CHAPTER: 2

“VAT: A THEORETICAL APPROACH”

2.0) Meaning

2.1) Definitions

2.2) Types of Value Added Tax

2.3) Optimal Structure of VAT

2.4) Economic Effects of VAT
CHAPTER: 2
“VAT: A THEORETICAL APPROACH”

2.0) MEANING:

Value Added Tax (VAT) is a general consumption tax assessed on the value added to goods and services. It is a general tax that applies, in principle, to all commercial activities involving the production and distribution goods and provision of services. It is a consumption tax, because it is a borne ultimately by the final consumer. It is not a charge on companies. It is charged as a percentage of prices. This means that the actual tax burden is visible at each stage of production and distribution chain.

It is collected fractionally, via a system of deduction, whereby taxable person can deduct from their VAT liability they have paid to other taxable person on purchases for their business activities. This mechanism ensures that tax is neutral regardless of how many transactions are involved.

In other words, it is a multistage tax, levied only on value added at each stage in the chain of production. Goods and Services with the provision of set-off for the tax paid at earlier stage in the chain. The objective is to avoid “Cascading”, which can have a snowballing effect on prices. It is assumed that due to cross checking in a multi stage tax; tax evasion will be checked, resulting in higher revenue to the government.¹

¹www.wikipedia.com
2.1) DEFINITIONS:

“Value Added Tax is a general consumption tax assessed on the value added to goods.”

“It is a general tax that is applies, in principle, to all commercial activities involving the production and distribution of goods.”

“It is charged as a percentage of prices, which means that the actual tax burden is visible at each stage in the production and distribution chain.”

“It is collected fractionally, via a system of deduction whereby taxable person i. e. VAT-registered business can deduct from their VAT liability the amount of tax they have paid to other taxable persons on purchase for their business activities.”

2.2) TYPES OF VALUE ADDED TAX:

The VAT can be levied in three ways. These are derived from different concepts of measurement of income consisting of.

a) Consumption Type VAT

b) Gross Production Type VAT

c) Net Income Type VAT

d) Wage Type VAT

2. www.google.com
3. www.wikipedia (The VAT Regime under Ethiopian Law with Special Emphasis on Tax Exemption)
A) GROSS PRODUCT VARIANT:

The Gross Product Variant allows deduction for all purchase of raw materials and components but no deduction is allowed for business inputs. That is, capital goods such as plant and machinery are not deductible from the tax base in the subsequent years. Thus, the economic base of gross production variant is equivalent to Gross National Product (GNP). In this variant of VAT, capital goods carry a heavier tax burden as they are taxed twice. Modernization and upgradation of plant and machinery is delayed dual tax treatment.

B) INCOME VARIANT:

Income Variant of VAT, unlike the gross product variant, deductions are allowed for purchases of raw materials and components as well as depreciation on capital goods. It provides incentive to classify purchases as current expenditure to claim set-off net investment i.e.: gross investment expenditure minus depreciation is taxed and, thus the economic base of income variant is equivalent to net national product. In practice, however, there are many difficulties connected with specification of any method of measuring depreciation, which basically depend on the rate of inflation and the life of an asset.

C) CONSUMPTION VARIANT:

Consumption Variant allows deduction for all business purchase including capital assets i.e. gross investment, deducted in calculation of value added. The economic base of tax, therefore, is equivalent to total private consumption. It neither distinguishes between capital and current expenditures-nor specifies the life of assets or depreciation allowance for different assets. This form is neutral between different methods of production, there would be no effect on tax liability due to the method of production i.e.: substituting capital for labour or vice-versa. The tax is also neutral between the decision to save or consume.
Consumption Variant is widely used. Most European countries have adopted this variant. The reason for preference of this variant is that it does not affect decision regarding investment because the tax on capital goods is also set-off against VAT liability. The consumption variant is more in harmony with the destination principle.

**Consumption Variant of VAT:**

VAT can be computed by adopting three different methods

1) Addition Method
2) Subtraction Method; and
3) Tax-Credit Method

These methods can be used to arrive at the VAT liability.

**1) Addition Method:**

This method is based on the identification of value added which can be estimated by summation of all the elements of value added i.e.: wage, profit, rent, and interest. This method is known as additional method or income approach. This is in line with the income method of calculating national income.

**2) Subtraction Method:**

The subtraction method estimates value added by mean of difference between output and input. i.e.: \( T = t \times (output - input) \). This is known as production approach and has further variants in the way subtraction is attempted from among

a] Direct Subtraction Method
b] Intermediate Subtraction method
c] Indirect Subtraction Method

Direct subtraction method is equivalent to business transfer whereby tax is levied on the different between the aggregate tax-exclusive value of sales and aggregate exclusive value of purchases.
Intermediate subtraction method is based on deduction of the aggregate tax-inclusive value of sales taxing the difference between them.

3) Tax Credit Method:

The indirect subtraction method entails deduction of tax input from tax on sales for each period. This method is also known as tax-credit method or invoice method. In practice, most countries use this method and employ net consumption VAT. A comparative picture of the three method of calculating VAT is presented in Table 2.1.

**Table No: 2.1**

**Various Methods of Calculating Liability of VAT:**

**A comparative Study**

<table>
<thead>
<tr>
<th>Method</th>
<th>Stage of Production</th>
<th>Total Economy</th>
<th>(Value in Rupee)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manufacturer</td>
<td>Wholesaler</td>
<td>Retailer</td>
</tr>
<tr>
<td>1. Addition Method</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Wages</td>
<td>150</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>b. Rent</td>
<td>50</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>c. Interest</td>
<td>25</td>
<td>75</td>
<td>20</td>
</tr>
<tr>
<td>d. Profit</td>
<td>25</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>e. Value add (a+b+c+d)</td>
<td>250</td>
<td>500</td>
<td>250</td>
</tr>
<tr>
<td>f. VAT</td>
<td>25</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>2. Subtraction Method</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Sales</td>
<td>350</td>
<td>850</td>
<td>1100</td>
</tr>
<tr>
<td>b. Purchase</td>
<td>100</td>
<td>350</td>
<td>850</td>
</tr>
<tr>
<td>c. Value add (a – b)</td>
<td>250</td>
<td>500</td>
<td>250</td>
</tr>
<tr>
<td>d. VAT</td>
<td>25</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>3. Invoice Method (Tax Credit Methods)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Sales</td>
<td>350</td>
<td>850</td>
<td>1100</td>
</tr>
<tr>
<td>b. Tax in Sales</td>
<td>35</td>
<td>85</td>
<td>110</td>
</tr>
<tr>
<td>c. Purchase</td>
<td>100</td>
<td>350</td>
<td>850</td>
</tr>
<tr>
<td>d. Tax in Purchase</td>
<td>10</td>
<td>35</td>
<td>85</td>
</tr>
<tr>
<td>e. VAT (b – d)</td>
<td>25</td>
<td>50</td>
<td>25</td>
</tr>
</tbody>
</table>

Note: The calculations are based on a uniform rate of 10 % tax on value added.

Source: M.C. Purohit (2001) Value Added Tax, Gayatri Publication. (Page No. 10)
Although, all the methods are identical, these are not likely to yield
the same revenue when tax rates vary according to commodity. This means that
rates are different from input and that for outputs. As shown in Table 2.2 the yield
would be Rs. 30 under subtraction method, when the tax rate is Rs. 25 only under
the invoice method, when the tax rate is 15 % at wholesale stage keeping 10% at
all other stages.

**Table No: 2.2**

**Calculation of VAT under Subtraction and Invoice Method**

(Value in Rupees)

<table>
<thead>
<tr>
<th>Calculation of VAT</th>
<th>Manufacturer</th>
<th>Wholesaler</th>
<th>Retailer</th>
<th>Total Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sales</td>
<td>100</td>
<td>200</td>
<td>250</td>
<td>550</td>
</tr>
<tr>
<td>2. Purchase</td>
<td></td>
<td>100</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>3. Value added (a– b)</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>250</td>
</tr>
</tbody>
</table>

**Rate of VAT is 10% on all Stages**

<table>
<thead>
<tr>
<th>VAT under subtraction Method</th>
<th>10</th>
<th>10</th>
<th>5</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 – 0= 10</td>
<td>10</td>
<td>20</td>
<td>25-20=5</td>
<td>55 – 30=25</td>
</tr>
<tr>
<td>2. Invoice Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rate of VAT is 15% at Wholesaler level and 10% at all other stages**

<table>
<thead>
<tr>
<th>Subtraction Method</th>
<th>10</th>
<th>15</th>
<th>5</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 – 0=10</td>
<td></td>
<td>30</td>
<td>25</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: M.C. Purohit (2001) Value Added Tax, Gayatri Publication. (Page No. 11)

The invoice method is widely used in most VAT countries because of
its inherent advantages in calculating tax liability. First, in cross checking of tax
paid at earlier stage is more as enable as dealer are required to mention the amount
of tax rate on invoice. Second, tax burden being independent upon the tax rate at
the final stage, dealer at intermediate stages do not have any finally, it facilitates
broader tax adjustment if exports are zero rated, and it is very easily done with this method.4

D) Wage Type VAT:

The base of the Wage Type VAT is obtained by deducting an amount equal to the net earnings from firm’s capital for that year. Since net earnings of the firm are equal to the net profit which also include interest on firm’s own capital. Thus, normally this deduction will be simply profit or net profits including interest. Firm’s capital for that year means net income of the firm for that year which is equal to the Gross Income of the firm mines the depreciation in that year. The balance left to be taxed is equivalent to wage paid. Hence, this variant of VAT is called the wage type of VAT.

Since,

\[
\text{Gross National Production (GNP) } = C + I = W + P + D
\]

\[(\text{Gross National Income}) \quad \text{…………… (1)}\]

\[
\text{Net National Production (NNP) } = C + I - D = W + P
\]

\[(\text{Net National Income}) \quad \text{…………… (2)}\]

C, I, W, P and D have their respective meaning. Tax base of wage type Value Added Tax

\[
\text{Wages} = \text{Net Income of the Firm} - \text{Net earnings of the firm.}
\]

\[\text{(Net Profit Including Interest)}\]

From (2)

\[
W = C + I - D - P
\]

\[\text{…………… (3)}\]

W = Tax base = Value added

4 "Value Added Tax" By M.C. Purohit, Gayatri Publication (2001)
Where, $C + I - D = \text{Net Income for the firm}$

$(P = \text{Net Profit Including Interest})$

$C = \text{Consumption}$

$I = \text{Gross Investment}$

$W = \text{Wages}$

$P = \text{Net Profit after Depreciation.}$

$D = \text{Depreciation.}$

It implies the value added to a commodity is equal to the wages paid.

This variety is also unlikely to be used for taxation by any government.\(^5\)

2.2.1) MERITS OF VALUE ADDED TAX:

Since ages always a reform is made for the benefit in the process of development. It was Chanakya who first wrote that a government should tax its people like a shepherd shears his flock or bee gets nectar from a flower. But apparently that fiscal wisdom died with him. Let us not experience the same with VAT in India. It has a baggage full of benefits. Few advantages of VAT are mentioned below.

1) Transparency:

The tax that is levied at the first stage on the goods or sales or purchase is transparent. Because the amount of tax which the goods have suffered, is not known at the subsequent stage. In the VAT system, the amount of tax would be known at each and every stage of goods of sale or purchase.

---

\(^{5}\)Dr. Tyagi B.P., “Public Finance” Published by Jai Prakash Nath & Co., Meerut (1998)
2) Selectivity:

VAT may be selectively applied to specific goods or business entities. We have already addressed essential goods and small business. In addition the VAT does not burden capital goods because the consumption type of VAT provides of full credit for the tax included in purchases of Capital goods; it simply eliminates the tax that has been imposed on them.

3) Coverage:

If the tax is carried through the level, it offers all the economic advantages of tax that includes the entire retail price within its scope, at the same time the direct payment of the tax is spread out over a large, such as wholesalers or retailers.

If retailers do evade, tax will be lost only on their margins because customers that are registered firms gain nothing if their suppliers fail to collect tax, except delay in payment. They will pay more to the government themselves. Under the forms of sales tax, both seller and customer gain by evading tax. One particular advantage is that of the widening of the tax base by brining all transactions into the tax net, specifically VAT, gives the new government the opportunity to bring back into the tax system those entire person and entities who were given tax exemption in one form or another by the previous regime.\(^6\)

4) Simple and Single Stage Tax:

Some people consider VAT superior to other indirect taxes for its simplicity. Though a multipoint tax, it is very much like a single point sales tax in its impact.

---

\(^6\)www.google.com
5) Neutral in Allocation of Resources:

A VAT is said to be perfectly neutral as regards allocation of resources. It supports the claim that it does not distort relative commodity prices provided, it is levied without any exemption and zero rated. Since, no such goods can reclaim tax on his inputs. When goods and services are exempted, no tax on inputs can be reclaimed.

6) Minimizes Scope for Tax Evasion:

Another advantage of this tax is that it minimizes scope for tax evasion. Under the VAT System, the major chunk of tax revenue comes from large concerns which are generally not in convenient position to evade tax. But, this advantage is also possessed by some other taxes for instance excise duty too.

7) Easy Invigilation of Tax Authorities:

The large size of the firms, from which the tax is collected, makes their invigilation by authorities easier.

8) Tax-Payers Feel Burdened:

Since, the tax is collected in small fragments at different stage of production and sales tax-payers feel the burden of tax less and the desire to evade the tax less and the desire to evade the tax is not pronounced.

9) Encourage Investment:

The consumption type of VAT allows deductibility of tax paid on inputs of capital goods, i.e.: under consumption type of VAT, capital goods are exempted from the tax. This sometimes result in negative tax payments too in those cases where the value of capital inputs exceeds the value of output.
10) **Encourages Exports:**

A commodity costs less, since the burden of tax on it is less. This enables the commodity to compete with foreign goods in international markets. Besides, in order to get a competitive edge over others, a country may refund the taxes paid on exportable goods.

Finally, VAT would provide a much sure base for future tax increases, if necessary than the present narrow base of outlay taxation.

2.2.2) **DEMERICHS OF VALUE ADDED TAX:**

It will be a virtual crime not to look to the other side of the coin of the Indian VAT system. Disadvantages will always give birth to amendments to the existing policy so that traders can ride jerk free on it adding value to the existing Indian taxation system.

1) **Regressive Nature:**

It is claimed that the tax is regressive; its burden falls disproportionately on the poor since the poor are likely to spend more their income than the relatively rich person. There is merit in this argument, particularly if it attempts to replace direct or indirect taxes with steep, progressive rates. However, observation from around the world and even Guyana has shown that steep tax rates lead to evasion, and in the case of income tax act as disincentive to effort. Further, there is now a tendency in most countries to reduce this progressivity of taxes as has been done in Guyana where a flat rate of income tax has been introduced. In any case VAT recognizes and makes room for progressivity by applying no tax on luxury items, although this can create problems for administration and open opportunities for evasion by way of deliberate misclassification, a problem
incidentally not peculiar to VAT and which takes place extensively in the area of customs duties.

2) Inflationary:

Some businessmen seize almost any opportunity to raise prices and the introduction of VAT certainly offers such an opportunity. However, temporary price controls, a careful setting of the rate of VAT and the significance of the taxes they replace, should generally ensure that there is no increase, if any, in the cost of living. To the extent that they lead to reduction in Income tax, any price increases may be offset by increases in take-home pay. In any case, any price consequence is one time only and price should stabilize thereafter. 7

3) Favors the Capital Incentive Firm:

It is also argued that VAT place a heavy direct impact of tax on the labour incentive firm compared to the capital incentive competitor, since the ratio of value added to selling price is grater for the former. This is a real problem of labour incentive economies and industries.

4) Not Simple Tax System:

It will be a folly to be carried away by some of the simple attractive features of VAT in theory. In theory, it is a single uniform rate tax without any exemption, but in practice, it has got to be multi-rate system with exemption to certain industries. This is necessary with a view to achieving social justice and economic priorities. The so-called simplicity of this system vanishes here.

7www.wikipedia.com
5) Not Neutral Tax:

Since exemption to certain industries cannot altogether be ruled out, it cannot be claimed that VAT is perfectly neutral tax.

6) Less Revenue Collected:

Another serious drawback of this system is that revenue collection under it is far less than the revenue collected from the multi-stage turnover tax system.

7) Possibility of Tax Evasion:

This system depends upon the cooperation of the tax payers to a very large extent. Each firm itself calculates its tax liability to being with and also finds out the taxes paid by the earlier firms. Once, however, the seller realizes that the administrative machinery of the government is ill-equipped to do the entire necessary cross-checking, they will resort to the creating of false purchase invoice showing that these taxes have already this happens, tax evasion becomes a major possibility and a common practice.

8) Conducive to Inefficiency:

The argument that VAT induces efficiency is not tenable especially in an economy of shortages where there are speculative hoarding, non-competitive price rise and similar practices are quite common. Since, in an economy of shortage, goods will be purchased irrespective of their inferior quality and high prices. Hence, it is doubtful whether VAT will prove helpful in improving efficiency.⁸

⁸www.google.com
2.3) OPTIMAL STRUCTURE OF VAT:

The optimal structure of VAT should be in conformity with the proper role which VAT is expected to play. Optimal structure of VAT has been studied with reference to the following aspects.

2.3.1) Progressive v/s Regressive Nature:

There is general agreement that taxes should be equitable. In discussion on tax equity, the general practice is adopting income as the index of ability to pay and favor a progressive tax system. VAT is a tax on the sale commodities and whosoever purchases the commodity, has to pay the tax at the same rate irrespective of his income or ability to pay. Therefore, the tax is not progressive, income taxation can easily be made progressive, while VAT even with heavy rate of taxation on luxuries cannot be made progressive, but can be made less regressive. VAT with food exempt is slightly regressive in the very low income groups. However, for most of the retail VAT is found to be roughly proportional with food retail exemption.

In many under developed countries the main purpose of the indirect taxes is fiscal. They have been imposed on articles in common use because these afford a large and easy source of revenue. If low indirect taxes are levied upon what the poor consume and high upon what the rich consume they can be made just as progressive as direct taxes.

VAT is unable to adjust the burden of taxation in the light of the number of departments and other personal circumstances. VAT tends to bear more heavily on large families within every income group. Moreover, families of the same size and the same income are likely to bear considerably less of commodity tax burden, if they are rural rather than urban.
In brief, VAT is not progressive. By making some adjustment it can be made less regressive. A well designed rate structure can be used as a fiscal weapon to generate maximum amount of revenue and to inject some progressivity in the tax system. Therefore, though VAT is regressive in nature and against the equity principle, an attempt can be made to attain the principle of equity by exempting necessities from the purview of the tax.

2.3.2) **Ad Valorem v/s Specific Taxes:**

The VAT which are levied upon the prices of the commodities are known as Ad Valorem taxes; and the VAT which are related with the physical measures such as weight, length etc. of the commodities are known as specific taxes. It is often suggested that it would be possible into Ad Valorem taxes. The main criticism of specific taxes is that they reduce the income elasticity of the VAT system, especially during periods of inflation. It is argued that with specific taxes, increase in the prices of the taxed commodities do not increase the prices of the taxed commodities and do not increase government revenue proportionately, as would be the case if ad valorem taxes were operative.

Specific taxes have been defended primarily on administrative grounds. Although specific taxes are inelastic and are unaffected by price variations, their administration is comparatively simpler. As the levy is not indeterminate, it is favored by the department and the producers alike.

The difficulty arises with ad-valorem taxes due to the indeterminateness of the selling price to which the tax is to be applied. There are substantial valuation difficulties whenever, the value of the same article changes frequently in successive transactions and when different trade discounts are allowed for quality sales.
Specific taxes cannot be used in all instances because of problems involved in defining the specific measuring device selected and because of the tendency for the amount of tax on inexpensive models to be out of proportion to the amount of tax on high price models.

Although there is a growing tendency towards ad-valorem rates in recent years, a considerable portion of commodity tax revenue continues to be derived from goods subject to specific rates. It is desirable to convert specific rates into ad-valorem rates in order to make the commodity tax system more elastic. It also brings more progression in commodity tax system, since ad-valorem duties place a preponderant burden on high priced commodities, generally consumed by rich. Such a tax system also encourages the production of low priced goods, generally consumed by the poor since taxes place less burden on such items. This is true even in the case of commodity consumed both by the poor and the rich, and income elasticity of demand for which is more than unity, because the rich are likely to spend proportionately more on this commodity.

It is concluded that since it is administratively difficult to rely exclusively on ad-valorem or specific taxes, a combination of the two may be desirable. Hence it is suggested that, along with minimum specific taxes, there should be a sliding scale of ad-valorem taxes arranged progressively in relation to price.

2.3.3) Income Elasticity in the Tax System:

In recent years, it has become fashionable to regard a high degree of income elasticity in the tax system as a desirable attribute. Similarly, the degree of income elasticity has become a criterion for judging the merits of various taxes. In developed countries a high degree of income elasticity is desired because of its anti-cyclical effects. A tax with a high degree of income elasticity is regarded as an
automatic stabilizer which helps to mitigate the business cycle. In underdeveloped countries, on the other hand, income elasticity is desired for other reasons. It serves to mobilize an increasing share of incremental income and thus facilitates a shift of resources to the government. It is sometime argued that it is politically easier to increase revenue by making the tax system income elastic, than by introducing new taxes or raising the rate of existing taxes.

One Indian economist has gone so far as to regard the income elasticity of the tax system as the secret to the acceleration of growth. He emphasizes the importance of income elasticity in the tax system.

In addition to the above line of support for income elasticity, there is what is essentially an equity argument used in its favor.

It is widely believed that in attempting to increase the ratio of tax revenue to national income the government should aim at taxing a part of the additional income generated in the process of growth.

VAT show a higher degree of income elasticity if they are ad-valorem by nature. The improvement in tax administration may increase the income elasticity of the tax system by reducing evasion, extension of coverage to more rural areas and extension of coverage to smaller producers and sellers.

2.3.4) Gross Product v/s Income v/s Consumption v/s Wage Type of VAT:

There is very little argument on what would be the best pattern of VAT. Some have argued that gross product variant is equivalent to gross national
product. The gross product variant of VAT, capital goods carry a heavier tax burden as they are taxed twice. For this reason, VAT tax system is not popular.

Income variant is equivalent to net national product. This method is very difficult to use for measuring depreciation, which basically depends upon the rate of inflation.

Wage type of VAT is equal to gross income of the firm. Net earnings of the firm are equal to the net profit included interest on firm’s own capital. Firm’s Capital for the year means the depreciation in the year. The expenditure is so wide (on a large scale) to acquire this type of inflation. Therefore, if wage type of VAT is used, the revenue collection will be reduced.

Consumption variant is neutral between different methods of production; there would be no effect on tax liability due to the method of production. This method is widely used in countries like for example- France, Italy, Germany, Canada, Mexico, Brazil, Bangladesh, China, United Kingdom, India, etc.

2.4) ECONOMIC EFFECTS OF VAT:

VAT has direct as well as indirect effect on several economic variables. Important aspects of economic effects are:

1) Effects on Prices.
2) Effects on Consumer’s Welfare via Incidence and Equity.
3) Effects on Production Process on Account of Neutrality and Efficiency.
4) Effects on Economic Growth via saving and Investment, and conformity with Optimal Tax Theory.
5) Allocation of Resources.
6) Equity Consideration.
7) Stabilization

8) Tax Administration.

Effects of VAT are felt all over the economy. Because, the tax influences several macro-economic variables such as saving, investment, employment, distribution prices and efficiency of resources. VAT directly affects some of these variables whereas the effect on other is indirect.⁹

1. Price Effect:

The effect of VAT on prices is tremendous and direct. The effect, however, depends upon whether VAT is a new levy or simply a replacement for the existing tax to recover the lost revenue from other taxes reduced or replaced by VAT. If VAT is adopted as a replacement for other taxes then the analysis must consider the effect of reduction in other taxes. This could imply a complex mixture of changes in factor prices and producer prices at manufacturing and wholesale levels. However, in general, a VAT causes increase in price of commodity depending upon the elasticity of demand and supply of the commodity concerned. Normally, it is fully forwarded because traders would wish to maintain their level of profit by shifting VAT ahead. All traders will initially bear tax and compliance costs but would like to recoup them in due course, sometimes even to take advantage of the situation charge prices somewhat higher than warranted by VAT.

VAT would be inflationary if it is shifted forward as the consumer maintains its real consumption and accommodative credit policy follows. In fact, it would be necessary to have sufficient increase in wages (to offset increase in price due to VAT) to help the consumption level. Such an increase in wages will cause inflationary spiral, for the business cost will trigger the price increase.

⁹ Economics of VAT, Dr. S.R. Singh, Mohan Prasad Shrivastav & Satyendra Kumar Gupta, APH Publishing Corporation (2008)
The empirical studies of effect of VAT on prices range from some rough estimates to sophisticated general equilibrium analysis. However, most studies have used partial equilibrium analysis and some of the studies have resorted to input-output model depending upon the taxes to be replaced and the data available.

2. Distribution Effect:

Distribution effect refers to incidence and equity aspects of the tax. That is, the issue is: Who really bears the burden of tax? In the case of VAT this depends upon various possibilities of shifting, avoidance and evasion of tax, as well as on the composition of the users of commodity. The aspects of avoidance and evasion are related both to the structure as well as to the administration of the tax. VAT in comparison to other forms of sales tax stands the test of proper administration because it involves a self-policing mechanism. The buyer of commodity would take care to obtain an invoice so that he could claim credit for the tax due to the seller. Hence, the equity aspects related to avoidance and evasions are better taken care of by VAT.

The distribution effect however depends upon the possibility of shifting of VAT. Normally, profit maximizing firms will shift all commodity taxes forward as these taxes affect marginal costs. But firms which have monopsony in the market for a factor or input will shift VAT backward.

The extent to which shifting would take place would depend upon the elasticities of supply and demand. The greater the elasticity of demand, the less the firm would be able to shift. Since the demand for a commodity is a function of both its price and availability of its substitute, a broad-based VAT would have less chances of substituting one commodity for another and hence, shifting is more likely to take place.
Most empirical studies on indigence assume complete forward shifting and collect data on consumption expenditure of the households. Although there are many difficulties in collection and consequent question of reliability, most studies rely upon these data. Hence, our conclusion regarding progressivity or regressively of tax depend on reliability of the data used by such studies.

The progressivity or regressivity of VAT depends upon various factors such as the number of exemptions and zero ratings, and on other compensatory features. For example, a poorly administered income tax with a narrow tax base could be more regressive than a VAT. Similarly, the progressivity or regressivity would depend upon the base with which the tax is related. VAT would be a proportionate tax if related to consumption and somewhat regressive when related to income. Here again, the degree of regressivity could be overstated when measured against current income as contrasted to permanent income hypothesis.

Evidence from different countries shows that VAT is partially progressive or proportional in some countries. In Dutch Countries the VAT was designed in such a way that it could be distributional neutral. In France the VAT was found to be proportional or mildly regressive when measured in relation to consumption and regressive in relation to income. In the United Kingdom, the VAT is progressive mainly because of zero-rating for food, housing and children clothing.

Finally, to estimate the total distribution effect of VAT, we must simultaneously look into the distributional impact of government expenditure which is a major policy variable to influence the redistributive process.\textsuperscript{10}

\textsuperscript{10} VAT Indian and Global Experiences, Astha Ahuja, New Century Publications, (2004)
3. Neutrality and Efficiency:

Major objective of tax policy is to attempt neutrality with respect to the economic behavior of producers as well as consumers. This is achieved in production when VAT does not induce firms to change their forms and methods of caring on business. It is obtained in consumption when VAT does not induce consumers to change their pre-tax choices between taxed and untaxed commodities or between those taxed at different rates. This is distorted, if the tax rate differs from one category of goods to another. Such variations change relative prices of different categories of goods and hence distort consumer preferences. Since neutrality is concerned with what to buy, how much to buy, etc., these decisions should not be affected by VAT if it is to be neutral.

The VAT is designed to be neutral between capital and labour or investment and consumption. Even in respect of foreign trade, the zero-rating keeps the VAT neutral.

VAT is likely to distort the comparison of benefits and thereby choices via increase in costs and thereby influence the pattern of resource allocation. Such a distortion of choices is known as the excess burden of taxation.
Diagram 2.1: EXHIBIT

In the diagram, Shifting of Tax is denoted on X-axis. Price is denoted on Y-axis. The exhibit shows that the market equilibrium without tax exists at point E. Imposition of VAT disturbs the equilibrium and a new equilibrium level will be attained by shift in supply curve (from S to S+T). The triangle area FED measures the excess burden due to the imposition of VAT.

The feature of excess burden indicated above can be defined as loss of consumer’s surplus and producer’s surplus arising due to the levy of VAT. The extent of excess burden will, however, depend upon the elasticity of demand and supply. Hicks – Joseph demonstrated the excess burden of such a tax with the technique of ordinal welfare economics. This, however, assumes that the objective of taxation is to maximize tax revenue. On the contrary, in present times, commodity taxes do have the objective of curtailing consumption of taxed items.
ET = C / R

ET = Economic Efficiency of a Tax
C  = Changes in Private Expenditure
R = Changes in Revenue

Also, on theoretical arguments too, the Hicks – Joseph conclusion is reversed by Morag’s reversal theorem, when the assumption of fixed revenue is dropped and when we compare taxes creating same reduction in the consumption of the commodity in question. Finally, even in terms of the theory of optimal taxation propounded by Ramsey and others, VAT fulfills the criterion that there are optimal determined and that there should be no taxation of inputs into the production process.

4. Effect on Growth:

One of the important objectives of tax policy in developing economy is to increase the rate of saving and investment to achieve a higher rate of growth. Hence, a rational tax structure should prove helpful increasing the rate of saving in the economy. For raising the rate of savings, it is necessary that the increase in consumption out of the increase in income is less. That is, we have to prevent consumption from rising as much as income rises due to investments in the economy. VAT can be viewed as a tax on articles of mass consumption to meet the costs of common benefits. Also, it can efficiently curb the consumption of luxuries as well as socially undesirable goods. Since capital goods and depreciation on capital are exempt under VAT, this tax does not have any adverse effects on investment and a higher rate on luxuries and socially undesirable commodities works as a suitable device for restraining consumption. Thus, VAT is an ideal tax
to help achieve higher incremental saving ratio and thereby attain higher rate of growth in the economy.

Also, in the long run, it is important to consider especially for a developing country the aspect of inter-temporal efficiency and the pattern of exploitation of the productive resources within the economy. The tax policy may add or admonish the supply of resources through differential treatment in tax policy. People may prefer to work less or more depending on the type of resources like the land, capital forest wealth or mineral resources may all be affected. In the context of long-term growth this has to be kept in mind.

VAT has direct as well as indirect effects on several economic variables. The important aspects, however, are effects on the production process on account of neutrality and efficiency, effects on economic growth via saving and investment. The analysis of the aspects, presented above indicates that it is due to the superiority of VAT in respect of these economic effects that it has come to occupy a place of pride in the fiscal structure of most countries in the world.\footnote{Principles and Practices of VAT, M.C. Purohit, Gayatri Publication}

5. Allocation of Resources:

It relates to the effects brought about by taxation in the allocation of resources. The rate of investment / economic growth and pattern of production in an economy depends upon the allocation of resources. The desired pattern of production can be attained by reallocation the resources. As the VAT is concerned directly with both production and consumption, VAT policy can bring both desired variations in the production and consumption through reallocation of resources e.g. reallocation will take place from high tax production to non-taxed or low tax production.
No doubt, it amounts to the interference of taxation in the consumer’s economic behavior. It is generally believed that interference of taxation in the consumer’s economic behavior should be minimized. Such non-interference is generally referred to as neutrality. It follows from the principle of neutrality that taxes which do not interfere with taxpayer’s economic behavior (i.e., which do not influence him to change his consumption, work or production patterns) are less burdensome that are taxes which call forth such changes. It was argued that by distorting prices a VAT interferes with optimum allocation of resources, because consumer divert some of their purchase from taxed to untaxed or low taxed outlays. If consumer purchases an inferior combination of goods and services as compared to what they would have purchased in the absence of VAT, there is a reduction in consumer’s satisfaction, hence an excess burden. Thus it was felt that a VAT imposes a burden on the economy because consumers are not as well off as they would have been raised by an income tax which does not distort pattern of consumption.

A closely related advantage claimed for VAT because of its expenditure basis is the argument that such a tax restricts the long range rate of capital formation and economic development less than income taxes.

The VAT doesn’t lessen the incentive to save as dose the income tax and its burden is concentrated more heavily upon those persons who will be compelled to reduce consumption rather than savings.

A) CAPITAL FORMATION:

The relative effect of VAT and income taxes on investment (or capital formation) may be examined as follows:

Investment depends upon savings:

Investment occurs when instead of spending the entire purchasing power of the community upon current consumption, some portion of purchasing
power is set aside for future improvement. Such saving is equal to investment under the conditions of full employment. With full employment, at any given moment, consumption may stimulate an increase in investment and a closer approach to full employment.¹²

Now, the VAT (and not the income tax) has the characteristic of distorting the consumer behavior i.e. consumption. Hence, as explained above, if the consumption falls, then the investment (or capital formation) increases under full employment conditions, and vice-versa.

B) INCENTIVE EFFECT:

It is sometime argued that an important advantage of VAT is that they are not directly related to the earning of income and thus unlike individual income taxes; don’t constitute a disincentive to earn money income. The complaints against the income tax on the basis of incentive effects are well known. The income tax, by taking a portion of all earnings from an investment, may restrict the development of new businesses and the expansion of old, in part by lessening the incentives to expand. Incentive to avoid risky investment is particularly strong. If capital gains are taxable as income, on the other hand, the VAT does not affect the earning from new capital equipment directly (assuming that the total demand for goods produced with the equipment is unaffected by the tax) and does not even do so indirectly so long as the earnings are not used for the purchase of taxable goods.

Furthermore, the income tax by taking a portion of all earnings from work may alter the incentives to undertake work, particularly marginal activity, such as overtime work or that of additional member of the family. The effect may be in the direction of increasing the amount of work, if the family strives to maintain its old level of living despite the tax, it may reduce it if the elasticity of

demand for income in terms of work is high. In either case, the tax can be charged with distorting work leisure patterns. On the other hand, the VAT will have no such effect, so long as additional income is desired-for purpose free of VAT, particularly saving.

C) REGULATORY ROLE:

An underdeveloped economy suffers, may a time from paucity of essential economic resources needed for the economic development of the country. When programmers’ of economic development are undertaken by such countries through the process of economic planning, then the scarce economic resources are to be allocated on a priority basis. These scarce resources are to be utilized for socially undesirable or harmful purposes. A system of differential VAT can help to regulate such role of scarce economic resources in a developing economy.

Regulatory in a developing economy

1) Recasting the pattern of production from unessential goods to basic necessities of life; and

2) From consumption goods to investment goods(viz. promoting growth)

For example, a VAT on luxury goods, harmful drugs etc. at a higher rate of tax are bound to increase the price of such goods; and its demand and ultimately the production is likely to be curtailed accordingly. The capital and labour can be beneficially diverted from the production of socially harmful or undesirable goods to the socially most desired productions of bare necessities, especially of lower income groups. Further, tax concessions and exemptions given to the production in backward region can divert scarce economic resources from developed, congested and overcrowded urban areas to rural or semi urban areas. It would help for the overall balanced economic development of different regions and thus the regional imbalances will be removed to a great extent.
6. Equity Considerations:

Almost all authorities on taxation have emphasized the criterion of justice. There is general agreement that taxes should be equitable, but considerably less agreement concerning what exactly would be equitable. The concept of equity depends upon the social, political ideas prevalent and accepted in a community. However, there is widespread agreement today that taxes or at least the tax system as whole should be progressive.

It is claimed that this tax is regressive and hence equitable. This claim is to be analyzed through those principles of distribution of tax burden which are widely accepted and offer general guideline. They are benefit theory and ability to pay doctrine. As a matter of fact we cannot defend VAT on the basis of a rigorous application of benefit principle, but if it is accepted that all the citizens have a responsibility to make some contribution to the government for the benefits received, even though precise measurement of such benefits is impossible, then VAT may be an administratively feasible way of reaching all citizens. As regards ability to pay theory if we just decide as to what constitute the standards to judge the ability, the problem is solved.

Prof. Musgrave\(^\text{13}\) states that the choice of standards for evaluating equity would be based on value judgments. On the other hand, there are economists, who favour expenditure to be the most important basis of taxation.

Consideration of equity necessarily involved a distinction between horizontal and vertical equity. The former means that people in similar circumstances should be treated equally by a tax system and the latter states that people in different circumstances should be treated unequally in such a way that the differences can be reduced. As regards horizontal equity, the VAT is

apparently equitable according to expenditure basis of taxation. Regarding vertical
equity, the VAT, if taken note of isolation, is not equitable. It is rather regressive.
Moreover it discriminates against large families. Food, the major objective of
expense of large poor families, is often included in the base. It is estimated that
about one fifth of the tax base is lost. If food is exempted, on the other hand, the
elimination of food from the base has been shown to covert the VAT from a
regressive tax to one that is fairly proportional. Food exemption materially reduces
not only the repressiveness of the tax but also the absolute burden on the lowest
income groups. There are some objections to the elimination of food from the base,
but if food is included, the problem is how to make the VAT progressive or at least
not highly regressive. The objections that have been advanced to exclude food are:-

1) Other expenditure of low income receivers may be as entitled to exemptions
   as food.

2) The exemption of food is likely to cause some shift in demand from taxed
   commodities to food.

3) Those in the medium and higher income brackets share in the exemption.

   The effect of progression could be obtained by including food in tax
base. To introduce some degree of progression governments can apply higher rates
to a number of commodities regarded as “luxuries” but this result in some
discrimination among consumers on the basis of taste, as food exemption to a
somewhat-loser extent.

   As subsequently discussed various adjustments can be made in the
structure of the VAT to lessen regressivity but only with loss of substantial revenue
at given tax rates, administrative complication and economic distortion.

   Distinct from the questions of regressivity which is a matter of
relative tax burdens is that of the absolute magnitude of taxes on the lowest income
groups, families that may be in a tax structure together with VAT can eliminate or mitigate the regressivity but it cannot eliminate the absolute burden on the said groups.

Inequities arise not only from expenditure patterns but from shifting difficulties as well. It is not likely that VAT is always fully and precisely shifted forward, some may rest in an inequitable fashion on the owners, particularly of smaller business and some may be shifted backward to the owners of specialized factors. It depends upon the relative elasticities of demand and supply of the concerned goods. No generalizations are possible about the relationship of these un-shifted and backward transferred burdens and the income of the persons involved. All that can be said is that the distributional pattern is likely to be very haphazard and unrelated, to any accepted measures of tax capacity.

Apart from the overall tendency to place a relatively heavy burden on persons in the lower income groups, the tax tends to penalize any groups whose circumstances compel them to spend higher percentage of income to attain a given living standard. Essentially the large family has less tax paying ability than the smaller, yet the VAT burden upon it will be greater. Newly married couples spending high percentage of income for consumer durables, person losing property by casualty and forced to replace it, persons who are ill and required to buy expensive medicines are all subjected to that on others with comparable incomes. At the very best, the VAT is relatively crude method of distributing burden among various people—although admissible, it does place a more satisfactory burden than the income tax on persons spending large amounts from accumulated wealth and on those able to escape the income tax.

These criticisms can be advanced against a VAT even if it is levied in the most satisfactory form, is shifted in its entirely, is uniform relative to consumer expenditures on all items (except those deliberately treated in different fashions)
and does not result in factor price changes. But in practice, VAT rarely attains these requirements.

7. Stabilization:

VAT has been advocated as a means of controlling inflation. It is said to be anti-inflationary because it reduces the purchasing power of the consumers. It takes away purchasing power from those also whose marginal propensity to consume is higher. The VAT can be used as a very good tool to reduce the spendable income and thus reducing effective demand in consumption goods industries. This is particularly important because, in developing countries initial investment does not cause secondary increase in investment and the increase in income are directed to increase the demand and consumption goods industries. Thus the VAT would be an anti-inflationary measure.

The above conclusion would hold true only when VAT does not cause a rise in prices. The extent of price increase, however, would depend upon the elasticity of demand upon the elasticity of demand and general production cost conditions.

The VAT is inflationary because it causes rise in prices. Income tax is also inflationary as it inflates wasteful expenditure and may reduce output through misallocation of resources. This conclusion warrants that the inflationary effect of a tax should not be judged in isolation. A tax may be inflationary relative to another tax, but may be anti-inflationary relative to borrowing; probably this would be the case with VAT.

When inflation is caused without rise in taxes its advantages are wholly availed of only by certain groups in society but when it is tax induced inflation, the yield of inflation goes to raise the amounts of the states exchequer. Secondly, tax induced inflation is purposive i.e. it is usually adopted to restrict the consumption of the taxed commodity. Thus if these taxes raise price, the
consumption of the taxed commodity is restricted and the yield of the inflation is received by the government.

The major evil of deficit financing is the inflationary rise of prices. On the other hand, taxation is supposed to be an effective anti-inflationary measure. Increase in the amount of tax revenue decrease the disposable purchasing power with the general public and therefore has anti-inflationary effects. Indirect taxation is a good way of mopping up surplus purchasing power with the general public for it affects a large part of the population than direct taxes. In a country like India, where only a very small percentage of the population pays the personal income tax and other direct taxes, a large majority of the people can be rich only through indirect taxes. Further, indirect taxes have a dampening effect on the demand for various kinds of commodities and therefore contribute to the disinflationary character of taxation that way also. However, some indirect taxes contribute to the inflation, especially when the prices of commodities consumed by the working classes are raised due to such indirect taxes and thus they cause a rise in demand for higher wages. Moreover, the discouragement provided by these taxes to production detracts from their anti-inflationary influence.

Theoretically speaking, in an open economy stabilization objective have three aspects namely:

1) Maintaining a balance between saving and investments so that income are maintained at full employment level
2) Regulating price level
3) Maintaining the balance of payment, and
4) The external value of the domestic currency.

According to the Post-Keynesian function finance approach, these objectives can be realized by a combination of taxation. Other things remaining constant, in deflationary situation taxation will be increased or alternatively the
composition of taxation so organized to respond automatically in the required
direction. This modern approach has emerged as a byproduct of the Post-
Keynesian theory of automatic stability or built in the flexibility. The modern
theory of automatic stabilization concentrates mainly on making taxation built in
flexible because of the difficulty involved in making other policy tools effectively
automatic in their effects.

8. Tax Administration:

Tax administration deals with the administrative cost and efficiency
involved in the collection of taxes. A tax should be such which does not involve a
complex and large machinery for its collection of taxes. According to Adam Smith,
lack of economy results from taxes whose administration costly.14

It is generally argued that direct taxes are irritating to the tax payers
and therefore not easy to collect. Besides, the tax payers have to fill in income tax
and wealth tax returns which are not always easy. The vast majority of people in
India are quite poor and illiterate. Hence, it is too difficult for them to comply with
tax formalities. Judged from this administrative point of view, indirect taxes are
more convenient and easy to collect especially in the content of developing country
like India.15

VAT are easier to administer if the rates are specific, since it requires
minimum paper work and investigation as there is no problem of valuation. Under
the ad valorem method, since rates are expressed as proportion of price, the price
of every grade of articles has to be verified before the imposition of tax.

It is obvious that administration of VAT laws which has to deal with a
large number of and variety of dealers cannot be simple. The administration of
VAT bristles with number of difficulties and hurdles. Needless complexities can be

15 “Indian Public Finance and Financial Administration” By, K.P.M. Sundaram and E. N. Sundaram, Sultan chand
and sons, 1978
removed. An adequate and effective administration is a prerequisite for the successful operation of any tax system.

In a tax like VAT where the incidence in most cases is on the buyer and not the seller, the animus of dealers against tax payment arises largely because of complicated procedures of registration, filing, returns and assessment. Therefore, there is need to facilitate tax compliance by simplifying procedures.

An important reason for emphasizing the simplicity in tax administration is that a tax designed to possess the three characteristics viz. built in elasticity, progressivity and planned non neutrality becomes necessarily complicated. Therefore to put a check on any further growth of complexity it is necessary to keep the process of administration as simple as it is physically and legally possible.

Large number of VAT exemption complicate tax administration and create inconvenience to tax payers. This is because the later have to keep separate records of the taxed and exempted items and the former has to check these records thoroughly.\(^\text{16}\)

\(^{16}\) “Perspective on Tax Designs and tax Reforms” By, G. Thimmaiah Ashish Publishing House, Delhi, 1984
References:
1) www.wikipedia.com
2) www.google.com
3) www.wikipedia.com
   (The VAT Regime under Ethiopian Law with Special Emphasis on Tax Exemption)
4) Purohit Mahesh C., “Value Added Tax” Published by Gayatri Publication, Delhi (2001)
5) Dr. Singh S. P., Shrivastav Mohan Prasad and Gupta Satyendra Kumar
   “Economics of Value Added Tax” Published by APH Publishing Corporation, New Delhi (2008)
6) www.google.com
7) www.wikipedia.com
8) www.google.com