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INFLUENCE OF VALUE ADDED TAX (VAT) ON CONSUMERS' SPENDING PATTERN IN SOUTH EAST NIGERIA

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Abstract

This study examined the influence of Value Added Tax on consumers' spending pattern in South East - Nigeria. This study considered whether consumers in the South- East of Nigeria alter their spending pattern as a result of VAT. Secondary data were used; the data for VAT were collected from Federal Inland Revenue Service (FIRS), and data used for expenditure were extracted from National Bureau of Statistics (NBS). The study estimated the models numerically using time series data for the period of 2011-2017. Ordinary Least Squares (OLS) technique was employed to test the formulated hypotheses. Results showed that VAT significantly influenced consumers' spending on alcoholic drinks and non-alcoholic drinks. Consequently, the study recommends that government should, from time to time, intervene in the activities of producers and dealers of alcoholic and non-alcoholic drinks in the South Eastern Nigeria as to ensure that the best of the products are available in the market because value added tax is not actually the only variables affecting the spending of the consumers of these products. Finally, the current 5% VAT rate should be maintained, since any increase would most likely affect the households negatively as it would escalate consumer prices to undesired levels.

Keywords: VAT, consumer spending pattern, alcoholic drink, non-alcoholic drink, South East Nigeria.

Background of the Study

Value added tax (VAT) is a consumption tax levied at each stage of the consumption chain and borne by the final consumer of the product or service. The collection of VAT is comparatively simple, indiscriminating and hard to avoid. World over, major attention is on (VAT) with regards to reforms and reorganization. Perhaps, this has been owing to its sizeable contributions to government revenue, growth and development of many economies (Owolabi & Okwu, 2011). As a veritable source of government revenue, many countries have shifted and a few others are considering a shift towards a higher indirect taxation. For the fact that Value Added Tax rises spending on consumer goods, it is anticipated to affect the behaviour of the consumers. This implies that VAT changes price and consumption behaviour of the consumer. Consequently, cost effects of Value Added Tax and the resultant consumer behavioural pattern are issues of concern to different nations of the world and their Value Added Tax law.

Countries all over the world look for ways to boost their revenue, and this has necessitated the introduction of value added tax on goods and services in many nations of the world. For instance, in Africa, VAT has been introduced in Benin Republic, Cote d'Ivore, Guinea, Kenya, Madagascar, Mauritius, Senegal, Togo, and Nigeria. Available data supports that, in these nations, Value Added Tax has turn out to be the main provider of government income (Ajakaiye, 2000; Shalizi & Square, 1988; Adereti, Adesina, & Sanni, 2011). Nigeria introduced VAT in

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1993; however its full implementation began on 1st January, 1994 (Umeora, 2013). Before its introduction, there was in existence, the Sales Tax. The underlying principle for replacing Sales Tax with Value Added Tax was as a result of some factors and considerations; noteworthy amongst these are the narrow nature of the Sales Tax in Nigeria as covered by Decree No. 7 of 1986. It covered only nine categories of goods as well as sales and services in registered hotels, motels and similar establishments.

VAT was designed such that the burden is borne by the final consumer. Since VAT can be applied on goods as well as services it has also been termed as goods and services tax (GST). A limited number of goods and services are exempted from Value Added Tax. Some of the goods excluded from Value Added Tax are drugs, pharmaceutical, essential foodstuff, books, learning materials, journals etc. The exempted services include medical services, services provided by micro finance banks and mortgage institutions, plays and performances conducted by educational institution as part of learning, as well as the supply of educational goods and services incidental to education by an educational institutions (Source: VAT Decree as Amended (2007)).

Value Added Tax is an expenditure tax that is fairly simple to control and hard to avoid, and it has been accepted by many nations worldwide (FIRS, 1993). There is evidence so far that Value Added Tax is an important source of income to the Nigerian government. For example, in the past 19 years, states and the Federal Government spending power has been boosted by over ₦4.273trillion Value Added Tax (VAT) revenues, Business Day resea rch has shown (The Economist Ng, 2012).

Value Added tax has wide scope since the cause of disagreeable variation can be effectively controlled under effective supervision (Leach, 2003) as sited in Onaolapo, Aworem and Ajala (2013). Income gotten from VAT can help to enhance the economic base of any country. This, nevertheless, has to do with the exploitation of the potentials and adoption of the kind of expenditure tax that will identify the tax payers as value minimizing persons and as such protect their evasion behavioural pattern. The main factor to consider before choosing Valued Added Tax choice among tax type are; review of managerial possibility of each alternative and other income sources, its comparative income possibilities, its level of deliberate conformity, its relative neutral stance, its fairness and the effectiveness of these criteria, one can effortlessly spot the main reasons behind countries replacing (RST) with VAT (Onaolapo et al, 2013).

VAT revenue is generated for distribution to the states and local governments in Nigeria. This helps to reduce over dependence on oil revenue; this assures a sustainable economic growth and development. Despite the fact that the effectiveness of Value Added Tax as a means of income is impressive, yet it's not easy to try to methodically appraise the influence of Value Added Tax on customer's expenditure therefore, the need for this study.

Statement of the Problem

VAT, as a tax imposed on goods and services has the tendency of increasing the prices of such goods and services. It is a form of indirect tax imposed on the consumption of some goods and services with the intention of raising the revenue profile of the nation. Essentially, VAT is a consumption tax which reduces the real income of consumers. For low income households, it may particularly have adverse consequences on their ability to purchase essential goods and services. In most jurisdictions, VAT is imposed only on some selected goods and services, exempting basic goods and services. This is also the case in Nigeria where goods like basic food items, educational materials, pharmaceuticals products and postal services, among other goods and services, are exempted. *Vat able* goods and services have, often times, generated some controversies in Nigeria. Proponents of VAT have supported it on the ground that it enhances the revenue generation of government. Opponents, however, argue that the nature of VAT, which is essentially proportionate, increases the prices of goods and exerts the greatest incidence on the poor which may affect the consumers' spending on such goods. Naiyeju (2009) on the other hand argues that the incidence of VAT, like other indirect taxes is regressive and, therefore, not a fair tax since it is assessed on all *vat able* goods and services by 5% which is different from income tax that is progressive towards income. In the light of the above arguments, there is the need to ascertain the influence of VAT on consumers' spending on some selected goods in South East, Nigeria.

Objectives of the Study

The main objective of the study was to examine the influence of VAT on consumer spending pattern in South East Nigeria, while specific objectives of the study are to:

1. Determine the influence of VAT on consumers' spending on alcoholic drinks in South- East, Nigeria.
2. Determine the effect of VAT on consumers' spending on non-alcoholic drinks in South- East, Nigeria.

Research Hypotheses

To guide the research, the researcher formulated the following null hypotheses:

1. Ho_1: Value added tax does not have significant influence on consumer spending on alcoholic drinks in South East Nigeria.
2. Ho_2: Value added tax does not have significant influence on consumer spending on non-alcoholic drinks in South -East Nigeria.

Review of Related Literature

Conceptual Framework

Tax is a compulsory payment made by all concerned to the government of a country from which essential services are rendered, without necessarily offering an explanation on how the money generated was spent or equating the services with the money collected. According to Anyanwu (1997) tax is a mandatory charge by the government on her citizens, corporate organizations, produce and service to raise income for its activities and to encourage social justice through redistribution of revenue consequence of taxes. While Odoh (2010) conceptualises taxation as a compulsory levy imposed by government, Okoye and Gbegi (2013) explain that it must be for the common good and benefit of the citizens.

In today's global market, all companies and individuals are required to pay taxes. The main reason behind government impose taxes is to stabilise the country in with regards to redistribution of resources and revenue between the wealthy and the underprivileged members of the society. Currently, there is a worldwide transfer in model, where the focal point is changing from direct taxation to indirect taxation policy development. These circumstances resulted to the implementation of the Value Added Tax as alternative sources of income to the government. Value Added Tax was indisputably the most unexpected advance of the twenty first century with regard to tax guiding principle. No other taxes, not even the income tax or the sales tax, have made such quick and repaid impact to the extent that VAT now exists in over 150 countries around the world, including Nigeria and other African countries. This is so because VAT is considered an important source of government revenue and evidence has shown that it is not only the least distorting tax, but also easily administered in most countries. Every country now makes use of VAT and each year sees a new continent adopting it.

Caenegra de Jantscher (1986), commenting on the importance of VAT, said that it assumed added impetus during the 1970s and 1980s when many developing and transitional countries enacted VAT as part of their Fiscal Structures. During this period, he added, VAT system formed a major innovation in these countries tax systems. This was buttressed by Bird (2005) that few fiscal issues were more important in developing and transitional countries (DTC) than the value added tax. According to him, "Over the last few decades, VAT has swept the world". The main reason for the rapid worldwide adoption of VAT has been attributed to its early adoption by the

European Union (E.U), following its introduction by France in 1954. The other reason is the key role of the International Monetary Fund (IMF) in propagating the message of VAT to developing nations. In his words: "The consistent support and advocacy of this form of taxation by the International Monetary Fund (IMF) and others in a variety of countries, first in Latin America and then around the world, encouraged and facilitated the adoption of VAT by countries with much less developed economic and administrative structures than those in the original E.U member states".

The rationale behind the adoption of VAT in Nigeria can be summarized as the need to achieve the following objectives:

1. Simplification of indirect tax system
2. Enhancement of tax neutrally in international trade
3. Reduction in tax evasion
4. Expansion of tax base promotion and investment.

The points above were further stressed by Gendron (2005) due to the fact that he argued that expenditure tax, such as Value Added Tax, is increasingly being favoured as a tax base over revenue and related things. Nairayan (2003) supports the introduction of VAT in Nigeria as an instrument for balance of payments engineering, by encouraging exports through zero-rating of exporting goods.

When it became obvious that oil revenue alone con not sustain the Nigerian economy, the necessity to diversify the Nigerian economy became imperative. In 1991, two study groups were established; one on directs taxes and the second on indirect taxes. The objectives of the study were to: reduce over dependence on oil revenue, improve the administration of indirect taxes, shift taxation towards consumption (indirect) rather than saving (direct), and provide incentives for export. The introduction of VAT automatically replaced the sales tax that was introduced in 1981 through Decree No 7.

The implementation of (VAT) [a tax on spending] started in January 1994 and replaced the former sales tax imposed on luxury goods in Nigeria. It is basically a consumption tax levied at a flat rate of 5%. Simply called the goods and services tax (GST), it is levied on the value added that results from each exchange. It is an indirect tax collected from someone other than the person who actually bears the cost of the tax or the tax burden. VAT has been introduced in most countries of the world on record. The first country that introduced or imposed VAT, as it is known presently is France on April 10, 1954. Most countries of the then European Economic Community (EEC) had value added tax as a means of ensuring uniformity of trading, since goods and services moved relatively freely among these countries. Owing to the close economic relationship between France and its former colonies, VAT was introduced almost immediately in most Franco phone African countries, beginning with Cote Divoire in 1957, and within ten years of its administration, VAT, in one form or the other, became operational in most French speaking African countries (Denis, 2010).

The first 'developing' country to implement VAT was Brazil, in 1967, when the government abolished the multiple sales tax system in order to ensure financial and economic co-ordination among 26 states in the country; this was followed by both India and China in 1990, and Nigeria on 1st January 1994 though it was introduced 1st September, 1993 (Blumkin, Ruffle & Ganun, 2008).

Today, VAT is used as an important instrument of fiscal and economic policies in all countries of the world. In Europe, Austria, Belgium, Denmark, Germany, Finland, France, Greece, Ireland, Italy, Luxemburg, Norway, Portugal, Spain, Sweden, Turkey, and United Kingdom operated value added tax. In Latin America, Argentina, Bolivia, Brazil, Columbia, Costa Rica, Ecuador, Guatemala, Mexico, Honduras, Panama, Peru, Uruguay, Dominican Republic, and Haiti operates the VAT system. In Asia, China, India, Indonesia, Korea, Taiwan, Pakistan, Philippines, Japan and Thailand operate the VAT system. In the Middle East, Israel use the VAT system. In Africa also, Benin

Republic, Botswana, Burkina Faso, Guiea Bissau, Kenya, Lesotho, Madagascar, Mali, Mauritania, Morocco, Niger, Senegal, South Africa, Swaziland, Togo and Nigeria all operates the VAT system. It is collected on behalf of the government by businesses and organizations. Its implementation is such that a tax of 5% is added when goods pass from one hand to the other. Certain items are exempted from VAT and these include: basic food items such as (rice, beans, garri, maize, yams, fish, etc), Baby products such as clothing accessories, cosmetics, agricultural equipment, fertilizer and farm transportation equipment, all diplomatic goods on the Federal Government's duty free concession; House rent; medical and health care services, International air transport, religious services, services by Microfinance Bank formerly known as (Community Bank/People's Bank) and mortgage institutions, postal services, and plays and performances conducted by educational institutions as part of their curriculum. Potential Value Added Tax payers, manufacturing firms, wholesale companies, importer and distributors of chargeable product and service is mandated by decree No 102 of 1993 to be registered with the Federal Inland Revenue Service which centrally administered Value Added Tax in the state. In we have 17classes of products and 24 types of services that are Vatable (Basila, 2010).

The goods and services exempted by the decree are purely those that border on people's welfare and which are necessary for human development. These include medical and pharmaceutical products, basic food items, educational materials, agricultural services and equipment, etc (FIRS). Nigeria adopted 5% VAT charges on all *vatable* goods and services, both domestic and imported. It was increased to 10% on May 23, 2007, but Nigerians resisted this hike and the Nigeria Labour congress (NLC) embarked on five days strike which eventually jeopardized the economy. This compelled the Federal government to reverse to the old rate. Nigeria also imposed a zero rate on export commodities with a view to encouraging export and achieving a favourable balance of trade. For now in Nigeria, the income from VAT is divided between the 3 arms of federation as seen below:

VAT Sharing Ratio in Nigeria from 1994-2013

YEAR	FGN	STATE	LOCAL GOVT
1994	20% of gross proceeds	80% of gross proceeds	
1995 (Jan-March)	50% of the proceeds	25% of the proceeds	25% of the proceeds
1995 (April-Dec)	40%	35%	25%
1996-1997	35%	40%	25%
1998	25%	45%	30%
1999	15%	50%	35%
2000-2013	15%	50%	35%

Source: **CBN Statistical Bulletin, 2017**

VAT Policies

VAT is a consumption tax levied at a flat rate of 5% on the effected goods and services. The introduction of VAT was to replace the former sales tax adjudged to be progressive and has the advantage of broadening the tax revenue base equitably shared among imported and domestically produced goods and services. As a consumption tax, VAT is easy to administer, is difficult to evade, and also gives a fairly accurate measurement of the growth of the economy since purchasing power increases with economic growth. VAT, as an instrument of development requires a lot of instruments in order to reap the stream of benefits. According to Bird (2005), a turnover tax was charged at every transaction made, many people regarded value added tax as merely a misguided form of a sales tax on consumption from the other sales taxes. The Chairperson FIRS, affirmed that when discussing on the effect of Value Added Tax on the expenditure behaviuor of the populace, it makes the shopper to spend with caution.

Consumption may be viewed as the total demand for all consumer goods and services. According to Tim (1996), consumption can be viewed as the totality of product or service that an individual wants to buy at a particular point in time. Anyanwu (1995) on the other hand sees consumption as the spending by households on goods and services such as clothing, food items, entertainment, health services and acquisition of assets among others. Arising from this definition is the concept of consumption function which shows the relationship between consumption and disposable income. In this regard, Fasoranti (2009) links the term "consumption" to the Keynes' psychological law which says that men are disposed as a rule and on the average, to increase consumption as income increases but not as much as the increase in their income.

Consumption means the goods (commodities), their uses, and services consumed e.g. Food, clothing, and child care. Consumption includes having available, as well as using free goods of nature and public goods that are utilized without charge. Consumption can be studied in terms of relationships among consumption categories. It is the way elements of consumption are combined to form level of consumption as a whole. Three ways to describe level of consumption are:

i) By the kinds and amounts of goods & services consumed in the household e.g. how many kilos of butter, pairs of shoes

ii) ii) By the way these good are organised for use – the tendency for products to be chosen in clusters, with choice of one product leading to choice of others of the same style & the activities associated with product use e.g. Variety of sports products

iii) By the values that underlie the choices of a household e.g. Safety, cheap prices, and comfort.

The consumption spending pattern of a household is the combination of qualities, quantities, acts and tendencies characterizing a community or a human group's use of resources for survival, comfort and enjoyment. The types of food and non-food items consumed vary across regions. Consumption patterns normally contribute greatly to the social and economic policy of the country. In a developing country like Nigeria, the consumption pattern is skewed towards food, i.e., food accounts for a higher proportion of the total expenditure, while in developed countries the opposite is the case. The more developed a society becomes, the less it spends on food and the more it spends on non-food items. Consumption patterns differ from one zone to another. Zonal variation exists at a close examination of a representative state within one zone when compared with another state within another zone. The consumption pattern of a country depicts the aggregate demand for goods and services in the country, and in most cases, it constitutes about 60 percent of the total GDP of the country. Consumption pattern also depicts the level of welfare and poverty that a nation is experiencing (National Bureau of Statistics Publication NBS on Consumption Pattern in Nigeria, 2010).

Theoretical Framework

The Theory of Optimal Taxation

This theory states that a tax structure should be selected to make the most of a social benefit function since its surrender by some constants. The literature on optimal taxation typically treats the social planner as a utilitarian: that is, the social welfare function is based on the utilities of individuals in the society Gregory, Mathew, and Danny (2009).

The theory equally suggests 8 broad things to learn from the theory. They include: One) Optimal marginal tax rate schedule based on the allocation of ability; Two) The optimal marginal tax schedule could reduce at high revenues;

Three) A even tax, with a worldwide total move, could be near to optimal; Four) The optimal level of reallocation increases with wage disparity; Five) Taxes should based on individual distinctiveness as well as revenue; Six) Only finished goods should be levied tax upon, and typically they ought to be taxed uniformly; Seven) Capital returns should not be taxed, at least in expectation; and Eight) In stochastic dynamic economies, optimal tax policy requires improved complexity. From the eight lessons above, the scholar discussed its hypothetical underlying facts and the degree to which it is consistent with real tax policy.

Keynes Absolute Income Hypothesis (AIH) Theory

In Keynesian model, current real income is the primary determinant of consumption and the relationship between income and consumption is determined by Absolute Income Hypothesis. According to Keynes interest rate as one of the explanatory variables of consumption have no effect on consumption decisions due to the reason that income and substitution effect of interest rate eliminate each other. The AIH explains that consumption will rise as income rises, but not necessarily at the same rate. In AIH, consumers take their decisions by taking into account the current disposable income and consumption is an increasing function of the real disposable income. As the disposable income increases, so will the consumption expenditures, but it will lead to a decreasing proportion of income (Keynes, 1936).

Keynes (1936) identified the relationship between income and consumption as a key macroeconomic relationship, and argued that the average propensity to consume (APC) out of current income would exceed the marginal propensity to consume so that the income elasticity of consumption pattern would be less than unity. Hence, in the long run, one would expect income elasticity to be unity. The Hypothesis emphasizes short run rather than long run. The implication of the theory is that an increase in aggregate income (after tax) will yield an increase in consumption, nothing else affect consumption expenditure. The first objection to Keynesian Theory came from Kuznets (1952 cited in Khan, 2014), who analyzed the long run relationship between consumption and income in the US and found contradictory results with Keynes. According to the results of his study, consumption does not decline as income increases. These findings revealed the existence of short run and long run consumption functions. In the short run, Keynesian consumption function gives accurate results but, in the long run, consumption function has a constant average propensity to consume Mankiw, (2010).

During the period of a business cycle or in the short run, because of the fluctuations in income, marginal propensity to consume is smaller than average propensity to consume as Keynes indicated. But, in the long run, average propensity to consume is constant and equals marginal propensity to consume (Branson, 1995 cited in Batina, 1999). Economists have attempted to explain how these two different consumption functions tend to be compatible with each other (Mankiw, 2010); hence, this work is anchored on the Keynes Absolute Income Hypothesis Theory.

EMPIRICAL REVIEW

In their respective studies, Deaton (2001 cited in Colander, 2005), Hall (2001), Flavin (2003), Zeldes (2005), Eswaran and Kotwal (2006) identified interest rate, investment, savings, unanticipated shocks, attitude of consumers, and presence of liquidity constraints as important determinations of consumption behaviour. Some of these studies have considered taxes as a part of fiscal policy and accordingly, analyze the effect of taxes on private consumption expenditure along with government expenditure, while a number of studies have tried to look at the effect of tax by sorting out taxation as compulsory and non-compulsory.

Subsequently, we review these empirical studies. Obiakor, Kwarbai, and Okwu (2015) investigated Value Added Tax and consumption expenditure of household in Nigeria. The study employed *ex-post facto* research design to investigate the effects of value added tax on consumption expenditure pattern and consumer price index. They used the multiple regression models on household durable and non-durable goods consumption expenditure and consumers price index. The results showed that value added tax and one-period lagged consumption expenditure on durable goods significantly affected households' consumption expenditure on durable goods. More, affirmative and noteworthy effect were found for VAT in relative to households' expenditure expenditures for consumer goods; and Value Added Tax, its variant and preceding expenditure level, did not daunt households' spending; and VAT did not show major importance to customer cost indicator. As a result, the work suggested that the existing 5% VAT rate be allowed to stay, since any increase would most expected have an effect on the households pessimistically and shoot up buyer's price index to unimaginable degree.

Eric and Joseph (2010) studied the effects of value added tax, as a substitute for payroll or corporate taxes, in the United States and found that VAT could be regressive, raising tax burdens proportionately more on lower income than on higher income taxpayers.

Sekwati & Malema (2011) investigated the potential impact of VAT increase from 10% to 12% in Botswana on households" consumption expenditure behaviour, and found that the increase in VAT rate increased prices of goods and services, and that the poor households were more adversely affected owing mainly to their higher marginal propensity to consume. The impact was negligible on the middle and upper income classes because these income groups have degrees of freedom to adjust their consumption patterns in response to the increase in VAT.

There are many other research on VAT but there exist paucity of literature on the effect of VAT on consumer retail spending behaviour or consumption pattern.

Barrel and Weale (2009) studies the Economics of a Reduction in VAT in United Kingdom (UK). They employed quarterly data to investigate the impact of VAT rate reduction on retail price in Europe. They established a weak evidence of changes in consumer expenditure behaviour with the reduction in VAT rate in European countries.

Keen and Syed (2006) studied the ways in which tax structure affects exports and, after defining a theoretical model, estimated a panel model using 27 Organization for Economic Cooperation and Development (OECD) countries over the 1967-2003 period. They addressed directly the issue of the tax mix, and estimated the relationship between net exports and both VAT and corporate taxes. The findings of the study in general confirmed the view that Value Added Tax is intrinsically trade unbiased, whereas company tax influence net exports.

Alexander and Gelardi (2012 cited in Kaplow, 2008b), expecting a behavioural change by consumers after its introduction, investigated whether consumer in UK and Canada altered their consumption expenditure behaviour when those countries introduced their VAT. Both retail volume and the percentage change from the prior year were used in the graphical depiction. Their analysis showed consumer adaptation behaviour to take advantage of changes in VAT via arbitrage behaviour.

Khan (2014) investigated consumption function under relative income hypothesis among households in Northern Pakistan. A domestic level study carried out in summer 2012 in 2 chosen communities, explicitly Tarnab and Akbarpura.

Ballard, Scholz and Shoven (1987) found that replacing the income tax partially by a VAT without zero rating or exemptions yields a regressive outcome: lower income cohorts lose while higher income counterparts gain. Barrell and Weale (2009), looking at quarterly data for the period 1987-2007, found weak evidence of changes in consumer behavior when European countries reduced their VAT rates. When the U.K. announced that hot foods sold retail would attract VAT, the market value of Greggs, a bakery that sells hot sausage rolls and other baked goods, dropped by £20 million ($32) million (Wallop and Chan, 2012 cited in Umeora, 2013).

Atkinsonand Stiglitz (1976) assessed the short run effects of VAT on consumption patterns in Greece. The study aimed at evaluating the effect VAT could have on individual commodity prices, consumer price index, shares and the allocation patterns of total consumption expenditures among groups of commodities. Using time series data from 1958-1986 for thirteen commodity groups, and by utilizing the Full Information Maximum Likelihood (FIML) approach to estimate and test the Static Almost Ideal Demand System (AIDS) model, the major empirical findings are: (1) VAT has affected, at different rates (positively or negatively), the structure of commodity prices. Indeed, VAT has increased the consumer price index by 4.7 percent above the rate expected to prevail without it; and (2) VAT has altered consumption patterns or the allocation of total consumption expenditures among the groups of goods and services under investigation. This result is due to the considerable divergence between the actual and the predicted budget shares, as well as the substantial change of both the compensated and uncompensated demands.

In a similar study on the Fiji economy, Narayan (2003) found that a 25 percent increase in Fiji's VAT rate led to about 4 percent increase in government revenue, assuming 100 percent collection rate, and about 0.6 percent increase in real GDP; however, it led to a decline in real consumption, investment, and national welfare.

Few more studies have examined the various issues involved when implementing a VAT in developing and developed countries. For instance, Metcalf (1995) studied the issues to be considered when designing a VAT, its mechanism, administration, and compliance costs, its economic impact on savings and labor supply, and its distributional and transitional concerns if implemented. Regarding its impact on saving, the author argues that VAT eliminates the inter temporal consumption distortions caused by taxing savings, and if the elasticity of saving with respect to the rate of interest is positive, then VAT will raise the amount of saving via increasing the after-tax rate of return on savings. However, he emphasizes that a clear cut answer on whether implementing VAT would increase savings rate is far from being answered.

Finally, Omolapo, Aworemi and Ajala (2013 cited in Olatunji, 2014) performed a data analysis with the use of stepwise regression analysis. Their findings showed that Valued Added Tax had statistically significant effect on revenue generation in Nigeria. The findings from their investigation discovered that VAT is of utmost importance to Nigeria as a country, and that for Nigeria to achieve her desired level of economic growth and development, Nigeria must generate enough revenue to meet up with her current expenditure in terms of terms provision of public utilities and the running costs of the nation. The result from the analysis indicates that if more goods and services are taxed, the revenue base of the country will increase.

The results of the review show that the existing literature does not provide empirical evidence on how VAT assessment influences consumer spending pattern in South East Nigeria. This study therefore tries to fill this void in the literature by providing a thorough treatment of the empirical linkage between VAT and consumer's spending pattern using actual data and proper econometric techniques. This forms the existing gap in literature which this study intends to bridge

Methodology

The investigation employed the *ex post-facto design*. This is because the researcher had no control over the data and variables used in the investigation. The study estimated the models numerically using time series secondary data for the period of 2011-2017. The linear regression with the application of Ordinary least Squares (OLS) technique was employed to estimate the parameters of the model numerically. The data used for this study were obtained from secondary sources.

The population of the study comprises the fifteen (15) enterprises in South East Nigeria which is made up of all the enterprises in the Zone that produce household goods and registered with the Medium Tax Office of the FIRS, Enugu, for the purpose of VAT payment as well as all the breweries, and beverages enterprises that have registered with the Micro and Small Tax Office of the FIRS, Enugu, for the purpose of VAT payment.

In order to test for the relevance of the hypotheses regarding the influence of VAT on consumer spending pattern, the researchers adopted the Regression Model, which, according to Onwumere (2009), examines the relationship between the dependent and the independent variables. It is stated mathematically, thus:

Y = f(X) …………………………. (i)

Where, Y is the dependent variable and X is the independent variable.

This can be re-written as:

$HCSP = f\ (VAT)$ ………………………………… *(ii)*

Where, HCSP = consumer spending pattern

VAT = Value Added Tax

The above function can be stated in linear equation form or model;

$HCSP = \beta_0 + \beta_1 x + \mu$ …………………………………………………………… *(iii)*

Where, HCSP = Dependent variable.

X = Independent variable.

β_0 = Constant indicating the point of interception.

β_1= Coefficient of explanatory Variable.

μ = Error term

In the light of the above, the following models below will be estimated using four sets of data (Value added tax, household consumption spending pattern for alcoholic drinks, household consumption spending pattern for non-alcoholic drinks and household consumption spending pattern for household goods). Each model will represent a given hypothesis respectively.

The model for hypothesis one is stated thus:

$HCSP_{AD}= f\ (vat)$……………….. *(i)*

Model (i) can be further specified as:

$HCSP_{AD} =\beta_0 + \beta_1 vat +\mu_t$……………….. *(ii)*

Below represents the stated model for hypothesis two:

$HCSP_{NAD}= f\ (vat)$……………….. *(iii)*

Model (iii) can be further specified as:

$HCSP_{NAD}=\beta_0 + \beta_1 vat +\mu_t$……………….. *(iv)*

Where,

$HCSP_{AD}$ = Household Consumption spending pattern on alcoholic drinks

$HCSP_{NAD}$ = Household Consumption spending pattern on non-alcoholic drinks

$HCSP_{HG}$= Household Consumption spending pattern on household goods

Vat = Value Added Tax

β_0 = Equation constant

β_1 = Coefficient of explanatory variables

μ_t = Error term

THE TEST OF GOODNESS OF FIT [R^2]

To test for the explanatory power of the independent variable, the coefficient of determination, R^2 will be applied. The essence of the application of this statistic is that it will be used to measure the explanatory power of the independent variable(s) over the dependent variable. This statistic is thus used as a test of goodness of fit. R^2 lies between zero and one ($0 \leq R^2 \leq 1$). The closer R^2 is to 1 the greater the proportion of the variation in the dependent variables attributed to the independent variable.

F-STATISTICAL TEST OF SIGNIFICANCE

To test the statistical significance of the joint force regression plane, the f-ratio is used. The test will be conducted at 5% level of significance.

Note: t* = computed t – value

$t_{0.025}$ = tabulated t – value
f^* =Computed f-value
$f_{0.05}$=tabulated f – value

Presentation and Analysis of Data

To analyze the data collected, this chapter was divided into two sections, viz: the presentation of time series data and test of hypotheses.

DATA PRESENTATION AND DESCRIPTIVE STATISTICS

Data collected in the course of this study are hereby presented descriptively using graphs and measure of central tendency. Below is the presentation of time series data on the variables used for the analysis ranging from 2011-2017, as shown in Table 1

Table 1: Value added taxes and consumers' spending on alcoholic drinks, non alcoholic drinks and household goods for the period, 2011 – 2017

YEARS	VAT_{AD}	$HCSP_{AD}$	VAT_{NAD}	$HCSP_{NAD}$	VAT_{HG}	$HCSP_{HG}$
2011	1,283,019.61	717,468	1,283,019.61	717,468	1,942,092.80	1,599,829
2012	1,894,548.24	717,468	1,894,548.24	717,468	2,305,390.10	1,599,829
2013	3,320,149.02	12,948,265,805.91	3,320,149.02	53,864,286,800.12	2,089,448.80	99,023,660,973.95
2014	3,498,330.06	12,948,265,805.91	3,498,330.06	53,864,286,800.12	9,466,838.29	99,023,660,973.95
2015	6,052,066.21	12,948,265,805.91	6,052,066.21	53,864,286,800.12	5,631,028.31	99,023,660,973.95
2016	7,216,310.58	12,948,265,805.91	7,216,310.58	53,864,286,800.12	5,857,521	99,023,660,973.95
2017	7,906,448.69	12,948,265,805.91	7,906,448.69	53,864,286,800.12	6,649,247.23	99,023,660,973.95
Total	**31,170,872.41**	**64,742,763,966**	**31,170,872.41**	**269,322,868,937**	**33,941,566.53**	**495,121,504,528**

Source: Federal Inland Revenue Service office (FIRS) and National Bureau of Statistics (NBS) (2011-2017).

VAT_{HG} = Value added tax on household goods

VAT_{AD} = Value added tax on alcoholic drinks
VAT_{NAD} = Value added tax on non alcoholic drinks
$HCSP_{A}$ = household consumption spending pattern on alcoholic drinks
$HCSP_{NA}$= household consumption spending pattern on non alcoholic drinks
$HCSP_{HG}$ = household consumption spending pattern on household goods

From Table 1, Value added tax for the different consumer goods is different even as values of some of the consumer goods are same the from 2011 to 2012. But from 2013 expenditure on consumer goods sky rocketed to a very high rate and VAT also increased.

Descriptive analysis of value added taxes and consumer expenditure on alcoholic drinks, non alcoholic drinks, and household goods (2011-2017).

	VAT_{AD}	$HCSP_{AD}$	VAT_{NAD}	$HCSP_{NAD}$	VAT_{HG}	$HCSP_{HG}$
Mean	4452982.	9.25E+09	4452982.	3.85E+10	4848795.	7.07E+10
Median	3498330.	1.29E+10	3498330.	5.39E+10	5631028.	9.90E+10

Maximum	7906449.	1.29E+10	7906449.	5.39E+10	9466838.	9.90E+10
Minimum	1283020.	717468.0	1283020.	717468.0	1942093.	1599829.
Std. Dev.	2611143.	6.32E+09	2611143.	2.63E+10	2849830.	4.83E+10
Skewness	0.156260	-0.948683	0.156260	-0.948683	0.340722	-0.948683
Kurtosis	1.478156	1.900000	1.478156	1.900000	1.880595	1.900000
Jarque-Bera	0.703989	1.402917	0.703989	1.402917	0.500918	1.402917
Probability	0.703284	0.495862	0.703284	0.495862	0.778443	0.495862
Observations	7	7	7	7	7	7

Source: **E-views3 Statistical Software Computation, 2017**

The descriptive statistical analysis of the variables shows that the mean values of the variables yielded thus: VAT_{AD} = 4452982, $HCSP_{AD}$ = 9.25, VAT_{NAD} = 4452982, $HCSP_{NAD}$ = 3.85, VAT_{HG} = 4848795 and $HCSP_{HG}$ = 7.07. The median analysis of the variables shows that VAT_{AD} = 3498330, $HCSP_{AD}$ = 1.29, VAT_{NAD} = 349330, $HCSP_{NAD}$ = 5.39, VAT_{HG} = 5631028, $HCSP_{HG}$ = 9.90. The corresponding statistics with their corresponding values are stated as shown in the Table above.

The decision rule for the study was restricted to the p-value of F- statistics, which should be less than 0.05 on one tailed test and 0.01on a two-tailed test. This implies that if the p-value is greater than the standard value of 0.05 or 0.01, the null hypothesis would be accepted and the alternate hypothesis rejected.

Test of Hypothesis One

Ho: Value added tax does not have a positive and significant effect on consumers' spending pattern on alcoholic drinks in South –East Nigeria.

Regression Analysis Result of the influence of value added tax on consumers' spending pattern on alcoholic drinks in South-East Nigeria, 2011 – 2017.

Dependent Variable: $HCSP_A$				
Method: Least Squares				
Date: 11/02/18 Time: 10:57				
Sample: 2011 2017				
Included observations: 7				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.18E+09	3.63E+09	0.323787	0.7592
VATAD	1813.043	716.5243	2.530330	0.0525
R-squared	0.561502	Mean dependent var		9.25E+09
Adjusted R-squared	0.473803	S.D. dependent var		6.32E+09
S.E. of regression	4.58E+09	Akaike info criterion		47.56401
Sum squared resid	1.05E+20	Schwarz criterion		47.54856
Log likelihood	-164.4740	F-statistic		6.402568
Durbin-Watson stat	1.296799	Prob(F-statistic)		0.052509

Source: E-views3 Statistical Software Computation, 2018

$$\mathbf{HCSP_A = 1.18 - 1813.043VAT_{AD}}$$

The table above shows the result of the simple regression analysis of the influence of value added tax on alcoholic drinks in South-East Nigeria 2011 – 2017. The result reveals that the coefficient of determination (R-square), which measures the goodness of fit of the model, indicates that 56% of the variations observed in the dependent variable were explained by the independent variable. After adjustment as revealed by the Adjusted R-squared, 47% variation in the dependent variable was explained by the independent variable indicating that there are other variables other than our explanatory variable that also impact on the dependent variable. The result shows that value added tax on alcoholic drinks has a positive and significant effect on consumer spending pattern on alcoholic drinks in South-East Nigeria. (α = 1813.043, t-value = 2.53, R^2 = 56, Adj R^2 = 47, p = 0.05, D.W = 1.297)..

Test of Hypothesis Two

Ho: Value added tax on nonalcoholic drinks does not have a positive and significant effect on consumers' spending pattern on non- alcoholic drinks South- East Nigeria.

Regression Analysis Result of the effect of value added tax on consumers spending pattern on non alcoholic drinks in South- East Nigeria 2011 – 2017

Dependent Variable: $HCSP_{NA}$				
Method: Least Squares				
Date: 11/02/18 Time: 11:15				
Sample: 2011 2017				
Included observations: 7				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.89E+09	1.51E+10	0.323637	0.7593
VATNAD	7542.505	2980.839	2.530330	0.0525
R-squared	0.561502	Mean dependent var		3.85E+10
Adjusted R-squared	0.473803	S.D. dependent var		2.63E+10
S.E. of regression	1.91E+10	Akaike info criterion		50.41511
Sum squared resid	1.82E+21	Schwarz criterion		50.39966
Log likelihood	-174.4529	F-statistic		6.402568
Durbin-Watson stat	1.296799	Prob(F-statistic)		0.052509

Source: E-views3 Statistical Software Computation, 2018

$$\mathbf{HCSP_{NAD} = 4.89 - 7542.51VAT_{NAD}}$$

The table above shows the result of the simple regression analysis of the influence of value added tax on non- alcoholic drinks in South-East Nigeria 2011 – 2017. The result reveals that the coefficient of determination (R-square), which measures the goodness of fit of the model, indicates that 56% of the variations observed in the dependent variable were explained by the independent variable. It was observed that after adjustment as revealed by the Adjusted R-squared, 47% variation in the dependent variable was explained by the independent variable indicating that there are other variables other than our explanatory variable that also impact on the dependent variable. The result shows that value added tax on non- alcoholic drinks had a positive and significant influence on consumer spending pattern in southeast Nigeria. (α = 1813.043, t-value = 2.53, R^2 = 56, Adj R^2 = 47, p = 0.05, D.W = 1.297).

Discussion of Results

The result of hypothesis one showed that value added tax has significant influence on consumer spending pattern on alcoholic drinks in South - East Nigeria during the period 2011 – 2017. The implication of this result is that if value added tax on alcoholic drinks is increased or decreased it will affect consumer spending on these goods.

The regression estimate in respect to hypothesis two also showed that value added tax equally has significant and positive influence on consumer spending pattern on non-alcoholic drinks in South -East Nigeria during the period 2011 – 2017. The implication of this result is that if value added tax on non-alcoholic drinks changes, it will significantly affect the consumer spending pattern on non alcoholic drinks in South -East Nigeria.

Conclusion and Recommendation

Based on the results above, we conclude that value added tax on alcoholic drinks had a positive and significant influence on consumer spending pattern on alcoholic drinks South-East Nigeria during the period 2011 – 2017. This shows that VAT_{AD} actually affected the consumption of alcoholic drinks in South-East Nigeria during the period.

Secondly, it was equally established that Value added tax has positive and significant effect on consumer spending pattern on non-alcoholic drinks in South-East Nigeria during the period 2011 – 2017. This shows that VAT_{NAD} actually affected the consumption of non-alcoholic drinks in South-East Nigeria during the period. These findings are in line with those of Obiakor et al. (2015). They employed regression analysis and found that VAT significantly affect consumer's spending pattern on durable goods and non durable goods.

From the findings above, we therefore recommend that Since the influence of value added tax on alcoholic drinks is positive and significant, government should, from time to time, intervene in the activities of producers and dealers of alcoholic drinks in South East Nigeria because value added tax is not actually the only variable affecting the spending pattern of consumers of these products. This is confirmed by the Adjusted R-squared assuming a value of 0.4738 indicating that there are variables other than the explanatory variable (VAT) that affect the consumption of these products.

Government should also intervene in the activities of producers and dealers of non-alcoholic drinks in South East Nigeria since the effect of value added tax is positive and significant. In addition to the two recommendations above, the current 5% value added tax rate should be maintained since any increase would escalate price of these goods to an undesired levels, which would, most likely, affect household adversely.

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