

## POTENTIAL IMPACT OF THE INCREASE IN VAT ON POOR HOUSEHOLDS IN BOTSWANA

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### ABSTRACT

In this article, we examine the potential impact of the increase in Value Added Tax (VAT) on Household Consumption in Botswana. The paper derives motivation from the recent increase in VAT from 10% to 12%. The increase was necessitated by among others the need to find alternative ways of financing the 2010/11 budget deficit in light of the difficult revenue situation faced by Botswana following the global economic meltdown, with real GDP declining by 4.6% in 2009 as a result. Notwithstanding the elasticity of demand and supply, generally an increase in VAT is likely to increase prices of consumption goods and services, as suppliers ordinarily shift the tax to consumers. Given that low income groups have a higher marginal propensity to consume, it is highly likely that poor households will be more affected than other sections of the population. For middle to upper income classes, the effect may be negligible given that they have degrees of freedom to adjust their consumption patterns in response to the increase in VAT.

**Keywords:** Value Added Tax, Household Consumption, Poor Households

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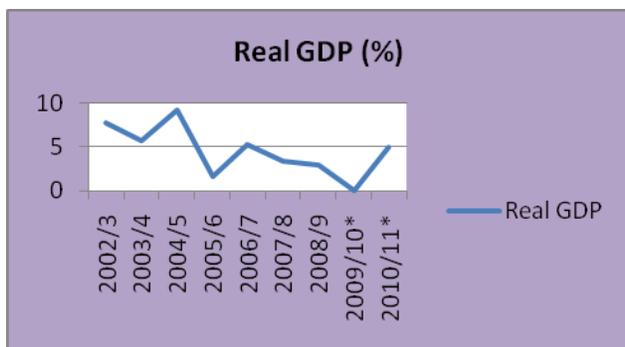
### 1. Introduction

During a period of sluggish growth in household incomes, few expect increases in *consumption taxes*. An increase in a consumption tax essentially reduces real income, hence lower *household consumption*. For low income households, an increase in consumption taxes may particularly have adverse consequences on their ability to purchase nutritious food. In February 2010, the government of Botswana announced, that along with other levies (e.g. service levies) and tariffs (e.g. electricity tariffs), the *Value Added Tax* (VAT) would be increased from 10% to 12% effective April 2010 (Republic of Botswana 2010). The increase in VAT was necessitated by among others the need to find alternative ways of financing development projects in light of the difficult revenue situation following the global economic meltdown which resulted in an unprecedented loss of income for Botswana. Global demand, particularly for luxury goods such as diamonds (largest export revenue earner for Botswana) plunged, as a result Botswana experienced loss of national income. GDP

estimates from the Central Statistics Office (CSO) indicate a decline of 4.6% in real GDP during 2009 (Republic of Botswana 2010). The fall in real output was largely attributed to the decline in real value added by the mining sector (particularly diamonds), which recorded a decline of 31.4% during the same period. **Figure 1** below shows recent trends in the growth rate of real GDP in Botswana. While GDP growth has slowed down in recent years following the erratic performance of the mining sector, the situation has certainly got worse on the back of the global financial and economic crisis. Being the largest source of revenue for government, the decline in the demand for diamonds has had adverse effects on government revenues. There is little cause for optimism as mineral revenues are not expected to return to pre recession levels in real terms until 2012/13. Finding alternative ways of financing development projects is therefore inevitable for government. In this instance, government opted to use the VAT to partly finance some of the 2010/11 fiscal year expenditures (with a budget deficit amounting to 12.2% of

forecast 2010/11 GDP of P99.70 billion), including subsequent years during this difficult phase of tight government revenues. Contrary to popular belief that governments use taxes rather punitively, it is important to note that government uses taxation as one of the several tools of policy as and when necessary to make interventions in the economy and thus influence economic activity and growth, hence the increase in VAT. VAT has a worldwide reputation of being a money machine and in developing countries this has proved to be the case.

**Figure 1**



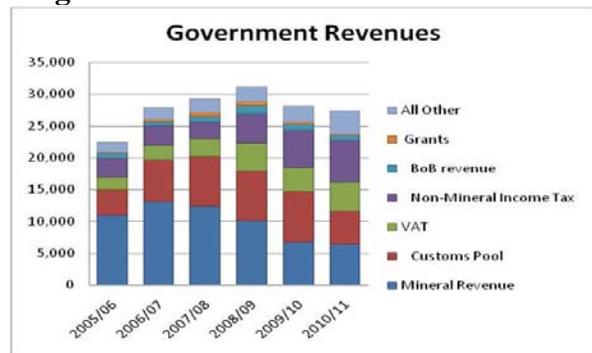
Source: Ministry of Finance and Development Planning

Note: (\*) – projected

**Figure 2** above shows the composition of government revenues in recent years in Botswana. It is perceptible that non-mineral income taxes, along with customs pool revenue and VAT have been growing in importance as sources of revenue for government in recent years. In the same manner as all other taxes, VAT is expected to play a more significant role in the financing of development expenditures. It is critical however to consider how this will affect the welfare of ordinary citizens, hence motivation for this paper in which we *examine the potential impact of the increase in VAT on poor households*. It is important to note that this increase also comes at a time when there has generally been sluggish growth in private and public sector employees' incomes, a result of the

Keen (2007) argues that this simple indirect tax has proved itself as a money making machine with over 130 countries having adopted it as of 2007. In South Africa for instance, VAT was introduced in October 1991 at a rate of 10%, but was later increased to 14% in 1993 (Black *et al* 2005). In 1992/93 VAT collections in South Africa amounted to R17, 5 billion or approximately 21.7% of total net tax revenue. In 2004/05 the revised budgetary estimate amounted to R95, 5 billion or approximately 28.8% of total tax revenue (ibid).

**Figure 2**



Source: Ministry of Finance and Development Planning

recession among other things. For the last two years (including the 2010/11 fiscal year), public servants have not been receiving cost of living salary adjustments as a result of the tight budgetary outlook (Republic of Botswana 2010).

## 2. Value added tax: what is it?

VAT is a tax on consumption of goods and services. VAT was first introduced in Botswana in July 2002 to replace the sales tax. The decision to replace the sales tax with VAT was influenced by the fact that VAT is applied on a broader range of goods and services (including those that were exempted from sales tax), so it was meant to broaden government's tax revenue base. Currently, VAT is charged at a rate of 10% on all goods and services. Goods that are subject to VAT include among others food,

household appliances, electricity, water, land and buildings, computers, stationery etc. Services subject to VAT include commercial services, electricians, plumbers, builders and professional services such as lawyers, doctors, accountants. That a broad based VAT with no exemptions or zero rating is regressive is beyond doubt. A regressive tax is one that takes a larger share of income from low income earners. To reduce the regressive impact of VAT, some supplies are usually exempted or zero rated. Zero rated supplies are taxable, but the rate of VAT charged on these goods and services is 0%. These include petrol and diesel, but more significantly for most households in Botswana, maize meal and sorghum for human consumption. Exempt supplies are those that are not subject to VAT at all. These include education services, financial services, and services by a public medical facilities etc. The advantages and disadvantages of VAT remain controversial at the very least. VAT supporters argue that in addition to being a money machine for government, it helps businesses to compete internationally since it does not affect export prices and encourages saving that could lead to capital formation in the long run (Ghafoor 2005). They further argue that since VAT has great potential to generate a tremendous amount of revenue with very low rate, it could help in addressing the budget deficit and balance of payment problems. More optimistic supporters even argue that VAT can be considered as a tool for reducing the amount of unregistered economy in a country (ibid).

In contrast, opponents regard VAT as money making machine that could possibly lead to increase in public spending and consequently large public sector (ibid). They further argue that VAT is a hidden tax therefore its rate could be raised more easily than other taxes, which would raise consumer prices immediately and

consequently higher inflation. The inflationary impact of VAT could appear in the form of slow economic growth or even a recession and a lower real value of existing savings. It is also argued that since low income persons consume a higher proportion of their income than high income persons, VAT should be regarded as regressive. Metcalf (1997) argued that whether the tax is viewed using the annual or lifetime income basis, households will still be harmed by the regressive nature of the tax. How the incidence of taxation is shared between consumers and suppliers is actually much more complex, and it depends on demand patterns, income distribution, market structures and so on. Consider a simple analytical problem. Suppose an item sells for P1.00 before the imposition of the tax. If the seller simply charges the same price as before and adds a 15% VAT, resulting in a final selling price of P1.15, then the consumer pays the tax because it has been shifted completely forward to him by the seller. Alternatively, the seller may lower the price to P0.87 after a 15% VAT is imposed, yielding a final selling price of P1.00. In this case the seller himself would pay the tax. Or the seller may lower his price partially thereby shifting part of the tax forward to the consumer and bearing the remainder of the tax himself. This seems simple and straight forward, but what happens in reality is much more complex and depends on the price elasticity of supply and demand i.e. the responsiveness of sellers and consumers to price changes. Such intricacies are however beyond the scope of the current analysis. However, this paper is premised on arguments by previous studies on the subject (Viren 2007, Fullerton & Metcalf 2002, Besley & Rosen 1998 etc) which have shown that more than 50% of consumption taxes are shifted to prices. Besley & Rosen (1998) observed that in

several cases, prices actually increase more than taxes.

### **3. Likely impact of VAT increase on poor households**

In this section, we consider the likely impact of the increase in VAT on poor households in Botswana. The discussion is however preceded by a brief description of the average incomes and expenditures of households in Botswana. Estimates of these incomes and expenditures were extracted from the Botswana Household Income and Expenditure Survey (HIES), 2002/03, conducted by the Central Statistics Office of Botswana. The HIES shows that for the two comparative periods 1993/94 and 2002/03, cash earnings from employment accounted for most of household incomes. In cities and towns, cash earnings from employment contributed 75.9% towards household gross income, followed by unearned cash income at about 8.1%. For urban villages and rural areas, cash earnings from employment accounted for 65% and 43.9% respectively of household gross income. In rural areas, the combined contributions of unearned cash income, own produce consumed, gifts received, aid and school meals accounted for about 45.4% of household gross income. The HIES also estimated (at the national level) the number of households with monthly disposable income less than P200.00 to be about 19,158, the majority of which (7,057) were “one person” household. In cities/towns, urban villages and rural

areas, the survey estimated 2,541, 4534 and 12,084 households respectively earned less than P200.00 a month. At the national level, the HIES estimated the number of persons living below US\$1.00 to have increased from 19.9% in 1993/94 to 23.4% in 2002/03 (see **Table 1** below). The data also shows that the number of poor people is higher in rural areas compared to cities/towns and urban villages. Similar to the national level of poverty, the proportion of poor people in rural areas increased between the two comparative periods. The estimates however show that the proportion of people living below US\$1.00 in cities/towns declined from 8.1% in 1993/94 to 5.1% in 2002/03. The distribution of income among households has important implications for consumption. **Tables 2-4** below show the expenditure/income aggregates by expenditure groups for cities/towns, urban villages and rural areas respectively. The data show that for low income groups generally, food constitutes a larger percentage of their total consumption expenditure. For households earning less than P400.00 in cities/towns, expenditure on food constitutes about 30% of total consumption; while for households earning between P400.00 and P600.00, expenditure on food constitutes about 43% of total consumption. For high income earners (P8000+), consumption expenditure constitutes about 14% of total consumption.

**Table 1: Proportion of Persons Living Below One Dollar a Day**

Region	# Persons below US\$1/day	% of persons below US\$1/day
<b>2002/03 HIES</b>		
Cities/Towns	18,699	5.1
Urban Villages	105,118	19.3
Rural Areas	258,915	36.1
<b>National</b>	<b>382,733</b>	<b>23.4</b>
<b>1993/94 HIES</b>		
Cities/Towns	25,814	8.1
Urban Villages	56,389	17.1
Rural Areas	186,095	26.4
<b>National</b>	<b>268,298</b>	<b>19.9</b>

Source: HIES 2002/03

**Table 2: Expenditure/Income Aggregates by Expenditure Group (Cities/Towns)**

	<400	400-600	600-1000	1000-2000	2000-4000	4000-6000	6000-8000	8000-10000	10000+
<b>Gross Cash Income</b>	158.55	441.09	718.35	1323.15	2653.47	4623.08	6605.33	8496.05	18398.33
<b>Disposable Cash income</b>	148.69	415.43	667.96	1213.40	2384.38	4043.52	5837.94	7455.62	16194.73
<b>Gross Income in Kind</b>	52.24	51.98	63.76	109.94	201.37	219.01	264.60	380.89	510.69
<b>Gross Income</b>	210.79	493.07	782.11	1433.09	2854.84	4842.09	6869.92	8876.94	18909.02
<b>Disposable Income</b>	197.46	463.59	723.92	1314.19	2568.92	4247.74	6074.52	7826.83	16673.39
<b>Total Consumption (Food)</b>	314.45	371.79	396.84	512.04	728.01	899.98	992.35	1116.11	1511.28
<b>Total Consumption (Other)</b>	717.95	496.49	629.13	1005.60	2020.03	3694.58	4172.84	6486.26	8435.10
<b>Total Consumption (Unspecified)</b>	4.52	4.40	9.62	15.73	24.67	14.01	82.19	167.85	142.90
<b>Total Consumption</b>	1036.93	872.69	1035.59	1533.36	2772.71	4608.58	5247.38	7770.23	10089.27
<b>Food Consumption/Total Consumption (%)</b>	30.33	42.60	38.32	33.39	26.26	19.53	18.91	14.36	14.98

Source: HIES 2002/03

The same consumption pattern also obtains in urban villages and rural villages (see **Tables 3** and **4**). Expenditure on food constitutes a larger percentage of total consumption for low income groups compared to high income groups in both urban villages and rural areas. As indicated earlier, low income groups generally have a higher marginal propensity to consume compared to high income groups. This consumption pattern also supports this hypothesis.

Interestingly we observe that the income classifications for the three regional groupings (**Tables 2- 4**) differ considerably. This may indeed foster the assertion that the rural areas are relatively poorer than the other two areas with the cities/towns being better off than the other two. This is more so given that the greatest proportion of the population resides in rural areas. The income classification is therefore more likely a dictate of income rather than residing populations. Within low income groups across the geographical divide, such as at income levels of P400.00 or less, we observe that 42.60%, 48.39%-48.44% and 54.43%- 63.90% of incomes are spent on food in cities/towns, urban villages and rural villages respectively. That the poor in rural villages followed by those in urban villages spend more on food than those in cities may reflect differences in living styles or the disparities in incomes within brackets/classifications across the three geographic areas. It could also be that the prices for food differ across these areas with those in rural areas being higher than in other areas. This is a more plausible scenario given that food in rural areas is sourced primarily from the other two areas and the

costs are likely to be higher because of the transportation costs.

That low income groups have a relatively higher propensity to consume has important implications on households in light of the increase in VAT. This analysis proceeds on the assumption that producers shift the increase in VAT to consumers. By implication, demand and supply elasticity of taxable goods and services are inconsequential in this analysis. The analysis also proceeds on the premise that given that VAT is a consumption tax, it will impact more on low income groups than high income groups, given their high marginal propensity to consume. It seems reasonable to assume also that high income earners have degrees of freedom to make adjustments in their consumption patterns in response to the increase in VAT. Basic intuition would also suggest that poor households will not have that luxury, hence will be affected adversely by the increase in VAT. Given that the increase in VAT is an anticipated shock, it may not necessarily impact consumption, particularly of the high income households significantly. For poor households however, this may not be the case since they were already struggling even before the increase in VAT. Given that VAT is regressive, it is highly likely to adversely affect the poor. It is possible also for households who are lying on or just above the PDL to fall below, consequently increasing the proportion of people living below the PDL. It is important however to acknowledge that in an effort to deal with the regressive nature of the tax, government has zero rated some of the basic food stuffs such as sorghum and maize meal, but these alone do not constitute a decent nutritious meal for these households.

**Table 3: Expenditure/Income Aggregates by Expenditure Group (Urban Villages)**

	<200	200-400	400-600	600-1000	1000-1500	1500-2000	2000-3000	3000-4000	4000+
<b>Gross Cash Income</b>	57.20	205.68	354.15	616.31	963.01	1461.29	2125.05	3037.13	7179.91
<b>Disposable Cash income</b>	56.32	199.97	336.42	583.86	912.08	1377.83	1958.81	2766.81	6510.48
<b>Gross Income in Kind</b>	47.38	98.46	137.47	170.80	238.64	266.51	314.27	396.13	507.16
<b>Gross Income</b>	104.58	304.14	491.62	787.11	1201.65	1727.80	2439.32	3433.26	687.07
<b>Disposable Income</b>	102.21	295.36	471.16	749.60	1141.75	1621.28	2249.54	3144.12	6983.67
<b>Total Consumption (Food)</b>	241.71	302.65	359.72	455.30	632.65	694.25	764.79	792.68	1132.51
<b>Total Consumption (Other)</b>	255.22	310.32	308.04	652.23	767.11	1144.79	1610.64	2264.93	4404.70
<b>Total Consumption (Unspecified)</b>	2.59	11.79	11.20	22.29	33.25	30.47	51.64	35.08	72.55
<b>Total Consumption</b>	499.52	624.76	678.95	1129.83	1433.02	1869.51	2427.07	3092.68	5609.76
<b>Food Consumption/Total</b>	48.39	48.44	52.95	40.30	44.15	37.14	31.51	25.63	20.19

Source: HIES 2002/03

**Table 4: Expenditure/Income Aggregates by Expenditure Group (Rural Areas)**

	<100	100-200	200-400	400-600	600-800	800-1000	1000-1500	1500-2000	2000+
<b>Gross Cash Income</b>	16.00	69.10	133.68	239.20	338.07	461.65	662.24	1190.95	3895.49
<b>Disposable Cash income</b>	15.70	67.54	128.64	230.29	322.80	442.45	626.81	1133.69	3530.95
<b>Gross Income in Kind</b>	32.35	80.71	171.13	253.07	354.65	440.80	553.47	556.61	775.37
<b>Gross Income</b>	48.35	149.80	304.81	492.27	692.72	902.45	1215.71	1747.55	4670.86
<b>Disposable Income</b>	46.81	146.15	297.47	478.42	666.29	863.62	1155.60	1667.43	4259.12
<b>Total Consumption (Food)</b>	135.99	235.74	226.80	285.09	391.46	520.54	538.47	660.33	1031.02
<b>Total Consumption (Other)</b>	78.54	126.58	173.43	279.41	322.12	405.57	506.21	938.63	2373.35
<b>Total Consumption (Unspecified)</b>	0.72	6.62	16.44	17.31	35.58	35.18	68.78	36.49	60.83
<b>Total Consumption</b>	215.24	368.94	416.66	581.81	749.16	961.30	1113.45	1635.45	3465.20
<b>Food Consumption/Total</b>	63.18	63.90	54.43	49.00	52.25	54.15	48.36	40.38	29.75

Source: HIES 2002/03

Although this is subject to empirical investigation, it should also be noted that often times when government announces cost of living adjustments for public servants, the tendency for some suppliers is to move swiftly to increase their prices even before the salary adjustment are effected. By the time the adjustments are effected prices have increased more than they should have. It is possible even in this scenario for suppliers to increase their prices in anticipation of the increase in VAT, such that prices may actually increase more than they should. It is also very likely that even businesses that do not pay VAT to government would take advantage of the situation and increase their prices as well. Worth noting is that, along with the increase in VAT, government also increased the threshold of VAT from P250, 000 to P500, 000. Most small enterprises will not be required to pay VAT, but may still be tempted to increase their prices to take advantage of the situation, although they may still argue that they pay more for inputs as a result of the increase in VAT. The major losers of course would be the poor households who can do little to respond to the increase in prices.

#### 4. Conclusion

The impact of VAT increase is most likely to have a profound impact on the poor households, with the rural poor being the most affected, followed by the urban village poor and lastly the cities/towns dwelling poor. Given that the majority of the poor are in rural areas, followed by urban villages and lastly cities/towns, this increase will be quite adverse on the consumption levels of the poor households. That we observe a higher percentage of incomes of the rural poor spent on food relative to the poor in the other two areas, serves to illustrate how VAT will significantly affect the rural poor, particularly when retailers increase prices beyond that which VAT increase dictates.

The tendency of retailers to increase prices beyond the VAT increase will most likely aggravate this adversity. While it is important for Botswana to continue with its liberal policy with regard to price regulation, it is also imperative that government machinery monitors prices to ensure that VAT increase does not lead to the exploitation of consumers. This should help ease the pressure on household incomes, especially the poor.

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