

Model: WDST Equation terms, first equation matrix row, and sample equation for the banked equation group - WLDevar

WLDtx world base export weighted average export tax

export tax	world avg. tx
tx	0001+!bx)
FOODA	-

$$\text{constant} + \text{SUMPRODUCT}(\text{USAbx}|:\text{ROWbx}|, \text{USAtx}|:\text{ROWtx}|) / (0.000001 + !bx|)$$

WLDtm world base import weighted average import tax

import tax	world avg. tm
tm	0001+!bm)
FOODA	-

$$\text{constant} + \text{SUMPRODUCT}(\text{USAbm}|:\text{ROWbm}|, \text{USAtm}|:\text{ROWtm}|) / (0.000001 + !bm|)$$

WLDxs sum of country/region exports

world xs supply	world exports
xs	s :ROWxs)
FOODA	-

$$\text{constant} + \text{SUM}(\text{USAx}|:\text{ROWxs}|)$$

WLDmd sum of country/region imports

world md demand	world imports
md	:ROWmd)
FOODA	-

$$\text{constant} + \text{SUM}(\text{USAm}|:\text{ROWmd}|)$$

WLDnt sum of country/region net trade

world trade	world net trade
nt	t :ROWnt)
FOODA	-

$$\text{constant} + \text{SUM}(\text{USAn}|:\text{ROWnt}|)$$

Most of these equations are calculations done for information only, they do not impact the model, they are indicators within the model as opposed to indicators added to model solutions from the indicator workbook.

This is the key equation for equilibrium for a product in the world market. World prices are the "change" variable used to drive this "target" value to 0 when a model is solved.

WLDcp world base import weighted competitiveness index

wld. compet.	im. wtd. cp
cp	(0.0001+!bm)
FOODA	-

constant +SUMPRODUCT(USAbm|:ROWbm|,USAcpl:ROWcp|)/(0.000001+!bm|)

WLDbx sum of country/region base exports

base exports	sum wld exports
bx	(USAbx :ROWbx)
FOODA	-

constant +SUM(USAbx|:ROWbx|)

WLDbm sum of country/region base imports

base imports	sum wld imports
bm	(USAbm :ROWbm)
FOODA	-

constant +SUM(USAbm|:ROWbm|)

WLDbi world base import weighted average import price

base im. price	world avg. bi
bi	(0.0001+!bm)
FOODA	-

constant +SUMPRODUCT(USAbm|:ROWbm|,USAbi|:ROWbi|)/(0.000001+!bm|)

WLDbt world base import weighted average import tariff

base im. tariff	world avg. bt
bt	(0.0001+!bm)
FOODA	-

constant +SUMPRODUCT(USAbm|:ROWbm|,USAbt|:ROWbt|)/(0.000001+!bm|)

WLDcfl

world net trade	sum net trade
cfl	cfl:ROWcfl)
cfl	-

constant +SUM(USAcf:ROWcfl)

WLDbop world total bop

bal. of payments	world bop
bop	:ROWbop)
bop	-

constant +SUM(USAbop:ROWbop)

WLDxrt world trade (exports + imports) weighted exchange rate

av. exch. rate	average xrt
xrt	rt:ROWxrt)
xrt	-

constant +AVERAGE(USAxrt:ROWxrt)