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An Empirical Assessment of Tax Knowledge, Socio-Economic Characteristics and Their Effects on Tax Compliance Behaviour in Sunyani Municipality, Ghana

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Abstract
The payment of taxes is of significant concern to policymakers in developing nations. Various tax agencies in developing countries have utilised different procedures to quantify the nature of non-compliance, which depends on social and economic behaviour of citizens. This study sought to examine the effect of tax knowledge and socioeconomic characteristics of taxpayer on tax compliance behaviour in the self-assessment system in Sunyani Municipality, Ghana. A descriptive research design was adopted and semi-structured questionnaire was used to collect data. Descriptive method, T-test, ANOVA, and regression analyses were used to examine the tax knowledge and tax compliance behaviour. Three hundred and ninety-nine (399) respondents were stratified and randomly selected as sample for the study. From the study, it was revealed that that knowledge of tax significantly affect tax compliance, regardless of the fact that the level of knowledge of the tax varies essentially among respondents. It was discovered that there is a positive association between tax compliance and socioeconomic characteristics (gender, gross monthly income). Other variables like age, religion, and level of education have no correlation with tax compliance behaviour. Tax knowledge assumes an essential part in expanding tax compliance behaviour in the self-assessment system. The factors that affect tax compliance have been of immerse interest to tax authorities and policy makers in their quest to improve tax revenue in the developing countries. This paper assesses the effect of tax knowledge of individuals on tax compliance behaviour in the self-assessment system in Ghana. This paper provides valuable information to individual taxpayers with the necessary skill-sets and knowledge abilities to enable them to comply with the Ghanaian income tax requirement. Tax authorities will know the behaviour and complying features of taxpayers to help to complete the three-fold goals of the self-assessment system.

Keywords: Tax Knowledge, Tax Compliance, Tax System, Income Tax, Self-Assessment System, Socio-Economic Characteristics

INTRODUCTION

In this world, nothing can be said to be certain with the exception of tax obligation and death (Benjamin Franklin, 1789). Taxation is a significant element in the management of the national earnings of developed and developing nations. Lymer and oats (2009) noted taxes have played a crucial role in civilised society since its birth in centuries ago. Lymer and Oats (2009) accordingly define tax as a vital obligation force and upheld by government or tax authority of unmerited earnings, costs, or capital, for which the taxpayer receives nothing particular in return. However, not all payments are considered as tax obligations: for instance, charges, tolls and other levies are compensated for certain product and services and are not absolutely tax expenses. This clearly shows that the importance of tax revenue in a nation is unquestionable. Studies (Saad, 2014; Nurlis, 2015) have uncovered that revenue from taxes is one of, if not, the significant sources of revenue for both developed and developing countries around the world. Fauziati *et al* (2016) noted that to maximise tax revenue is to improve tax compliance behaviour among citizens, which is difficult to obtain in practice.

Franzoni, (1998) define tax compliance as the correct filing of tax returns, timely filing of taxable income and payment of amounts when due. Singh (2003) further noted that taxpayers should prepare all appropriate details of taxes obligations on time and the type must indicate the exact tax liability. These should be done according to the laws and regulations, rules and rulings of the legal courts. Those who do not conform to the tax laws and regulations, deliberately or not, are considered to have committed a criminal activity. Therefore, developing nations (including Ghana) are still described to be at low stages of tax compliance even with the many demands for voluntary compliance (Ayoki, 2008).

The effect of tax knowledge on complying actions was analysed in different studies (Saad, 2014; Chebusit *et al*., 2014; Alabede *et al*., 2011; Abdul-Razak, 2013). The relationship between tax knowledge and tax compliance have not received much attention empirically. Information as an aspect of compliance is linked to the ability of taxpayers to know the right to tax obligation and their desire to conform. The aspect that pertains to compliance is the general knowledge of the rules and knowledge on the possibility of exemption from taxes (Kasipilai *et al.,* 2003; Mohd, 2010). These previous research on tax compliance in connection with the immediate assessment were done in numerous developed nations. For instance, Allingham and Sandmo (1972) and Lewis (1982) recommended that citizens were prone to conform if the possibility of being audited was high. In any case, prompt assessments, the possibilities of being audited are by all account not the only factors influencing tax compliance behaviour of citizens. Other factors for example, age (Sapiel *et al*, 2014; Torgler, 2007), gender (Kastlunger *et al*., 2010), the level of income (Mohd, 2011; Abdul-Razak, 2013) and the equity and fairness (Nichita and Batrancea, 2012) affect tax compliance behaviour. These factors are still appropriate and essential in the self-assessment systems and the outcomes are in western countries like the US, Australia and New Zealand. Will the same outcomes occur if the analysis was carried out in Ghana? This study was therefore designed to give empirical evidence on the influence of tax knowledge on tax compliance behaviour in the self-assessment system (SAS) in Ghana.

Problem Statement

The payment of taxes is of important concern for policymakers in developing nations like Ghana since only small part of citizens, mainly government employees, honour their tax responsibilities. In the 2015 budget, tax revenue, including oil and exemptions for the period came to GH¢13,388.8 million, representing 3.84% less than the targeted amount of GH¢ 13,902.9 million. The inefficient and ineffective performance of tax revenue is principally due to the delinquency of tax obligations by some business establishments, for example, the small-scale enterprises (SMEs). This reveals the shortfalls in corporate income taxes of GH¢ 514.1 thousand (1.0 % of Gross domestic Product) (Ghana Budget Report, 2015).

As recognized by the Minister of Finance in the 2015 budget that a challenge to the enhancement of revenue accumulation is the on-going modernization programme in the Ghana Revenue Authority. Mohani (2001) asserted that tax compliance is a noteworthy issue for tax authority and individuals to accomplish absolute assessment income and, at least, "lessen the tax gap". Kirchler *et al*. (2008) further noted that methods of the tax regulation are to build up compliance behaviours of taxpayers in less developed nations. These methods rely on how the tax laws are enforced, taxpayers' honesty and trustworthiness of the government in service delivery. Obtaining acceptable stages of voluntary compliance in the self-assessment system. The voluntary self-assessment system involves interlocking aspects such as charges, audit, tax rate, knowledge, behaviour, fairness and equity (Kirchler *et al*., 2008).

Although several kinds of research have been done on the tax compliance behaviour (Saad, 2014; Chebusit *et al*., 2014; Abdul-Razak, 2013). The relationship between tax knowledge and tax compliance have not received much attention empirically. This study was therefore designed to give empirical evidence on the influence of tax knowledge on tax compliance behaviour in the self-assessment system (SAS) in Ghana with special emphasis on Sunyani Municipality.

Hypotheses

The following hypotheses were set for investigation.
H0: there is no significant relationship between tax knowledge and tax compliance behaviour in Ghana.
H1: there is a significant relationship between tax knowledge and tax compliance behaviour in Ghana.
H0: there is no significant relationship between socioeconomic characteristics and tax compliance behaviour in Ghana.
H1: there is a significant relationship between socioeconomic characteristics and tax compliance behaviour in Ghana.

MATERIAL AND METHODS

The researcher took a quantitative research approach to deal with the study. Quantitative research depends on deductive views (Sekaran and Bouge, 2010) and uses the quantitative expository systems that can give a descriptive premise with the essential associations of the variables made through complex statistical modelling (Saunders *et al*., 2009). Quantitative research requires regular research models whose research focus is to depict, clear up and anticipate events, with the likelihood of inspecting and relies on the extent of the biggest sample contrasted with the drawings of qualitative research (Cooper and Schindler, 2006).

The study population incorporated all taxpayers in Ghana. It was on these components that the research devices and instruments to get information for the investigation were based on. The researcher chose a sample of 399 respondents. Primary data was the main source of data for the study. The technique for primary information gathering was questionnaire. Questionnaire was utilised when the researcher needs to gather information from a substantial number of individual. Five-point Likert scale questionnaire was utilised as a part of this study to gather data from the perspective respondents. The instruments were subjected to reliability test, the reliability values of the study range was 0.775, which is greater than the recommended value of 0.7 according to Pallant (2005).

The analysis was done to build general multidimensional measure for every variable using descriptive statistics, parametric tests and regression analysis to quantify the connection between the variables. The computation of ANOVA and t-test were additionally used for reference and correlation. Regression model was utilised as a part of the study, inspired by foreseeing the estimation of the dependent variable relying upon the estimation of the independent variable. A general multiple regression equation for the study as expressed follows:

$$TC = a + B_1 TNRESR + B_2 TNEMP - B_3 TNR + B_4 TNAWN + \varepsilon_1 \qquad (1)$$

Where: TC=tax compliance, TNRESR=Tax knowledge on responsibility and rights, TNEMP=tax knowledge on employment income, TNR=tax knowledge on tax reliefs, TNAWN=Tax knowledge on awareness of penalties, fines and offenses, α is constant, whiles β_1, β_2, β_3, β_4, β_5 are coefficient of the variables and ε is the error term representing other variables that were not included in the models.

$$TC = a + B_1 G + B_2 A - B_3 R + B_4 LE + B_5 GI + \varepsilon_1 \qquad (2)$$

Where G=gender, A=age, R=religion, LE=level of education, GI=gross monthly income level, α is constant, whiles β_1, β_2, β_3, β_4, β_5 are coefficient of the variables and ε is the error term representing other variables that were not included in the models. All the variables were measured using the likert scale and the mean scores of the variables were used for the regression analysis.

RESULTS

Relationship between Tax Knowledge and Tax Compliance Behavior

Table 1: Model Summary[b] on the Link between Tax Knowledge and Tax Compliance Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.256[a]	.066	.056	1.18860	.066	6.916	4	394	.000	.749

a. Predictors: (Constant), Knowledge on tax responsibility and rights, Knowledge on employment income, Tax relief benefits, Awareness of offenses, penalties and fines.
b. Dependent Variable: tax compliance
Source: Field data, May, 2016

Table 2: ANOVA[a] on Relationship between Tax Knowledge and Tax Compliance Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.081	4	9.770	6.916	.000[b]
	Residual	556.633	394	1.413		
	Total	595.714	398			

a. Dependent Variable: tax compliance
b. Predictors: (Constant), Knowledge on tax responsibility and rights, Knowledge on employment income, Tax relief benefits, Awareness of offenses, penalties and fines Source: Field data, May, 2016.

Table 3: Coefficients[a] of Relationship between Tax Knowledge and Tax Compliance Behavior

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.974	.155		12.709	.000
	Knowledge on tax responsibility and rights	.093	.044	.200	2.143	.033
	Knowledge on employment income	.116	.046	.234	2.508	.013
	Tax relief benefits	-.064	.031	-.144	-2.077	.039
	Awareness of offenses, penalties and fines	.065	.031	.148	2.122	.035

a. Dependent Variable: tax compliance
Source: Field data, May, 2016

A regression investigation was done to establish the relationship between tax knowledge and tax compliance determinants (probability of being audited, personal financial constrains, tax penalty, income group, changes in government roles and policies was significant at 5%. From the results of the analysis, there was a positive correlation between tax compliance and tax knowledge (P=0.00), which implied that there is a relationship between the predictor variables (tax Knowledge on tax responsibility and rights, knowledge on employment income, tax reliefs benefits and awareness of tax penalties) and tax compliance. The table 4.10 shows that the predictor variables identified in the study are statistically significant and have influence on tax compliance behavior and it explained about 6.6% of the variation in the tax compliance. This means that 93.4% of tax compliance can be attributed to other factors other than tax knowledge. This is an indication that tax knowledge is very essential in achieving tax compliance in the Ghanaian tax system. The overall significance of the model is showed by F-statistic=6.916, p=0.000) and the Durbin-Watson indicates that the model is fit at 0.749. Over all, the above tables states that 6.6% of the variation of tax compliance has been explain by the individuals' tax knowledge. However, knowledge on employment income indicates the most important determinant of tax compliance (r=.116, p=0.013) followed by knowledge on tax responsibility and rights, awareness of the offenses and penalties, tax relief with (r=.093, p=0.033), (r=0.65,P=.035) and (r=-.064, P=.039) respectively (Table 4.10). From the above table 16, the value of r=0.255 and P=0.010 indicates a positive and significant relationship between tax compliance behaviour and tax knowledge. Therefore, the null hypothesis that there is no relationship between tax knowledge and tax compliance is rejected.

Effect Of Socio-Economic Characteristic On Tax Compliance

Table 4: Model Summary on the Effect of socio-economic characteristic on tax compliance

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.236[a]	.055	.043	1.19654	.055	4.618	5	393	.000	.735

a. Predictors: (Constant), Age, Religion, level of Education, Gender, Gross monthly income group

Source: Field data, May, 2016

Table 5: ANOVA[a] on the Effect of Socio-economic Characteristic on Tax Compliance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.058	5	6.612	4.618	.000[b]
	Residual	562.657	393	1.432		
	Total	595.714	398			

a. Dependent Variable: tax compliance

b. Predictors: (Constant), Age, Religion, level of Education, Gender, Gross monthly income group

Source: Field data, May, 2016

Table 6**:** Coefficients[a] of the Effect of Socio-economic Characteristic on Tax Compliance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.439	.324		4.442	.000		
	Gender	.345	.121	.141	2.852	.005	.989	1.011
	Age	-.044	.032	-.068	-1.388	.166	.987	1.013
	Religion	.067	.083	.040	.811	.418	.993	1.007
	Level of Education	-.014	.053	-.013	-.262	.793	.990	1.010
	Gross monthly income group	.291	.090	.160	3.249	.001	.997	1.003

a. Dependent Variable: Tax Compliance

Source: Field data, May, 2016

The regression analysis was done to establish a relationship between socio-demographic characteristics and tax compliance behaviour. Table 4.13 indicates that the link between tax compliance and gender was positive and significant (r=.141, p=0.024), there was also significant relationship between tax compliance and gross monthly income (r=-0.160, P=.0.047). Other variables like age, religion, and level of education have no correlation with tax compliance. Table 4.12 and Table 4.12 indicate that the overall significant of the model is F=4.618(P=0.000). The analysis shows that there was a link between tax compliance and socio-economic characteristics, table 4.12 shows the predictor variables identified to be significant in the analysis influence tax compliance and which explain about 5.5% of the variations in the tax compliance whiles 94.5% of the variations are being explain by other variables that were not included in the model. Therefore the null hypothesis that there is no significant relationship between socioeconomic characteristics and tax compliance behaviour is rejected.

DISCUSSION

Relationship between tax knowledge and tax compliance behaviour

From the study, there was a positive correlation between tax compliance and tax knowledge (r=0.255, P=0.10), which implied that there was a significant relationship between the predictor variables (knowledge on tax responsibility and rights, knowledge on employment income, tax reliefs benefits and awareness of tax penalties) and tax compliance. Knowledge of an aspect of compliance is linked to the capability of taxpayers to recognise the tax laws and rules, and their desire to conform to such laws. A huge positive factual connection was found between the levels of knowledge and tax compliance decisions. These findings is in tandem with Adesina *et al* (2016) findings that knowledge of the tax has had a significant positive effect on tax compliance while tax penalties have had an insignificant positive effect on tax compliance. This means that knowledge on tax is destined to advance tax compliance than tax penalties. This demonstrates the level of knowledge well really forced searching for escape clauses to maintain a strategic distance from tax liabilities, tax punishments is a positive and significant relationship with compliance behaviours of a taxpayer. These findings also support other studies (Kasipillai and Jabbar, 2003; Kirchler *et al*, 2006), which recorded that knowing about taxes would prompt higher compliance rates. In a comparative note, the absence of knowledge of the tax may prompt resistant conduct among taxpayers, deliberately or not.

Effect of Socio-Economic Characteristic on Tax Compliance

It emerged that there was a positive association between tax compliance and socioeconomic (gender, attended any tax course, gross monthly income). These findings are in tandem with Mohd (2011) findings that knowledge of tax significantly affect tax compliance, regardless of the fact that the level of knowledge of the tax varies essentially among respondents. The results likewise demonstrate that the likelihood of being audited, impression on government spending, punishments, individual financial constraints emphatically affect tax compliance behaviour.

Other variables like age, religion, and level of education have no correlation with tax compliance behaviour. These findings also support Torgler (2007) findings that as the principal, age has no effect on appreciation for all taxpayers; also, rupture conflicting definitions utilized as a part of exploration; thirdly, the impact on taxpayer compliance is weakened when the respondents' age is connected with various different variables, and fourth, the age appraisal association with different variables is dangerous.

CONCLUSIONS

Tax knowledge assumes an essential part in expanding tax compliance. Tax knowledge could urge taxpayers to take additional consideration to complete their tax returns. Independently employed labourers ought to attempt however much as could be expected to acquire a sensible level of tax knowledge that applies to their business. Obtaining knowledge has numerous tax benefits. It would spare taxpayers to contract consultants to figure taxes for their organisations and save enormous expense of tax counsel. It can help precisely ascertain tax obligation and keep away from unintentional compliance.

Conceivable tax compliance issues are vast in number, the outcomes show that tax compliance was affected by the likelihood of being audited, money related requirements and changes in the present government strategy, fairness and equity in the Ghanaian tax system, the role of the government in the economy, awareness of tax offences and penalty. Different variables, for example, the view of public spending of the government, the impression of equity and value, age, gender, the part of tax organisation and tax knowledge are fundamentally connected with tax compliance at the season of this study.

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