

Perception on Tax System Structure, Tax Compliance Costs and Tax Compliance Behaviour in Yemen

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ABSTRACT

This study considered the tax system structure into tax penalty, tax rate, and tax audit, and then examined their effects on tax compliance behaviour among small and medium-sized enterprises (SMEs) in the manufacturing sector of Yemen. Also, the tax compliance cost in Yemen was considered as a mediating factor in the tax system structure and tax compliance model. The study used a survey questionnaire to collect data based on previous studies. The study empirically found a strong positive and significant association between the tax rate, tax penalty, and tax audit and manufacturing SME tax compliance behaviour in Yemen. Whereas tax compliance cost is negatively related to tax compliance behaviour. For the mediation effect, only the relationship between two factors, that is tax rate and tax penalty with tax compliance behaviour were mediated by of tax compliance costs. While no evidence for the mediating effect of tax compliance costs on the relationship between tax audit and the tax compliance behaviour is found. By referring to Deterrence Theory, this study has contributed by extending the tax literature through a framework that examined tax compliance cost as a mediator in the association between manufacturing SME tax compliance behavior in Yemen and the structure of the Yemeni tax system.

Keywords: Deterrence Theory, SMEs, Tax Compliance Behaviour, Tax Compliance Costs

1. INTRODUCTION

Tax compliance related issues are one of the global problems facing many countries when it's come to effective revenue generation. Even though, the level of tax compliance and revenue generation in developed countries is higher when compared with developing economies (Cobham & Jansky, 2018; Franzoni, 2000). Though, tax compliance barely reaches 100% across countries including the developed nation where "hard-to-tax" group exists as term defining evasion of tax payment or under declaring incomes in a bid to decrease tax payments (McGee et al., 2008). Looking from the perspective of developing countries, Masud and Gambo (2014) state that there is a low level of tax revenue generation by many developing nations to run their governmental activities.

One reason for this is the low tax compliance in most developing countries as compared to developed countries (Kim, 2008). In a country like Yemen, it is very difficult for the government to generate enough tax revenue for the shouldering of public needs as a result of low tax compliance (Al-Ttaffi & Abdul-Jabbar, 2020; Al-Fassel, 2014).

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Similarly, if tax revenue of Yemen was compared with that of other countries in terms of Gross Domestic Product GDP, the Yemen GDP ratios is quite low as presented in Table 1.

Table 1 Comparison of Yemen Tax Performance and Other Countries Using Gross Domestic Product GDP Ratios to Tax Revenue

| Country | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Average % (2008-2017) |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|---------------------|--------------------------|
| UK | 32.30 | 31.20 | 32.40 | 33.10 | 32.40 | 32.20 | 32.20 | 32.70 | 33.30 | 33.50 | 32.53 |
| Australia | 26.80 | 25.50 | 25.30 | 25.90 | 26.90 | 27.10 | 27.30 | 27.90 | 27.6 | 28.5 | 29.73 |
| Tunisia | 26.80 | 26.80 | 27.20 | 29.10 | 29.10 | 29.80 | 30.90 | 30.30 | 29.60 | 31.2 | 29.08 |
| Morocco | 30.20 | 26.90 | 27.70 | 28.50 | 29.50 | 27.70 | 28.30 | 26.40 | 27.20 | 27.60 | 28.00 |
| Egypt | 17.90 | 17.80 | 16.40 | 15.90 | 15.20 | 16.30 | 15.30 | 15.70 | 15.40 | 17.10 | 16.50 |
| Jordan | 17.80 | 17.00 | 16.00 | 15.00 | 15.30 | 15.20 | 15.65 | 15.17 | 15.92 | 15.13 | 15.82 |
| Lebanon | 16.40 | 16.80 | 16.90 | 16.30 | 15.20 | 14.30 | 14.05 | 13.45 | 13.50 | 15.26 | 15.32 |
| Malaysia | 15.1 | 15.5 | 13.80 | 15.30 | 16.10 | 15.80 | 15.30 | 14.80 | 14.20 | 13.60 | 14.95 |
| Yemen | 8.00 | 7.50 | 6.60 | 5.40 | 7.00 | 7.10 | 8.00 | 8.00 | 8.40 ^(p) | 8.70 ^(p) | 7.47 |

Source: IMF, 2014 p31, Ministry of Planning and International Cooperation [MPIC], 2016 p2, OECD, 2019; World Bank, 2020 Note: a. Only major items are reported. Data from domestic IMF (2014) p. 31 projections (p) based on authors' MPIC, 2016.

On the other hand, poor tax compliance adds more economic burden and difficulties on government because its hindered government to sufficiently provide some essentials needs of the general public. This was as a result of low tax revenues which could affect government ability in providing essential services to the citizens and overburden the complying taxpayers (Alm, 2012b). Researchers in the field of tax such as Feinstien (1991) argued that the act of tax noncompliance will end up to unfairness between complying taxpayers with tax laws and those that are not complying through demotivating the first group and living the latter group enjoying the privilege.

On a similar view, Al-Ttaffi and Abdul-Jabbar (2020) contented that low tax noncompliance could negatively affect nation economic growth which in turn affect government provision of public goods and other infrastructure required for human development and capacity building. Similarly, tax noncompliance will cost government especially developing nations a lot of resources to detect and prevent it effects, although, resources that could use for public development and social wellbeing (Al-Ttaffi & Abdul-Jabbar 2020; Alm, 1999a). Thus, tax noncompliance has adverse impact on the precision of macroeconomic statistics of a country because the true amount of economic activities will not be wholly captured and accurately analysed (Alm, 2018d). Based on these reasons, increasing the tax compliance at various level is a major concern of many governments around the world, since many governments of different nations including Yemen large portion of their activities is funded by collected tax revenue. On this note, Lee (2018) state that academic researchers and policymakers should pay more attention in providing proffer lasting solution that would contain the menace of tax noncompliance and improve the compliance level as well more revenue to government coffers.

In Yemen, tax revenue constitutes important source of income apart from crude oil revenues. According to Obaid et al. (2020a), 23.9% of Yemen government function is being shouldered by tax revenue. Even though, the Yemeni government consider different fiscal measures to boost its domestic revenue, the government is constraint with abnormal fiscal deficit and public debt as a result high level of tax noncompliance in particular SMEs operating in the country (Obaid et al., 2020b; Al-Ttaffi & Abdul-Jabbar, 2020; MPIC, 2018; Al-Batly, 2014; Al-Fassel, 2014a). Accordingly, MPIC (2018) as well as Imam and Jacob (2014) have reported that the amount of tax

revenue in relation to Yemen total income in 2015 is only 8% which is the lowest among the Middle East and North Africa countries. The amount is very low contrary to 15% that was recommended to the Middle East and North Africa nations with low income as reported by MPIC (2018).

However, Al-Ttaffi and Abdul-Jabbar (2020) reported that SMEs income tax contribution to the Yemen government tax revenue remain low due to noncompliance behaviour. They further pointed out that for instance, in San'a governorate alone, 60% of the SMEs operating there are not complying with the tax laws provision whereas the remaining 40% of the SMEs reveal low compliance (Al-Ttaffi & Abdul-Jabbar, 2018). Similarly, earlier, Al-Adofi (2015) reveal that based on the data obtained from Yemeni tax authority shows that 80% of the SMEs operating in the country are tax evaders through submitting misleading and inaccurate statement and other misappropriation. Al-Adofi (2015) further argued that the income tax paid by the complying SMEs in essence do not even represent up to 25% of their gross profit. This implied that most of the SMEs in Yemen are not tax compliance which in turn reduces the income tax revenue due for government.

Manufacturing sector of the SMEs plays an important role in the Yemeni economy where it employs a large number of the population with approximately 162,750 employees and it accounts for 9.85% of total export volume in Yemen. In view of that reason, manufacturing SMEs is a vital component of the Yemen economy and has recorded a steady growth of 7.2% since 2012 (Aameer, 2015). This indicates the vital contribution of the manufacturing industry to employment and income generation among the people of Yemen.

1.1 Research Objectives

1. To examine the association between tax penalty, tax rate, and tax audit with SMEs tax compliance behaviour in the Yemeni manufacturing SMEs.
2. To examine the mediating impact of tax compliance cost in the association between tax penalty, tax rate, and tax audit with SMEs tax compliance behaviour.

1.2 Research Questions

1. What is the association between tax penalty, tax rate, tax audit and SMEs tax compliance behaviour in the Yemeni manufacturing SMEs?
2. Does tax compliance cost mediate the association between tax penalty, tax rate, and tax audit with SMEs tax compliance behaviour in the Yemeni manufacturing SMEs?

2. LITERATURE REVIEW

2.1 Tax Compliance Behaviour

Tax compliance refers to filling all the due tax obligation be individual or corporate entity as at when due and that tax represent the actual tax liability of the taxpayer and are in accordance with prevailing tax laws and policy of a country (Al-Ttaffi & Abdul-Jabbar, 2020). Primarily, scholars argued on the problems of tax compliance and identified that tax compliance arises due to the failure of the taxpayers both individual and corporate to adhere to the laid down tax rules and regulation and other policies in their domain of economic activities (Alabede et al., 2011). The main problem surrounding tax compliance is mainly related to taxpayer's willingness to follow tax laws objectively (Kirchler, 2007). Early scholars on tax compliance such as Jackson and Milliron (1986) and Alm (1999) associate tax compliance with the reportage of income in totality and at the same time pay every tax due on the income in fulfilment of a country's laws and regulations or court judgments.

However, there is no generally accepted definition of the concept of tax compliance behaviour that could include its different aspect and view point. So, to harmonised the various definitions from scholars, this study defines tax compliance as the willingness by taxpayers to announce the accurate income, pay the appropriate deductions, reliefs, or reductions, and timely payment of taxes in compliance to the tax laws. On the other hand, scholars put tax compliance into economic as well as psychological perspective (Kirchler, 2007).

From the economic point of view, tax compliance is considered as an economic decision which taxpayer normally make under the condition of uncertainty and risk. Sandmo (2004) state that normally, taxpayer has to examine the cost and risk involve in any decision making regarding to the compliance with tax laws or not. Meaning that, if the taxpayer was caught by tax authority for not complying, he/she will be subjected to fine and when they are not apprehended by the authority, he/she will be going to enjoy the benefit from his action. On this note, Deterrence Theory is use to explain the compliance pattern of the taxpayer.

In essence, Deterrence Theory describes the ability of effective tax system in reducing the problem of tax noncompliance through the threat and punishment associated to the action of culprit if caught in violating any provision of tax law accordingly. Based on this, Hamm (1995) argued about Deterrence Theory that, taxpayer compliance decision mainly relied on some factors; income of the taxpayer, tax rate, punishment and threat, and possibility of audit. This means that when the probability of detection is certain and the cost of punishment is severe, this will discourage the taxpayer not to comply with tax laws and thus, will increase the tax compliance behaviour.

On the other hand, Jackson and Milliron (1986) opined that many researches on tax compliance behaviour have emphasised on Deterrence Theory particularly in referring to relative deterrence effect on different categories of penalty and taxpayer's considerable factors of economy. However, the theory has been criticised for putting more weight on economics variables and factors as an aspect of tax compliance and ignoring other factors or variables. According to Casal et al. (2016), when considering the determinant factors of tax compliance, it is unbearable not to recognise the concept of Deterrence Theory instrument by tax authority not to apply it in fighting noncompliance behaviour. Therefore, Deterrence Theory is very fundamental in combating tax compliance worldwide and the theory underpins this study.

2.2 Tax System Structure and Tax Compliance Behaviour

Accordingly, Fischer et al. (1992) and Jackson and Milliron (1986) propose that the structure of tax system significantly determines tax compliance behaviour. Specifically, the Fischer's Model identifies the factors responsible for the effectiveness of tax system structure along with its efficiency, which includes tax penalty, tax rate, probability of detection, complexity of tax system, and tax revenue mobilisation (O'Shaughnessy, 2014). Based on these factors of tax system structure, this study considers three variables, namely tax audit, tax rate, and tax penalty to represent tax system structure due to their sensitivity to the taxpayers in Yemen as discussed below.

2.2.1 Tax Audit

Tax audit is defined as examining the tax return of taxpayers, accounts, and financial information that ensure proper information reportage in accordance to tax law alongside the verification of reported amount of tax (Gupta & Nagadevara, 2007). Tax audit is regarded as among the influential factor that could deter taxpayers to comply with the tax laws due its effectiveness (Alshjra'h & Abdul-Jabbar, 2020; Harelimana, 2018; Jackson & Milliron, 1986). Among the early model used to describe tax compliance is the model provided by Jackson and Milliron (1986) by employing Deterrence Theory. The theory asserts that crucial factors deterring taxpayers' illegal

behaviours include a higher degree of tax audits in the tax system (Allingham & Sandmo, 1972). One of the studies that relate the Deterrence Theory with tax audit is Casal et al. (2016). The study affirms that tax compliance determinants such as tax audit are unlikely to discard the deterrence instruments concepts employed by tax departments in combating tax noncompliance.

The study of Allingham and Sandmo (1972) used the Deterrence Theory instrument to determine compliance level and report that tax audit is positively influencing tax compliance. Several other studies also confirm such result between tax audits with tax compliance (Wuyah et al., 2018; Everhart, 2018; Inasius, 2015). Nguyen et al. (2020) also examined tax audit with tax compliance among Vietnamese firms. Their findings show that tax audit has positive influence with tax compliance. Similarly, Amah and Nwaiwu (2018) as well as Alshjra'h and Abdul-Jabbar (2020) in their different studies have reported that there is positive relationship between tax audit and tax compliance both at corporate and individual levels of taxpayers. However, Sinnasamy and Bidin (2017), Feld and Frey (2007), Slemrod et al. (2001), and Mittone (2006) have reported negative findings. Moreover, there are studies that found no relationship between the tax audit and tax compliance such as Tilahun and Yidersal (2014), Muche (2014), Modudgu et al. (2012), and Gerxhani and Schram (2006). Earlier, it was reported by Fischer (1992) that the effect of tax audit has on tax compliance was inconsistent. Therefore, this study hypothesised that;

H₁: Positive association exists between tax audit and tax compliance behavior among the Yemeni manufacturing SMEs.

2.2.2 Tax Rate

Tax rate represents a major construct within the tax system in the Fischer's Model (Chau & Leung, 2009; Richardson, 2006). Tax rate refers to the tax percentage charged on taxable items and paid by taxpayers as stipulated by tax law (Fischer, 1993). According to Americans for Fair Taxation (AFFT, 2007) consider tax rate as the percentage of charge accrued to corporation or individual. This study defines tax rate as the tax levied on SMEs by the government as determined by their income or earnings. The Deterrence Theory considers tax rate as a factor that significantly determines tax compliance choice (Allingham & Sandmo, 1972) and the effects of tax rate on compliance involves cost and benefit analysis by the taxpayers. It is also said that a greater tax rate should have minimised after tax income then increases tax compliance thus, assuming a reducing risk aversion (Allingham & Sandmo, 1972). There are studies that are in line with this view. The studies include Weber et al. (2014), Olowookere and Fasina (2013), Adebisi and Gbegi (2013) for instance.

Contrary to the above studies, other studies found that tax rate influences tax compliance negatively and such relationship is significant (Ottone et al., 2018; Teng & Manual, 2016; Inasius, 2015; Yusof et al., 2014). On the other hand, some studies found insignificant relationship (Alshjra'h & Abdul-Jabbar, 2020; Olowookere & Fasina, 2013; Modugu et al., 2012; Abdul-Jabbar, 2009; Richardson, 2006). Therefore, in line with the literature reviewed and the assumptions of the Deterrence Theory. Thus, this study hypothesised that,

H₂: Positive association exists between tax rate and tax compliance behaviour among the Yemeni manufacturing SMEs.

2.2.3 Tax Penalty

Penalty is regarded as a vital factor in the tax system that influences tax compliance (Devos, 2013). Penalties alongside sanctions are exploited to avoid tax noncompliance, and whilst considered effective, it is deemed to be a highly costly approach (Dunn et al., 2018). The present study refers to tax penalty as the fines and sanctions enforced on SMEs that commit income tax offenses. Penalties are regarded as an essential approach towards deterring unwanted

behaviours. The phenomena and dimensionality of tax penalty have been captured by several studies using the Deterrence Theory.

Noteworthy among the studies that relates the Deterrence Theory with tax audit is Casal et al. (2016) who affirm that it is impossible to disregard tax penalty as a deterrence instrument employed by tax departments to curtail noncompliance. Owing to the sensitivity of tax penalty and its important role, several empirical researches have emerged to explore the link associated the tax penalty and tax compliance. By the literature, Allingham and Sandmo (1972) indicate a positively significant relation between tax penalties with increased tax compliance. Several other studies affirmed this positive association amidst tax penalty with tax compliance (Alshjra'h & Abdul-Jabbar, 2020; Oladipupo & Obazee, 2016; Thiga & Muturi, 2015).

Contrarily, other studies have discovered that tax compliance is negatively related to tax penalty (Martinez-Vazquez & Rider, 2005; Feld & Tyran, 2002; Fjeldsad & Semboja, 2001). Alternatively, some studies reported that there is association between tax penalty and tax compliance (Mohdali et al., 2014; Kuria, 2013; Palil & Mustapha, 2011). Due the reported mixed result of the above discussed studies, this study hypothesised that,

H₃: Positive association exists between tax penalty and tax compliance behaviour among the Yemeni manufacturing SMEs.

2.3 Tax Compliance Cost

Tax compliance cost could be defined as the value of resources expended by taxpayers to meet their tax obligations (Sandford, 1995). According to Ariff and Pope (2002), tax compliance costs are the costs incurred by the taxpayers in meeting the conditions set by the tax regime. Adam and Yusof (2018) termed tax compliance costs as all costs sustained by private and corporate businesses to comply with all tax laws without the tax amount itself. In essence, many of such incurred costs are often associated with information handling activities like record keeping or filing tax returns together with the tax data.

Among the studies that had been conducted, some studies indicate a negative significant link between tax compliance and tax compliance costs (Onoja & Odoma, 2020; Mahangila, 2017; Nurtegin, 2008; Franzomi, 2000). Unpredictably, a few studies discovered that tax compliance costs may influence tax compliance positively (Omondi & Theuri, 2019; Musa, 2018; Sapiei & Abdullah, 2014) whereas Abdul-Jabbar (2009) found that the relationship is not significant.

On the other hand, Mahangila (2017) reports that lower cost of compliance motivates taxpayers to discharge their tax responsibilities unflinchingly. Similarly, a report by a research consortium suggests that reducing tax compliance costs might increase voluntary tax compliance (Mahangila, 2017). Tax jurisdictions that have high compliance costs might appear unfair to taxpayers. If taxpayers and SMEs know that they are unfairly treated in terms of incurring too much cost of compliance, they may try to evade tax. Therefore, this study hypothesised that,

H₄: Negative association exists between tax compliance cost and tax compliance behaviour among the Yemeni manufacturing SMEs.

In this study tax compliance cost is a mediating variable. Mediating variable is a variable "which represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest" (Baron & Kenny, 1986). In this study, tax compliance cost is expected to explain the association between the independent variables (tax system structure) and the dependent variable (tax compliance). In this case, tax compliance cost is viewed as factor that can strengthen the association between tax system structure and SMEs tax compliance behaviour. Tax compliance cost is also considered as an element to be use to assess

the compliance level among taxpayers (Musa, 2018). Based on this view, this study used tax compliance cost as a mediating variable that is anticipated to strengthen the association between Yemeni tax system structure and manufacturing SMEs tax compliance.

Therefore, this study in its effort to ascertain the mediating impact of tax compliance cost on the association of tax system structure (tax rate, tax penalty, tax audit) has on tax compliance hence, hypothesised the following:

H₅: Tax compliance cost mediates the association between tax audit and tax compliance behaviour among the Yemeni manufacturing SMEs.

H₆: Tax compliance cost mediates the association between tax rate and tax compliance behaviour among the Yemeni manufacturing SMEs.

H₇: Tax compliance cost mediates the association between tax penalty and tax compliance behaviour among the Yemeni manufacturing SMEs.

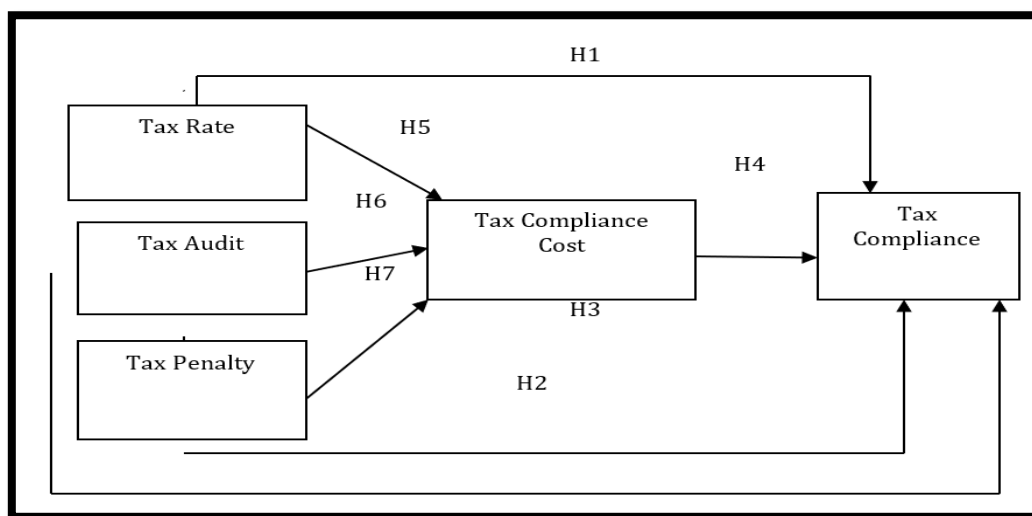


Figure 1. Study Framework

3. METHODS

This study adopts survey research design using self-administered questionnaire as the tool to collect data. The population of the study is 27,796 SMEs in the manufacturing sector and are distributed among the 22 governorates of Yemen. However, the study focused on 10 governorates where a large number of manufacturing SMEs are located, i.e., more than 82% out of the total number of 27,796 manufacturing SMEs in the country. The sample size of this study is 377 manufacturing SMEs based on Krejcie and Morgan (1970) suggestion. However, Israel (2009) opined that a researcher could add about 30% of the sample size to minimise the non-respond rate. Therefore, the sample size of this study now is 490. The study also used stratified sampling design.

The unit of analysis is organisational level which is represented by managers-owners. This is because, these individuals have an important role in making decision concerning the SMEs tax compliance in Yemen. According to Lignier (2009), managers-owners of the SMEs possess important knowledge on the financial status of their firms and provide vital information on different matters surrounding the cash outlet. In Yemen, SMEs managers-owners are highly involved in making decision related to tax and tax matters of their corporations. Therefore, these people are the respondent of this study due to their roles they played in their SMEs. The collected

data was analysed using Smart PLS 3.3 to achieve partial least squares structural equation modelling (PLS-SEM) and to examine the proposed hypotheses and to analyse the research model.

4. RESULTS AND DISCUSSIONS

This study uses PLS-SEM to analyse the data. This is because PLS-SEM has the capacity to test different associations among the variables of study simultaneously (Ringle et al., 2012). Similarly, Chin (2010) state that PLS-SEM is suitable for analysing complex model that could have multiple of variables, items as well as relationships. Hair et al. (2014) argued that PLS-SEM must stage procedures namely; structural model (inner model) and measurement model (outer model). Inner model examines the significance and hypothesis association whereas outer model evaluates validity and reliability of the indicator and construct of a model. Therefore, PLS-SEM is the most suitable for analysing the construct and model of this study. On the same vein, Farouk et al. (2018) added that PLS-SEM is being employed in analysing various empirical data in many fields of study among which tax compliance behaviour is included.

4.1 Assessment of Measurement Model of the Study

What researchers are interested when examining the measurement model is to check whether the measures used for the constructs are valid and reliable (Ramayah et al., 2011). The main standard employed to assess measurement model include internal consistency test, discriminant validity test, reliability test, and convergent validity test (Hair et al., 2016; Henseler et al., 2009). In this study, convergent validity test was achieved by examining the indicator loading, composite validity as well as average variance extracted (AVE). The result of this test is presented in Table 2. The indicators loading Cronbach's alpha (CA) as well as composite reliability (CR) in this study exceed the minimum entry of 0.40 and 0.70 accordingly (Hair et al., 2014). Thus, according to the result, convergent validity is satisfactory in this study.

Table 2 Assessment of Convergent Validity

| Latent Construct | Items | Loading | CA | CR | AVE |
|--------------------------------------|-------|---------|-------|-------|-------|
| SMEs Tax Compliance Behaviour (STCB) | STCB1 | 0.804 | 0.820 | 0.871 | 0.532 |
| | STCB2 | 0.777 | | | |
| | STCB3 | 0.767 | | | |
| | STCB4 | 0.691 | | | |
| | STCB5 | 0.753 | | | |
| | STCB6 | 0.561 | | | |
| Tax Audit (TA) | TA1 | 0.837 | 0.736 | 0.831 | 0.555 |
| | TA2 | 0.805 | | | |
| | TA3 | 0.739 | | | |
| | TA4 | 0.566 | | | |
| Tax Rate (TR) | TR1 | 0.727 | 0.775 | 0.835 | 0.502 |
| | TR2 | 0.706 | | | |
| | TR3 | 0.714 | | | |
| | TR4 | 0.712 | | | |

| Latent Construct | Items | Loading | CA | CR | AVE |
|------------------|-------|---------|-------|-------|-------|
| | TR5 | 0.689 | | | |
| Tax Penalty (TP) | TP1 | 0.848 | 0.787 | 0.852 | 0.592 |
| | TP2 | 0.833 | | | |
| | TP3 | 0.689 | | | |
| | TP4 | 0.680 | | | |

Note: Tax compliance cost is not included because it is not an independent or dependent variables

Following the convergent validity test, next is discriminant validity test which is in line with Fornell-Larcker's criterion based on Hair et al. (2014) suggestion. Fornell-Larcker's criterion discriminant validity is considered when the value of AVE square root of each construct is higher than the correlation of variable with other variable (Hair et al., 2016; Henseler et al., 2009). The result of this test in this study was presented in Table 3. The result indicates that all the square root of AVE is within the range of 0.881 and 0.710 and all they are more than their correlation with other latent variables. The result shows that the latent variables share high variance with its indicators than with another latent construct. This confirms that the discriminant validity in this study is well achieved.

Table 3 Assessment of Discriminant Validity

| Latent Construct | | TA | TP | TR |
|------------------|-------|-------|-------|-------|
| STCB | 0.729 | | | |
| TA | 0.514 | 0.745 | | |
| TP | 0.455 | 0.447 | 0.770 | |
| TR | 0.557 | 0.471 | 0.392 | 0.709 |

4.2 Assessment of Structural Model

The secret behind testing structural model is to know the impact of independent as well as mediating variables have on dependent variable. In this case, significance path of the coefficients is computed by the bootstrapping function with 5000 resample. Figure 2 and Table 4 provide the path coefficients (b-values), p-values and the t-values of the entire proposed hypotheses in this study.

Generally, Figure 2 and Table 4 show the result that TA ($\beta = 0.263$, $t = 5.667$, $p < 0.01$), TR ($\beta = 0.326$, $t = 7.077$, $p < 0.01$), TP ($\beta = 0.172$, $t = 3.122$, $p < 0.01$) and), TCC ($\beta = -0.201$, $t = 5.508$, $p < 0.01$) were significantly related to SMEs tax compliance, indicating support for hypotheses H₁, H₂, H₃ and H₄.

Table 4 Result of Hypotheses

| Hypotheses | Association | Path Coefficient | T-value | P-value | Decision |
|----------------|------------------|------------------|---------|---------|---------------|
| H ₁ | TA-> STCB | 0.263 | 5.667 | 0.000** | Supported |
| H ₂ | TR-> STCB | 0.326 | 7.077 | 0.000** | Supported |
| H ₃ | TP-> STCB | 0.172 | 3.122 | 0.001** | Supported |
| H ₄ | TCC->STCB | -0.201 | 5.508 | 0.000** | Supported |
| H ₅ | TA -> TCC-> STCB | 0.033 | 0.521 | 0.301 | Not Supported |

| H ₆ | TR->TCC-> STCB | -0.121 | 2.123 | 0.017* | Supported |
|----------------|----------------|------------------|---------|---------|-----------|
| Hypotheses | Association | Path Coefficient | T-value | P-value | Decision |
| H ₇ | TP->TCC->STCB | -0.160 | 2.937 | 0.002** | Supported |

Note: * p < 0.05; ** p < 0.01, (one tailed)

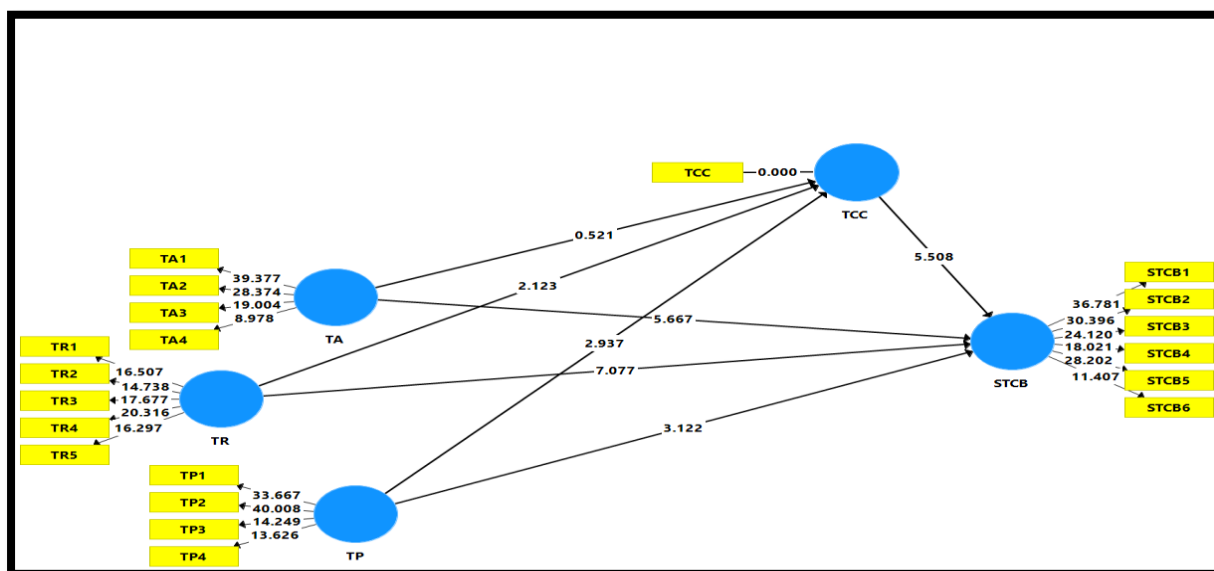


Figure 2. Structural Model (partial least square bootstrapping)

Figure 2 and Table 4 provided the results of the hypotheses testing of this study. Particularly, the finding show that compliance cost mediates the association between TP and STCB ($\beta = -0.160$, $t = 2.937$, $p < 0.01$) and TR and STCB ($\beta = -0.121$, $t = 2.123$, $p < 0.05$) are significantly associated to Yemeni SMEs tax compliance behaviour. This indicates support for the hypotheses H₄, and H₆ but not H₅. However, the negative coefficients in case of tax penalty and tax rate show a competitive mediation. This means that incorporating mediator takes the effect of direct relationship in the opposite direction. Thus, in the direct relationship, high tax rate led to increase SMEs tax compliance behaviour; but eventually, tax compliance costs mediate this relationship by decreasing the SMEs tax compliance behaviour. Similarly, intervention of the tax compliance cost on the positive association between tax compliance and tax penalty can increase SMEs tax compliance behaviour.

4.3 Determination of Coefficient (R²)

R² or coefficient determination is one of the measures to be done when using structural model assessment and is consider being very essential requirement for testing the inner model through PLS-SEM as suggested by Hair et al. (2019). As presented in Table 5, the entire three independent variables contribute a value of 0.422 (R²) or 42.2% of the total variance in the Yemeni SMEs tax compliance behaviour. In addition, the value of R² increased to 0.457 as a result of mediating effect of tax compliance cost. The result show that 45.7% of the variance in SMEs operating in Yemen their tax compliance is influence by tax penalty, tax audit, and tax rate with the indirect effect of tax compliance cost accordingly.

Table 5 Determination Coefficient (R²)

| Endogenous Variable | R ² Value | Size |
|--|----------------------|---------------------------|
| Direct model SMEs tax compliance behaviour | 0.422 | More or less considerable |
| Mediated model SMEs tax compliance behaviour | 0.457 | More or less considerable |

4.4 Predictive Relevance Q²

In this study, Q² was evaluated by Stone-Geisser's test using blindfolding techniques as suggested by (Hair et al., 2014). To assess the predictive relevance of the structural model, blindfolding method is the most appropriate. For a research model to be predictive relevance, its Q² value must be greater than zero (Henseller et al., 2009). In this study, crossed-validated redundancy result of the two models is greater than zero as shown in Table 6. This indicated that both the model achieved predictive relevance test.

Table 6 Cross Validated Result

| Total | SSO | SSE | 1-SSE/SSO |
|------------------------------------|-----------|-----------|-----------|
| Direct model SMEs tax compliance | 2,232.000 | 1,776.966 | 0.204 |
| Mediated model SMEs tax compliance | 2,232.000 | 1,735.675 | 0.222 |

This study aimed at testing the relationship between tax system structure and tax compliance behaviour and employing tax compliance cost as mediating variable among the Yemeni SMEs. In this view, the overall finding of this study was in line with the assumption of Deterrence Theory which opined that effective tax audit is required to increase tax compliance whereas probability of detecting tax defaulters will increase SMEs tax compliance. This was also argued by other studies such as Allingham and Sandmo (1972). This was because SMEs owners/managers have rational thinking and they are expected to increase their tax noncompliance benefit chances. Similarly, SMEs owners/managers could pay their taxes out of fear of being apprehended and punished whenever they were caught for tax evasion activities by the tax authority. This result is in line with previous studies that reported that tax audit is one of the important and significant determinants for increasing tax compliance from the view point of SMEs tax compliance behaviour (Wuyah et al., 2018; Olaoye & Ogundipe, 2018). This signified that tax audit stands to be one of the most important techniques for enforcing tax system structure especially in SMEs operating in Yemen. Therefore, this result highlights the role of tax audit played in increasing tax compliance among the Yemeni manufacturing SMEs.

However, the result of this study does not affirm the prediction of Deterrence Theory according to Allingham and Sandmo (1972) that tax rate influence tax compliance behaviour. Going by the Deterrence Theory, an increase in tax rate could leads to decrease in tax compliance behaviour. Thus, the finding of this study established that there is positive significance relationship between tax rate and tax compliance behaviour. This indicates that an increase in tax rate would not affect the compliance level among the taxpayers. This result is supported by the studies of Aronmwan et al. (2015), Adebisi and Gbegi (2013), Boone et al. (2013) as well as Olowookere and Fasina (2013) who also reported that tax rate has positive significant association with tax compliance.

The finding of this study about effect of tax penalty on tax compliance reveals that positive significant relationship exist between tax penalty and tax compliance among SMEs in Yemen. This shows that threat of penalty is a major instrument for enhancing tax compliance. Similarly, penalties play an important role in improving tax compliance which has a potential power to deter noncompliance provided it was deployed appropriately. The finding of this study is

supported by the studies of Al-Shira'h and Abdul-Jabbar (2020) as well as Oladipupa and Obazee (2016) who found that an important relationship exists between tax penalty and tax compliance among SMEs. Similarly, the finding of this study supported the anticipation of Deterrence Theory that appropriate penalty could increase tax compliance.

The result of the mediating variable i.e., tax compliance cost and tax system structure and SMEs tax compliance are negative significant relationship at tax rate level. This show that tax compliance cost strengthened the relationship between tax rate and SMEs tax compliance. Also, it indicates that mediating effect of tax compliance cost with tax rate on tax compliance, owners/managers of SMEs can be likely more compliant with tax authorities. This result is supported by Deterrence Theory proposition that fair procedure in the tax system could encourage more compliance.

The mediating result between tax rate and tax compliance i.e., tax compliance cost in this study shows that with the use of extra effort and help of tax consultant these could increase the tax compliance of the SMEs. Even though, often SMEs taxpayer regarded the tax rate unfair to them, but the mediating effect of tax compliance cost has made them improve record keeping and correct filling and returning of the due taxes accordingly. This assertion is in line with Deterrence Theory proposition. Therefore, tax compliance cost assist in explaining the association between tax rate and SMEs tax compliance level in this context.

The finding of the study on the relationship between tax penalty and tax compliance using tax compliance cost as mediating variable indicates negative significant effect. This highlights that, in Yemen, SMEs owners/managers are paying their tax responsibilities just because of fair of penalties related to noncompliance. In line with this result, Widuri et al. (2019) reported that tax penalties imposed by tax authorities simultaneously has significant effect on taxpayer compliance behaviour. It is also argued that increasing the tax penalties to those caught for tax noncompliance attitudes subsequently will increase the government's revenue through an increase in tax compliance (Faridy, et al., 2016; Ihrig & Moe, 2004). Franzoni (2000) opined that "high compliance costs ... not only incline the 'cost-benefit analysis' towards evasion, but may also generate resentment, weakening taxpayers' moral conscience or even prompting them to evade as a form of 'punishment' for the tax administration".

5. CONCLUSIONS

This study examined the relationship between tax rate structure, tax compliance cost and SMEs tax compliance behaviour. The finding indicates that tax audit; tax penalty and tax rate has significant relationship with SMEs tax compliance. Similarly, the mediating effect of tax compliance cost between tax system structure and SMEs tax compliance is also substantial. The implication of this study is therefore, tax authority shall increase their operational inspection of the SMEs performing in their area in order to ensure their compliance level with tax laws and to improve the efficiency and effectiveness of monitoring and collecting due taxes to the government. Policy makers, researchers and students may also find this study useful from the perspective of tax compliance behaviour. Yemen government also will find the result of this study very useful in tackling issues related to SMEs tax compliance and in general the perception of taxpayers on tax compliance determinants in a wide range. Future study could verify the result of this study using different variables and context among the other corporate taxpayer's categories.

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