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THE EFFECT OF THE VALUE ADDED TAX ACT AMENDMENT 2013 ON TAX REVENUE IN KENYA

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Abstract

Kenya has been faced with the need to generate more tax revenue to support its expenditure on public services for both the national and county governments. With the ever-increasing budget deficit and increased borrowing to support itself, the cabinet secretary for treasury came up with drastic measures to increase VAT revenue in 2013. The objective of this study was to examine the effect of the VAT Act amendment 2013 on tax revenue in Kenya. The study used secondary data from the Kenya National Bureau of Statistics for the financial year 2006/7 to 2015/16 which provided sufficient dataset for the event study model of analysis used.

The analysis result indicated that VAT revenue and total tax revenue exhibited a continuous growth in the study period. This study found that the amendment of the VAT Act in 2013 led to a general increase in VAT revenue. This was depicted by the sudden increase in domestic VAT revenue after amendment. The revenue growth was highest in the post-amendment period than before the amendment. The growth was more pronounced in the domestic VAT revenue than the import VAT revenue suggesting that consumption was more on the local products than the imports.

The government could therefore ride on these findings to tighten any loopholes in the collection of VAT revenue from businesses in Kenya, concentrating more especially on the domestic products which brought in more VAT revenue than the imports.

Introduction

The main source of revenue for the government of Kenya is taxation. Marina and Kilis (2002) argued that taxation is the only known concrete means for collecting resources in order to fund public goods and services consumed by any populace. It should however be noted that for developing countries, other sources of revenue include user fees and licenses charged by various government ministries on services rendered, sale of government assets and privatization of various companies and institutions, and foreign aid.

Kenya faces the need to create more bases for tax revenue to maintain its services to the public more so with the creation of the 47 County Governments (Kenya Constitution 2010). The new constitution (2010) entrenched a two tier system of government with the national government retaining the powers to impose both direct and indirect taxes, while the county governments impose property, entertainment and other taxes like tax on agricultural products which are allowed under their jurisdiction. The country is also burdened by huge budget deficits, unfavorable balance of trade and the ever increasing foreign debt. The budget deficit in 2012/2013 and 2013/2014 fiscal years was 25% and 68% respectively according to Economic Surveys published by the KNBS. These conditions make it mandatory for the Finance Cabinet Secretary to think of ways to raise revenue to support the needs without overburdening the tax payers every fiscal year.

The Value Added Tax is an indirect tax which is levied on consumer expenditure (KRA, 2015). This tax is paid for by the final customer of the goods or services. It is imposed on the consumption of taxable goods and services supplied in the country or those that are imported. Prior to the introduction of VAT in Kenya in 1990, there existed the Sales Tax, which had been in operation since 1973. The introduction of VAT was to generate more revenue through the expansion of the tax base, which was confined to sale of goods and services at manufacturing and importation level under the sales tax system (KRA, 2015).

The objectives of a tax system include raising revenue for the government, redistributing wealth and to encourage or discourage certain activities mainly by use of various provisions in the tax law. Kenya, like most developing countries, faces problems with its tax systems which include rates and structures which are

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challenging to manage, systems that are unresponsive to progress, systems that raise little revenue while introducing economic distortions, systems that treat tax payers differently in spite of being in similar circumstances and that are selective with regards to management and implementation, skewed to favor those that are able to cheat the system (KIPPRA, 2004).

The VAT Amendments 2013

VAT exemptions and zero rating makes the system more complicated and leads to loss of revenue due to low compliance. Prior to the 2013 VAT Act amendment, a total of 395 goods and 22 groups of services were tax exempt. Similarly 416 supplies of both goods and services were permitted as zero rated. The VAT rates in existence were 0%, 12% and 16%. The amendment(2013) permitted exemption to 39 and 18 groups of goods and services respectively, while the zero rated supplies of both goods and services were reduced to 8. It also spelt out 9 categories of supplies to public bodies and privileged persons and institutions to be zero rated, as defined in the VAT Act, 2013, under Part B of the Second Schedule.

Research Problem

In Kenya, taxation remains the main source of revenue to the government, both national and county (KRA, 2015). Government operations rely on tax revenue in order that they may function well. The National Treasury is taxed with the responsibility of sourcing for the funds through the presentation of the Finance Bill every fiscal year to the parliament for debate and adoption. This also includes allocations to the various departments for public expenditure.

VAT is the second largest tax revenue contributor to the Kenyan Government (Treasury, 2015). It is also pegged to consumption of goods and services in the economy, and all the citizenry are expected to contribute to this tax revenue through the purchase of goods and services which attract VAT. It would be beneficial to the government to alter some of the categories of goods and services to bring them under the VAT bracket in order that more tax revenue is gained.

An empirical investigation on VAT and consumption expenditure behavior of households in Nigeria was done by Obiakor et al (2015). They considered VAT revenue, household consumption expenditure on durable and non-durable goods as well as consumer price index for the period 1994 – 2014. Their conclusion was that while VAT and one-period lagged consumption expenditure on durable goods significantly shaped households' consumption expenditure on durable goods; one-period legged VAT insignificantly reduced the consumption expenditure. Their recommendation was that the VAT rate of 5% in operation should be retained because of the significant effects on household consumption expenditure on durable and non-durable goods. Increase in the VAT rate would negatively affect the households and increase the consumer price index to undesired levels.
The above discussions have indicated on the importance of tax revenue to the government and the various measures put into the system to improve tax collection. Despite these measures, budget deficits continue to be witnessed, more so the need to fund expanded government operations (both Central and County government systems) courtesy of the new constitution (2010). The cabinet secretary in charge of Finance came up with drastic measures during the 2013 finance bill presentation in parliament.

The bill which was later on passed into law (2013) aimed at reforming VAT by slashing the exemption to 39 from 395 and 18 from 22 groups of goods and services respectively, while the zero rated supplies of both goods and services were reduced to 8 from 416. This was aimed at simplifying the VAT collection system and increasing revenue. Little is known about the success of this measure on revenue mobilization in the country. This study attempts to fill this knowledge gap. This study will be guided by the question; has the VAT amendment (2013), which brought in most categories of goods and services under the VAT bracket, led to an increase in tax revenue?

Objective of the Study

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The main objective was to assess the effect of the VAT Act amendment (2013) on tax revenue in Kenya with the specific objective being to establish the effect of the amendment on the total VAT revenue collected in Kenya, and thus the impact of this on the total revenue collected.

Methodology

Research Design

The study adopted an event study methodology to investigate whether the 2013 VAT Act Amendment had any effect on the tax revenue collected in Kenya.

An event study is an analysis of the effect of an unanticipated event on the expected outcome in an industry, sector or the overall market. This method has been used in many fields to measure the effects of an economic event in various sectors of the economy (MacKinlay,1997). The study examines the effect of an event on the normal trend of returns, in this case VAT revenue. The estimation window comprised of six years' VAT revenue collections used to estimate the trend prior to the VAT Act Amendment period. The trend model is important in determining the consumers' reaction towards the amendment. It measures the deviation of VAT in the post amendment period as compared to the expected normal VAT revenue collections.

Data Collection Methods and Sources

The quantitative secondary data relating to VAT collections and total tax revenue was collected from statistical abstracts, KRA Publications and economic survey publications by the Kenya National Bureau of Statistics. The study used year 2006 to 2016 data since the amendment to the VAT Act was done in the year 2013, therefore the effects of this on VAT and tax revenue would start taking effect as from 2013 onwards.

Data Analysis

Descriptive data analysis was used to study the performance of VAT across the study period. The results were presented on tables and graphs. The effect of the VAT Act Amendment 2013 was then determined using the event analysis by determining pre and post amendment VAT revenue collections where the deviation was examined. The deviation can either be positive, neutral or negative.

Model Specification

The study was aimed at bringing out any major change in the tax revenue affected by the amendment done to the VAT Act of 2013 which roped in most of the consumable goods and services under the tax bracket. The pre and post amendment VAT revenue collections were compared against the expected and actual collections to compute abnormal collections, which represents the effect of the VAT Act amendment 2013 on tax revenue in Kenya. The growth in post amendment trend represented by positive abnormal collections indicates positive effect, a negative indicates negative effect, while if there is no growth, it means no effect. The study period comprised of 6 years pre-amendment and 2 year post-amendment setup. The average growth in VAT revenue collections would be determined and projected over the post-amendment period. The effect was then examined by observing any abnormal changes in VAT revenue following the amendment. The effect of the amendment was derived by subtracting the trended model for the 2 year post amendment period. The study adopted a constant growth VAT model. The timeline for the event study was as shown below.

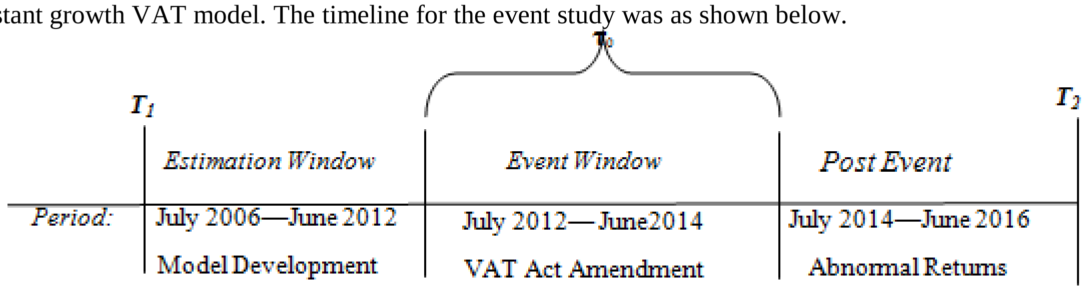

Diagram 1: Time line for the event study

The event period (2 years from 2012 to 2014) is represented as $\tau 0$ and the estimation window is represented by the distance between T1 and $\tau 0$. SPSS software was used to determine the trends of the estimation window. The estimation generated the following model used to compute normal collections;
$Yt=\alpha+\beta*t+\varepsilon$…………………………………..Equation 1

Where Yt represents the normal VAT collection in time t, α is the intercept at the beginning of the model while β is the slope which measures the growth of VAT collection over time. ε measures the white noise caused by seasonal variability in VAT revenue collections.

Results and conclusion

Descriptive Statistics of VAT Revenue

The tables (a) and (b) below reveal that domestic VAT dominated the total tax collection within the 10 annual periods from June 2006 to June 2016, yielding better returns than both VAT on oil and VAT on other imports if comparison of means is taken into account.

Table (a) Analysis of Means

	Mean	N	Std. Deviation
VAT on oil imports	7282.9080	10	2798.10815
VAT on other imports	81042.1930	10	30943.97595
Domestic VAT	96637.3870	10	47792.49273
Total VAT	184962.4870	10	77137.10979

Table (b) Analysis of Correlation

		VAT on oil imports	VAT on other imports	Domestic VAT	Total VAT
VAT on oil imports	Pearson Correlation	1	.846**	.878**	.920**
	Sig. (2-tailed)		.002	.001	.000
VAT on other imports	Pearson Correlation	.846**	1	.784**	.918**
	Sig. (2-tailed)	.002		.007	.000
Domestic VAT	Pearson Correlation	.878**	.784**	1	.966**
	Sig. (2-tailed)	.001	.007		.000
Total VAT	Pearson Correlation	.920**	.918**	.966**	1
	Sig. (2-tailed)	.000	.000	.000	
**. Correlation is significant at the 0.01 level (2-tailed).					

The inference is further supported by table (b) in which a relatively higher correlation is observed between total VAT and domestic VAT. Looking at individual components, the Pearson correlation statistics reveal that the modes of VAT revenue exhibit a strong positive correlation with domestic VAT and VAT on oil imports highly correlated at 87.8%, and VAT on other imports being highly correlated with VAT on oil imports at 84.6%.

However, the correlation between VAT on other imports and domestic VAT is slightly lower at a 78.4% correlation. This may be attributed to the fact that some imported products compete with those of similar model in the local market, and the resultant antagonistic effect reduces the margins collected in both tax domains; ideally increased importation should serve to enhance volume of trade and inadvertently increase the domestic VAT collected.

Increased volume of trade should directly impact on total VAT collections, and a high correlation is exhibited in this relationship at 98.8% as indicated in table (c) below;

Table (c) Revenue collection correlation with VAT

	Total VAT	Tax Revenue

Total VAT	Pearson Correlation	1	.988**
	Sig. (2-tailed)		.000
Tax Revenue	Pearson Correlation	.988**	1
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Results of the Event Study

The total VAT revenue (being a composite of VAT on oil imports, VAT on other imports, and domestic VAT) is the endogenous construct whose variation the event study primarily focused on. Through analysis of both the pre-amendment and post-amendment periods as concerns the VAT Act 2013, changes in the total VAT accrued were then established. In this case, the exogenous variable was taken to be the Tax Revenue. Using the model developed, a time series plot was derived. A trend line was superimposed on the plot to help estimate the projected VAT revenue. The trend line was then used to extrapolate future outcomes as far as total VAT revenue is concerned.

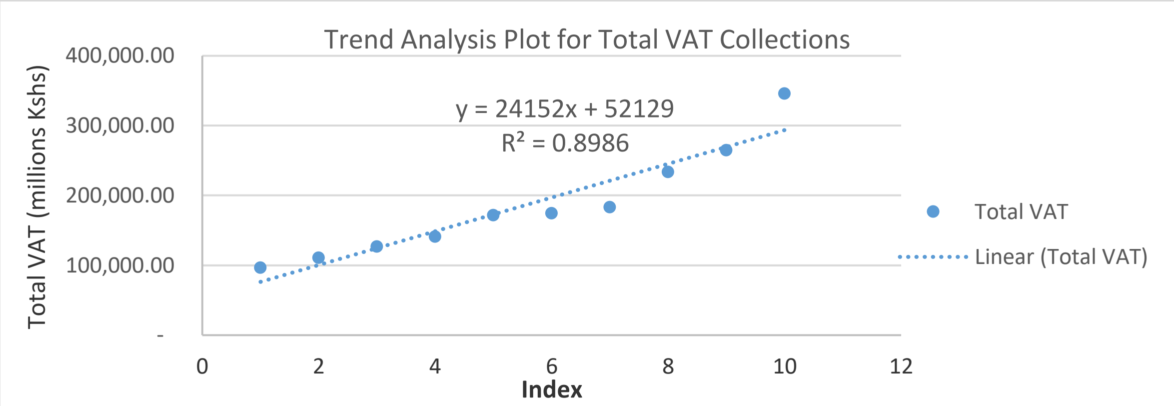

Figure (a) The Trend of Total VAT collections over Time

However, the model above does not account for the residuals, ε (also referred to as white noise) that indicates variation of Actual Total VAT data points from the predicted fit. These residuals constitute the Abnormal VAT collections but can be determined through regression so that the original model stated is adhered to, that is,
$Yt=\alpha+\beta*t+\varepsilon$

Where Yt represents the normal VAT collection in time t, α is the intercept at the beginning of the model while β is the slope which measures the growth of VAT revenue over time. ε measures the white noise caused by seasonal variability in VAT revenue.

Regression analysis yields the parameters below:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-48396023.215	5769045.084		-8.389	.000
	Financial Year	24151.621	2868.028	.948	8.421	.000

[a]. Dependent Variable: Total VAT

Thus, the equation yielded that would be used to determine the analysis points of reference is
$y = 24152x + 52129R^2 = 0.8986$

This produces the analysis points of reference as indicated in table (d) below:

Table (d) Variations in Total VAT Revenue (Kshs millions)

Annual Period	*Actual Total VAT*	*Normal Total VAT (Yt=24151.621*t-48396023.215)*	*Residuals*
June 2007	96573.27383	76280.19359	20293.08024
June 2008	111008.2859	100431.8142	10576.47167
June 2009	126877.7121	124583.4348	2294.277295
June 2010	141040.9456	148735.0555	-7694.109853
June 2011	171679.0628	172886.6761	-1207.613257
June 2012	174787.5527	197038.2967	-22250.74401
June 2013	183218.5096	221189.9173	-37971.40775
June 2014	233557.5269	245341.5379	-11784.01102
June 2015	264871.6687	269493.1585	-4621.489845
June 2016	346010.3257	293644.7792	52365.54653

Table (d) above indicates the predicted normal Total VAT along with the actual Total VAT revenue. The results indicate that the revenue exceeded the projected values up until the close of the June 2010 financial year where the performance of the Total VAT revenue fell below the projected targets. Projected values kept exceeding the actual revenue up until the end of the June 2015 financial year. Though it may appear that there is a negative trend in meeting revenue targets, it is actually positive after the event window in 2013 as the variation in projected revenue increases from -37971.40775 in June 2013 to -4621.489845 in June 2015. This positive trend of growth in tax revenue came after the amendment of the VAT Act; it is clearly evident that there were shortfalls in the VAT collected from June 2010 to June 2013 (reduced from -7694.109853 to -37971.40775) showing that the positive growth spurt begun at the close June 2013.

Looking at the period after the amendment of the VAT Act, the regression analysis using the equation for the period yields the results for projected Total VAT collections as follows:

Table (e) Projected Total VAT Revenue after VAT Act Amendment

Financial Year	*Actual Post 2014*	*Predicted Post 2014 (Yt= 56226.3994*t-113014714.9)*	*Residuals*
Jun-14	233557.5269	225253.441	8304.085866
Jun-15	264871.6687	281479.8404	-16608.17173
Jun-16	346010.3257	337706.2398	8304.085866

The regression equation employed in this case is:
$Yt= - 113014714.9 + 56226.3994*t + \varepsilon$

Despite the positive growth spurt being evident in the whole dataset model after the event window, it appears that there is a shortfall in revenue at the end of the financial year June 2015. This can be attributed to the extended open period that the taxpayers were granted to comply in filing both individual tax returns as well as those for small businesses through the i-tax platform.

The long term growth in VAT revenue was further investigated by analyzing the residuals of the regression model over the whole study period. The plot derived is as in figure (b) below:

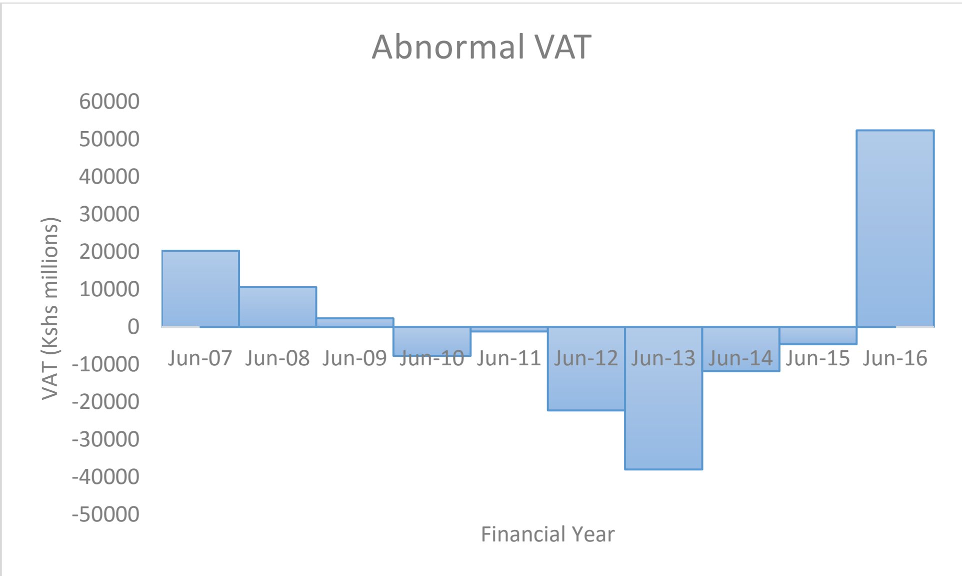

Figure 4.3(b) Abnormal VAT Collections

It can be observed that prior to the event window there had been a downward trend in the Total VAT collected annually. However, during the event period in June 2013 an upward growth in Total VAT collected was observed through to the end of the study period where there was a marked positive increase. This comes out more clearly if a histogram is superimposed on the chart above (figure (b)). The histogram is represented in figure (c) below:

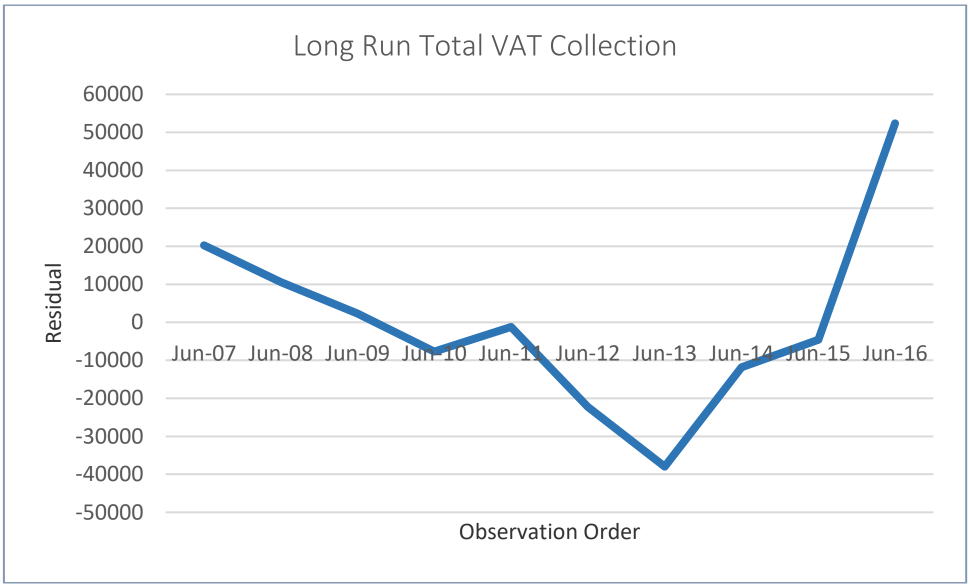

Figure (c) Long term trend in VAT collection

It is evident that after the event window in 2013 the negative trend in collections stopped, and a positive growth begun and continued on through to the end of the study period. Despite a reduced positive growth between June 2014 and June 2015, there was a sharp positive growth in the collection of VAT (especially after June 2015). The period after June 2015 coincides with increased compliance by tax payers in order to avoid imposition of fines for late remittances of tax; this also explains the increase of great magnitude in domestic VAT collection for the period June 2015 to June 2016.

Summary of research findings

The cabinet secretary in charge of treasury recommended drastic changes in the VAT Act in his finance bill of 2013 which were enacted into law. This study examined the effect of these changes on the VAT revenue. The study focused on the period after the VAT Act amendment and the subsequent years respectively. The findings indicated that VAT revenue consistently increased over the study period, with the domestic VAT element being the highest for the period under review. The increase in domestic VAT revenue is consistent with the increased number of goods and services which were brought into the VAT bracket by the VAT Act of 2013. The results indicated that the actual VAT revenue exceeded the normal (expected) VAT after the VAT Act amendment.

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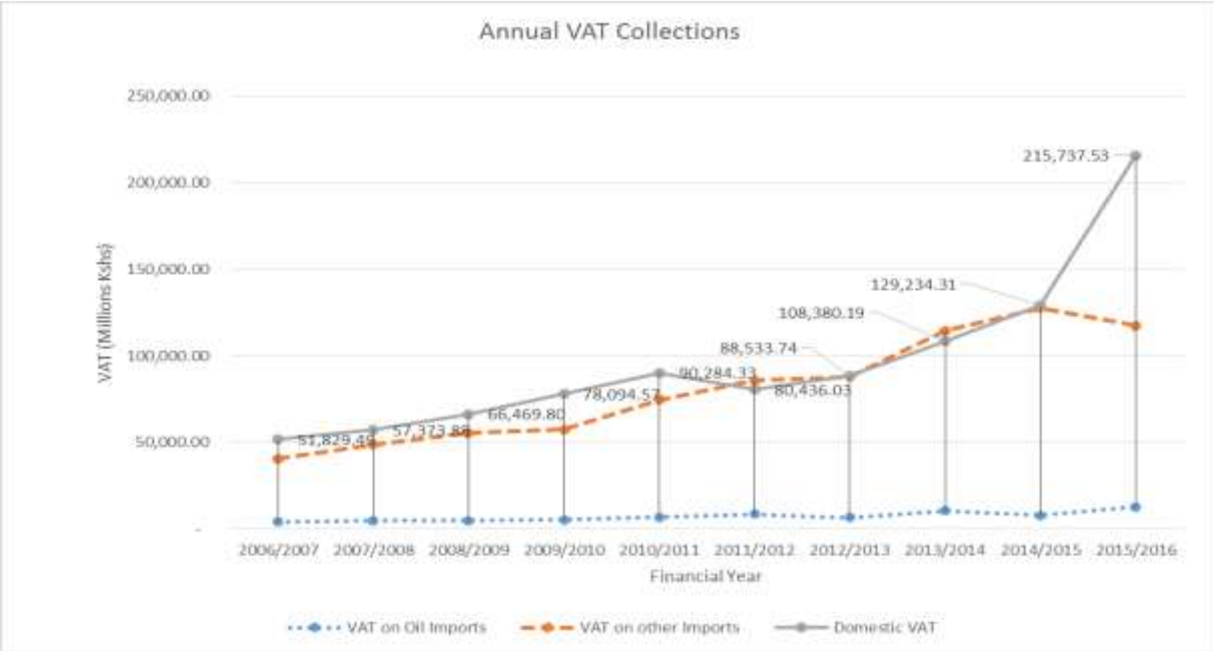

Figure (d) Trends for the Various Tax Domains

Conclusion

This study found that the amendment of the VAT Act in 2013 led to a general increase in VAT revenue. This was depicted by the sudden increase in domestic VAT revenue after amendment. The revenue growth was highest in the post-amendment period than before the amendment. The growth is more pronounced in the domestic VAT revenue than the import VAT revenue suggesting that consumption was more on the local products than the imports.

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