TAX COMPLEXITY AND TAX COMPLIANCE IN AFRICAN SELF-ASSESSMENT ENVIRONMENT

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ABSTRACT

The study examined the effect of tax complexity on tax compliance in African Self-Assessment Environment. The population of the study covered all Africa countries; however a sample of 44 countries was selected. By employing Pearson Correlation and OLS Regression Method, sourced data was analyzed through SPSS version 19. Result indicates a significant negative effect of tax complexity on tax compliance in African taxpayers spend extra one day (19hours) beyond the regional average hours on tax compliance in self-assessment environment. Therefore, a good self-assessment system should be simple and less complex to make for acceptable level of tax compliance among taxpayers.

Keywords: Complexity, Compliance, Self-Assessment, Tax.

1. INTRODUCTION

Most of African countries have joined global scene in the application of Self-Assessment (SA) system. A recent study which surveys the tax system in Africa disclosed that with the exception of South Africa almost all the countries surveyed issued tax identification number to their taxpayers, and their tax system is based on SA principles (Carter & Cebreiro, 2011). SA is built on the notion of voluntary tax compliance which is designed to improve tax system efficiency (Loo, 2006, 2011; Loo & Ho, 2005; Palil, 2010). Despite efforts of African countries to match up with global trends by implementing SA, they are left behind in tax compliance measured by tax revenue as a percentage of GDP (Carter & Cebreiro, 2011). Research shows that one of the factors leading to non-compliance in SA environment is tax complexity (Saad, 2014). Thus, recent report shows that average number of hours it takes to comply with tax obligation in Africa is above the global average (PWC, 2014). In fact, the report shows that average time it takes to comply with tax obligation in Africa is higher than that of Middle-East, European Union, North America, Central America, Asia Pacific and Central Asia.

Therefore, in line with the above development, the paper examines the effect of tax complexity on tax compliance in Africa. The study will be of great significance in the number of ways. First, it would shed more light on tax compliance in Africa since very few studies were carried on this. More specifically, scholars pay little emphasis on the effect of tax
complexity and tax compliance in Africa. Second, the study has tried in making cross-country investigation comprising 42 countries which as far this study is concern is the largest sample ever used in African cross- analysis in tax related disciplines. Third, the study offer some recommendations based on the empirical findings which can be beneficial to African countries covered by the analysis.

2. LITERATURE REVIEW

Tax compliance is an issue hassling both developed and developing countries, and one of the possible determinant of tax noncompliance is complexity of tax system. Therefore, this section will review the relevant available literature on the tax compliance and tax complexity for the development of testable hypotheses in relation to sub-Saharan African countries.

2.1 Tax Compliance in African Self-Assessment Environment

Self-Assessment (SA) system of tax administration has been gaining wide acceptability globally (Saad, 2014). Tax compliance is based on trust or power of authorities. Where tax compliance is based on trust, it becomes voluntary tax compliance, but if tax compliance is based on power, it is called enforced compliance (Kirchler, Hoelzl, & Wahl, 2008; Kirchler, Hofmann, & Gangl, 2012; Kogler et al., 2013; Wahl, Kastlunger, & Kirchler, 2010). Thus, SA is based on the principles of voluntary tax compliance. Under SA taxpayers assess themselves to tax and pay without enforcement action, thus, it is implied that they must possess adequate tax knowledge and tax system need not be complex (Saad, 2014). Tax system built on SA principles can be seen successful, because successful tax administration is the one in which taxpayers pays willingly, without conspicuous investigation, enquiries, reminders, and or treats for legal or administration sanctions (James & Alley, 2002). Thus, it is these qualities of voluntary tax compliance that gives the SA wider global acceptability.

Like other countries around the world, tax compliance in sub-Saharan Africa is based on the SA principles. To confirm this assertion, survey of 15 African countries covering –Benin, Botswana, Burundi, Ethiopia, Ghana, Kenya, Malawi, Mauritius, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Uganda and Zambia showed that with the exception of South Africa all other countries issue Tax Identification Number, and all personal and corporate income tax is based on SA principle (Carter & Cebreiro, 2011). However, despite the fact that sub-Saharan African countries followed the global trend in implementing SA system, their tax revenue as a percentage of GDP which is a good tax good measure of tax compliance is low. While tax revenues account for one-third of GDP in OECD countries, it accounts for less than one-fifth in sub-Saharan African countries (Carter & Cebreiro, 2011). Interestingly, a recent survey shows that in countries where tax reforms were implemented there is considerable increase in tax revenue as percentage of GDP which exceeds 16.8% (Carter & Cebreiro, 2011). This percentage is average expected for fragile and low income countries globally.

Despite the tax reforms, there is relatively low level of tax compliance among taxpayers in sub-Saharan African countries compared to advance OECD. Evidence shows that one of the factors leading to voluntary compliance in SA environment is simplification of tax payments
(Saad, 2014), which implies that a complex tax system can be a deterrence to voluntary tax compliance.

### 2.2 Tax Complexity

Tax complexity is a multidimensional concept defined by different people from different viewpoint (Evans & Tran-Nam, 2013). Evans and Tran-Nam (2013) gave three different definitions of tax complexity from the perspective of tax accountants, tax lawyers, and taxpayers. To tax accountant, tax complexity refers to as the time it takes to prepare income tax returns including tax planning or the time it takes to give tax advices and consultancies. To a tax lawyer, tax complexity can be viewed from the point of difficulty in reading, understanding, and interpreting tax laws for their application in tax compliance. To a taxpayer, tax complexity is viewed from the point of time taken and cost incurred in complying with the relevant tax legislations. Thus, this study view tax complexity on the basis on time spent in complying with the relevant tax laws by the taxpayers, which is in line with the viewpoints of both tax accountants and taxpayers.

Complexity of tax system has for long being identified as one of the determinants of tax compliance within tax system/structures (Chan, Troutman, & O’Bryan, 2000; Chau & Leung, 2009; Fischer, 1992). Other studies highlight that tax complexity can have effect on tax compliance (Richardson & Sawyer, 2001). However, most of studies on tax complexity relates to compliance costs not tax compliance (Cline & Neubig, 1999; Forest & Sheffrin, 2002; Guyton, Hare, Stavrianos, & Toder, 2003; Slemrod & Sorum, 1985). Only few studies on tax complexity relates to compliance behavior. Alabede (2012) consider complexity as a single construct among four constructs of measuring tax systems/structures and its effect on tax compliance. Another study used tax complexity as main variable in relation to tax compliance behavior (Saad, 2009, 2011). However, study of Saad (2009, 2011) did not examine the relationship between complexity and tax compliance directly, her study only revealed the results of the relationship between complexity and perceived behavioral control. In her recent study, Saad (2014) suggests that the future research can consider the investigation of tax complexity as possible determinant of tax non-compliance.

Based on the above suggestions the current research would investigate whether tax complexity is among the factors responsible for low tax compliance in sub-Saharan Africa. In fact, it was analyzed that the tax system in Africa is somewhat complex, because it takes 320 hours to pay tax compared to global average of 268 (PWC, 2014). This means hours take to pay tax in Africa is greater than the global average by 20%. Therefore, this implied the need to investigate whether or not tax complexity as measured by number of hours to comply has effect on tax compliance among the sub-Saharan African countries. Despite the existence of these two phenomena; low tax compliance and high tax complexity, researchers in sub-Saharan Africa did not investigate whether this correlation and relationship exist in cross-country perspective among sub-Saharan African countries. Thus, this study sought to fill the gap. Hence, the following hypotheses were formulated.

**H1:** There is negative correlation between tax complexity and tax compliance in Africa.

**H2:** Tax complexity has negative effect on tax compliance in Africa.
3. METHODOLOGY

This section covers study population, sample selection, data sources, variable measurement, technique of data analysis and research model. So, a sample of 42 countries was selected from the population of 61 countries. Babyak (2004) posits that 10-15 observations per predictor variable is good enough to run regression analysis. However, this study included 42 observations. The following procedure was adopted to arrive at the study sample:

Table 1: Sample Selection

<table>
<thead>
<tr>
<th>S.No</th>
<th>Approach</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total number of African Countries</td>
<td>61</td>
</tr>
<tr>
<td>2</td>
<td>Countries Exempted for Lack of Data for Independent Variable</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Countries Exempted for Lack of Data for the Dependent Variable</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Countries Exempted for Being Outliers</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Final Sample</td>
<td>42</td>
</tr>
</tbody>
</table>

3.1 Research Model

Equity theory has been highlighted by social psychology model as important theory in study of compliance and taxpayer behavior (Fjeldstad, Schulz-Herzenberg, & Sjursen, 2012). This theory may explain that when tax system is complex, taxpayers may question its fairness. The more complexity the tax system is the more taxpayers can perceive that there is inequity in the system. Thus, based on the theoretical insights this model is developed which hypothesized that tax complexity can have negative effect on tax compliance. Because, when tax system is complex, taxpayers may perceive the inequity in the system which will lead to low compliance. Hence, the following model is formulated:

\[ COMPLY_i = \beta_0 + \beta_1 COMPLEX_i + \mu_i \]  \hspace{1cm} (1)

Where:

\[ COMPLY_i \] = Tax Compliance rating for a country,
\[ \beta_0 \] = Constants,
\[ COMPLEX_i \] = Tax Complexity
\[ \mu_i \] = the error term.

Tax Compliance (COMPLY), the dependent variable, was measured by tax revenue as percentage of GDP (Central Intelligence Agency, 2013). Tax revenue as a percentage of GDP is a good measure of tax compliance (Carter & Cebreiro, 2011). Tax Complexity (COMPLEX), independent variable, was measured using number of hours it take to comply with the tax laws in a particular country (PWC, 2014). Data for the study was sourced from PWC (2014), Central Intelligence Agency (2013), and World Bank (2014). The study covered only year 2013.

In order to examine correlation and relationship between tax compliance and tax complexity in Africa, Pearson Correlation and Ordinary Least Square (OLS) Regression were employed respectively. Analysis was done through SPSS version 19.
4. DISCUSSION OF RESULTS

Table 1 presents result of Pearson Correlation analysis on tax complexity and tax compliance. It seems that there is significant negative correlation between tax complexity and tax compliance. The strength of the correlation was low ($r = -0.32$) but significant at 5% ($p = 0.039$). Correlation coefficient ranges from 0 to 0.35 is generally considered low, 0.36 to 0.67 is considered moderate and 0.68 to 1.0 high (Taylor, 1990). This establishes hypothesis one ($H_1$) that tax complexity is negatively relative to tax compliance. The finding corresponds to Richardson and Sawyer (2001) who observed tax complexity as one of the contributing factors for noncompliance behaviour among taxpayers. In reality, the more the tax complexity (especially in terms of time spent to comply and pay tax), the less its compliance or the more its noncompliance among taxpayers. Taxpayers tend to appreciate tax system which takes little or no time of compliance and presents much simplicity, especially in a competitively challenging business environment in which much attention is directed towards profit generating strategies.

Moreover, the effect of tax complexity on tax compliance was confirmed in OLS regression result (Table 2). The result shows that a statistically significant negative relationship exists between tax complexity and tax compliance in Africa context. Tax complexity influences level of tax compliance among taxpayers by 8% (as indicated in adjusted $R^2 = 0.08$ at $p < 0.05$) while 92% represents other factors not capture by the model. Also, Table 3 shows coefficients of the observed variable (COMPLEX): a significant negative coefficient ($-0.016$) was found at $p<0.05$, which means the effect of tax complexity on tax compliance among taxpayers in Africa is negative. If tax complexity level increases by 1.6%, tax compliance among taxpayers would reduce by 1.6%. Impliedly, tax complexity neither assures good tax system nor its rigidity makes it the most generally acceptable. In as much as good tax system is targeted, tax system is expected to be simplified to bring about acceptable level of tax compliance among taxpayers.

As regards to the time of tax compliance among taxpayers in Africa, descriptive statistics presents that it takes maximum of 956 hours and minimum of 76 hours with an average of 286.6 hours (Table 4) which is about 19 hours more than global average of 268 hours. This implies taxpayers in Africa countries spend extra one day beyond global average hours on tax compliance under Self Assessment Environment.

5. CONCLUSION

Self Assessment System (SAS) has gained global acceptance for some decades; it is a system which permits taxpayers to compute tax in compliance of legal framework specific to a country and remit the same accordingly. However, researchers have identified frequent noncompliance among taxpayers as the most challenge to the success of SAS, especially in African countries. Therefore, this study examined effect of tax complexity and tax compliance in African self assessment environment. Result indicates a significant negative effect of tax complexity on tax compliance in Africa: taxpayers spend extra one day beyond global average hours on tax compliance under Self Assessment Environment. Therefore, a good self assessment system should be simple and less complex to make for acceptable level of tax compliance among taxpayers.
REFERENCES


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Loo EC. The influence of the introduction of self assessment on compliance behaviour of individual taxpayers in Malaysia, 2011.


Table 1: Pearson Correlations

<table>
<thead>
<tr>
<th></th>
<th>COMPLY</th>
<th>COMPLEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>-0.320*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.039</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>42</td>
<td>42</td>
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</table>

* Correlation is significant at the 0.05 level (2-tailed).

Table 2: OLS Regression Model

<table>
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<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Std. Error of the Estimate</th>
<th>df 1</th>
<th>df 2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.320*</td>
<td>0.103</td>
<td>0.080</td>
<td>8.61418</td>
<td>0.103</td>
<td>4.577</td>
<td>1</td>
<td>40</td>
<td>0.039</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), COMPLEX
b. Dependent Variable: COMPLY

Table 3: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>29.519</td>
<td>2.540</td>
<td>11.621</td>
</tr>
<tr>
<td></td>
<td>COMPLEX</td>
<td>-0.016</td>
<td>.008</td>
<td>-.320</td>
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a. Dependent Variable: COMPLY

Table 4: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tbody>
<tr>
<td>COMPLEX</td>
<td>42</td>
<td>76.00</td>
<td>956.00</td>
<td>286.5714</td>
<td>178.10413</td>
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<tr>
<td>Valid N (listwise)</td>
<td>42</td>
<td></td>
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