

Impact of Tax Knowledge on Tax Compliance Challenges: A Case of Artisanal and Small-Scale Miners in Midlands Province - Zimbabwe

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Abstract: The purpose of the study is to examine the impact of tax knowledge variables on tax compliance challenges for Artisanal and small-scale miners in the Midlands province of Zimbabwe. Stratified random sampling was used to select the suitable research participants for interviews. The population of the study was 9409, sample size of 400 Artisanal and small-scale miners were interviewed to come up with the results for this study. The sample size was selected by using Yamane's formula. The data for this study was analysed through Pearson, Spearman correlation and Multivariate Linear regression. The results of the study are important to show the relationship between Tax knowledge variables on Tax knowledge compliance challenges. The study was conducted on the Midlands province of Zimbabwe. Research participants consist of the Artisanal and small-scale miners selected from eight major mining districts of Midlands Province of Zimbabwe. The results of the study revealed that tax knowledge variables have both negative and positive significance on tax compliance challenges

Keywords: Compliance challenges, Taxation, Tax compliance, Tax gap, Tax knowledge.

1. Introduction

The issue of tax compliance challenges is a topical issue in many countries. Both developing and developed countries are experiencing tax compliance challenges. Many governments of the world are failing to finance their expenditures as a result of high level of tax non-compliance. The collection of tax is very important to boost government expenditures such as the supply of public goods (Saad, 2013). A number of strategies were put in place in Zimbabwe to ensure full tax compliance but many individuals operating in the informal sector remain outside the tax net as the majority of them are not registered with the revenue authority (Nyamwanza, Mavhiki, Mapeteres & Nyamwanza, 2014).

Artisanal and small-scale miners (ASMs) are amongst the small and medium enterprises (SMEs). Mining activities generate forex in the economy of Zimbabwe but their contribution to the revenue authority is insignificant (Zivanai, Chari, & Nyakurimwa, 2016). ASMs play a major role in the

economic development in Zimbabwe. The major income generating businesses in Zimbabwe are in the informal sector (ZIMSTAT, 2018). There is a lot of money that is lost by the revenue authority in Zimbabwe as a result of lack of tax knowledge by individuals who are operating in the informal sector. Many ASMs are operating illegally, some have registered mining claims but do not report their financial benefits as they have inadequate knowledge on the proper preparation of the required financial books. (Saad, 2013).

1) Artisanal and Small-Scale Miners (ASMs)

Artisanal and small-scale miners are becoming a major player in the category of SMEs. Some Artisanal small-scale miners operate individually, some as families, and some operate in small groups. ASMs usually use small tools and small machineries in executing their business activities. These tools and machineries are sometimes hired. The majority of ASMs like their fellow counterparts in the category of SMEs are known for not keeping proper record of their finances for tax purpose. They are also known to possess little or no knowledge on taxes there are expected to remit to the revenue authority. The failure to keep proper books of Accounting makes it difficult for the revenue authorities to compute the taxable income expected of them. Some of the ASMs have permanent mining claims in which they operate. Also, some to lease the mining claims. The majority of individuals in the category of SMEs are always changing their places of operations which makes it difficult for the revenue authorities to make a follow up on them. The majority of ASMs in Midlands province of Zimbabwe operate illegally by reviving dangerous former Germany mines as in Shurugwi district. The fact that most of the ASMs in Midlands province of Zimbabwe operate informally and illegally result in them not to be compliant on tax regulations. In Midlands province of Zimbabwe very few ASMs are registered and operate legally.

2) Tax obligations for ASMs

The Income Tax Act Chapter 23: 06 in Zimbabwe do not have specific provisions for the taxation of ASMs. The

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operations of ASMs attract similar tax obligations as SMEs in business. Therefore, the operations of ASMs give rise to the following taxes; presumptive tax, Income tax, Value Added tax (VAT), Pay As You Earn (PAYE)/ Employees tax and Withholding tax (www.zimra.co.zw 10/04/2020/20:44). The majority of registered ASMs are in the category of paying presumptive tax to the revenue authority. Presumptive tax is charged to small traders who may not be required to register for Income Tax. Presumptive tax is based on the estimated income generated from trade. ASMs operators who are liable for presumptive tax are not expected to submit Income Tax returns (Zivanai *et al.*, 2015).

The Collection of revenue from all economic activities is very important for the government to fund its expenditure as well as to develop infrastructure that enable the easy of doing business (Savitri, 2015). ZIMRA experience deficit despite the heavy penalty that the tax authorities charged on business that fail to pay taxes due to the informality of business operations in Zimbabwe (Masango *et al.*, 2018). The Zimbabwe revenue authority over the past five years from the years 2015 to 2019 has reported positive news on surpassing their targets on revenue collection (www.zimra.co.zw/2020/04/20:41). Despite the fact that revenue authority is surpassing its targets over the year's. More effort need to be done to tape more revenue from both registered and unregistered ASMs so as to boost government revenue which is very low to meet its expenditure.

Zimbabwe like any other developing economies is always experiencing tax gap according to James and Alley (2014). Tax gap exist when there is a shortfall between the actual income received by the revenue authority in the form of tax and the expected income to be received if there was one hundred percent (100%) compliance. Thus, the study aims to unearth the effects of tax knowledge variables on tax compliance challenges. The main objectives of the study are to:

- Establish the impact of tax knowledge variables on tax compliance.
- Analyze the factors contributing to tax compliance challenges.
- Evaluate the strategies to ensure tax compliance.

2. Literature Review

The study adopted the related literature from the past researchers that is related to tax knowledge and tax compliance challenges. The related literature is very important to the study in providing facts related to the impact of tax knowledge on tax compliance.

1) Tax Knowledge

Tax knowledge is generally defined as the fact of knowing about all the procedures and requirement needed by the taxpayers in remitting their taxes (Muiruri, 2016). The knowledge of tax payment is very important in determining the level of tax compliance. The major factor affecting taxpayer compliance level is the level of taxation understanding (Nurkhin, 2018).

Researches relating to tax knowledge and compliance conducted by many scholars reviewed that, adequate

knowledge on taxation have a positive significance on tax compliance (Yunus, Ramli & Hassan, 2017, Sheikh *obid.*, 2014, Amanamah, 2016, Nurkhin, 2018). Also, other scholars reviewed that tax knowledge has a negative significant on the level of tax compliance. The main reason given by many authors on the negative significance of tax knowledge on tax compliance is that, some taxpayers acquire tax knowledge so as to find the strategies to avoid and evade the taxes they are supposed to remit to the revenue authority. (Kessler, 2018, Standford, 1993, Wadesango, *et al.*, 2018). According to Saad (2015) tax knowledge is divided into two aspects, namely, knowledge through formal education received as a matter of course and the knowledge specifically directed at possible opportunities to evade taxes. Also, according to Eriksen & Fallan (1996) Knowledge about tax law is assumed to be very important for preferences and attitudes on taxation issues. In an environment where the taxpayers does not possess adequate tax knowledge it is very difficult for that taxpayer to be committed to tax issues.

2) Tax compliance

In general terms tax compliance refers to the adherence to tax regulations by the taxpayer. Tax compliance refers to the individual willingness to act within both the 'spirit' and tax law and administration without the application of enforcement action (James & Alley, 2012 in Saad, 2013). Kessler (2008) defined tax compliance as filing all required tax returns at the proper time and that returns accurately report the tax liability as required by tax law. Thus, tax compliance refers to the behaviour of taxpayer that does not violate tax regulations as prescribed by the revenue authority in a given administrative boundary. SMEs require some level of tax knowledge to enable them to be able to interpret the provisions of the existing tax statutes (Maseko, 2014). Taxpayers need to develop the ability and willingness to comply with the tax laws, this include declaring the correct income in each year and remit the required amount of taxes (Wadesango *et al.*, 2018).

3) Tax gap

In general terms tax gap is the different between the total amount of money in the form of taxes that should be remitted to the revenue authority and the actual amount of money being remitted by the taxpayer, the result being adverse variance on the side of the revenue authority. According to James and Alley (2014) tax gap is the difference between the amount which was to be collected if there was one hundred percent (100%) compliance and the actual amount collected by the revenue authority.

4) Theories of Taxation related to knowledge and compliance

There are many views and theories that are related to tax knowledge and tax compliance challenges. The earliest views on tax compliance were propounded by Smith (1776) in which is he stated that, high taxes frequently afford a smaller revenue to the government than what might be drawn from more moderate taxes'' (Gcabo, 2009). Thus, high tax rates contribute to low compliance as many taxpayers will find it very burdensome to remit their taxes to the revenue authority.

5) Deterrence model

The deterrence model or the classical approach was put

forward by Allingham & Sandmo (1972) The main fact of the deterrence theory are that, taxpayers make rationale economic decision as such their decision to evade tax is based on their perceived gains or losses. If the decision to evade tax will result in them benefiting more income in their business activities the result is evading tax. On the other hand, if the taxpayer's decision to evade tax is resulting in higher chances of prosecution and high penalties to them, in such circumstances taxpayers will not resort to evade tax.

6) *Benefit Theory*

The benefit theory or principal was a refinement of the earlier work of Knutwicksell & Lindan (1919) from Stockholm school. The benefit theory was refined by Samuelson and Musgrave. The main facts of the benefit theory are that, taxpayers are more compliant in remitting their taxes when the government provide more benefits endeavour in remitting their taxes to the revenue authority. On the other hand, when the taxpayers realise that, there is little or no benefit in their effort to remit tax they resort to be noncompliant in remitting their taxes (Kessler, 2008)

7) *Effects of tax knowledge variables on tax compliance*

A number of studies revealed that there is a positive significance between tax knowledge and tax compliance. Lack of relevant tax knowledge result in high level of tax noncompliance (Yunus, Ramli & Hassan, 2017). A number of tax knowledge variable influence tax compliance. Barbuta-Misu (2011) revealed eight variables of tax knowledge. He further divided these variables into economic and non-economic factors. Economic factors include, tax audit probability, tax benefits, penalties, fines, tax rate and the level of income. Non-economic factors include, perceived fairness of tax system, attitude towards taxes and individual personal socialisation.

8) *Tax audit probability*

Tax audit is considered to be one of the enforcement method used by revenue authorities to ensure compliance to the tax system. Tax audit is considered to be one of the method of punishment by the revenue authority (Mohdali, & Yusoff, 2014). When the tax payer perceive a low audit probability the level of tax compliance become lower. When the taxpayer perceive that the tax audit probability is very high the level of tax compliance is very high (Barbuta-Misu, 2011). Audit probabilities were found to be very strong influence on tax compliance for sole proprietors but has little influence on salaried taxpayers (Woodbury, 1995 in Mohdali, & Yusoff, 2014).

9) *Tax penalty*

Tax penalty refers to the punishment and enforcement by the revenue authority to the taxpayers for failing to adhere to tax regulations. Tax penalty is also a method of threat to the noncompliant taxpayers. Fear has been considered to be a strong instrument in enforcing tax compliance by many tax authorities. In many countries tax penalty is used to deter taxpayer's non-compliance behaviour (Mohdali, & Yusoff, 2014). Basically, it is assumed that the taxpayer make the decision to comply with tax regulations under uncertain circumstances, strictly as a result of fear of possibility of being caught and penalised (Aim & McKee, 1998). In the absence of

tax penalty the level of tax compliance is low.

10) *Tax Fines*

The knowledge of existing tax fines also influences the decision of the taxpayer to comply or not to comply with tax issues. Tax fines is also another measure used by revenue authorities to deter people from breaking the law but does not guarantee the taxpayer to comply with the tax law (Yunus, Ramli & Hassan, 2017). Taxpayers are considered to be less compliant in remitting all their taxes when there is no or less tax fines imposed by the revenue authority in a given administrative boundary (Saad, 2013).

11) *Tax rate*

Tax rate is another instrument used by revenue authority to ensure that they collect all the taxes needed to boost finances of the government. Tax rate is the percentage or proportion charged by the revenue authority from the income generated/received by the taxpayers. In many circumstances high tax rates demotivate taxpayers to remit their taxes than when there is low tax rate. The taxpayers are rational actors in decision making during the uncertainty economic conditions. Thereby taxpayers want to optimise their benefits in conducting their business activities (Alm & McKee, 1998). The revenue authorities are said to charge high tax rates so as to compensate taxes lost from noncompliant taxpayers (Kessler, 2008).

12) *Tax benefits*

Tax benefits are the advantages gained by the taxpayers for remitting their taxes to the revenue authority. It is commonly known that the individuals who generate income in any country are supposed to remit part of their income in the form of taxes to the revenue authority so as to finance for public goods and services such as construction of road and other in fracture. In the event that the Government show less effort in developing public goods and services, the taxpayers usually become demotivated as such they do not feel comfortable to remit their taxes (Muiruri, 2016).

13) *Level of Income*

The level of income is another variable of tax compliance. When the tax payer is aware that the level of income is very low to sustain their expenditures they tend to ignore remitting their taxes as they think they will remain with less finances to finance their business activities (Barbuta-Misu, 2011).

14) *Perceived fairness of tax system*

Fairness of tax system exist when the revenue authority provide equal treatment to all taxpayers with uniform economic benefits. Taxpayers are highly motivated when there is fairness on the tax system. Equity on tax system is a source of motivation for the taxpayers. Perceived fairness determines tax compliance. The most justifiable prerequisite for fairness and equity is to treat equal people in equal circumstances in an equal way (Friedman, 2011). According to Junainah (2013) tax fairness could either be vertical or horizontal. Vertical tax fairness exist when taxpayers are treated with different tax rates based on their different business activities. Also, horizontal tax fairness treaty equal taxpayers in the same manner in remitting their taxes, being large or small business (Wadesango et al, 2018). Tax fairness and equity is considered as having positive significance to tax compliance depending on how the revenue

authority administer the tax system (Mukasa, 2014).

15) *Attitude towards taxes*

Taxpayer attitude refers to the beliefs that prevails in taxpayer’s mind. Usually one’s attitude determines one’s actions. According to Aim (2013) attitudes represent the positive or negative evaluations that an individual taxpayer holds. It is assumed that attitude encourage individuals to act according to their perception. Therefore, taxpayer with a negative attitude towards tax system is expected to be less compliant than the one with positive attitude towards the existing tax system. Perception and attitude towards tax system have a great impact on the compliance levels of the taxpayer. Thus, negative attitudes towards tax evasion is often found to be quite positively correlated (Wadesango et al, 2018).

16) *Personal Socialisation*

Individual taxpayers are highly influenced by their socialisation experience. Tax socialisation is whereby a taxpayer learns the way of responding to the existing tax system of the land. Individual taxpayers are the product of their social mates. If a taxpayer interacts with taxpayers who are compliant they also become compliant and if they interact with tax evaders they are like to behave in same manner of evading their taxes (Savitri, 2015).

3. Factors Contributing to Tax Compliance Challenges

Tax compliance challenges refers to the factors that hinder the proper way of remitting tax to the revenue authority by the taxpayers. Factors that promote compliance challenges include; compliance cost, complexity of the tax system, ownership of the mine, tax authority conduct (Gunarso, 2016). The existence of such tax compliance variables pose a number of negative influence in the manner in which the tax collection is administered (Devano & Rahayu, 2006).

1) *Compliance Costs*

Compliant cost is one of the tax knowledge variable that influences tax compliance. Individual taxpayers usually calculate the costs incurred in the event of being fully compliant with the existing tax system as well as the cost of non-compliant. In a situation whereby compliant costs are higher than the costs of non-compliant. The taxpayer usually opt for the less costs (wadesango et al, 2018). In many instances the taxpayers who are faithful in remitting their taxes to the revenue authorities they find themselves incurring high expense as well as having high cost of operations than their counterparts who do not remit their taxes, as such they opt to be noncompliant (Marino & Zizza, 2012). Compliant cost variable adversely affect both the taxpayers and the revenue authorities. On the other hand, the revenue authority incur high compliance costs in enforcing taxpayers to remit taxes (SaracoDlu & Capkurlu, 2011). The major compliance costs encountered by the revenue authorities is the costs of travelling to reach non-compliant taxpayers as well as employing human resources that make a follow up to the noon –compliant taxpayers.

2) *Tax Complexity*

In many countries Zimbabwe included the procedures needed to be followed by the taxpayer to be a registered taxpayer are too complex as they are characterised by long

bureaucratic procedures and more time is needed to complete the required tax registration forms that are too long (Nurkhin, Muhsin & Sumiaddji, 2018). In some instances tax forms are written in a complex language of which the revenue authority do not have staff to assist on the interpretation and the completion of tax forms. In such instances taxpayers opt to be non-compliant. According to Masarirambi (2013) tax complexity is one of the barrier to tax compliance. Tax compliance problem is an outcome of devising a complex tax system that the taxpayer is not able to interpret. Modern tax systems are considered to be burdensome especially on small and medium enterprises (Wadesango et al, 2018).

3) *Ownership of mining claims*

Ownership of mining claims has a strong impact in influencing taxpayer’s compliance. In the context of shurugwi there are three categories of ownership of mining claims namely, single owned mining claims, partnership ownership of mining claims, company ownership and leasing, mining claims. Individuals who own and operate their mining claims tend to be non-compliant as they make poor decisions as they decide alone (Suyanto, Intansari & Endhan, 2016). Mining claims that are owned and operated by many individuals tend to comply with all the taxes expected of them as there are many individuals who are involved in crafting decisions hence quality decisions making to adhere to tax regulations are made (Febrian & Kusmuriyanto, 2015). Also, mining under lease agreement are operated formally as the person who operate the mining on behalf of the other would want to be faithful with all the formal regulations so to create a goodwill with the owner of the mining claim (Devano & Rahayu, 2006).

Fig 1 shows the relationship between tax knowledge variables (independent variable) and the tax compliance (dependent variable).

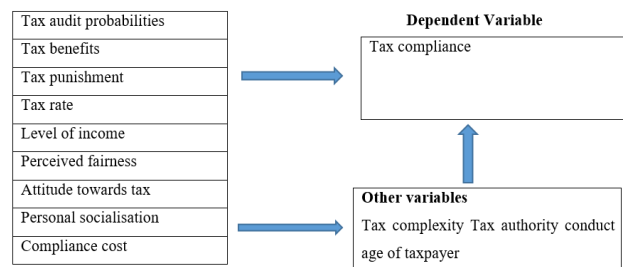


Fig. 1. Research Framework: Based on the facts of this study: 2021

4) *Tax Authority behaviour*

Knowledge of the tax payer’s behaviour / conduct is one of the variable that influences taxpayer behaviour. In a situation whereby the relationship between the taxpayer and the tax authority is antagonistic the likelihood is high level of tax non-compliant. In a situation whereby the tax authority create a friendship relationship the level of tax compliance is considered to be high (Savitri, 2015). Also, when tax authorities are corrupt as well as engaged into corrupt activities this demotivates the taxpayers to be committed in remitting their taxes (Nyamwanza et al, 2014). Tax authorities’ willingness to provide public goods and services is very important in determining the level of

tax compliance. If the tax authorities are not providing public goods and services, the taxpayers are demotivated therefore, they are likely to resist the payment of their taxes due to misuse of their tax money (Nurkhin, Muhsin & Sumiadji, 2018, Devano & Rahayu, 2006).

5) *The independent variables*

The independent variables of the study are tax audit probabilities, tax benefits, tax punishment (tax penalties and fines), tax rate, and level of income of the taxpayer, perceived fairness on tax system, attitude towards tax system, personal socialisation and compliance cost. Independent variables have an effect of influencing the dependent variable (Burns and Burns, 2012). Other factors influencing the dependent variable tax compliance are tax complexity, tax authority conduct and the age of the taxpayer. The independent and other tax variables influence tax compliance either positively or negatively depends on the situation of the taxpayer and the revenue authority. This study focuses on how independent variable influence the dependent variable.

6) *Dependent variables*

The dependent variable of the study is tax compliance. Tax compliance is a challenge due to the adverse effect of tax knowledge variables. Tax compliance challenges are a result of many factors such as bureaucratic burden, maintaining proper and sufficient records for management and taxation purpose, complexity of tax system as designed by the revenue authority (Maseko, 2014). The dependent variable is influenced by the independent variables (Burns & Burns, 2012). This study focuses on how the dependent variable is influenced by independent variables.

7) *Tax compliance challenges*

Tax compliance challenges refers to problems encountered by the taxpayers in their endeavour to adhere with the available tax system in a given economic and Administrative boundary. Tax compliance behaviour is influenced by the prevailing economic situation surrounding the taxpayers (AIM, 2013). According to Wadesango et al (2018) tax compliance in relation to a tax system is also determined by economic factors, psychological factors, tax fairness, equity, tax moral and social norms. Also, these variables determine the attitudes of the taxpayers as well as their compliance with tax system. Tax compliance challenges are a product of tax knowledge. In a situation whereby taxpayers possess high level of tax knowledge the level of tax compliance challenges are produced (Wadesango et al, 2018). Tax compliance challenges is also contributed by bureaucratic burden, maintaining proper and sufficient records for management and taxation purpose, complexity of tax system, lack of money and many others (Maseko, 2014).

8) *Strategies to ensure tax compliance*

Tax compliance is a major challenge for many tax authorities and is very difficult to persuade taxpayers to fully comply with the tax requirements even though tax laws are not always accurate (James & Alley, 2014 in Wadesango et al, 2018). Tax non-compliance is the failure to comply with laws and reporting of incorrect income (Kicher, 2013). A number of strategies can be put in place by the revenue authorities so as to solve

compliance challenges. Some of these strategies include enforcing tax compliance, monitoring tax compliance, tax education, easy of tax registration and many others.

9) *Enforcing tax compliance*

A number of legal strategies are in place so as to punish potential taxpayers who fail to adhere to the existing tax system. A number of tax penalties and tax fines can be used to ensure full compliance so as to end compliance challenges by the taxpayers (Yunus, Ramli & Hassan, 2017). Some authors are of the view that, revenue authorities should impose both negative and positive sanctions. Negative sanctions are imposed through imposing a number of tax penalties and tax punishments. Positive sanctions is whereby the revenue authority is rewarding faithful and consistence in remitting their taxes. (Wadesango et al, 2018, Maseko, 2014, Yunus, Ramli & Hassan, 2017).

10) *Monitoring tax compliance*

There is need to ensure that all artisanal and small-scale miners who operate informally are registered by registering everyone who is in profit making business. Once every potential taxpayer is registered it becomes easier for the revenue authority to monitor everyone who should remit their taxes. The existence of self- assessment is considered to be weak as only few audits are performed as the system is based on trust and relationships between the taxpayer and the tax collectors (Wadesango et al, 2018).

11) *Tax education*

Tax education refers to the process of imparting the taxpayers on the issues pertaining the payment of remitting tax to the revenue authority. There is need to conduct a number of workshops and many platforms of delivering tax information to those who have been interest in business as well as those in business. Once taxpayers are well educated on tax issues the expected results is high level of tax compliance. Tax education is considered to be an effective tax tool to enforce voluntary compliance. Once the taxpayers are motivated the taxpayers becomes responsible in overcoming the tax burden as they will feel to be part and parcel of the available tax system (Standford, 1993). Many researchers have proven the positive and significant influence of taxpayer education on tax compliance (Devano & Rahayu, 2006, Febrian & Kusmuriyanto, 2015, Nurkhin, Muhsin & Sumiadji, 2018).

12) *Easy tax registration*

Tax registration pose a number of compliance challenges in many developing economies. Therefore, there is need for the revenue authority to craft easy registration tax system. There is need to put in place digital tax system to allow taxpayers to register anywhere anytime for their taxes wants they click to the website of the revenue authority (Wadesango et al, 2018).

4. Methodology

The study belong to quantitative research. Descriptive research design was used in this study. The population of the study consist of Artisanal and small-scale miners who are registered with Zimbabwe revenue authority at Midlands province in Zimbabwe. The study use stratified random sampling so as enable the collection of data from heterogeneous

Table 1
Pearson Correlation on the effects of Tax Knowledge on Tax Compliance

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) txco	1.000									
(2) txap	0.939*	1.000								
(3) txbe	0.967*	0.955*	1.000							
(4) txpu	0.960*	0.968*	0.984*	1.000						
(5) txra	0.976*	0.949*	0.986*	0.977*	1.000					
(6) levi	0.968*	0.958*	0.991*	0.988*	0.988*	1.000				
(7) pefa	0.986*	0.946*	0.982*	0.971*	0.990*	0.982*	1.000			
(8) attx	0.979*	0.956*	0.978*	0.980*	0.987*	0.988*	0.983*	1.000		
(9) peso	0.978*	0.940*	0.975*	0.965*	0.986*	0.975*	0.984*	0.976*	1.000	
(10) coco	0.986*	0.946*	0.972*	0.970*	0.977*	0.978*	0.977*	0.985*	0.975*	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ Authors Own Computation

The table reports the results of the Pearson correlation matrix on the effects of Tax Knowledge on Tax Compliance; the annotation *** indicates results significant at a 0.01%, **, at 0.05% and * at 0.10% levels of significance.

Table 2
Spearman Correlation on the effects of Tax Knowledge on Tax Compliance

Variables	txco	txap	txbe	txpu	txra	levi	pefa	Attx	peso	coco
txco	1.000									
txap	0.9428*	1.000								
	0.0000									
txbe	0.9749*	0.9581*	1.000							
	0.0000	0.0000								
txpu	0.9656*	0.9669*	0.9850*	1.000						
	0.0000	0.0000	0.0000							
txra	0.9852*	0.9496*	0.9849*	0.9768*	1.000					
	0.0000	0.0000	0.0000	0.0000						
levi	0.9752*	0.9577*	0.9913*	0.9876*	0.9881*	1.000				
	0.0000	0.0000	0.0000	0.0000	0.0000					
pefa	0.9940*	0.9447*	0.9801*	0.9698*	0.9907*	0.9804*	1.000			
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
attx	0.9820*	0.9538*	0.9820*	0.9812*	0.9917*	0.9906*	0.9856*	1.000		
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
peso	0.9917*	0.9451*	0.9774*	0.9685*	0.9896*	0.9788*	0.9893*	0.9837*	1.000	
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
coco	0.9871*	0.9525*	0.9812*	0.9774*	0.9865*	0.9866*	0.9866*	0.9905*	0.9864*	1.000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ Authors Own Computation

Table 3
Multivariate Linear Regression results for the effects of Tax Knowledge on Tax Compliance

txco	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
txap	.022	.025	0.89	.372	-.027	.071	
txbe	-.007	.052	-0.14	.890	-.110	.096	
txpu	-.027	.047	-0.58	.561	-.119	.065	
txra	-.212	.065	-3.29	.001	-.339	-.086	***
levi	-.315	.065	-4.86	.000	-.443	-.188	***
pefa	.683	.050	13.60	.000	.584	.781	***
attx	.165	.054	3.05	.002	.059	.272	***
peso	.176	.042	4.18	.000	.093	.259	***
coco	.529	.037	14.32	.000	.457	.602	***
Constant	-.030	.019	-1.59	.112	-.068	.007	
Mean dependent var	2.520		SD dependent var	1.309			
R-squared	0.986		Number of obs	400			
F-test	3127.617		Prob > F	0.000			
Akaike crit. (AIC)	-347.491		Bayesian crit. (BIC)	-307.577			

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ Authors Own Computation

Artisanal and small-scale miners in midlands province. Midlands province have 9409 Artisanal and small-scale miners who are registered with the Ministry of mines and mining development. (Annual report: 2020). The sample size of the study was obtained using Yamane’s formula: (1967) shown below;

1) Sample Size

The sample size of this study was determined using Yamane’s Formula: 1967

$$Yamane's\ formula: n = N / [(1) + (N * e^2)]$$

Where: n = Sample Size

N = Target population

E = Level of significance/ marginal error 5%

Therefore, the target population of the study is 9 409

Substituting the target population on the Yamane's formula:

$$n = 9409 / [(1) + (9409 * 0.05^2)] = 383, 68$$

From the workings above based on the Yamane's formula the sample size is 383. 68. Therefore, to increase the statistical power the current study increased the sample size to 400 respondents. The sample size used for data analyses in this study is 400 hundred respondents selected from a population of 9 409 registered Artisanal and small-scale miners in midlands province of Zimbabwe.

2) Questionnaire

The questionnaire is the main research instrument used in this study to conduct both face to face and self-administered interviews. A likert scale with 5 scale choices are 5(strongly agree), 4(Agree), 3(uncertain), 2(disagree), 1(strongly disagree) is used in this study so as to obtain more data from ASMs.

3) Linear Regression for the study

$$\text{Log}(Y_1) = \frac{p}{1-p} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \epsilon$$

Where:

P = Probability of success or failure

Y = Tax compliance

β_0 = Interception at y – axis

$\beta_1 - \beta_9$ Regression co-efficients of Xn

ϵ = Error

X1 – X2 = Regression co-efficient of xn

Where:

Y1= Tax payers compliance

X1= Tax audit probabilities

X2= Tax benefits

X3= Tax punishments

X4= Tax rate

X5= Level of tax payer income

X6= Perceived fairness

X7= Attitude towards tax

X8= Personal socialisation

X9= Compliance cost

4) Data analysis

Multiple regression analysis was adopted to measure the relationship that exist between tax knowledge variables and the dependent variable tax compliance. Pearson correlation, Spearman rho and Multivariate Linear regression was used to analyse the relationships that exist amongst the existing variables. Pearson correlation was used to measure the relationship between the independent variables and the dependent variables. Also, Pearson correlation was used to measure the relationship between the independent variables themselves. In addition to that, Spearman rho was used to measure the relationship on the absolute values between the independent variables and depended variable as well as the relationship of absolute values of independent variables themselves. Multivariate Linear regression was used to measure the causation that exist between independent variables and dependent variables. It shows what causes the relationship to

exist in the way they exist.

Key:

txco: Tax compliance

txap: Tax audit probabilities

txbe: Tax benefits

txpu: Tax punishment

txra: Tax rate

levi: Level of income

pefa: Perceived fairness

atix: Attitude towards tax

peso: Personal socialisation

coco: Compliance costs

Table 1 shows that txco has a very strong positive significant correlation with all tax knowledge variables i.e. txap, txbe, txpu, txra, levi, pefa, atix, peso and coco and all the tax knowledge variables have a strong significant correlation to each other as seen by the * annotation on all the correlations.

The results of Pearson correlation from table 1 shows that, Tax compliance has a very strong positive significant correlation with tax knowledge variables. These tax knowledge variables are, tax audit probabilities, tax benefits, tax punishment, tax rate, level of income, perceived fairness, attitude towards tax, personal socialisation and compliance costs. Literature related to this study concurs to such relationship though there are some variations in some instances. Tax audits probabilities results in high tax compliance especially if the taxpayers are aware that, they are to be audited they try their level best to comply with their taxes to avoid being found contradicting the tax laws (Mohddi, Isa & Yusofi, 2014, James & Alley, 2002). In addition to that, have a positive influence on tax compliance. If the taxpayers are aware that they are to receive tax benefits their level of compliance is high than if there are no incentive to be given to them as a result of their faithfulness in remitting their taxes to the revenue authority (Gcabo & Zurika, 2007, Makasa, 2014). Also, tax punishment is considered by many authors to be significant in influencing tax compliance since taxpayers who are not compliant are afraid of being punished for not paying their taxes. To avoid tax punishment whenever, tax punishment is imposed to errant taxpayers the level of compliant becomes higher (Saad, 2013, Alm & Mckee, 1998). Also, perceived fairness is one of the major contributing factor to tax compliance. Whenever, fairness prevail amongst tax officials the taxpayers are motivated to pay their taxes (Lumumba & Migwi, 2010, Alm, 2013). Perceived fairness towards tax system is correlated with taxpayer's attitude towards paying their taxes. Taxpayers are demotivated by the tax authorities that are corrupt since they perceive that their money they pay in the form of taxes may be abused if the remit their taxes. A good situation is whereby the taxpayers develop a positive attitude as well as confidence upon their tax officials (Nyamwanza, Mavhiki, Mapetere & Nyamwanza, 2014).

Table 2. shows that txco has a very strong positive significant correlation with all tax knowledge variables i.e. txap, txbe, txpu, txra, levi, pefa, atix, peso and coco and all the tax knowledge variables have a strong significant correlation amongst to each other as seen by the * annotation on all the

correlations.

The results from Spearman correlation are almost the same with that of Pearson correlation in which Tax compliance is considered to be positively correlated with tax compliance variables. Evidence from table 2 shows that, tax socialisation has a positive and significance influence on tax compliance. Taxpayers who are raised or socialised with taxpayers who are compliant they are also considered to be compliant than those who are raised or socialised by noncompliant taxpayers (James & Alley, 2002, Amanamah, 2016). In addition to that, compliance costs are having a strong impact on tax compliance. In a given situation whereby compliance costs are low this motivated taxpayers to be registered, hence high level of compliance is witnessed than in a given situation whereby tax compliance costs are high.

High compliance costs demotivate the taxpayers to pay their (Saad, 2013, Mohddi, Isa, & Yusofi, 2014). In addition to that, independent variables of tax compliance are also correlated to each other. This means that, these tax variables are equally important in contributing to compliance or noncompliance by taxpayers.

The table 3 reports the results of the Multivariate Linear Regression Model on the effects of Tax Knowledge on Tax Compliance; the annotation *** indicates results significant at a 0.01%, **, at 0.05% and * at 0.10% levels of significance.

Key:

txco: Tax compliance

txap: Tax audit probabilities

txbe: Tax benefits

txpu: Tax punishment

txra: Tax rate

levi: Level of income

pefa: Perceived fairness

atrx: Attitude towards tax

peso: Personal socialisation

coco: Compliance costs

$$\text{Log}(Y_1) = p/(1-p) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \epsilon$$

Where:

P = Probability of success or failure

Y = Tax compliance

β_0 = Interception at y – axis

$\beta_1 - \beta_9$ Regression co-efficients of X_n

ϵ = Error

$X_1 - X_9$ = Regression co-efficient of x_n

Where:

Y1= Tax payers compliance

X1= Tax audit probabilities

X2= Tax benefits

X3= Tax punishments

X4= Tax rate

X5= Level of tax payer income

X6= Perceived fairness

X7= Attitude towards tax

X8= Personal socialisation

X9= Compliance cost

$$\text{Log}(Y_1) = \frac{p}{1-p} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \epsilon$$

Table 3 shows results of the overall significance [F (9, 390) = 3127.617; Prob>F = 0.000], suggesting that the nine variables; txap, txbe, txpu, txra, levi, pefa, atrx, peso and coco together impact on txco (tax compliance) and account for about 98.6% ($R^2 = 0.986$) of the variation in tax compliance.

Table 2.3 also shows that pefa ($\beta = 0.683$, $p = 0.000$), atrx ($\beta = 0.165$, $p = 0.002$), peso ($\beta = 0.176$, $p = 0.000$) and coco ($\beta = 0.529$, $p = 0.000$) are significant positive predictors of txco, whereas txra ($\beta = -0.212$, $p = 0.001$) and levi ($\beta = -0.315$, $p = 0.000$) are significant negative predictors of txco.

The results from table 3 of Multivariate Linear Regression shows the effects of Tax Knowledge on Tax Compliance. All nine variables of tax compliance have significant positive relationship with tax compliance. These variables are; tax audit probability, tax benefits, tax punishment, tax rate, level of income, perceived fairness, attitude of taxpayers, personal socialisation and compliance costs. From the nine variables of tax compliance, perceived fairness, attitude towards tax, personal socialisation and compliance costs are significant positive predictors of tax compliance. On the other hand, tax rate and level of income are considered to be negative predictors of tax compliance. Tax rate has been considered by many authors to be the main determinant of tax compliance. In a situation whereby tax rate is low taxpayers are motivated to remit their taxes than when tax rate is very high (Gcabo & Zurika, 2007, Makasa, 2014, James & Alley, 2002). Also, level of income is considered to be the main determinant of tax compliant. Higher income motivate taxpayers to pay their taxes than if the level of income is low (James & Alley, 2002, Makasa, 2014). Contrary to that, writers on tax compliance revealed that, Level of income is not significant in determining taxpayer's compliance. The important factor considered to be important in determining tax compliance is the attitude of the taxpayers. Some taxpayers have low income but as a result of positive attitude towards tax officials they remit their taxes faithfully (Lumumba & Migwi, 2010, Nyamwanza, Mavhiki, Mapetere and Nyamwanza, 2014). The results of regression shows that, tax knowledge variables have a positive significant influence on tax compliance.

5. Findings and Recommendations of the Study

The findings of this study were derived from both the related literature from the research participants engaged in Artisanal and small-scale mining activities in Midlands's province of Zimbabwe. The study revealed that, tax audit probabilities influence tax compliance if introduced frequently. Taxpayers become compliant whenever there are aware that there are to be audited than when they are not audited. Therefore, the study recommended that many tax audits need to be conducted so as to enforce compliance amongst the Artisanal and small-scale miners.

In addition to that, tax benefits positively influence tax compliance. Taxpayers are more compliant when they are receiving benefits from paying their taxes. When there are no

or less tax incentives taxpayers tend to be reluctant in remitting their taxes. Therefore, the study recommended that, the revenue authority to introduce a number of incentives that benefit the taxpayers who are compliant in paying their taxes. Tax punishments contributed to high level of compliance amongst the Artisanal and small-scale miners. Tax punishments takes various forms such as paying of fines, cancellation of business licence, imprisonment of noncompliant taxpayers. When the taxpayers are aware of the available tax punishments they tend to be more compliant than when there are no tax punishments. Thus, the study recommends that, more tax punishments to be put in place so as to reduce the rate of noncompliant.

Tax rates and too many taxes are a source of noncompliant. When the revenue authority introduces too many taxes with high tax rate the taxpayers are demotivated to pay their taxes since they perceive that they cannot shoulder the burden of paying their taxes hence they resort abandon their responsibilities to remit their taxes. Therefore, the study recommended that, the revenue authority need to avoid charging high tax rate that burden the taxpayers. Also, too many taxes need to be avoided so as to motivate more taxpayers to be faithful in remitting their taxes. The level of tax income correlate with the level of remitting tax to the revenue authority. Taxpayers with high income are likely to remit their taxes than those with less income. There is need for the revenue authority to motivate every taxpayer to be compliant even the taxpayers with less income need to be motivated to be compliant.

Perceived fairness is also another important factor that influences taxpayer compliance. Taxpayers are motivated to remit their taxes when they are satisfied that their money are put into good use. When the taxpayers perceive that their money is misused they tend to be noncompliant than when their money are put into good use. Therefore, the study recommends that, the revenue authority to ensure that they put the public money into good use. Also, the issue of corruption on tax issues should be avoided so as to foster confidence amongst the taxpayers. Revenue authorities to be responsible in introducing control measures to avoid corrupt activities amongst the revenue authority officials. Personal socialisation is also influencing tax compliance. Individual taxpayers are a product of socialisation. Taxpayers who are socialised by noncompliant taxpayers tend to be noncompliant than those who are socialised by compliant taxpayers. There is need for the revenue authority to ensure proper socialisation of the Artisanal and small-scale miners. More awareness programs to be put in place to ensure proper tax socialisation amongst the taxpayers. In addition to that, compliance costs contribute to tax compliance. High level of compliance costs demotivate the taxpayers to remit their taxes. Whereas, low compliant costs motivate more taxpayers to remit their taxes to the revenue authority. There is need for the revenue authority administrators to ensure low compliance costs in place whenever a taxpayer want to register with the revenue authority.

In addition to that, there is need for the revenue authorities to put in place many educational campaigns to ensure that every taxpayer attains adequate tax knowledge. More awareness programs are important to enable many taxpayers to receive tax

knowledge. Taxpayers with adequate tax knowledge encounter less compliance challenges hence their level of compliance are high. There is need for the revenue authority officials to identify all the compliance challenges that are encountered by the taxpayers at any given place and time. The identification of tax compliance challenges enables the responsible authorities to put mitigation measures in place so as to ensure full tax compliance amongst the Artisanal and small-scale miners.

6. Conclusion

This paper presented an overview of Impact of tax knowledge on tax compliance challenges. A case of artisanal and small-scale miners in midlands province – Zimbabwe.

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