those concerning taxation and regulation. Shadow economy practices such as tax evasion, results in the loss of tax revenues for the government and consequently affect government performance. The implications of loses in tax revenue is the incapacitation of the government's ability to finance projects essential for economic growth and societal welfare. The current study revealed two major variables that can possibly influence the shadow economy level. The variables are: firstly, the probability of detection and secondly, the penalty rate. The present study therefore builds on the existing body of knowledge on taxes from a deterrence perspective. Since shadow economy is subject to individuals, this suggests that deterrence factors should be given priority, compared to other factors. The proposed framework, from a deterrence perspective, would benefit tax administrators in comprehending and mitigating the phenomenon of a shadow economy.

Key words

Probability of detection, penalty rate, shadow economy, tax evasion

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1. Introduction

Shadow economies signify a phenomenon of great importance in every economy, due to the huge implication it has on different parts of human economic and social life (Sabra *et al.*, 2015). The shadow economy, represents all market based legal transactions or economic activities, which are deliberately concealed from the government. Furthermore, there is an armful of evidence suggesting numerous consequences of shadow economies, ranging from different macroeconomic implications, to the effect on the structure of the tax systems. This will lead to restrictions in maximizing public revenue generation and therefore, putting constraints on the efficiency of public services. Similarly, Feld and Schneider (2010) described a shadow economy as follows: every lawful creation of products and services in a market with the intent of concealing it from the constituted public authorities for reasons such as: evasion of tax payment; to deviate from standard practices of the labour market and also refraining from the fulfilments of statistical questionnaires among others.

Tax revenue is the longest existing and most sustainable means of generating revenue for governments globally. This helps governments to meet their expenditure requirements and hence, the high dependence of most economies on taxation (Kira, 2017; Okauru, 2012). Similarly, taxation has proven to be the most realistic source of government revenue used in financing development projects in any economy

(Alkhatib and Abdul-Jabbar, 2017; Tanzi and Zee, 2001). A major and important issue of concern is how willing the taxpayers are to conform to the tax law's provisions. It is generally acknowledged that several people pose a negative and unresponsive attitude to tax payments. Therefore, making it a herculean task for authorities to impose the collection of taxes in many circumstances (Alm *et al.*, 2005). However, the non-conformity to the provisions of tax laws indicates that the taxpayer is evading tax (Kirchler, 2007).

There exists some level of tax evasion in both formal economies and shadow economies; although tax evasion is relatively higher in shadow economies, since all the activity in such economies takes place in an unofficial way. This implies that, not only will businesses in this category avoid payment of taxes, but they may also not even be lawfully registered as a recognised enterprise (Schneider *et al.*, 2015). Therefore the high existence of shadow economies may also lead to higher rates of tax evasion (Cooray *et al.*, 2017). This suggests that, if shadow economies are minimized, it is highly possible that they may lead to mitigation of tax evasion, particularly from non-formal sectors (Palil *et al.*, 2016).

Consistent with Schneider (2007), perceptions on tax burden presents a major reason that has led to the emergence of "shadow economy". The rate of taxes has an effect on "labour-leisure decisions" and it also motivates the supply of labour needed in shadow economies. Although for economists, a major point of concern is the alteration in the general tax burden. A higher variation between the overall labour cost and the net income from work after taxation, will promote greater inducement of people into working in "shadow economies". Furthermore, countries with more efficient rule of law and strong finance through tax revenues are associated with smaller shadow economies. The high level of regulations existing among transition countries leads to a higher occurrence of bribes and official processes are marked by high rates of taxes. Similarly, there is lack of uniformity or high rate of flexibility in their regulatory frameworks which therefore result into bigger shadow economies.

Studies such as Allingham and Sandmo (1972) are among the leading earliest studies in the domain of tax evasion, and it may be used as a relevant reference for a theoretical argument in this domain. While the correlation between tax evasion and shadow economies are not congruent, a number of circumstance or processes exist in "shadow economies" which entail the evasion of direct or indirect taxes. This is in a way that any effort towards implementing the factors that decrease tax evasion will undoubtedly also have effects on shadow economies (Schneider, 2017). Allingham and Sandmo (1972) asserted that tax evasion is dependent on the "expected costs and gains". The gain that accrues from non-compliance with tax is a product of two factors which are; individual marginal tax and real individual income. Whereas, the expected costs of non-compliance is a direct consequence of the effectiveness of the deterrence as ratified by the government, implying the need for government's auditing process to raise the possibility of detection as well as penalties faced by those individuals found guilty of such act.

Although, there is a strong theoretical and policy interest on deterrence for the purpose of overcoming the shadow economy issues, there surprisingly exists little empirical proof. This might not be unconnected to the unavailability of data regarding its legal foundation and also data related to frequency of audits at the international level (Feld and Schneider, 2010). The present study, therefore proposes a new framework that covers key deterrence factors. In specific, it is targeted at assessing the influence of two deterrence factors which are: firstly, the probability of detection and secondly, the penalty rate on shadow economies, using the deterrence perspective. The subsequent section covers the review of literature in order to develop the proposed model.

2. Literature Review and Hypothesis Development

2.1. Probability of Detection and Shadow Economy Level

There is serious attention given to the use of policies to encourage deterrence and to fight the shadow economy. Surprisingly, not much is understood from a few of the existing empirical literature concerning the consequences of deterrence, despite the unambiguous indication of the traditional "economic theory of tax non-compliance". Hanefah (2007) asserted that the main principle behind the Deterrence Theory can simply be summed up to imply that a high probability of detection or high punitive measure represents the major deterrents that control peoples decision regarding committing of criminal activities.

The nature of enforcement measures employed by tax authorities and those facilitating activities employed by people in shadow economic activities to avoid been detected are what determines the probability of detection (Schneider, 2017). Given the rationale nature of most individuals, they tend to measure and compare the costs against the benefits prior to the decision to break any given law. Hence for individuals, the choice of taking part wholly or partially in shadow economy involves uncertainties and are also subjected to the trade-off between the benefit of successfully breaking the law and the cost of been discovered. As earlier presented; a high rate of “shadow economy” is associated with higher rates of tax evasion (Cooray et al., 2017), therefore, in most situations the activities in the shadow economy is directly associated with the evasion of direct or indirect taxes, such that those factors that have an effect on tax evasion, will definitely have an effect on the shadow economy (Schneider, 2017).

Therefore, when the probability of detection is high, then shadow economy is found to be less tempting (Virta, 2010). Similarly, Cebula (1997) revealed in his study of the audit probability effect on the magnitude of practice of shadow economy in USA, the study posited that when audit frequency is increased, there may be a decline in the magnitude of shadow economies. This finding therefore shows that government actions have a parallel and strong effect. In addition, Pedersen (2003) also found a negative influence of the individual’s perceived risk of detection by the state audits on the probability of engaging in the shadow economy. Also, Feld and Larsen (2010) found that the relationship between the probability of detection and the probability of working in the shadow economy to be negative and significant. Inferring from the discussions above, the factors determining tax evasion can also have an effect on the shadow economy. Thus, the findings of many existing studies showed a negative association between the probability of detection and tax evasion (Alkhatib *et al.*, 2018; Almunia and Lopez-Rodriguez, 2018; Ayers *et al.*, 2015; Slemrod *et al.*, 2001).

On the contrary, a few other studies, notably the study in Israel by Ariel (2012) found an insignificant relationship between the perceived probabilities of detection with the apprehension on tax evasion. In Germany also, Feld *et al.* (2007) failed to establish that there is a confirmed negative influence of deterrence on the shadow economy for Germany. Therefore, it can be inferred that most existing studies confirmed that there is a negative influence of probability of detection, while a few of the existing studies also found that it has no significant influence. Thus, given these mix findings, the current study proposes the followings:

H1: *There is a negative relationship between probability of detection and a shadow economy.*

2.2. Penalty Rate and Shadow Economy Level

For most countries, the effort towards ending shadow economies is a continuous process. The most popular approach is the increase of deterrence through the imposition of higher fines as a penalty and also prison sentences for severe cases have also been suggested (Frey and Schneider, 2000). These measures should be applied, not only to the sellers but also to the buyers of goods and services, as they form the two actors that encourage shadow economies. Consequently, Frey and Schneider (2000) emphasise that a deterrence policy should not be weak to the extent of failing but should rather be a less oppressive policy that can encourage people to take part in the formal economy. In addition, it should also encourage the legalization of sections of the shadow economy and as well aid in the return to the official economy, for example, through the granting of amnesty, although, the approach has only demonstrated moderate effectiveness. Extant literature has affirmed that there are two different classes of deterrence: the general deterrence and the specific deterrence. General deterrence refers to the deterrent implication of likely punishments, while the case of specific deterrence is regarded as the deterrent consequence of the actual punishment that a person guilty of offences are meted.

Virta (2010) found in his study that institutions and their quality are what determine the magnitude of effectiveness of penalty rates. Therefore, the appropriate proxies include the rule of law and government efficiency. The rule of law is charged with ensuring the quality of contract enforcement, the police and the courts, whereas government efficiency is centred on the quality of public service delivery. Similarly, Cebula (1997), examines the consequences of the penalty policies on the size of the shadow economy in the United States. Cebula concluded that raising the magnitude of the penalties can lead to the declining shadow economy.

Additionally, Allingham and Sandmo (1972) posited that the decision by individuals is based on a rational choice following the uncertainties and risk. Hence, individuals make decisions on the bases of the potential cost and/or benefit before the decision on breaking any law. Uncertainties discourage the decision by individuals to either partially or completely take part in the shadow economy, they are faced with a trade-off between the gains of successful disobedience to the law and penalty of been caught. Hence if the expected penalty is high when caught, the smaller the temptation into shadow economy will be (Virta, 2010). Similarly, it is established that the antecedents of tax evasion will surely have effect on shadow economies, therefore extant studies found that the penalty is negatively related with tax evasion (Alkhatib *et al.*, 2018; Allingham and Sandmo, 1972; Chau and Leung, 2009; Feld and Frey, 2006; Hasseldine *et al.*, 2007).

Conversely, a few other studies revealed contrary findings that showed no support for the deterring effects of penalties (Ali *et al.*, 2001; Oladipupo and Obazee, 2016). Similarly, Feld and Larsen (2010) also reported that the use of penalties and punishment do not impose a negative effect on the shadow economy. According to the outcomes of the literature on tax penalties as discussed earlier, the conclusion is that the majority of the extant studies revealed that penalties have a negative influence. With the exception of a few others that reported a positive influence of penalties. Thus, the following proposition is made:

H2: *There is a negative relationship between penalty rate and a shadow economy.*

3. Proposed Research Framework

The proposed model is shown in Figure 1 below; it was developed based on the Deterrence Theory. This theory suggests that people's behaviour is generally influenced by expected gains or costs of such behaviour. That is, the theory emphasises that humans evaluate crime based on the disparity in the cost-benefit of crime, instead of dissimilarity in the motivational factors. The theory describes the deterrent effect of sanctions, other forms of punishments on the unlawful behaviours.

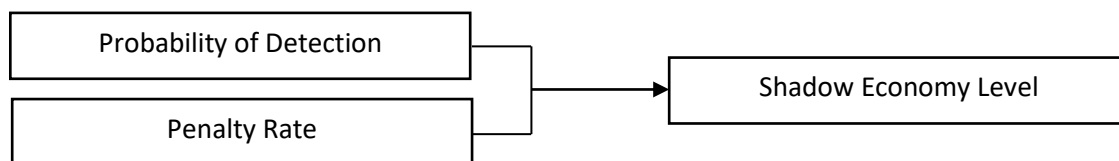


Figure 1. Conceptual Model for Shadow Economy Level

4. Conclusions

There is a prevalent perception that a widespread of some economic activities that take place under cover from the official economy and it is at an increasing rate. Approaches to discourage the drive of staying in the shadow economy includes: reduction in the tax rate, improved delivery of public services, "social security burden" imposed on labour and also increasing civic virtues, these have seldom been applied. One possible way is to acquire public supply base on the wish of citizens, while also striving to minimize the cost of public supply (without compromising quantity and quality). This is achievable through rationalizing the functions of the public sector (such as use of Innovative Public Management). A rising shadow economy will certainly result to declining revenue, which will then affect the quality standard and also quantity of publicly supplied goods and services. Conclusively, the effect of shadow economy will have implications of higher tax rates on those firms and the people involved in the official economic sector. This may also lead to higher inducement of people into shadow economies.

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