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(fpaseban49@gmail.com)

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(Dervis et al., 1982)

(De Melo and Tarr, 1992)

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P*

P

Z

$Z(P) = P \times Z(P)$

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(Cororaton, 2000)

(Ballingal, 2001)

(Wang, 2003)



(Carneiro and Arbache, 2003)

(Blake et al., 2002)

(Martin, 2003)

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(CES) α

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$(\delta_{fa}^{va}) \alpha$ f

CES

$(a_a^{va}) \alpha$

(ρ_a^{va}) CES

$(QF_{fa}) \alpha$ f

:

$$QVA_a = \alpha_a^{va} \times \left[\sum_{f \in F} \delta_{fa}^{va} \times QF_{fa}^{-\rho_a^{va}} \right]^{\frac{-1}{\rho_a^{va}}}$$

$a \in A$

()



$$\rho_a^{va} = \frac{\lambda}{\varepsilon} - \lambda \quad (CES) \quad () \quad ()$$

$$(a_a^a) \alpha \quad (CES)^a \quad \alpha \quad \text{CES} \quad (\rho_a^a) \text{CES} \quad (QINTA)$$

$$QA_a = a_a^a \left(\delta_a^a \cdot QVA_a^{-\rho_a^a} + (1 - \delta_a^a) \cdot QINTA_a^{-\rho_a^a} \right)^{\frac{-1}{\rho_a^a}} \quad a \in A \quad ()$$

$$\rho_a^a = \frac{\lambda}{\omega} - \lambda \quad (CES) \quad () \quad ()$$

$$= \quad \alpha \quad () \quad () \quad (PA_a) () \quad (1 + ta_a) \quad C \quad (PQ_c) (+ \quad (ica_{ca}) \quad \alpha$$

$$PVA_a = PA_a * (1 + ta_a) - \sum_c PQ_c * ica_{ca} \quad a \in A \quad ()$$

$$() \quad () \quad (PDD_c) \quad (PM_c) \quad (QD_c) \quad (QM_c)$$



$$PQ_c = \frac{(PDD_c \cdot QD_c + PM_c \cdot QM)}{QQ_c} \quad c \in (CD \cup CM) \quad ()$$

(Pwm_c)

:

(tm_c)

(EXR)

$$PM_c = Pwm_c \cdot (\lambda + tm_c) \cdot EXR \quad c \in CM \quad ()$$

()

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(QM_c)

()

$$QQ_c = a_c^q \left(\delta_c^q \cdot QM_c^{\rho_c^q} + (\lambda - \delta_c^q) \cdot QD_c^{\rho_c^q} \right)^{\frac{-1}{\rho_c^q}} \quad c \in (CM \cap CD) \quad ()$$

:

$$\rho_c^q = \frac{(\eta_i - \lambda)}{\eta_i} \quad ()$$

C

(QE_c) () CES

C

:

((QD_c)

$$QX_c = a_c^t \left(\delta_c^t * QE_c^{\rho_c^t} + (\lambda - \delta_c^t) * QD_c^{\rho_c^t} \right)^{\frac{1}{\rho_c^t}} \quad c \in (CE \cap CD) \quad ()$$

:

$$\rho_c^t = (\sigma_\lambda + \lambda) / \sigma_\lambda \quad ()$$

α

(QA_a) α

(ina_a)

:



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$$QINT_a = ina_a \cdot QA_a \quad a \in A \quad ()$$

$$\begin{matrix} & \alpha & & C \\ & \alpha & & C \\ (ica_{ca}) & & & C \\ & \alpha & & \\ : & & (QA_a) \alpha & \end{matrix}$$

$$QINT_{ca} = ica_{ca} \cdot QA_a \quad c \in C \quad a \in A \quad ()$$

(LADJ)

$$\begin{matrix} : & (qinv_c) \\ QINV_c = IADJqinv_c & c \in C \end{matrix} \quad ()$$

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$$\begin{matrix} () (&) \alpha \\ & \alpha \\ : & (QA_a) \alpha & (iva_a) \\ QVA_a = iva_a \cdot QA_a & a \in A \end{matrix} \quad ()$$

C

C

(PDS_c)

(PE_c)

(QD_c)

:

(QE_c)

$$PX_c = \frac{PDS_c + QD_c + PE_c \cdot QE_c}{QX_c} \quad c \in CX \quad ()$$

$$\begin{aligned}
 & \left(\begin{array}{c} \\ \\ \end{array} \right) \\
 & \left(\begin{array}{c} \\ \\ \end{array} \right) \\
 & C \quad (PX_c) C \\
 & \quad \quad \quad : \quad (\theta_{ac}) \alpha \\
 & PA_a = \sum_c PX_c \cdot \theta_{ac} \quad a \in A \quad ()
 \end{aligned}$$

$$\begin{aligned}
 & C \quad (PDD_c) \\
 & \quad \quad \quad \cdot (PM_c) \\
 & \quad \quad \quad \vdots \\
 & \frac{QM_c}{QD_c} = \left(\frac{PDD_c * \alpha_c^m}{PM_c * \alpha_c^d} \right)^{\frac{1}{1+\rho_c^d}} \quad c \in (CM \cap CD) \quad () \\
 & \quad \quad \quad \vdots \\
 & QM_c = \left(\frac{PDD_c * \alpha_c^m}{PM_c * \alpha_c^d} \right)^{\frac{1}{1+\rho_c^d}} * QD_c \quad c \in (CM \cap CD) \quad ()
 \end{aligned}$$

$$\begin{aligned}
 & \quad \quad \quad (PE_c) \\
 & \quad \quad \quad \cdot (PDS_c) \\
 & \quad \quad \quad \vdots \\
 & \frac{QE_c}{QD_c} = \left(\frac{PE_c * \delta_c^d}{PDS_c * \delta_c^e} \right)^{\frac{1}{\rho_c^e-1}} \quad c \in (CE \cap CD) \quad ()
 \end{aligned}$$

$$\quad \quad \quad : \quad (EXR) \quad \quad \quad (Pwe_c)$$



...

$$PE_c = Pwe_c \cdot EXR \quad c \in CE \quad ()$$

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(QD_c)

(QM_c)

:

$$QQ_c = QD_c + QM_c \quad c \in (CM \cup CDN) \cup (CD \cap CMN) \quad ()$$

C

C

C

: (QA_a) α

(θ_{ac}) α

$$QX_c = \sum_a \theta_{ac} \cdot QA_a \quad c \in CX \quad ()$$

C

C

: (QE_c)

(QD_c)

$$QX_c = QD_c + QE_c \quad c \in (CE \cup CDN) \cup (CD \cap CEN) \quad ()$$

(YF_{hf}) f

h

: (trnsfr_{hi}) h

$$YH_h = \sum_{f \in F} YF_{hf} + \sum_{i \in INSD} trnsfr_{hi} \quad f \in F \quad ()$$

:

$$YH = \sum_h YH_h \quad ()$$

(mps_h)

h

(DTAX_h) ()

(YH_h)



$$\begin{aligned}
 & \vdots \\
 \text{HSAV}_h &= \text{mps}_h (\text{YH}_h - \text{DTAX}_h) & h \in H & \quad () \\
 & \quad \quad \quad (\text{YH}_h - \text{DTAX}_h)
 \end{aligned}$$

$$\begin{aligned}
 \text{YDH}_h &= \text{YH}_h - \text{DTAX}_h & () & \quad : \\
 & \quad \quad \quad \vdots
 \end{aligned}$$

$$\begin{aligned}
 \text{PSAV} &= \sum_h \text{HSAV}_h & () & \\
 & \quad \quad \quad (\quad \quad)
 \end{aligned}$$

$$\begin{aligned}
 & (\text{YH}_h) & (\text{ty}_h) \\
 & \quad \quad \quad \vdots
 \end{aligned}$$

$$\begin{aligned}
 \text{DTAX}_h &= \text{ty}_h \cdot \text{YH}_h & h \in H & \quad ()
 \end{aligned}$$

$$\begin{aligned}
 & \quad \quad \quad \text{C} \\
 & \quad \quad \quad \text{C} & \quad \quad \quad \text{C} \\
 (\text{MPS}_h)_h & & (\beta_{ch}) \\
 & (\text{YH}_h) & (\text{ty}_h) \\
 & (\text{PQ}_c) (\quad \quad)
 \end{aligned}$$

$$\begin{aligned}
 & \quad \quad \quad \vdots \\
 \text{QH}_{ch} &= \frac{\beta_{ch} (1 - \text{mps}_h) (1 - \text{ty}_h) \text{YH}_h}{\text{PQ}_c} & h \in H, c \in C & \quad ()
 \end{aligned}$$

$$\begin{aligned}
 & (\text{DTAX}_h) \\
 & (\text{TARIFF}_c) & (\text{IDTAX}_A) \\
 & \quad \quad \quad \vdots & (\text{DTAX}_{\text{INS}})
 \end{aligned}$$

$$\begin{aligned}
 \text{YG} &= \sum_h \text{DTAX}_h + \sum_A \text{IDTAX} + \sum_{cM} \text{TARIFF}_c + \sum_{\text{INS}} \text{DTAX}_{\text{INS}} & ()
 \end{aligned}$$



$$\left(\begin{array}{c} \text{PQ}_c \\ \text{trnsfr}_{h,\text{gov}} \end{array} \right) \quad \text{C} \quad \text{(PQ}_c \text{)}$$

$$\text{EG} = \sum_{c \in \text{C}} \text{PQ}_c \cdot \text{qg}_c + \sum_{\text{H}} \text{trnsfr}_{h,\text{gov}} + \text{trnsfr}_{\text{INS},\text{gov}} \quad i \in \text{H}, c \in \text{C} \quad ()$$

$$\text{GSAV} = \text{mspg} \times \text{YG} \quad () : \quad \text{(YG)}$$

$$\text{(GADJ)} \quad \text{C} \quad \text{C} : \quad \text{(YG)} \text{C}$$

$$\text{QG}_c = \text{GADJ} \times \text{qg}_c \quad ()$$

$$\left(\begin{array}{c} \beta_{\text{ins},f} \\ \text{trnsfr}_{\text{row},f} \end{array} \right) \quad i \quad f \quad i \quad \text{(WF}_f \text{)} \quad f \quad \text{(QF}_{fa} \text{)} \alpha : \quad \text{(EXR)}$$

$$\text{YIF}_{\text{ins},f} = \beta_{\text{ins},f} \left(\sum_{f \in \text{F}} \text{WF}_f \cdot \text{QF}_{fa} + \text{trnsfr}_{\text{row},f} \cdot \text{EXR} \right) \quad i \in \text{INS}, f \in \text{F} \quad ()$$

$$\left(\text{YIF}_{\text{ins},f} \right) f \quad i \quad i \quad \text{(trnsfr}_{\text{ins},i} \text{)} i$$

$$\text{YI}_i = \sum_{f \in \text{F}} \text{YIF}_{\text{ins},f} + \sum_{i \in \text{INS}, \text{DNG}} \text{trnsfr}_{\text{ins},i} \quad i \in \text{INS}, f \in \text{F} \quad ()$$



$$EI_i = \sum_{c \in C} PQ_c \cdot qi_c + \sum_{i \in INSD} trnsfr_{i,ins} \quad i \in INSD, c \in C \quad (1)$$

$$TSAV = PSAV + GSAV + FSAV \quad (2)$$

$$BP = \sum_{c \in C} pwm_c \cdot QM_c - \sum_{c \in C} pwe_c \cdot QE_c + FSAV + NETROW \quad (3)$$

$$PINTA_a = \sum_{c \in C} PQ_c \cdot ica_{ca} \quad c \in C \quad a \in A \quad (4)$$

$$(\delta_{fa}^{va}) \alpha \quad a$$



...

$$f \quad (QA_a) \alpha \quad (PVA_a)$$

$$: \quad (QF_{fa}) \alpha$$

$$WF_f \cdot WFD_{fa} = \frac{\delta_{fa}^{va} \cdot PVA_a \cdot QA_a}{QF_{fa}} \quad f \in F \quad a \in A \quad ()$$

$$(cwtsc_c)$$

$$: \quad (QP_c)$$

$$CPI = \sum_c QP_c \cdot cwtsc \quad ()$$

$$:$$

$$TARIFF_c = tm_c \cdot PWM_c \cdot QM_c \cdot EXR \quad ()$$

$$\cdot \quad PWM_c \quad EXR$$

$$:$$

$$DITAX_i = ITAX_i \cdot YI_i \quad ()$$

$$\cdot \quad ITAX_i \quad YI_i$$

$$:$$

$$\sum_c PQ_c * QINV_c + IFOR = PSAV + GSAV + ISAV + FSAV \quad ()$$

$$:$$

$$(QFS_f) \quad (QF_{fa})$$

$$\sum_A QF_{fa} = \overline{QFS_f} \quad ()$$



$$QQ_c = \sum_{a \in A} QINT_{ca} + \sum_{h \in H} QH_{ch} + QG_c + QINV_c \quad ()$$

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جدول ۲- اثر کاهش نرخ تعرفه بر بخش کشاورزی ایران (درصد تغییرات)

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1. General Agreement on Tariff and Trade (GATT)
2. World Trade Organisation (WTO)
3. Applied General Equilibrium Models (AGEM)
4. Computable General Equilibrium (CGE)
5. Walrasian model
6. L. Johanson



(Dixon et al., 1992)

(Dervis et al., 1982)

(Bautista, 2000)

(Panagariya, 2002)

(Blasco, 2006)

(Dorosh et al., 2003)

(Doi et al., 2001)

9. social accounting matrix

10. constant elasticity of substitution (CES)

11. constant elasticity of transformation (CET)

12. Heckscher-Ohlin-Samuelson model

13. Armington function

14. Leontief function

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