

SMEs Record Keeping in Ghana: Has VAT Made It Better?

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ABSTRACT: With the introduction of the VAT Flat Rate Scheme, which brings on-board traders on whom the VAT record-keeping requirements would or might prove burdensome, concerns arise on the potential impact of the 'VAT record keeping requirement' on SME's record keeping. The focus of this study was to investigate the effect of the record-based controls of VAT on firms' record keeping skills and accounting system based on a sample of 250 SME's selected from five key trading centres in the Accra metropolis. The result showed that completion of the VAT monthly return form imposes more cost on traders than the VAT invoice book. Firms who receive education from VAT officials are found to be 0.102 more likely to complete the VAT monthly return form than firms who do not receive education from VAT officials. Also, firms who receive education from VAT officials are 0.849 times as likely as those firms who had not received education from VAT officials to complete the VAT invoice book by self. Generally the result showed that the 'record-based controls of VAT' has significantly improved SME's record keeping skills and accounting system albeit it is found to be stringent relative to other record keeping types kept by SME's.

Keywords: Record-based control of VAT; SMEs; Ghana; Survey research design

JEL Classifications: H00; H2; H25; H32

1. Introduction

Small and Medium enterprises constitute about 90 percent of all registered companies in Ghana (Venture Capital Trust Fund, 2007). They are believed to contribute about 70 percent of Ghana's Gross Domestic Product (Abor and Quartey, 2010). SME's contribute significantly to the growth of the economy by serving as primary sources of employment, main sources of continued job creation, tax revenue, the foundation for sustained growth of large corporations, basis of national competitiveness and sources of innovation and entrepreneurship. However, it has been difficult to tax these types of businesses because some do avoid registration through rhythmic movements; do not keep records; do not file returns; plead ignorance, and have low turnover and revenue potential.

The tax authorities have, over time, adopted methods to tax SME's in Ghana. In 1998, the VAT system was re-introduced in Ghana after a failed attempt – due to widespread public opposition – in 1995. To make way for easy collection of VAT in the informal retail distributing trade sector, the Flat Rate VAT scheme was enacted by an act of parliament in 2007, Act 734, in an amendment to the Value Added Tax Act, 1998, Act 546. The flat rate VAT scheme is a simplified tax collection system which is to ensure that retailers of goods charge a VAT/National Health Insurance Levy of three

percent. Under the new arrangement, “a taxable person who is a retailer of goods shall account for the Value Added Tax payable under this section at a flat rate of 3% calculated on the value of the taxable supply” – Value Added Tax (Amendment) Act, 2007.

VAT is a consumption tax which is based on a system of self-assessment under which registered traders make their own declaration of tax liability at the end of the tax period of one month defined under the VAT Act 1998, (Act 546). Under the VAT law, every person liable to tax under the Act is required to keep a record of all supplies made or received and VAT paid or charged in each tax period. This implies that the VAT law imposes some sort of record-keeping requirements on registered traders. This raises concerns as most of these SMEs in Ghana are unstructured business units operating in the informal sector with little aptitude for record-keeping. The severity of the problem became more complex with the introduction of the Flat Rate Scheme which brings onboard traders on whom the VAT record-keeping requirements would or might prove more complicated and burdensome.

The main purpose of this study is to determine the impact that the VAT record keeping requirement has had on Small and Medium Enterprises’ record keeping skills and accounting system. Specifically the study seeks to find out if the VAT record keeping requirements are too stringent; whether VAT record keeping requirement has improved SMEs record keeping skills or not, and whether the impact of VAT on firms’ record keeping skills and system differ with firm size, education, kind of business and the frequency of visits by VAT officials. Primarily the paper used the Accra business community as the case study. Firms from five main business centres in the Accra metropolis were sampled. These markets are Makola market, Okaishie market, Agbobloshie market, Abosakai Market, and Kantamanto market. These markets were chosen due to their high business concentration and heterogeneity in business.

Various aspects of SMEs and VAT have been extensively investigated in the literature (see: Storey, 1994; Weston and Capeland, 1998; Michaelas et al, 1999; Lopez and Aybar, 2000; Kayanula and Quartey, 2000; Fisher and Reuber, 2000; Abor and Biekpe, 2006; Abor and Quartey, 2010; Gockel and Akoena, 2002; Go et al, 2005; Lephoto, 2007; Carare and Danninga, 2008). However, no effort has been made to explore the potential impact of VAT record keeping requirement on SMEs record keeping skills and system in the literature. The focus of this current study is to fill this gap that exists in the literature. Specifically the study seeks to test the following hypotheses:

1. *VAT record controls are too stringent*
2. *There is no significant relationship between the frequency of visits by VAT officials, the filling of the VAT invoice book, the filling of the VAT monthly return form, firms’ record keeping skills, firms’ accounting keeping system, and the extra cost imposed by VAT record based controls*
3. *Firms with an encounter with VAT officials are more likely to complete the VAT record books.*

The rest of the article is organised as follows: section II reviews literature; section III describes the method of the study; section IV discusses results, and section V concludes and makes policy recommendations.

2. Literature Review

Definition of SMEs

The issue of what constitute SMEs has been extensively investigated in the literature. Basically, the classification of firms has been based on the following criteria; capital assets, skill labour, turnover level, firm size, legal status, and method of production (see Bolton Committee, 1971; Storey, 1994; Weston and Copeland, 1998; Jordan et al., 1998; Michaelas et al., 1999; Lopez and Aybar, 2000). The general conclusion emanating from these classifications suggests that there is no ‘one-fit-all’ definition for SMEs.

In Ghana, various classifications on what constitute SMEs have been provided. A cursory glance at them all indicates that the most frequently used criterion for classification has been the employment size (Kayanula and Quartey, 2000). The Ghana Statistical Service for example classifies firms with less than 10 employees as small-scale enterprise and firms with more than 10 employees as medium and large-sized enterprises. Osei et al. (1993) classified SMEs into three categories; micro, very small, and small. Using a cut-off point of 30 employees, the authors indicated that micro enterprises are firms that employ less than 6 workers; exceedingly small firms are those that employ between 6 and 9 workers, and small firms are those that employ between 10 and 29 workers. In a more

recent survey by the Regional Project on Enterprise Development, Ghana Manufacturing, micro enterprise employs less than 5 workers; small enterprise employs between 5 and 29 workers; medium enterprise employs between 30 and 99 workers, and large enterprise employs 100 and above (see Teal, 2002).

The National Board for Small Scale Industries (NBSSI), however, base their classification on employment size and value of fixed asset. Based on these criteria, small enterprise are firms having not more than 9 workers and plant and machinery value of not more than 10 million Ghana cedis. Using the same criteria, however, the Ghana Enterprise Development Commission (GEDC) used an above 10 million Ghana cedis value of plant and machinery.

Causes of SMEs failure

Despite the scores of benefits provided by SMEs, its development has been impeded by several factors both financial and non-financial. Largely, however, financial reasons have frequently been cited in the literature as the most prevalent factor that impedes SMEs start-ups and progress. As a result of the perceived high risk connected to SMEs, financial institutions both formal and informal feel reluctant to extend credit to such business entity for risk of default. Cook and Nixson (2000) indicated that the development of SMEs is always constrained by the limited availability of financial resources, to meet their operational and investment needs. Other studies such as Levy (1993) and Parker et al. (1995) have shown that access to credit is a serious challenge to SMEs development.

However, other authors have argued that the failure of SMEs is more of non-financial reasons than financial reasons. For instance, Green et al. (2002) indicated that identifying a product and a market, acquiring necessary property rights or licenses, and keeping proper records are more fundamental to running an SME than finance. Tushabonwe-Kazoobu (2006) examined the causes of small business failure in the towns of Bushanyi and Mbarara in Uganda using a total of 133 businesses. He categorised the factors into internal factors and external factors. Out of the total 133 businesses sampled, 33% of them cited poor record keeping as an internal impediment to business growth. Also, out of the total 133 businesses surveyed, 53% of them cited taxation (VAT) as the major constraint to business growth. Also, other non-financial reasons such as weak institutional capacity, lack of managerial skills and training, existence of laws, regulations and rules that hinder the development of SMEs, and Lack of access to appropriate technology have been identified to disrupt SMEs start-ups and development (see: Sowa et al., 1992; Aryeetey et al. 1994; Parker et al. 1995; Kayanula and Quartey, 2000; Gockel and Akoena, 2002).

Value-Added Tax in Ghana

One of the utmost significant events of the 1990 tax reform was the advent of VAT to replace the then sales tax. This move by the government was deemed necessary since the then sales tax had a narrow tax bracket and problems of tax administration inefficiencies, reduced compliance and international competitiveness (i.e. less competitive export sector). It was envisaged that the record-based control of VAT with verifiable audit trail would improve efficiency of domestic indirect tax collection, promote export development strategy by charging zero rate for exports and also provide tax refunds for the inputs embodied in export production, promote economic growth through enhanced tax base, and promote a self-assessment culture.

VAT was first introduced in 1995 but withdrawn due to public outcry. The main reasons cited for the initial rejection included: high rate (17%), low threshold (annual turnover of 25 million Cedi), public information, campaigning and taxpayer education was too poor. After three years of reconsideration, VAT was successfully reintroduced in 1998 under VAT Act 546. This time the added value of all goods (except agriculture and basic goods) and services were taxed with a rate of 10% and a threshold of 200 million Cedi annual turnover (suppliers of goods). In 2000, a major review of the VAT system was completed, which resulted in a tax rise to 12.5% and a broadening of the tax base by lowering the threshold for suppliers of goods to an annual turnover of 100 million Cedi. The extra 2.5% increase was to be used, by GETFUND, to support educational development in the country. In 2004, there was another revision of the VAT rate from 12.5% to 15% with the extra 2.5% to be allocated to the National Health Insurance trust fund to facilitate and improve access to health in the country.

To make way for easy collection of VAT in the informal retail distributing trade sector, the Flat Rate VAT scheme was enacted by an act of parliament in 2007, Act 734, in an amendment to the Value Added Tax Act, 1998, Act 546. The flat rate VAT scheme is a simplified tax collection system,

which is to ensure that retailers of goods charge a VAT/National Health Insurance Levy of three percent. Under the new arrangement, “a taxable person who is a retailer of goods shall account for the Value Added Tax payable under this section at a flat rate of 3% calculated on the value of the taxable supply” – Value Added Tax (Amendment) Act, 2007.

Cited as an advantage of its introduction the record-based controls of VAT with verifiable audit trail has been envisaged to improve the efficiency of domestic indirect tax collection and record keeping of businesses. However, there seems to be no paper that explicitly investigates the impact of the record-based controls of VAT on SME’s record keeping system. Nonetheless, there exist empirical works that evaluate the superiority of VAT over other forms of tax, and the impact of VAT on consumers.

In terms of generating higher revenues, there have been works that have established the superiority of VAT in this light. Tait (1988) confirms that, in almost all developing countries where VAT has been introduced, its contribution to tax revenue has been increasing. The author concludes that the superiority of VAT over other forms of indirect taxes stems from its revenue buoyancy, neutrality in both domestic and international trade and the difficulty for evasion. Gillis (1990) also concludes that the earned reputation of VAT as a “money making machine” stems from the record of VAT in generating large amounts of revenue quickly in a comparatively painless manner. In South Africa, Go et al (2005) concluded that VAT is the most effective instrument for generating revenue.

The superiority of VAT over other forms of indirect tax has been argued along the lines of promoting international competitiveness. Krugman and Feldstein (1989) conclude that, VAT is not a protectionist measure; indeed, the allegedly pro-competitive device of export rebates is essential if the VAT is not to act as an export tax, which in turn is actually a protectionist measure that would reduce both imports and exports. The authors added that VAT would most assuredly fall heavily on traded rather than non-traded goods, which would constitute a bias against both exports and imports. However, Cnossen (1991) indicates that by applying a zero rate to export (and allowing reclaim of tax paid on exports) and by taxing imports equally with domestic products, tax neutrality in international trade is ensured.

Also because VAT is a consumption tax, researchers and other stakeholders have been worried about the potential additional burden on consumers due to its potential inflationary effects. Thus, consumers are likely to experience an increase in the price of consumable goods and services as a result of VAT. In assessing the potential inflationary impact of VAT, there have been some empirical findings in the literature. In a survey of OECD countries carried out by Lephoto (2007); the author concluded that VAT had little or no effect on prices. In Germany, Carare and Danninga (2008) found that increases in core inflation following the 2007 VAT hike was smaller than expected, leading to speculation about delayed inflationary effect. Burges and Stern (1993) affirm that, within domestic indirect taxation, a movement to a system like VAT is justified by the reasons that it is non-cascading and does not interfere with the production efficiency.

3. Data and Methodology

The main population for this study is small and medium enterprises in the Accra business community that have registered for VAT and collecting VAT. Specifically the study focused on five main market centres in the Accra community. These include Makola market, Okaishie market, Abosakai market, Agbobloshie market and Kantamanto market. These markets were chosen for three main reasons; their high business concentration nature, heterogeneity in markets concentration and to get a fair representation of the situation. The Makola Market is situated at the centre of Accra on the Kojo Thompson road. This market largely deals in cooking utensils, foodstuffs both perishable and non-perishable, canned foods, animal products, and traditional clothes and jewellery. These products are either sold in small wooden shops, on tables or concrete made shops. In terms of gender composition, the Makola market is a female dominated market. The Okaishie market centre, which is close to the Makola market on the Kwame Nkrumah avenue, largely deals in provisions, cosmetics, hardware, original-made clothes, shoes and sandals operating in small and large concrete made shops with some selling in open spaces. Kantamanto market is another major market centre close to the Okaishie market where market participants primarily deals in second-hand imported clothes, sandals, hardwares, shoes, slippers operating in concrete made shops and some sold in open spaces. The Agbobloshie Market which is near the timber market on the Fadama road also deals largely in

foodstuffs ranging from animal to non-animal products. Mostly, market women sit and sell in open spaces and small wooden structures (kiosk). Lastly the Abosakai market, which is close to the Agbobloshie market, deals primarily in imported second-hand spare parts of automobiles. Market participants are mostly males who operate in concrete made shops.

A total of 50 small and medium enterprises registered and collecting VAT were selected from each market. Thus, a total of two hundred and fifty (250) SMEs were selected for the survey. The convenience sampling technique was chosen ahead of the probability sampling technique in this study. This is because the convenience sampling affords flexibility and data collection luxury contrary to the probability sampling techniques, which requires more formal access to lists of valuations. For example, in this study, the use of the probability sampling technique would require that, in each market, we get formal lists of all SME's registered with VAT and collecting VAT. This will be a hilarious exercise which will require lots of time and cost. Thus, although the convenience sampling technique has been criticised as causing under-representation or over-representation of some groups within a sample, the ease with which it affords the researcher in getting access to useful information, which might not be possible under the probability sampling techniques case is the main justification for its use in this study.

The study employed self-administered questionnaires to collect data. The questions were homogeneous on all issues across all individual sample units. Specifically the questionnaire was divided into five different sub-headings namely; business characteristics, SME's record keeping prior and post VAT, and perception of SME's on the impact of VAT on SME's record keeping. In the first section business units were required to provide responses on ownership, years of operation, educational level, nature of business and employment size. The second and third sections of the questionnaires sought to draw responses from respondents on the impact of VAT on their record keeping skills. The last section sought to seek opinions from respondents on the impact of VAT on SME's record keeping system and skills.

4. Empirical Results and Discussion

In this section, a detailed analysis of the major findings of the article is provided. Specifically the section is sub-divided into the following subsection. Characteristics of SMEs, SME's record keeping status prior to VAT, SME's record keeping during VAT, the average additional cost burden imposed by VAT record keeping requirement, and impact of VAT record keeping requirement on SME's record keeping skills

4.1 Characteristics of SME's

In all, a total of 222 out of the 250 registered VAT traders completed the self-administered questionnaires. 50 out of the 222, representing 22.5 percent, are into the sale of provisions while 46, representing 20.7 percent, are into the sale of automobile parts. The remaining 50.5 percent of the sample are into the sale of general goods, building and construction materials, secondhand clothing, jewelry, and cosmetics. The level of education for these firms is low. 85.1 percent of the sample has education attainment up to senior secondary school level while the remaining 14.9 percent of the sample have education above senior secondary school level. The cross tabulation of business and education level reveals that the highest attainable level of education is senior secondary school. This suggests that there is no significant difference in educational attainments among traders surveyed. The level of employment size is also low. 95.1 percent of the sample representing 212 has a labour force size of less than 5 employees with the remaining 4.9 percent of the sample employing larger than 5. These details are well spelt out in Tables 1 and 2.

		Level of education						Total
		Basic	Middle/JSS	Secondary	Polytechnic	University	Other	
nature of business	general goods	0	7	28	6	3	0	44
	building and construction	0	2	5	1	3	0	11
	secondhand clothes	3	12	17	3	0	1	36
	Provisions	0	12	24	9	5	0	50
	Cosmetics	1	6	15	5	0	0	27
	automobiles	0	12	32	1	1	0	46
	Other	0	1	4	1	1	1	8
Total		4	52	125	26	13	2	222

		number of workers				Total
		< 5	>5 but <10	>10 but < 20	>20	
nature of business	general goods	40	4	0	0	44
	building and construction	9	1	0	1	11
	secondhand clothes	35	1	0	0	36
	Provisions	48	1	1	0	50
	Cosmetics	26	0	0	1	27
	Automobiles	46	0	0	0	46
	Other	8	0	0	0	8
Total		212	7	1	2	222

4.2 Background check on SME's record keeping pattern prior to registering for VAT

In this survey, the authors sought from traders the status and nature of records kept prior to joining VAT. The rationale was to provide a background on SME's record keeping profiles and habits. The survey revealed that 83.8 per cent representing 186 of the sample kept record with 81.7 per cent of this, representing 152, keeping the record by self. In terms of the relative ease, 147 firms, representing 96.7 per cent, recorded their books with relative ease while the remaining 3.3 per cent did it with some level of difficulty. The survey also revealed that the main books of account kept included sales book, cash book, and stock book, which are simple to keep and trader friendly.

For those who sought assistance in keeping records consisted of 18.3 per cent representing 34 firms. Out of the 34, 32 of them representing 94.1 per cent sought the services of employees while the remaining 5.9 per cent sought help from relatives. The average cost for seeking extra services from employees was high for 57.6 per cent, moderate for 33.3 per cent, and exceptionally high for 6.1 per cent of the sample that sought assistance from employees. Using cross tabulation, the authors investigated whether the average additional cost imposed by keeping records differed across business units. The result showed homogeneous cost across business units (i.e. high average cost) except for those into the sale of provisions that experienced a moderate cost (see Table 3).

		what was the average cost incurred				Total
		very high	high	moderate	no cost	
nature of business	general goods	0	7	0	1	8
	building and construction	1	3	0	0	4
	secondhand clothes	0	4	0	0	4
	provisions	0	1	8	0	9
	cosmetics	1	1	1	0	3
	automobiles	0	3	1	0	4
	other	0	0	1	0	1
Total		2	19	11	1	33

Next the authors tested to see if this difference in cost observed is real or due to chance variation. The chi-square test indicates that the differences are real and not due to chance variation (see Table 4). This we explain as been due to differences in the degree of skill required but has nothing to do with the differences in the education levels. Lastly the survey revealed that 16.2 percent representing 36 did not keep record specifically for reasons such as low level of education, lack of accounting skills, and lack of knowledge on the need to keep records.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33.007 ^a	18	.017
Likelihood Ratio	35.458	18	.008
Linear-by-Linear Association	.620	1	.431
N of Valid Cases	33		

a. 27 cells (96.4%) have expected count less than 5. The minimum expected count is .03.

Generally, it is evident from the above analysis that, although, the level of education of firms interviewed is low, the books of accounts kept prior to joining VAT posed relatively high cost to few firms. This goes to explain that records kept prior to joining VAT was less stringent for firms.

4.3 SME's record keeping post VAT registration

Next the authors examined how the introduction of VAT has changed the status, nature, and cost of keeping a record for SME's. As a result of migrating onto VAT the scope of records kept by businesses changed by the inclusion of the VAT invoice book and the monthly VAT returns form. Firms continued to keep other book of accounts for reasons of determining profit, tax declaration, future references, and reconciliation of accounts. Regarding the completion of the VAT invoice book, 85.1 per cent representing 189 firms self-complete the invoice book with 96.3 percent of them doing it with relative ease and 3.7 per cent doing it with some difficulty. Only 14.9 per cent of the sample, representing 33 firms, is unable to complete the VAT invoice book by self. This implies that the VAT invoice book poses "threat of extra cost of keeping record" to few firms. This presupposes that the record keeping requirement of the VAT invoice book does not differ significantly from the other books of account kept by firms prior to joining VAT.

However, with regard to the completion of the monthly return form, only 17.6 per cent of the sample is able to complete it by self with the remaining 82.4 per cent of the sample unable to complete it by self. This means that, as a result of migrating onto VAT, more firms are exposed to the risk of incurring extra cost burden in keeping their accounts. In all, a total of 39 firms are able to complete both the VAT invoice book and monthly return by self while a total of 150 firms out of the 183 firms that are unable to complete the monthly returns by self, complete the VAT invoice book by self. 33 firms, however, are unable to complete both the VAT invoice book and returns form by self. Controlling for firms who have had an encounter with VAT officials, 37 firms who have had an encounter with VAT officials are able to complete both the invoice book and the returns form while

147 firms are able to complete the invoice book by self but not the monthly returns form. Only two firms that have not had an encounter with VAT officials are able to complete both VAT record accounts by self. Thus, many of the traders who received education from VAT officials were able to complete the invoice book by self but not the monthly return form. This gives a clear picture that education of traders by VAT officials has been biased towards the completion of the VAT invoice book (see Table 5).

Table 5. Contact with VAT officials and filing of VAT returns

do you receive education from vat officials			do you fill the VAT returns yourself		Total
			Yes	No	
Yes	do you fill the vat invoice yourself	yes	37	149	186
		no	0	33	33
	Total		37	182	219
No	do you fill the vat invoice yourself	yes	2	1	3
	Total		2	1	3

4.3.1 Frequency of visit by VAT officials and the keeping of VAT records by traders

Next the authors test to see if a relationship exist between the frequency of VAT education by VAT officials and the completion of the VAT record books by self. Using measures of association the authors investigated the relationship between frequency of VAT education and the completion of the VAT record books by self. The result as shown in Tables 6a and 6b indicates the rejection of the null hypothesis that there is no significant relationship between the frequency of VAT education received and the completion of VAT returns. Thus, there exists a significant positive relationship between the frequency of VAT education received from officials and the completion of VAT returns even though the strength of this relationship is weak. Thus, the more firms receive education from VAT officials the more they are, in a better position, to complete the VAT returns form by self thereby avoiding extra cost imposed by VAT record keeping.

However, as shown in Tables 7a and 7b, the authors did not find a significant relationship between the completion of the VAT invoice book by self and the frequency of VAT education received. As indicated earlier, the VAT invoice book is similar in many forms to other record keeping books kept by firms and thus, requires less assistant to complete it for a greater proportion of the traders. Interestingly, however, education of traders on record keeping by VAT officials has instead been more centered on the completion of the VAT invoice book than the monthly return form.

Table 6a. Directional Measures of frequency of VAT education and filling of VAT monthly returns

			Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Somers' d	Symmetric	.181	.067	2.555	.011
		how often Dependent	.264	.098	2.555	.011
		do you fill the VAT returns yourself Dependent	.137	.052	2.555	.011
a. Not assuming the null hypothesis.						
b. Using the asymptotic standard error assuming the null hypothesis.						

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.190	.071	2.555	.011
	Kendall's tau-c	.148	.058	2.555	.011
	Gamma	.424	.150	2.555	.011
N of Valid Cases		219			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

			Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Somers' d	Symmetric	.022	.063	.348	.728
		how often Dependent	.034	.098	.348	.728
		do you fill the vat invoice yourself Dependent	.016	.047	.348	.728
a. Not assuming the null hypothesis.						
b. Using the asymptotic standard error assuming the null hypothesis.						

		Value	Asymp. Std. Error	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.024	.068	.348	.728
	Kendall's tau-c	0.18	.050	.348	.728
	Gamma	.060	.172	.348	.728
N of Valid Cases		219			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

4.3.2 The relative risk of keeping VAT records

Using the cross tabulation, the authors estimate the relative risk of the event that a firm who have received education from VAT officials is more likely to complete the VAT record books by self. The relative risk of completing the VAT record books is the ratio of the probability that a trader, who has had education from traders, will complete the VAT records books by self to the probability that a trader, who has not had education from traders, will complete the VAT record books by self. The result of the risk estimate as shown in Table 8 indicates that firms who receive education from VAT officials are 0.253 times as likely to complete the VAT monthly return form by self as firms who do not receive education from VAT officials. Alternatively, firms who receive education from VAT officials are 2.493 times as likely as firms who do not receive education from VAT officials not to complete the monthly return form by self. Using the odds ratio, firms who receive education from VAT officials are 0.102 more likely to complete the VAT monthly return form than firms who do not receive education from VAT officials. Also, as shown in Table 9, firms who receive education from VAT officials are 0.849 times as likely to complete the VAT invoice book by self as firms who do not receive education from VAT officials.

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for do you receive education from vat officials (yes / no)	.102	.009	1.150
For cohort do you fill the VAT returns yourself = yes	.253	.108	.594
For cohort do you fill the VAT returns yourself = no	2.493	.503	12.366
N of Valid Cases	222		

Table 9. Risk estimate for completing VAT invoice book

			do you fill the vat invoice yourself		Total
			yes	No	
do you receive education from vat officials	yes	Count	186	33	219
		% within do you receive education from vat officials	84.9 (%)	15.1%	100.0 (%)
	no	Count	3	0	3
		% within do you receive education from vat officials	100.0 %	.0 (%)	100.0 (%)
Total	Count	189	33	222	
	% within do you receive education from vat officials	85.1 (%)	14.9 (%)	100.0 (%)	
Risk Estimate					
	Value	95% Confidence Interval			
		Lower	Upper		
For cohort do you fill the vat invoice yourself = yes	.849	.803	.898		
N of Valid Cases	222				

This confirms the fact that the VAT record keeping (monthly returns form) requirements is too stringent relative to other record keeping books by firms. This conclusion is confirmed by firms' responses to the question; is the VAT record keeping requirement too stringent relative to other record keeping requirements? Out of the total 222 registered traders surveyed, 74.3 per cent indicated that the VAT record keeping requirement is too stringent relative to other record keeping while 25.7 indicates that it is not too stringent. Mainly they provide the reasons as: complex calculation, demands a lot of information, and is time consuming. The low level of education of firms as indicated earlier is the thrust of this conclusion.

4.4 Average extra cost imposed by keeping vat records

As discussed above, few firms are able to complete the monthly returns form by self. As a result, many of them sought assistance of some form. In this section, the authors consider the additional cost burden that this situation poses to traders. The survey showed that, a total 172 firms, representing 94.5 per cent, sought the services of employees while the remaining 5.5 per cent were assisted by family members. This implies that completion of the VAT monthly return form exposes more traders to the risk of incurring extra cost. Using cross tabulation the authors investigated whether the mode of assistance sought is homogeneous across business units. As shown in Table 10, there is no significant difference in the mode of alternative assistance sought. In other words, the alternative means of completing the VAT returns form is homogeneous across firms. This is confirmed by the chi-square test. As shown in Table 11, the asymptotic significance values for all the summary statistics are statistically not different from zero which implies that the alternative means of filling VAT

monthly return forms is homogeneous. This presupposes that all firms captured in this survey have the equal likelihood of been exposed to the risk of incurring extra cost in keeping VAT monthly return form.

Table 10. Nature of business and type of assistance sought

		if no via what means do you fill the monthly return form		Total
		Employee	Relative	
nature of business	general goods	38	2	40
	building and construction	5	0	5
	secondhand clothes	25	3	28
	Provisions	38	2	40
	Cosmetics	24	0	24
	Automobiles	36	3	39
	Other	7	0	7
Total		173	10	183

Table 11. Chi-square test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.905 ^a	6	.690
Likelihood Ratio	5.485	6	.483
Linear-by-Linear Association	.025	1	.874
N of Valid Cases	182		

a. 8 cells (57.1%) have expected count less than 5. The minimum expected count is .27.

Out of the total firms that sought assistance in completing the VAT return form, 173 of them incurred extra cost in keeping VAT accounts while the remaining did not. The cost is moderate for 140 firms and high for the remaining 33 firms. Those who did not incur extra cost were those who sought assistance mostly from friends and relatives. Further the authors investigated whether the average cost imposed by VAT record accounts differs across business type. The result as shown in Table 11 indicates that the average cost imposed by VAT monthly return form is moderate for many of the firms but high for only a few. Using the cross tabulation alone it is impossible to tell whether these differences are real or due to chance. Using the chi-square test the authors investigated this. As shown in Table 12, the asymptotic significance values for the Pearson chi-square and likelihood ratio test are both significant at the 5% level. This implies that the differences in cost incurred in keeping VAT monthly return forms across firms are real and not due to chance variation.

Table 12. nature of business and cost imposed by filing monthly returns

		what is the average cost incurred		Total
		high	Moderate	
nature of business	general goods	8	30	38
	building and construction	1	4	5
	secondhand clothes	2	25	27
	Provisions	5	32	37
	Cosmetics	11	13	24
	Automobiles	4	32	36

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	Other	2	4	6
Total		33	140	173
Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	16.623 ^a	6	.011	
Likelihood Ratio	15.068	6	.020	
Linear-by-Linear Association	.176	1	.675	
N of Valid Cases	173			
a. 5 cells (35.7%) have expected count less than 5. The minimum expected count is .95.				

Also, the authors test whether the extra cost imposed by keeping VAT records differs with the level of firms' education, frequency of VAT education received, and the size of the firm. These details are shown in Tables 13-15.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.151 ^a	5	.398
Likelihood Ratio	4.234	5	.516
Linear-by-Linear Association	.041	1	.839
N of Valid Cases	173		
a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .19.			

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.720 ^a	2	.423
Likelihood Ratio	3.032	2	.220
Linear-by-Linear Association	1.306	1	.253
N of Valid Cases	173		
a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .19.			

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.880 ^a	4	.003
Likelihood Ratio	14.412	4	.006
Linear-by-Linear Association	3.624	1	.057
N of Valid Cases	172		
a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .58.			

As shown in Table 13, the asymptotic significance value for all summary statistics are statistically not different from zero which implies that extra cost imposed by VAT returns does not differ with the level of education. Also, Table 14 indicates that the cost imposed by keeping VAT returns does not differ significantly with the size of a firm. Lastly Table 15, however, shows that the cost of keeping VAT records by traders differs significantly with the frequency of VAT education received by traders from VAT officials.

While the chi-square is useful for determining whether there is a relationship, it does not disclose the strength of this relationship. Using directional measures, the authors further investigated the strength of association or relationship that exist between the cost of keeping VAT returns and the frequency of the VAT record keeping education by officials. As shown in Tables 16-17, the approximate significance values are statistically different from zero. Thus, there exists a significant relationship between the cost imposed by keeping VAT returns and the frequency of the VAT record keeping education. The value of each measure is more than 0.15 which signifies a stronger relationship between the frequency of VAT education and the extra cost imposed by keeping VAT returns.

Table 16. Directional Measures of cost of keeping VAT returns and frequency of VAT education

			Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Somers' d	Symmetric	.177	.071	2.394	.017
		how often Dependent	.230	.092	2.394	.017
		what is the average cost incurred Dependent	.144	.059	2.394	.017
a. Not assuming the null hypothesis.						
b. Using the asymptotic standard error assuming the null hypothesis.						

Table 17. Symmetric measures of cost of keeping VAT returns and frequency of VAT education

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.182	.073	2.394	.017
	Kendall's tau-c	.143	.060	2.394	.017
	Gamma	.442	.173	2.394	.017
N of Valid Cases		172			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

The difficulty in completing the monthly return form causes delays in monthly return payments, which sometimes based on the severity of the problem, causes the VAT office to attain a success rate less than the target. In order to recoup these delayed payments, the office of VAT incurs extra cost.

4.5 Impact of record-based controls of VAT on traders' record keeping skills and system

In this section, the authors examine the effect of VAT record keeping requirement on firms' record keeping skills and accounting system. Out of the total 222 firms surveyed, 219 of them had an encounter with VAT officials. Out of this, 174 of them had experienced improvement in their record keeping skills and accounting system; 29 of them had not experienced any improvement in both their record keeping skills and record keeping system; 14 of them had experienced improvement in their record keeping system but not skills, and only 2 of them had experienced some improvements in their record keeping skills but not system.

In sum, a total of 188 firms indicated improvement in their record keeping system while 31 indicated that VAT record keeping requirement has not improved their record keeping system. Similarly, a total of 176 firms indicated improved record keeping skills while 43 of them concluded that VAT record keeping requirement has not improved their record keeping skills. Judging by the law

of large numbers, it can be concluded that the record keeping requirements of VAT has improved firms' record keeping skills and accounting system.

Firms were further asked to indicate the extent to which the VAT record keeping requirement has improved their record keeping skills and accounting system. In all, a total of 36.9 per cent and 37.4 per cent of the sample indicate that the VAT record keeping requirement has had a high effect on their record keeping skills and accounting system, respectively. Also, 38.3 per cent and 42.8 of the sample indicated that the VAT record keeping requirement has had a modest impact on their record keeping skills and accounting system, respectively. The impact of VAT record keeping requirement on firms' record keeping skills and accounting system is, however, small for 17.1 per cent and 14.4 per cent of the sample, respectively and nil for 7.7 and 5.4 per cent of the sample, respectively.

From the above analysis, the authors further tested to find out if the impact of VAT record keeping requirement on firms' record keeping skills and accounting system differs across firms. As shown in Tables 18-19, the impact on firms' record keeping skills and accounting system is high for firms into the sale of general goods, building and construction materials and secondhand clothes but moderate for firms into the sale of provisions, cosmetics, automobiles, jewelry, etc. Using the chi-square test the authors further tested to find out if the differences observed are due to chance variation or real. Result of the chi-square tests shows that the observed differences are real but not due to chance. In other words, there exists a significant difference in the impact that VAT record keeping requirement has on firms' record keeping skills and accounting system across business units.

		impact of VAT on record keeping skills				Total
		high	Moderate	low	no impact	
nature of business	general goods	29	7	8	0	44
	building and construction	7	0	4	0	11
	secondhand clothes	27	4	5	0	36
	provisions	7	25	4	14	50
	cosmetics	7	19	0	1	27
	automobiles	4	26	16	0	46
	other	1	4	1	2	8
Total		82	85	38	17	222

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.351E2 ^a	18	.000
Likelihood Ratio	144.300	18	.000
Linear-by-Linear Association	22.609	1	.000
N of Valid Cases	222		

		impacted of VAT on firms' record keeping system				Total
		high	Moderate	low	no impact	
nature of business	general goods	29	8	7	0	44
	building and construction	7	0	4	0	11
	secondhand clothes	29	5	2	0	36
	provisions	8	30	2	10	50
	cosmetics	6	20	0	1	27
	automobiles	3	26	17	0	46

	other	1	6	0	1	8
Total		83	95	32	12	222
Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	1.407E2 ^a	18	.000			
Likelihood Ratio	149.781	18	.000			
Linear-by-Linear Association	26.727	1	.000			
N of Valid Cases	222					
a. 14 cells (50.0%) have expected count less than 5. The minimum expected count is .43.						

Also, the authors tested to find out if there is a relationship between the frequency of visits by VAT officials and the impact that the record-based control of VAT has on firms' record keeping skills and accounting system. Evidence as shown in Tables 20-21 indicates that there exist a significant relationship between the frequency of VAT education received, and the impact that such education has on firms' record keeping skills at the 5% significance level. This relationship is stronger as the values of the various measures exceed 0.15.

Table 20. Directional Measures of frequency of VAT education and the impact on firms record keeping skills

			Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Somers' d	Symmetric	.180	.076	2.301	.021
		has this education improved your record keeping skills Dependent	.143	.061	2.301	.021
		how often Dependent	.244	.103	2.301	.021
a. Not assuming the null hypothesis.						
b. Using the asymptotic standard error assuming the null hypothesis.						

Similarly, there is evidence in support of a significant relationship between frequency of education received and the impact that such education has on firms' record keeping system (see Tables 22 to 23). The relationship as described by the Kendall's tau-b and Kendall's tau-c is weak but strong per the value given by the Gamma statistic. Seen as a check and balance tool, the VAT record books ensures sanity in record keeping, minimizes error and speeds up the process of record keeping.

Table 21. Symmetric measures of frequency of VAT education and the impact on firms record keeping skills

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.187	.079	2.301	.021
	Kendall's tau-c	.154	.067	2.301	.021
	Gamma	.361	.147	2.301	.021
N of Valid Cases		219			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

			Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Somers' d	Symmetric	.135	.069	1.905	.057
		has this education improved your record keeping system Dependent	.098	.051	1.905	.057
		how often Dependent	.218	.110	1.905	.057
a. Not assuming the null hypothesis.						
b. Using the asymptotic standard error assuming the null hypothesis.						

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.146	.074	1.905	.057
	Kendall's tau-c	.106	.056	1.905	.057
	Gamma	.344	.166	1.905	.057
N of Valid Cases		219			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

5. Conclusion and Policy Recommendations

The primarily objective of this paper was to determine the effect that the record-based controls of VAT has on SMEs record keeping skills and accounting system. Keeping of VAT records is found to expose more traders to risk of incurring extra cost. This cost is found to differ significantly with the type of business and frequency of VAT education, but does not differ significantly with the level of education of traders and size of firm. Specifically completing the monthly return form exposes more traders to the risk of incurring additional cost than the filling of the VAT invoice book. Firms, who receive education from VAT officials, are found to be 0.102 more likely to complete the VAT monthly return form than firms who do not receive education from VAT officials. Also, the authors found that firms who receive education from VAT officials are 0.849 times as likely as those firms who had not received education from VAT officials to complete the VAT invoice book by self. The study also found a significant relationship between the frequency of VAT education and the filling of the VAT returns form. However, the authors did not find a significant relationship between the frequency of VAT education and the filling of the VAT invoice book by self. Generally, there is evidence in support of the fact that the VAT record keeping requirement has significantly improved firms' record keeping skills and accounting system even though it is found to be stringent relative to other record keeping requirements kept by firms.

The ancient cry of low tax revenues in the economy is a reflection of both tax noncompliance and inefficiencies within the tax system. Difficulty in completing monthly returns have either increased cost in businesses or caused delays in monthly payments often time. Also, the low coverage of VAT makes the current VAT registered traders less competitive as their unregistered competitors continue to attract buyers to their end due to price advantage. All these impose an enormous cost on the economy since there is twin revenue slack in tax incomes.

Education of traders on the completion of the monthly return form by VAT officials should be intensified. The lag in education experienced is the thrust for the high cost imposed by VAT on traders. The VAT office should consider renewing their efforts on educating traders on the need to keep business records and how to keep them. Frequent visits by VAT officials and regular organised seminars and workshops by stakeholders on the need to and how to keep records will prove

tremendously valuable. The VAT office should beef up their current coverage to ensure equity in the system. This will require that more new personnel be enrolled onboard. As currently done in the agricultural and educational sectors, the government can make it a national policy where a significant number of national service personnel are recruited every year in all districts to assist in achieving 100 per cent coverage.

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