EXPLORING RISK MANAGEMENT IN DEVELOPING COUNTRIES' TAX ADMINISTRATIONS

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Abstract

One of the major challenges currently facing developing countries is how to raise adequate tax revenues for development financing. The United Nations (UN), the World Bank, the International Monetary Fund (IMF), and other multilateral organisations are all making efforts to tackle this issue. This paper contributes by advocating risk management in developing countries' tax administrations. This topic has received some practitioner attention, but is yet to receive adequate academic attention, especially as it relates to developing countries. There has been more focus on tax compliance/noncompliance research. However, this paper argues that tax noncompliance is just one of numerous problems facing tax administrations in developing countries. There is a need to identify other risks, and to build models for the assessment and management of such risks. This paper responds to such needs by using a synthesis of practitioner literature, previous research findings, and the authors' field experiences from developing countries in Asia and Africa. The paper provides useful and practical insights by categorising the risks faced by developing countries' tax administrations into three groups: internal, external, and collusive risks. The paper groups risks into those that are within the control of the tax administration and those that are outside of its control. The analysis suggests directions for further research and provides tax practitioners in developing countries with useful tips on risk management.

Keywords: Risk Management in Tax Administrations, Developing Countries, Internal Risks, External Risks, Collusive Risks.

1. INTRODUCTION

Developing countries face many problems when generating tax revenue to fund their development. This challenge has been acknowledged for a long time. For example, Nicholas Kaldor, who was one of the first researchers to identify this challenge, published his seminal findings in 1963. Kaldor (1963) stated that a dichotomy exists between developing and developed countries in terms of tax revenue generation. He also noted that developed countries generate about 25 to 35 per cent of their Gross Domestic Product (GDP) from tax revenue while developing countries only raise about 8 to 15 per cent of their GDP in this way (Kaldor, 1963). He warned that if developing countries are unable to raise at least 15 per cent of their GDP from tax, they may not be able to exit underdevelopment (Kaldor, 1963). The percentage suggested by Kaldor (1963) was adopted as the official tax revenue adequacy benchmark by the International Monetary Fund (IMF, 2011). In the same vein, the United Nations (UN) supports the minimum level of tax to GDP ratio for developing countries to attain the 2020 Sustainable Development Goals (SDGs) (United Nations Secretariat, 2019). It is now nearly 60 years since Kaldor made his groundbreaking contribution to the subject of the tax revenue

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generation challenges faced by developing countries. While a considerable amount of research has been conducted into the matter and practitioners have made concerted effort to find solutions since then, the tax to GDP ratios of developing countries remain low and the problem of tax revenue adequacy remains largely unresolved. The UN has repeatedly advised developing countries to de-emphasise their reliance on foreign aid and to improve their domestic revenue generation (United Nations, 2018). The organisation has convened three global conferences (the Monterrey Conference, 2002; the Doha Conference, 2008; and the Addis Ababa Conference, 2015) on the theme of domestic revenue mobilisation in order to generate ideas and to emphasise the importance that it attaches to this issue.

The burden of raising adequate tax revenue to finance development lies with tax administrations. However, they face significant risks when performing their statutory functions. As noted by James (2012), "tax administration is a risky business" (p. 345). The risk inherent in tax administration exists partly because the process involves the collection of a share of citizens' incomes and the remittance of these monies to the government. Hence, one of the widely researched risks faced by tax administrations is tax noncompliance: taxpayers failing to comply with tax laws. A huge volume of research has been conducted into tax compliance, with perspectives ranging from the economic to the sociopsychological. However, tax administrations face a variety of risks in addition to tax noncompliance. Unfortunately, there has been little detailed academic analysis of the other risks. Reference materials currently available in respect of this topic include technical publications on risk management in tax administrations written by international organisations. These works may not be adequate for the purpose of academic analysis. Moreover, technical papers by international organisations, such as the Organisation for Economic Co-operation and Development (OECD), are written with particular objectives and styles that may not align with academic research. Furthermore, the limited number of academic papers on risk management in tax administrations in existence were written many years ago (for example, James, 2012). There is a need for an update that recognises contemporary risks facing tax administrations. For example, there are growing risks arising from digitalisation and technology that were not envisaged a few years back. Additionally, there is a need for academic research into the specific risks facing tax administrations in developing countries as distinct from those in advanced countries which are the focus of the existing academic papers. It should be emphasised that the issues faced by tax administrations in developing countries are significantly different from those faced by administrations in advanced countries (Besley & Persson, 2014).

This paper makes several contributions to the literature on tax administration. First, in a similar way to the European Commission (2006), the authors present a model of risk identification for tax administrations, especially those in developing countries, which captures external risks, such as tax noncompliance and the growing risks arising from technology and digitalisation. The paper also identifies internal risks that may arise within tax administrations. Second, the paper alludes to a possible risk of collusion between internal and external forces (collusive risk). Third, the paper contributes to the literature by further classifying risks faced by tax administrations into two categories—those that can be controlled by tax administrations and those that cannot but the effects of which can be mitigated by them. The paper makes a useful contribution to the theory and practice of tax administration due to the fresh analytical insights that it presents. Additionally, at a time when the world economy faces an unprecedented economic shutdown arising from COVID-19, there is a further threat to tax administrations' revenue because business incomes are on a downward spiral. This is an ongoing problem at the current time and shows that a large-scale national or global disruption is potentially an external risk factor for tax administration, a factor that is captured in our model.

The paper's sources consist of secondary research findings and the practitioner literature on risk management for tax administrations. These sources are complemented by some of the authors' wide field experiences in tax administration in Asian and African countries. Different risk management models are available in the academic and practitioner literature (Chartered Institute of Management Accountants [CIMA], 2008; Lundquist, 2014). To avoid complexity, this study follows a simple three-step framework: risk identification, risk assessment, and risk management. The remainder of the paper proceeds as follows. Section two presents a model of risk identification comprising internal, external, and collusive risks, and discusses individual risks in the external category with insights from the literature and practice. Section three discusses individual risks in the internal category. Section four presents some frameworks for managing the risks identified in the paper. Section five concludes the paper with discussion of implications for further research and the practice of tax administration.

2. CATEGORIES OF RISKS FACING TAX ADMINISTRATIONS IN DEVELOPING COUNTRIES

Although developing countries generally have similar socioeconomic, political, and legal environments, there are significant country variations. Their levels of development also vary widely. Due to these differences across jurisdictions, a standardised approach to tax administration is neither practicable nor desirable. This section identifies a broad range of risks that affect tax administrations in developing countries. While the creation of a standard list of risks is neither possible nor practicable, the risk identification model provided in this section incorporates as many risks as possible. A tax administration may not face all of the risks identified, but would definitely be exposed to some of them. Furthermore, the level of risk may vary among tax administrations in different countries. Despite these differences, the authors believe that the risk management model in Figure 1, and the categories of risks identified in Figure 2, will be adequate for tax administrations in developing countries. Additionally, the classification into internal, external, and collusive risks will go a long way to improve the understanding and management of these risks.

Figure 1: Risk Management Model

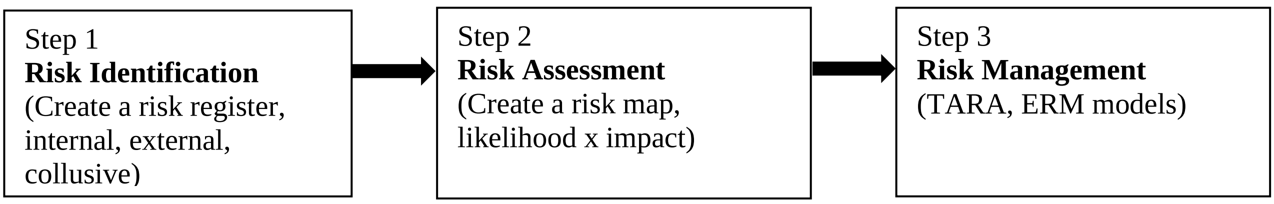
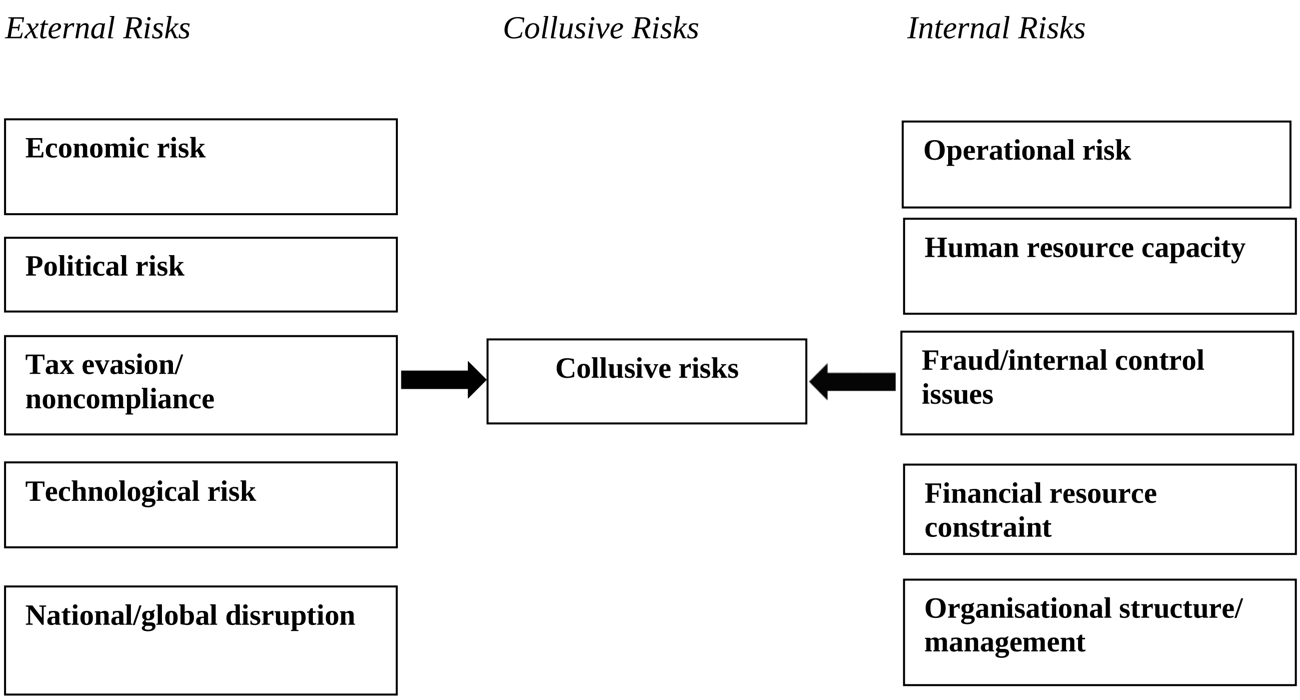


Figure 2: Risk Identification Model



2.1 External Risks

External risks are those emanating from activities or elements operating outside of the control of the tax administration. They include economic risks, political risks, tax evasion and avoidance, technological risks, and national/global disruptions.

Economic risks

The European Commission (2006) identified economic conditions as one of the risks facing tax administrations. Favourable economic conditions increase tax administrations' revenues while adverse conditions decrease them. This position has some support from the literature, especially in developing countries that are prone to experiencing adverse economic circumstances. For instance, Fishlow and Friedman (1994) found that the public in developing countries resort to tax evasion as an adjustment mechanism when there is inflation and during economic downturns, and this has a significant negative effect on government revenues. Economic conditions may be broadly interpreted to include economic indices, such as GDP per capita, the Human Development Index, economic status of taxpayers, etc. The OECD (2006) notes that taxpayers' economic status and economic problems—e.g., whether a "household can save and/or get by, or whether it needs to spend savings or borrow" (p. 3)—affect their willingness to pay taxes and thus affect tax administrations' revenues.

Although all countries face economic problems occasionally, developing countries are more prone to the risk of economic fluctuations (inflation, recession, instability, unemployment, etc.). This is due to a variety of factors but, importantly, it depends on the quality of governance. Unfortunately, many developing countries lack the good governance to be able to efficiently manage their economies. In countries with economic instability, tax administrations face significant risks from tax revenue fluctuation due to large-scale noncompliance during downturns (Fishlow & Friedman, 1994). In addition to being impacted by noncompliance, tax revenues may decrease as economies shrink because taxes are paid from business profits. When economies go into recession, businesses make losses or earn lower profits, and their statutory tax obligations and ability to pay are reduced. Another economic issue prevalent in developing countries that poses a significant risk to tax administrations is the existence of a large informal economy. Large volumes of business activities are conducted outside of the formal records that can be utilised for tax assessment. That means that these business activities escape the tax net.

Political risks

Public opinion about the government, whether favourable or not, can significantly influence taxpaying behaviour. This is a widely researched topic in the tax compliance literature (Doerrenberg, 2015). In this paper, this phenomenon is considered a political risk—the risk of citizens' failure to support the government and thereby engage in tax noncompliance. Research on this subject has approached it from different but interrelated perspectives. Moreover, some studies have investigated the influence of public spending and/or availability of public goods on tax revenue (Doerrenberg, 2015). A common thread that runs through the literature is that government actions or inactions affect citizens. Citizens trust and support the government when policies affect them positively, and withdraw their trust and support if they perceive the government to be incompetent or corrupt.

Political risk is a factor that manifests outside of tax administrations. Tax administrations are not involved in political decisions; rather, they are answerable to political leaders. However, they face significant political risks arising from political decisions (Umar et al., 2017). Developing countries are often viewed as being deficient in the quality of governance. There is substantial empirical evidence to support this position, including the World Governance Index (WGI), which is published annually by the World Bank. The WGI has consistently given many developing countries rankings. As such, the governments in many of these countries are unpopular with their citizens. As predicted by numerous studies on tax and governance (Doerrenberg, 2015), developing countries' tax administrations find it extremely difficult to raise tax revenue. Therefore, political risk is a significant external risk for tax administrations in developing countries and cannot be easily controlled.

Tax evasion and avoidance

Tax evasion and avoidance are probably the most recognised risks facing tax administrations, and have been widely researched since Allingham and Sandmo (1972)'s seminal work was published. Tax evasion significantly reduces the amount of tax revenue that any tax administration can raise. The amount of tax generated by a tax authority is a function of the tax base multiplied by the tax rate and the level of compliance. This means that a high evasion level will effectively neutralise the revenue accruable from a large tax base and a high tax rate. In this paper, tax evasion/avoidance is included among the external risks that tax administrations face because it is perpetrated by taxpayers who operate from outside of the immediate purview of the tax administration. While the tax administration may have some control in terms of being able to introduce laws and policies in order to deter noncompliance, taxpayers make their own decisions about whether to comply with tax laws or to evade tax. Moreover, taxpayers are independent, external parties.

Technological risks

Technology has no doubt contributed to increased efficiency in tax administrations. It has resulted in the automation of taxpayer registration, making it easier for tax administrations to identify taxpayers and their relevant information. Technology, in the form of e-filing, has also made it easy for taxpayers to complete and submit their tax returns from the comfort of their homes and business premises. However, the use of modern technology is also associated with risks that are growing in several dimensions. For instance, e-commerce has generated a complex web of online transactions that tax administrations are struggling to track. Business is now being conducted across jurisdictions without the need for any physical presence. This continues to pose a significant challenge for tax administrations, especially in developing countries where technical capacity is limited. One of the emerging risks to tax administrations posed by technological advancement is the use of cryptocurrencies. These currencies are not domiciled in a particular country and cannot be tracked to particular individuals and transactions. This makes their taxation a potential challenge for tax administrations.

National/global disruption

Large-scale disruption to economic activities might occur on a national or global scale and can have a profound effect on a tax administration's ability to generate tax revenues. Such disruptions might affect business operations, thereby significantly reducing profits and even causing widespread unemployment. For instance, the COVID-19 pandemic, which is ongoing at the time of writing, has disrupted businesses worldwide. The impact of this on tax administrations is not immediately apparent but will become clearer with time. Tax administrations need to be aware of risks arising from sudden natural disasters, pandemics, and wars, etc. that might cause large-scale disruption to business activities and, consequently, affect their own ability to raise tax revenue.

3. INTERNAL RISKS

Internal risks are those that occur within the workings of tax administrations. They include risks arising from day-to-day operations, constraints in terms of human and financial resources, structural risks, and management risks.

Operational risks

Tax administrations perform a wide range of routine functions. They identify and register taxpayers, facilitate tax filing, collect taxes due, audit taxpayers when necessary, and provide taxpayer services in order to facilitate compliance. In performing these functions, tax administrations face the risk of failures that could significantly affect their capacity to raise tax revenue. This is more likely in developing countries that are still trying to build capacity for the complex task of tax administration. Some tax administration functions and their associated risks are described below.

Taxpayer registration: Jimenez et al. (2013) describe taxpayer registration as "the process, by which the tax administration collects basic taxpayer identifying information such as names, addresses and legal entity types" (p.14). Taxpayer information allows tax administrations to identify eligible taxpayers by various parameters, such as geographical spread, active or inactive status, and business nature/scale (Jimenez et al., 2013). Most tax authorities now have a central database of eligible taxpayers within their jurisdictions. Each taxpayer is assigned a unique identification number. This enables tax authorities to preserve and retrieve information about a taxpayer whenever necessary. It also facilitates the planning of tax administration operations, as tax authorities have access to a wide range of information about taxpayers (Jimenez et al., 2013). There is a risk that tax administrations in developing countries will fail to capture a large number of eligible taxpayers in their databases. This is due to the particular demography of these countries and the low capacity of the tax administrations. It is widely acknowledged that a significant portion of businesses in many developing countries operate informally and are not captured in the tax net. This means that the tax authorities cannot collect taxes from these businesses.

Taxpayer audit: Tax authorities undertake audits of selected taxpayers at the end of each tax period. This is to ensure that taxpayers' returns are accurate and devoid of fraudulent misrepresentations. Auditing is a crucial function of tax administration. However, even in advanced countries, not all taxpayers are audited. This implies that tax administrations face the risk of a large number of taxpayers escaping undetected if they evade taxes. Developing countries' tax administrations face more challenges when performing tax audits, especially in terms of their capacity to detect evasion. According to Umar et al. (2017), detection is a problem in developing countries and, even when tax evasion is detected, it is not easy to prosecute offenders due to complex systemic problems.

Taxpayer services: Taxpayer services are currently the preferred means of facilitating voluntary compliance. Tax authorities are increasingly being advised to treat taxpayers as clients/customers, as the private sector does. Mutual antagonism between tax authorities and taxpayers leads to tax noncompliance. One important taxpayer service is to pass information on all aspects of the tax system to taxpayers. The provision of taxpayer services also involves assisting and guiding taxpayers through the tax payment process in order to facilitate tax compliance. Additionally, these services include listening to taxpayers' complaints and resolving issues promptly. Moreover, high tax compliance costs have been found to reduce compliance. Tax administrations can reduce high tax compliance costs by providing taxpayer assistance, and by reducing the amount of time and effort that it takes taxpayers to perform their statutory duties. There is a very high risk that taxpayer services could fail, thereby causing dissatisfaction among taxpayers and leading to tax noncompliance. This risk is particularly high in developing countries, where public services are not very effective.

Tax law complexity: One crucial tax administration tool is tax law. However, tax laws have been found to be too complex for taxpayers to understand, thereby leading to noncompliance (Tanzi, 2017). Developing countries copied complex tax laws from advanced countries without taking their own peculiarities into consideration. Such tax laws become difficult to implement, thereby causing noncompliance. Complex tax laws are also a problem for the tax administration. In some developing countries, the tax laws are outdated and are not regularly reviewed in line with contemporary realities.

Human resource capacity

Tax administration is a highly demanding public function and, as such, requires a high level of professionalism. Unfortunately, developing countries' public sectors often lack the expertise to administer such organisations effectively. Even where limited expertise is available, tax administrations compete with the private sector to attract a skilled workforce. The private sector often gains the upper hand in this competition because it offers better remuneration. Although this situation is gradually improving, the human resource constraint constitutes a significant risk to tax administrations and should not be ignored or taken for granted. This is more so with the increasing complexities of the 21st century, which create unprecedented challenges for both private and public sector organisations. In order to keep pace with the changing environment and to manage the evolving disruptions, tax administrations need a skilled and up-to-date workforce; otherwise, they risk losing a significant portion of their revenues. Some of the emerging threats that require skilled responses are globalisation, base erosion and profit shifting (known as BEPS), and digitalisation.

Financial resource constraint

Ironically, while tax administrations collect revenues for governments, they are often faced with financial constraints when performing their duties. Tax administration is expensive, as significant funds are required in order to employ adequate and skilled staff, procure modern software and equipment, conduct tax audits, and so on. Developing countries, with their chronic funds shortages, find it difficult to adequately finance modern tax administrations. One way in which this problem is being addressed is through the provision of technical assistance by international development organisations such as the IMF and the World Bank. In some developing countries, tax administrations are being allowed to keep a percentage of tax collected in order to finance their operations as a means of tackling fund shortages.

Internal fraud/leakages

While tax administrations fight tax evaders, they face significant risk from their own staff, who may choose to compromise the system for selfish gain. Like other public sector organisations in developing countries, tax administrations are not immune to fraudulent activity that diverts public funds into private hands.

Structural and management risk

Tax administrations, like other public and private sector organisations, require the appropriate structure and management skills in order to attain their objectives. In developing countries, tax administrations were previously structured in the traditional bureaucratic style and served as departments under the supervision of their country's finance ministry (Sarr, 2016). Such a structure made them nonresponsive to contemporary challenges. In recent times, most tax authorities in developing countries have gained some measure of autonomy. However, the semi-autonomy currently enjoyed by tax administrations in developing countries is yet to yield significant results. This may be due to problems other than their structure and there is a need for tax administrations to embrace 21st century management techniques. Public sector organisations in more advanced countries are embracing contemporary management techniques, such as lean management, total quality management, and new public management. As such, developing countries' tax administrations risk failing to attain their objectives if they retain old fashioned, public sector, bureaucratic management techniques amidst the complexities of the 21st century.

4. RISK ASSESSMENT AND MANAGEMENT

The next step after identifying risks is to assess and manage them. According to CIMA (2008), risk assessment involves weighing the likelihood of a risk occurring against the severity of its impact if it is not mitigated. Risk management is a crucial element in contemporary management. There is a need to identify risks that may threaten the objectives of the organisation and to put strategies in place to deal with them. Risk management is, therefore, the process of reducing the possibility of adverse consequences occurring: by reducing the likelihood of an event taking place; by minimising its impact; or by taking advantage of the upside risk (CIMA, 2008). An organisation's management team is responsible for establishing a risk management system. Risk management is a process that was developed in order to assist with the management of business enterprises, and knowledge of its principles and practice has evolved over time.

One widely accepted risk management model is the enterprise risk management (ERM) framework developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2004). Proponents of the ERM framework argue that it is an improvement on the traditional practice of risk management in organisations, which places responsibility for risk management on functional managers, who are required to manage the respective risks arising from the departments that they supervise. For instance, the Chief Finance Officer is, traditionally, responsible for managing risks in the area of finance operations. Similarly, the production manager is responsible for risks arising from the production process. While this approach technically makes sense, proponents of the ERM framework find it to be severely limited when managing enterprise-wide risks (CIMA, 2008). Some of the arguments against the traditional risk management approach, according to Beasley (2016), are as follows. First, there are many risks that may not fall directly within the purview of a single functional department of an enterprise (Beasley, 2016). Such risks "fall between the siloes", which means none of the silo leaders can see them or claim responsibility for them (p. 2). Beasley (2016) notes that a risk can affect an organisation without recourse to the organogram. Consequently, this risk may escape the attention of functional departmental heads and have disastrous consequences for the entire organisation (Beasley, 2016). Second, some risks may affect more than one department at the same time or at different times (Beasley, 2016). The implication is that one manager may be managing such risks as they affect their own department without taking their effect on other units into consideration, and multiple silos may manage the same risk in different ways (Beasley, 2016). Third, when risks are managed in the traditional way, a departmental response to a risk might negatively affect the performance of other units (Beasley, 2016).

Due to the weaknesses of the traditional risk management method, the ERM framework has gained acceptance over the past decade (Beasley, 2016). Beasley (2016) notes that, "the objective of enterprise risk management is to develop a holistic portfolio view of the most significant risks to the achievement of the entity's most important objectives" (p.3). He adds that "the 'e' in ERM signals that ERM seeks to create a top-down, enterprise-wide view of all the significant risks that might impact the business" (Beasley, 2016, p. 3). He notes this means that the responsibility for managing risk that might affect attainment of the organisation's objectives lies with senior management and the board of directors (Beasley, 2016). According to Beasley (2016), the ERM framework should not be seen as a one-off project; rather, it is an ongoing project, because "risks constantly emerge and evolve" (p. 4). While the ERM framework has been widely accepted as a contemporary risk management model, the TARA framework is also viewed as a model that can be used to deal with present and future risks. TARA is an acronym for "transfer", "avoid", "reduce" and "accept", and these terms are briefly explained below.

Transfer: This means to transfer or, at least, to share the risk with a third party. For instance, a company might insure an asset that faces a significant risk of being stolen or accidentally damaged. This will effectively transfer the risk to the insurance company and, if an incident occurs, the impact on the organisation will be minimal. Additionally, an organisation may transfer the risk of embarking on a large project by engaging other organisations as partners. This means that two or more organisations will bear the entire risk in proportion to their participation.

Avoid: Organisations can prevent the occurrence of certain risks by avoiding activities that could trigger them. This strategy is preferable if the risk has a very large impact on the organisation and also has a high likelihood of occurring. If such activities must be undertaken, it is necessary to have a thorough risk management plan in place.

Reduce: This means to reduce the risk exposure, usually by carrying out the activity in a different way. This strategy is suitable when the risk will not have a significant impact but is likely to occur. However, if it is not possible to reduce risk exposure, a company might have to accept the risk (if it will not have a significant impact) or avoid it altogether.

Accept: Risk acceptance means knowing that a risk will occur and going ahead anyway (perhaps even doing nothing about it). Managers might decide to have contingency plans to deal with the fallout from such risks. More often, accepted risks have a low probability of occurring and, even when they occur, they do not have a substantial impact.

For tax administrations, there is a need to assess both external and internal risks, as outlined in our framework. Risk assessment for tax administration requires objective quantification and/or subjective judgment. It is possible to obtain data on some risks. For instance, an examination of tax compliance/evasion records from previous years might help a tax administration to predict current risks. External economic risks can also be predicted using readily available economic forecasts by agencies such as the World Bank and Standard and Poor's. Political risks may be difficult to assess using quantitative data, but utilising past experience and subjective measures can assist. Tax administrations can assess internal risks through self-appraisal or by engaging experts. Such appraisals may utilise SWOT (i.e. strengths, weaknesses, opportunities, and threats) analysis to determine internal capabilities and weigh them against threats.

Once the risk assessment has been completed, actions should be taken to manage the risks. Naturally, of the risks identified, those most likely to occur and to have the most damaging impacts should receive priority. When considering the TARA model, it is important to note that it may not be feasible for tax administrations to transfer their risks by insuring them. However, they may be able to reduce many risks and accept those that they cannot do anything about. Risks that can be significantly reduced by tax administrations include the external risks of noncompliance by taxpayers and most of their internal risks. Tax administrations are not in a position to be able to prevent external factors, such as economic conditions and political risks. However, engaging in proactive risk management practices could enable them to foresee such risks and take actions to mitigate their impact. For instance, when facing economic problems, like inflation and recession etc, tax administrations can assess potential impacts and consider possible mitigating actions at the onset. Similar measures can be taken in respect of political risks. The risks identified in this paper, their characteristics, and recommendations for their mitigation are summarised in Table 1.

Table 1: Categories of Risks, Their Characteristics and Mitigation Measures

Risk type	**Risk location**	**Control span**	**Recommended mitigation measures to be taken by the tax administration**
Economic risk	External	Not within the tax administration's control	Assess the implications of economic issues and take proactive measures
Political risk	External	Not within the tax administration's control	Assess the implications, which may include noncompliance. Take proactive measures (e.g. improve taxpayer engagement)
Tax evasion/ noncompliance	External	Partly within the tax administration's control	Conduct risk-based audits, improve tax service quality, train staff, etc.
Technological risk	External	Not directly within the tax administration's control	Keep abreast of technological trends and respond appropriately
National/global disruptions	External	Not within the tax administration's control	Take proactive measures when disruptions occur
Operational risk	Internal	Within the tax administration's control	Improve tax service quality, simplify tax laws, and ensure lower compliance costs
Human resource capacity	Internal	Within the tax administration's control	Employ skilled staff, and train and retrain all staff.
Fraud/internal control issues	Internal	Within the tax administration's control	Tighten internal controls
Financial resource constraint	Internal	Partly within the tax administration's control	Negotiate with political leaders to secure adequate funding for tax administration operations
Organisational structure/management	Internal	Within the tax administration's control	Embrace modern management techniques, such as lean management and new public management
Collusive risk	Internal/external	Partly within the tax administration's control	Tighten internal control and ensure that there is less interface between staff in sensitive positions and taxpayers

5. CONCLUSIONS

Developing countries face a tax revenue generation crisis. This problem has been a subject of academic interest for several decades. The problem has also attracted attention from the UN, the World Bank, the IMF, and many other multilateral development agencies. Unfortunately, the problem has persisted. As noted by the IMF (2015), the largest contributing issue is tax noncompliance, and academic researchers have focused on tax noncompliance in line with the position taken by international practitioners. While this paper concurs with the mainstream position that tax noncompliance is a major problem, it explores risk management more broadly, arguing that tax noncompliance is just one of the problems that tax administrations in developing countries face. Risk management is a possible and less costly way for tax administrations in developing countries to increase tax revenues. These tax administrations need to take stock of the wide range of risks that they face and analyse them. This will allow them to gain a better understanding of the dynamics of such risks and manage these risks more effectively.

We have identified a wide range of risks and classified them as internal or external risks based on whether they exist within the tax administration structure or whether they operate from outside of it. While the classification of tax administration risks as internal or external provides useful insights, this paper added collusive risk as another dimension. This is a situation whereby internal elements (within the tax administration) collude with external parties (taxpayers) to defraud the government of tax revenues. Collusive risk is significant in some developing countries and should receive further attention from academic researchers and practitioners.

Overall, the key message of this paper is that tax administrations in developing countries should engage in risk mapping, which involves the identification of all possible risks to which they are exposed, and ranking such risks in terms of likelihood that they will occur and the scale of their impact. The current practice, which places more emphasis on tax compliance, audit, and sanction, should be modified. There is a need to focus on a wider range of risks. Interestingly, if other risks are properly managed by tax administrations, tax compliance should improve and tax evasion be reduced.

The framework provided in the paper is a generalised one. It is common knowledge that each country's tax administration faces unique challenges. While this paper's framework serves as a guide, there is need for country-specific case studies to be undertaken. We hope that academic researchers in various developing countries can take up this challenge. Furthermore, this paper has proposed a framework for risk management by a tax administration. Future research could apply quantitative or qualitative data to the suggested framework to investigate one or more categories of risk. Finally, as developing countries intensify the quest for sustainable revenue, professional risk management in tax administration is an under-explored area and may constitute an important part of the solution.

BIBLIOGRAPHY

Allingham, M. G. & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics*, *1*(3-4), 323-338. https://doi.org/10.1016/0047-2727(72)90010-2

Beasley, M. S. (2016). *What is enterprise risk management?* Raleigh, NC: Enterprise Risk Management Initiative, Poole College of Management, North Carolina State University.

Besley, T., & Persson, T. (2014). Why do developing countries tax so little? *Journal of Economic Perspectives*, *28*(4), 99-120. https://doi.org/10.1257/jep.28.4.99

Chartered Institute of Managing Accountants (2008). *Introduction to risk management* (Topic gateway series No. 8). London, England: Chartered Institute of Management Accountants.

Committee of Sponsoring Organizations of the Treadway Commission (2004). *Enterprise risk management —Integrated.* n.p.: Committee of Sponsoring Organizations of the Treadway Commission.

Doerrenberg, P. (2015). Does the use of tax revenue matter for tax compliance behaviour? *Economic Letters*, 128, 30-34. https://doi.org/10.1016/j.econlet.2015.01.005

European Commission (2006). *Risk management guide for tax administrations*. n.p.: European Commission's Taxation and Customs Union Directorate General.

Fishlow, A., & Friedman, J. (1994). Tax evasion, inflation and stabilization. *Journal of Development Economics*, *43*(1),105-123. https://doi.org/10.1016/0304-3878(94)90025-6

International Monetary Fund. (2011). *Revenue mobilization in developing countries*. Washington, D.C.: International Monetary Fund.

International Monetary Fund. (2015). *Current challenges in revenue mobilization: Improving tax compliance*. Washington D.C.: International Monetary Fund.

James, S. (2012). Behavioural economics and the risks of tax administration. *eJournal of Tax Research*, *10*(2), 345-363.

Jimenez, G., Mac an tSionnaigh, N., & Kamenov, A. (2013). *Information technology for tax administration.* Washington D.C.: United States Agency for International Development.

Kaldor, N. (1963). Will underdeveloped countries learn to tax? *Foreign Affairs*, *41*(2), 410-419. https://doi.org/10.2307/20029626

Kangave, J. (2005). Improving tax administration: A case study of the Uganda Revenue Authority. *Journal of African Law*, *49*(2), 145-176. https://doi.org/10.1017/S0021855305000124

Lundqvist, S. A. (2014). An exploratory study of enterprise risk management: Pillars of ERM. *Journal of Accounting, Auditing & Finance*, *29*(3), 393-429. https://doi.org/10.1177/0148558X14535780

Organisation for Economic Co-operation and Development. (2013). *What drives tax morale*? Paris, France: OECD Publishing.

Sarr, B. (2016). Assessing revenue authority performance in developing countries: A synthetic control approach. *International Journal of Public Administration*, *39*(2), 146-156. https://doi.org/10.1080/01900692.2014.1003382

Tanzi, V. (2017). Corruption, complexity and tax evasion. *eJournal of Tax Research*, *15*(2), 144-160.

Umar, M. A, Derashid, C., & Ibrahim, I. (2017). What is wrong with the fiscal social contract of taxation in developing countries? A dialogue with self-employed business owners in Nigeria. *Sage Open*, *7*(4). https://doi.org/10.1177/2158244017745114

United Nations. (2018). *Countries urged to strengthen tax systems to promote inclusive economic growth*. https://www.un.org/development/desa/en/news/financing/tax4dev.html

United Nations Secretariat. (2019). *Follow-up note on the role of taxation and domestic resource mobilization in achieving the sustainable development goals*. New York, NY: United Nations.