

**The Effect of Trade and Exchange Rate Policies on Price
Incentives for the Production of Coffee, Cotton and Tea in
Uganda: an Omega Free-Trade Equilibrium Approach**

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Dedication

To

Anyu and Apuka,
Patricia, Patrick and Jessica, and
Willy, Anna, Albert and *Ösci,*

with love.

Abstract

The objective of this study is to determine the extent to which the trade and exchange rate policies in Uganda have affected price incentives for the production of coffee, cotton and tea. These crops were the major agricultural exports from Uganda for the period 1970-92, and were a major source of foreign exchange, income and employment. Both the direct effects of trade and agricultural pricing policy interventions (such as the coffee export taxes) and the indirect effects of economy-wide trade and macroeconomic policies (which influence the real exchange rate) on the agricultural price incentives, are examined.

The omega free-trade equilibrium approach is used to determine the incidence of protection, measured by an incidence parameter. The extent to which policy interventions in other sectors, such as import tariffs to protect the industrial sector, have indirectly affected agricultural price incentives is then assessed. The incidence parameter is also used to calculate the equilibrium real exchange rate that would prevail in a free-trade environment with no government interventions. Direct, indirect and total nominal rates of protection measure the policy intervention effects. Direct nominal rates of protection are measured by comparing actual domestic and border prices. The indirect nominal rates of protection are calculated using the equilibrium real exchange rate and actual agricultural and non-agricultural prices. The direct and indirect rates together make up the total nominal rate of protection.

From the analysis, the incidence parameter showed that about 63 per cent of the burden of import tariffs is borne by the exportable sector. This implicit taxation is in addition to the direct export taxes already levied by the government. The total nominal rates of protection showed that, on the whole, all three crops had been taxed. The indirect effects of economy-wide macroeconomic and trade policies in Uganda were found to be much lower than the direct effects of trade and agricultural price policies.

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List of Abbreviations and Acronyms

BOU	= Bank of Uganda
CMB	= Coffee Marketing Board
CPI_T^w	= trade-weighted consumer price index
CPI_{Ug}	= Consumer Price Index of Uganda
CSE	= consumer subsidy equivalent
E	= nominal exchange rate
EER_m	= nominal effective exchange rate for import
EER_x	= nominal effective exchange rate for export
EPC	= effective protection coefficient
ERP_d	= direct effective rate of protection
ERP_t	= total effective rate of protection
ESC	= effective subsidy coefficient
GDP	= Gross Domestic Product
IFS	= International Financial Statistics, Yearbooks
LMB	= Lint Marketing Board
$\ln \text{trpol}$	= natural logarithm of the trade policy variable
$\ln \text{tt}$	= natural logarithm of external terms of trade variable
MFEP	= Ministry of Finance and Economic Planning
NPC	= nominal protection coefficient
NRP_d	= direct nominal rate of protection
NRP_{id}	= indirect nominal rate of protection
NRP_t	= total nominal rate of protection
OGL	= Open General Licensing System
$PGDP_{Ug}$	= gross domestic product deflator for Uganda
P_h	= domestic price index of home goods
P_i	= border price of a commodity i at the farmgate
P_i^*	= border price of a commodity i valued at the equilibrium real exchange rate
P_i''	= domestic price of a commodity valued at the official exchange rate
P_m	= domestic price index of importables
P_{na}	= domestic price index of non-agricultural goods
P_{na}^*	= domestic price index of non-agricultural goods valued at the equilibrium real exchange rate.
P_x	= domestic price index of exportables

P_m^w	= world price index of importables
P_x^w	= world price index of exportables
P_T^w	= world price index of tradeables
PSE	= producer subsidy equivalent
Raid	= real capital inflows to Uganda
RER	= real exchange rate
RER_m	= real effective exchange rate for imports
RER_x	= real effective exchange rate for exports
RER_x^E	= equilibrium real exchange rate index
Rgovt	= real government expenditure (Uganda)
RPR	= relative price ratio
SDR	= Special Drawing Right
SIP	= Special Import Programme
t_x	= implicit export tax rate
t_m	= implicit import tariff rate
US\$	= United States dollar
Ushs	= Uganda shilling(s)
UTA	= Uganda Tea Authority
UTGC	= Uganda Tea Growers Cooperation
WPI_T^w	= trade-weighted wholesale price index of Uganda's major trading partners