POLICY BRIEF

Issue No. 48

AUGUST 2014

Is VAT on Agricultural Inputs Cost Effective?

Swaibu Mbowa, Steven Were Omamo, Joseph Rusike

Executive Statement

This policy brief summarizes the results of preliminary analysis to quantify the potential farm-level and aggregate impacts of the proposed imposition of 18% value added tax (VAT) on key agricultural inputs in Uganda. Results reveal that the potential costs of the proposed imposition of VAT on agricultural inputs appear to far outweigh the potential benefits. The impact of VAT imposition on maize seed and fertilizer is estimated to contribute total tax revenues of $10.29 million compared to estimated total losses to maize farmers of $20.93 million. This implies a benefit-cost ratio (BCR) of 0.49. This ratio of benefits to costs is well below acceptable levels; and if other commodities, inputs, and other impact channels (e.g., the "output price effect")were considered, the BCR could be even much lower. In conclusion, the proposed measure undermines basic agricultural and broader economic growth and development objectives; and the ratio of benefits to costs renders the proposed measure unjustifiable based on economic arguments. Therefore, the proposed measure should be reconsidered; and alternative sources of revenue sought.

Background

In Uganda there is pressure to reduce the gap between government expenditure and revenue collection because of increasing government spending and declining donor aid. To reduce the gap, the Government is removing tax exemptions in order to increase the collection of revenue through taxes. Like most governments around the world, the Ugandan Government uses value added tax (VAT) to collect tax revenue because VAT is effective for revenue mobilization. This is because VAT is broad-based and improves tax compliance and enforcement and revenue collection. In the past, Government had maintained a zero rated tax on agricultural inputs such as certified seeds, and fertilizers. The ultimate goal was to promote the widespread adoption and use of yield enhancing inputs for increased agricultural productivity and food security. Consequently agricultural input supply firms imposed no VAT charges on farmers' purchases of these inputs. Following the budget speech of 2014/2015, Government removed the zero rating on supply of these agricultural inputs and introduced the standard taxable rate of 18 percent VAT. For example a 50kg bag of NPK fertililizer that initially cost Ugx 125,000 would now cost Ugx 147,500 after the taxes.

Objectives and Methodology

This brief assesses the possible effects of imposing the 18% VAT on fertilizer and maize seed - by examining its potential impacts on farm income. In addition, further analysis is undertaken to show the aggregate outcome; focusing on the relative sizes of potential tax revenues generated from imposition of VAT on key agricultural inputs versus potential income losses to farmers using

a BCR analysis. Computation of farm-level impact is based on simple maize enterprise budgets. The aggregate impacts are extrapolated directly from the farm-level results. The resulting estimates of farm-level and aggregate impacts should therefore be interpreted as indicative, not definitive. The maize enterprise is used because maize is grown by about 3 million farming households (as a cash and staple food crop).

Data Sources and Assumptions

No new surveys were undertaken. Rather, several sources of published data were accessed to develop the required data and related information base. Table 1 below summarizes the data sources and key assumptions driving the analysis.

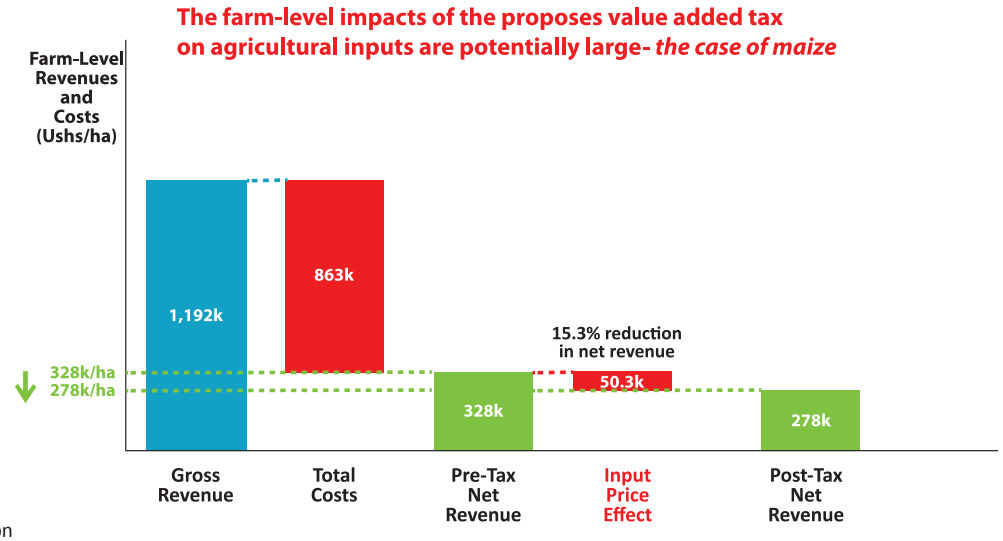
Table 1: Data Sources and Key Assumptions

Analytical Area	Source	Key Adjustments	Key Assumption(s)
Smallholder farmer production budgets for maize and beans	Sserunkuuma , D. 2005. "Local and Regional Food Procurement in Uganda: An Analytical Review." A report prepared for the World Food Program.	• Input and output prices updated to 2014 levels	• Input and output quantity relationships assumed to be the same in 2014 as in 2005 • Labor use rates assumed to be the same in 2014 as in 2005
Maize and beans production levels	FAOSTAT		• FAO figures are consistent with official production estimates
Fertilizer sales	the Uganda Bureau of Statistics, 2013. 2013 Statistical Abstract	National average price of DAP and Nitrogen fertilizers	• Officially recorded fertilizer imports for 2012 are expected sales in 2013
Fertilizer prices	Fertilizer and seed companies in Uganda	Compound and Nitrogen fertilizers substitutes	• Current market prices will increase with full effect of VAT
Maize seed sales	Rodeyns, N. 2014. Seed industry in Uganda, Trends, Opportunities and Challenges, with a personal touch; success, past, future, challenges, …. Presented at The "10K Club" Seed Convening held at Lake Victoria Serena Resort, Kampala, Uganda, July 8-11, 2014.	Seed of hybrid and open-pollinated varieties substitutes	• Estimates of seed industry production for 2013 is equal to sales
Maize seed prices	Fertilizer and seed companies in Uganda	National average price of hybrid and opv maize seed	Current market prices will increase with full effect of VAT
Impact of VAT on Agricultural Inputs	Tegemeo Institute Study (2013). "Potential effects of the imposition of value added tax on agricultural inputs and sifted maize meal"		
Analysis of income along maize Value Chain	Mbowa Swaibu et al (2013)		

Source: authors computation

Findings

Figure 1



Source: authors computation

Figure 2

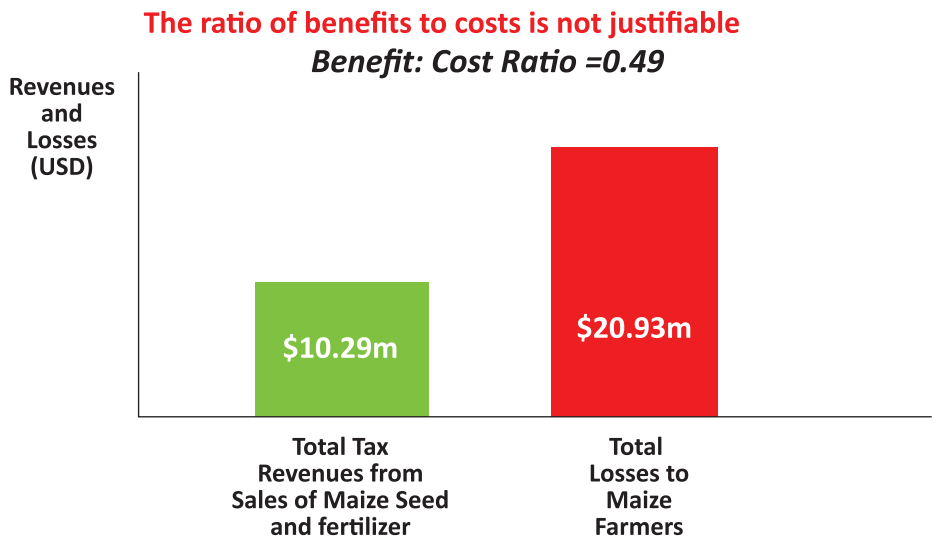
Likely Tax Revenues Are Small Compared to Losses-Example of Maize Seed and Fertilizer

Estimated Tax Revenues				
	Quantity sold in 2013 (mt)i	Unit Price in 2013 (USD)	Total Value in 2013 (USD)	Estimated VAT revenues at 18% (USD)
Maize Seed	12,000	3,000	24,000,000	4,320,000
Fertilizer	36,845	900	33,160,500	5,968,890
Total Estimated Tax Revenues @ 18 percent of sales value (USD)				10,288,890

Estimated Losses to Maize Farmers Using Improved Seed and Fertilizer	
Aggregate impact of redution in maize profitability (USD)	20,926,800

Source: authors computation

Figure 3



Recent Policy Briefs

"Promoting self-employment through entrepreneurship financing: Lessons from the Uganda Youth Venture Capital Fund."
No. 47 June 2014
Gemma Ahaibwe, Ibrahim Kasirye and Mildred Barungi

"To Farm, or Not to Farm: Challenges and Prospects of Youth Employment in Agriculture in Uganda"
No. 46 June 2014
Gemma Ahaibwe, Swaibu Mbowa and Musa Lwanga Mayanja

"Robusta Coffee Nursery Seedling Multiplication Program in Mid-Northern Uganda: Opportunities and Challenges"
No. 45 May 2014
Mbowa Swaibu, Odokonyero Tonny and Munyambonera Ezra

About the Authors

Swaibu Mbowa is a Senior Research Fellow at the Economic Policy Research Centre, Kampala, Uganda.

Steven Were Omamo Director of Policy and Advocacy AGRA Nairobi Kenya

Joseph Rusike Programme Officer, Policy and Advocacy AGRA Nairobi Kenya

The figures above illustrate very clearly that the potential costs of the proposed imposition of VAT on agricultural inputs appear to far outweigh the potential benefits. Focusing on the maize sub-sector and considering the impact of VAT imposition on maize seed and fertilizer, estimated total tax revenues amount to $10.29 million compared to estimated total losses to maize farmers of $20.93 million as a result of VAT-induced higher costs of maize seed and fertilizer– implying a BCR of 0.49. This ratio of benefits to costs is well below acceptable levels (a BCR greater than 1 is acceptable). If other commodities, other inputs, and other impact channels were considered (e.g., the "output price effect"), the BCR could be even more negative.

Summary

Findings

- The potential costs of the proposed imposition of VAT on agricultural inputs appear to far outweigh the potential benefits;
- Focusing on the maize sub-sector and considering the impact of VAT imposition on maize seed and fertilizer, estimated total tax revenues amount to $10.29 million compared to estimated total losses to maize farmers of $20.93 million as a result of VAT-induced higher costs of maize seed and fertilizer– implying a benefit: cost ratio of 0.49;
- This ratio of benefits to costs is well below acceptable levels; and
- If other commodities, other inputs, and other impact channels were considered (e.g., the "output price effect"), the benefit: cost ratio could be even more negative.

Conclusions

- The proposed measure undermines basic agricultural and broader economic growth and development objectives; and
- The ratio of benefits to costs renders the proposed measure unjustifiable based on economic arguments.

Recommendations

- The proposed measure should be reconsidered; and
- Alternative sources of revenues should be sought.

Contact Person: Swaibu Mbowa, PhD, Senior Research Fellow, EPRC, Tel: 256-41-4541023/24. Mob: 256-773-196544. E-mail: smbowa@eprc.or.ug. Skype: swaibu.mbowa

The Economic Policy Research Centre (EPRC) is an autonomous not-for-profit organization established in 1993 with a mission to foster sustainable growth and development in Uganda through advancement of research –based knowledge and policy analysis.

Learn more at:
www. eprc.or.ug
TWITTER: @EPRC_official
www.facebook.com/EPRCUganda
eprcuganda.blogspot.com

Address:
Economic Policy Research Centre
Plot 51, Pool Road, Makerere University Campus
P.O. Box 7841, Kampala, Uganda
Tel: +256-414-541023/4
Fax: +256-414-541022
Email: eprc@eprc.or.ug