

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

EUUNpx export price (world prices with or without ftm trade premium and with export tax)

export price	non-fta or fta mem.	fta premium	export tax	world p. trans. e.	exchange rate
px	$*((1-!ftm)$	$(1+FTAftf))$	$*(1-!tx)$	$WLDpx ^{\#}$	$/!xrt$
ANIML	-	-	-	1.0	-

ftm and cmm variables are switches which move countries into free trade agreements and common markets, respectively.

constant $*((1-!ftm) + !ftm*(1+FTAftf)) * (1-!tx|) * (WLDpx|^{\#}) / !xrt$

EUUNpm import price (with own, ftm, or cmm tariff)

import price	non comp. tax	existing tariff	fta tariff	cmk tariff	world p. trans. e.	exchange rate
pm	$*!th $	$(n)*(1+!tm)$	$(TAtf , !tm))$	$(+CMKtc))$	$WLDpx ^{\#}$	$/!xrt$
ANIML	-	-	-	-	1.0	-

th will be > 1 if a sector is specified to be non competitive. If it equals 2, the import price will be doubled.

constant $*!th| * ((1-!ftm-!cmm)*(1+!tm|) + !ftm*(1+MIN(FTAftf|, !tm|)) + !cmm*(1+CMKtc|)) * (WLDpx|^{\#}) / !xrt$

EUUNxs exports

export supply	supply shift term	supply elast.
xs	$*!fx $	$*!px ^{\#}$
ANIML	-	0.75

constant $*!fx| * !px|^{\#}$

EUUNmd imports

import demand	demand shift term	demand elast.
md	$*!fm $	$*!pm ^{\#}$
ANIML	-	-0.40

constant $*!fm| * !pm|^{\#}$

EUUNnt net trade = xs - md

net trade	export supply	import demand
nt	$+!xs $	$-!md $
ANIML	-	-

constant $+!xs| - !md|$

EUUNbop balance of payments

balance payments	net trade at wld p.	capital flow
bop	!ntARTWK))	+!cfl)
bop	-	-

constant +(SUMPRODUCT((WLDpxANIML:WLDpxARTWK),(!ntANIML:!ntARTWK)) +!cfl)

EUUNzz

tariff of FTA m.	FTA m. tar. or '9'
zz	+(1-!ftm)*9
ANIML	-

zz is used as a convenient way of finding the minimum FTA member tariff

constant +!ftm*!tm| + (1-!ftm)*9

EUUNth tariff equivalent of non-competitive demand

nc tariff equiv.	demand elast.	tariff reduction
th	!cp/ABS(#))	0001+!bt))
ANIML	-0.40	-

th will be the amount a non-competitive importer will be able to charge above the tariff inclusive import price (up to a maximum of 2)

constant +((!cp/ABS(#)) *(!tm|/(0.000001+!bt))

EUUNfx supply shift in response to changed export prices

supply shifter	shift share	supply elast.	changed exp.price	ON (1) OFF (0)
fx	+#	*#	*(!px -1)	*#
ANIML	0.7	0.75	-	0.000001

constant +# *# *(!px|-1) *#