**LAMPIRAN**

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Lampiran 1. Input *file* tablo model CGE AGROINDUSTRI

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!TABLO Input file for the agroindustri indonesia model: 35 sectors !

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! Excerpt 1 of TABLO input file: !

! Definitions of sets !

Set COM # Commodities #

(Padi, TanMakLn, Karet, Tebu, KelapaSawit, Tembakau, Kopi, Teh,

Kakao, TanKebLn, Peternakan, Kayu, HasHutln, Perikanan, Pertambangan,

Makanan, IndKlpSwt, Beras, Terigu, Gula, Minuman, Rokok, Pemintalan,

TeksPakKlt, BambuKyRotan, KrtsKrbon, PpkPestisida, Kimia, OlahKaret, Semen,

IndustriLain, ListrkGasAir, Bangunan, DagResHot, Jasa);

Set SRC # Source of commodities # (Dom, Imp); !s!

Set IND # Industries #

(Padi, TanMakLn, Karet, Tebu, KelapaSawit, Tembakau, Kopi, Teh,

Kakao, TanKebLn, Peternakan, Kayu, HasHutln, Perikanan, Pertambangan,

Makanan, IndKlpSwt, Beras, Terigu, Gula, Minuman, Rokok, Pemintalan,

TeksPakKlt, BambuKyRotan, KrtsKrbon, PpkPestisida, Kimia, OlahKaret, Semen,

IndustriLain, ListrkGasAir, Bangunan, DagResHot, Jasa);

Set OCC # ccupation types # (Unskilled, Skilled); !o!

Set MAR # Margin commodities # (DagResHot, Jasa);

Subset MAR is subset of COM;

Set NONMAR # Non-margin commodities # = COM - MAR; ! n !

Set EXOGINV # 'exogenous' investment industries #

(Pertambangan, ListrkGasAir, Bangunan, DagResHot, Jasa);

Subset EXOGINV is Subset of IND;

Set ENDOGINV # 'endogenous' investment industries # = IND - EXOGINV;

SET HH #household types# (agr1-agr2, rural1-rural3, urban1-urban3);

SET AGRIFAC # Agricultural factors #(unskilled,varcap,land,fert) ;

SET N\_AGRIFAC # Non-agricultural factors # (labcomp, fixcap, varcap) ;

SET FACNF # All factors except fertiliser #

 (skilled, unskilled,fixcap,varcap,land);

SET KAP # Types of capital #(fixcap ,varcap ) ;

SET AGFACNF #Agri. factors excluding fertiliser# (unskilled,varcap,land);

SET AGIND (Padi, TanMakLn, Karet, Tebu, KelapaSawit, Tembakau, Kopi, Teh, Kakao,

TanKebLn, Peternakan, Kayu, HasHutln, Perikanan);

SET FERTIL (PpkPestisida);

SUBSET

AGFACNF IS SUBSET OF AGRIFAC;

AGFACNF IS SUBSET OF FACNF;

KAP IS SUBSET OF FACNF;

OCC IS SUBSET OF FACNF;

AGIND IS SUBSET OF IND;

FERTIL IS SUBSET OF COM;

KAP IS SUBSET OF N\_AGRIFAC;

SET N\_AGIND = IND - AGIND;

SET NONFERT = COM - FERTIL;

! Excerpt 2 of TABLO input file: !

! Variables relating to commodity flows !

Variable

! Basic Demands for commodities (excluding margin demands) !

(all,c,COM)(all,s,SRC)(all,i,IND) x1(c,s,i) # Intermediate basic demands #;

(all,c,COM)(all,s,SRC)(all,i,IND) x2(c,s,i) # Investment basic demands #;

(all,c,COM)(all,s,SRC)(all,h,HH) x3(c,s,h) # Household basic demands #;

(all,c,COM) x4(c) # Export basic demands #;

(all,c,COM)(all,s,SRC) x5(c,s) # Government basic demands #;

(change) (all,c,COM)(all,s,SRC) delx6(c,s) # Inventories demands #;

(all,c,COM)(all,s,SRC) p0(c,s) # Basic prices by commodity and source #;

! Technical or Taste Change Variables affecting Basic Demands !

(all,c,COM)(all,s,SRC)(all,i,IND) a1(c,s,i) # Intermediate basic tech change #;

(all,c,COM)(all,s,SRC)(all,i,IND) a2(c,s,i) # Investment basic tech change #;

(all,c,COM)(all,s,SRC) a3(c,s) # Household basic taste change #;

(all,c,COM)(all,s,SRC) f5(c,s) # Government demand shift #;

! Margin Usage on Basic Flows !

(all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR) x1mar(c,s,i,m)# Intermediate margin demands #;

(all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR x2mar(c,s,i,m)# Investment margin demands #;

(all,c,COM)(all,s,SRC)(all,m,MAR)(all,h,HH) x3mar(c,s,m,h) # Household margin demands #;

(all,c,COM)(all,m,MAR) x4mar(c,m) # Export margin demands #;

(all,c,COM)(all,s,SRC)(all,m,MAR) x5mar(c,s,m) # Government margin demands #;

! Technical Change in Margins Usage !

(all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR) a1mar(c,s,i,m) # Intermediate margin tech change #;

(all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR) a2mar(c,s,i,m) # Investment margin tech change #;

(all,c,COM)(all,s,SRC)(all,m,MAR) a3mar(c,s,m) # Household margin tech change #;

(all,c,COM)(all,m,MAR) a4mar(c,m) # Export margin tech change #;

(all,c,COM)(all,s,SRC)(all,m,MAR) a5mar(c,s,m) # Governmnt margin tech change #;

! Powers of Commodity Taxes on Basic Flows !

(all,c,COM)(all,s,SRC)(all,i,IND) t1(c,s,i) # Power of tax on intermediate #;

(all,c,COM)(all,s,SRC)(all,i,IND) t2(c,s,i) # Power of tax on investment #;

(all,c,COM)(all,s,SRC) t3(c,s) # Power of tax on household #;

(all,c,COM) t4(c) # Power of tax on export #;

(all,c,COM)(all,s,SRC) t5(c,s) # Power of tax on government #;

! Purchaser's Prices (including margins and taxes) !

(all,c,COM)(all,s,SRC)(all,i,IND) p1(c,s,i)# Purchaser's price, intermediate #;

(all,c,COM)(all,s,SRC)(all,i,IND) p2(c,s,i)# Purchaser's price, investment #;

(all,c,COM)(all,s,SRC)(all,h,HH) p3(c,s,h) # Purchaser's price, household #;

(all,c,COM) p4(c) # Purchaser's price, exports rupiah #;

(all,c,COM)(all,s,SRC) p5(c,s) # Purchaser's price, government #;

! Excerpt 3 of TABLO input file: !

! Variables for primary-factor flows, commodity supplies and import duties !

! Variables relating to usage of labour, occupation o, in industry i !

(all,i,IND)(all,o,OCC) x1lab(i,o) # Employment by industry and occupation #;

(all,i,IND)(all,o,OCC) p1lab(i,o) # Wages by industry and occupation #;

!(all,i,IND) a1lab\_o(i) # Labor augmenting technical change #;

(all,i,IND)(all,o,OCC) f1lab(i,o) # Wage shift variable #;!

! Variables relating to usage of fixed capital in industry i !

(all,i,IND) x1cap(i) # Current capital stock #;

(all,i,IND) p1cap(i) # Rental price of capital #;

!(all,i,IND) a1cap(i) # Capital augmenting technical change #;!

! Variables relating to usage of land !

(all,i,AGIND) x1lnd(i) # Use of land #;

(all,i,AGIND) p1lnd(i) # Rental price of land #;

!(all,i,IND) a1lnd(i) # Land augmenting technical change #;!

! Variables relating to "Other Costs" !

(all,i,IND) x1oct(i) # Demand for "other cost" tickets #;

(all,i,IND) p1oct(i) # Price of "other cost" tickets #;

(all,i,IND) a1oct(i) # "other cost" ticket augmenting techncal change#;

(all,i,IND) f1oct(i) # Shift in price of "other cost" tickets #;

! Variables relating to commodity supplies, import duties and stocks !

(all,c,COM)(all,i,IND) q1(c,i) # Output by commodity and industry #;

(all,c,COM) t0imp(c) # Power of tariff #;

(change)

(all,c,COM)(all,s,SRC) fx6(c,s) # Shifter on rule for stocks #;

! Excerpt 4 of TABLO input file: !

! Variables describing composite commodities !

! Demands for import/domestic commodity composites !

(all,c,COM)(all,i,IND) x1\_s(c,i) # Intermediate use of imp/dom composite #;

(all,c,COM)(all,i,IND) x2\_s(c,i) # Investment use of imp/dom composite #;

(all,c,COM)(all,h,HH) x3\_s(c,h) # Household use of imp/dom composite #;

(all,c,COM)(all,h,HH) x3lux(c,h) # Household - supernumerary demands #;

(all,c,COM)(all,h,HH) x3sub(c,h) # Household - subsistence demands #;

! Effective Prices of import/domestic commodity composites !

(all,c,COM)(all,i,IND) p1\_s(c,i) # Price, intermediate imp/dom composite #;

(all,c,COM)(all,i,IND) p2\_s(c,i) # Price, investment imp/dom composite #;

(all,c,COM)(all,h,HH) p3\_s(c,h) # Price, household imp/dom composite #;

! Technical or Taste Change Variables for import/domestic composites !

(all,c,COM)(all,i,IND) a1\_s(c,i) # Tech change, int'mdiate imp/dom composite #;

(all,c,COM)(all,i,IND) a2\_s(c,i) # Tech change, investment imp/dom composite #;

(all,c,COM)(all,h,HH) a3\_s(c,h) # Taste change, h'hold imp/dom composite #;

(all,c,COM)(all,h,HH) a3lux(c,h) # Taste change, supernumerary demands #;

(all,c,COM)(all,h,HH) a3sub(c,h) # Taste change, subsistence demands #;

! Excerpt 5 of TABLO input file: !

! Miscellaneous vector variables !

Variable

(all,i,IND) a1prim(i) # All factor augmenting technical change #;

(all,i,IND) a1tot(i) # All input augmenting technical change #;

(all,i,IND) a2tot(i) # Neutral technical change - investment #;

(all,i,IND) employ(i) # Employment by industry #;

(all,c,COM) f0tax\_s(c) # General sales tax shifter #;

(all,c,COM) f4tax\_x(c) # General sales tax trad export shifter #;

(all,o,OCC) f1lab\_i\_x(o) # Skill-specific labour shifter #;

 (all,c,COM) f4p(c) # Price (upward) shift in export demand schedule #;

(all,c,COM) f4q(c) # Quantity (right) shift in export demands #;

(All,c,COM) p0com(c) # Output price of locally-produced commodity #;

(all,c,COM) p0dom(c) # Basic price of domestic goods = p0(c,"dom") #;

(all,c,COM) p0imp(c) # Basic price of imported goods = p0(c,"imp") #;

(all,i,IND) p1lab\_o(i) # Price of labour composite #;

(all,o,OCC) p1lab\_i(o) # Price of labour for each skill #;

(all,i,IND) p1prim(i) # Effective price of primary factor composite #;

(all,i,IND) p1tot(i) # Average input/output price #;

(all,i,IND) p2tot(i) # Cost of unit of capital #;

(All,c,COM) pe(c) # Basic price of export commodity #;

(all,c,COM) pf0cif(c) # C.I.F. foreign currency import prices #;

(all,c,COM) x0com(c) # Output of commodities #;

(all,c,COM) x0dom(c) # Output of commodities for local market #;

(all,c,COM) x0imp(c) # Total supplies of imported goods #;

(all,o,OCC) x1lab\_i(o) # Employment by occupation #;

(all,o,OCC)(all,h,HH) x1lab\_i\_h(o,h) # Household labour supply #;

(all,i,IND) x1lab\_o(i) # Effective labour input #;

(all,i,IND) x1prim(i) # Primary factor composite #;

(all,i,IND) x1tot(i) # Activity level or value-added #;

(all,i,IND) x2tot(i) # Investment by using industry #;

! Excerpt 6 of TABLO input file: !

! Scalar or macro variables !

Variable

(change) delB # %(Balance of trade)/GDP #;

!employ\_i # Aggregate employment: wage bill weights #;!

!f1lab\_io # Overall wage shifter #;!

f1tax\_csi # Uniform % change in powers of taxes on intermediate usage #;

f2tax\_csi # Uniform % change in powers of taxes on investment #;

f3tax\_cs # Uniform % change in powers of taxes on household usage #;

f3tot # Ratio, consumption/income #;

(all,h,HH)f3tot\_h(h)# Ratio, consumption/income by hh#;

f4tax\_c # Uniform % change in powers of taxes on exports #;

f5tax\_cs # Uniform % change in powers of taxes on government usage #;

f5tot # Overall shift term for government demands #;

f5tot2 # Ratio between f5tot and x3tot #;

p0cif\_c # Imports price index, C.I.F., rupiah #;

p0gdpexp # GDP price index, expenditure side #;

p0imp\_c # Duty-paid imports price index, rupiah #;

p0realdev # Real devaluation #;

p0toft # Terms of trade #;

p1cap\_i # Average capital rental #;

p1lab\_io # Average nominal wage #;

p2tot\_i # Aggregate investment price index #;

p3tot # Consumer price index #;

p4tot # Exports price index #;

p5tot # Government price index #;

p6tot # Inventories price index #;

phi # Exchange rate, rupiah/$world #;

(all,h,HH)q(h) # Number of households #;

realwage # Average real wage #;

(all,h,HH)utility(h) # Utility per household #;

w0cif\_c # C.I.F. rupiah value of imports #;

w0gdpexp # Nominal GDP from expenditure side #;

w0gdpinc # Nominal GDP from income side #;

w0imp\_c # Value of imports plus duty #;

w0tar\_c # Aggregate tariff revenue #;

w0tax\_csi # Aggregate revenue from all indirect taxes #;

w1cap\_i # Aggregate payments to capital #;

w1lab\_io # Aggregate payments to labour #;

w1lnd\_i # Aggregate payments to land #;

w1oct\_i # Aggregate "other cost" ticket payments #;

w1tax\_csi # Aggregate revenue from indirect taxes on intermediate #;

w2tax\_csi # Aggregate revenue from indirect taxes on investment #;

w2tot\_i # Aggregate nominal investment #;

(all,h,HH)w3lux(h)# Total nominal supernumerary household expenditure #;

w3tax\_cs # Aggregate revenue from indirect taxes on households #;

(all,h,HH)w3tot\_hh(h)# Nominal total consumption, each household #;

(all,h,HH)x3tot\_hh(h)# Nominal total consumption, each household #;

(all,h,HH)p3tot\_hh(h)# Nominal total consumption, each household #;

w3tot # Nominal total household consumption #;

w4tax\_c # Aggregate revenue from indirect taxes on export #;

w4tot # rupiah border value of exports #;

w5tax\_cs # Aggregate revenue from indirect taxes on government #;

w5tot # Aggregate nominal value of government demands #;

w6tot # Aggregate nominal value of inventories #;

x0cif\_c # Import volume index, C.I.F. weights #;

x0gdpexp # Real GDP from expenditure side #;

x0imp\_c # Import volume index, duty-paid weights #;

x1cap\_i # Aggregate capital stock, rental weights #;

x1prim\_i # Aggregate output: value-added weights #;

x2tot\_i # Aggregate real investment expenditure #;

x3tot # Real household consumption #;

!x4\_ntrad # Quantity, non-traditional export aggregate #;!

x4tot # Export volume index #;

x5tot # Aggregate real government demands #;

x6tot # Aggregate real inventories #;

! Excerpt 7 of TABLO input file: !

! Data coefficients relating to basic commodity flows !

File MDATA # Data file #;

Coefficient ! Basic Flows of Commodities!

 (all,c,COM)(all,s,SRC)(all,i,IND) V1BAS(c,s,i) # Intermediate basic flows #;

 (all,c,COM)(all,s,SRC)(all,i,IND) V2BAS(c,s,i) # Investment basic flows #;

 (all,c,COM)(all,s,SRC)(all,h,HH) V3BAS(c,s,h) # Household basic flows #;

 (all,c,COM) V4BAS(c) # Export basic flows #;

 (all,c,COM)(all,s,SRC) V5BAS(c,s) # Government basic flows #;

 (all,c,COM)(all,s,SRC) V6BAS(c,s) # Inventories basic flows #;

Read

 V1BAS from file MDATA header "1BAS";

 V2BAS from file MDATA header "2BAS";

 V3BAS from file MDATA header "3BAS";

 V4BAS from file MDATA header "4BAS";

 V5BAS from file MDATA header "5BAS";

 V6BAS from file MDATA header "6BAS";

Update

 (all,c,COM)(all,s,SRC)(all,i,IND) V1BAS(c,s,i) = p0(c,s)\*x1(c,s,i);

 (all,c,COM)(all,s,SRC)(all,i,IND) V2BAS(c,s,i) = p0(c,s)\*x2(c,s,i);

 (all,c,COM)(all,s,SRC)(all,h,HH) V3BAS(c,s,h) = p0(c,s)\*x3(c,s,h);

 (all,c,COM) V4BAS(c) = pe(c)\*x4(c);

 (all,c,COM)(all,s,SRC) V5BAS(c,s) = p0(c,s)\*x5(c,s);

Coefficient (all,c,COM)(all,s,SRC) LEVP0(c,s) # Levels basic prices #;

Formula (Initial) (all,c,COM)(all,s,SRC) LEVP0(c,s) = 1; ! arbitrary setting !

Update (all,c,COM)(all,s,SRC) LEVP0(c,s) = p0(c,s);

(change) (all,c,COM)(all,s,SRC)

 V6BAS(c,s) = V6BAS(c,s)\*p0(c,s)/100 + LEVP0(c,s)\*delx6(c,s);

Coefficient ! Margin Flows!

 (all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR)

 V1MAR(c,s,i,m) # Intermediate margins #;

 (all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR)

 V2MAR(c,s,i,m) # Investment margins #;

 (all,c,COM)(all,s,SRC)(all,m,MAR)(all,h,HH)

 V3MAR(c,s,m,h) # Households margins #;

 (all,c,COM)(all,m,MAR) V4MAR(c,m) # Export margins #;

 (all,c,COM)(all,s,SRC)(all,m,MAR) V5MAR(c,s,m) # Government margins #;

Read

 V1MAR from file MDATA header "1MAR";

 V2MAR from file MDATA header "2MAR";

 V3MAR from file MDATA header "3MAR";

 V4MAR from file MDATA header "4MAR";

 V5MAR from file MDATA header "5MAR";

Update

 (all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR)

 V1MAR(c,s,i,m) = p0dom(m)\*x1mar(c,s,i,m);

 (all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR)

 V2MAR(c,s,i,m) = p0dom(m)\*x2mar(c,s,i,m);

 (all,c,COM)(all,s,SRC)(all,m,MAR)(all,h,HH)

 V3MAR(c,s,m,h) = p0dom(m)\*x3mar(c,s,m,h);

 (all,c,COM)(all,m,MAR)

 V4MAR(c,m) = p0dom(m)\*x4mar(c,m);

 (all,c,COM)(all,s,SRC)(all,m,MAR)

 V5MAR(c,s,m) = p0dom(m)\*x5mar(c,s,m);

! Excerpt 8 of TABLO input file: !

! Data coefficients relating to commodity taxes !

Coefficient ! Taxes on Basic Flows!

 (all,c,COM)(all,s,SRC)(all,i,IND) V1TAX(c,s,i) # Taxes on intermediate #;

 (all,c,COM)(all,s,SRC)(all,i,IND) V2TAX(c,s,i) # Taxes on investment #;

 (all,c,COM)(all,s,SRC)(all,h,HH) V3TAX(c,s,h) # Taxes on households #;

 (all,c,COM) V4TAX(c) # Taxes on export #;

 (all,c,COM)(all,s,SRC) V5TAX(c,s) # Taxes on government #;

Read

 V1TAX from file MDATA header "1TAX";

 V2TAX from file MDATA header "2TAX";

 V3TAX from file MDATA header "3TAX";

 V4TAX from file MDATA header "4TAX";

 V5TAX from file MDATA header "5TAX";

Update (change) (all,c,COM)(all,s,SRC)(all,i,IND)

 V1TAX(c,s,i) = V1TAX(c,s,i)\* [x1(c,s,i) + p0(c,s)]/100 + [V1BAS(c,s,i)+V1TAX(c,s,i)]\*t1(c,s,i)/100;

Update (change) (all,c,COM)(all,s,SRC)(all,i,IND)

 V2TAX(c,s,i) = V2TAX(c,s,i)\* [x2(c,s,i) + p0(c,s)]/100 +

 [V2BAS(c,s,i)+V2TAX(c,s,i)]\*t2(c,s,i)/100;

Update (change) (all,c,COM)(all,s,SRC)(all,h,HH)

 V3TAX(c,s,h) = V3TAX(c,s,h)\* [x3(c,s,h) + p0(c,s)]/100 +

 [V3BAS(c,s,h)+V3TAX(c,s,h)]\*t3(c,s)/100;

Update (change) (all,c,COM)

 V4TAX(c) = V4TAX(c)\* [x4(c) + pe(c)]/100 +

 [V4BAS(c)+V4TAX(c)]\*t4(c)/100;

Update (change) (all,c,COM)(all,s,SRC)

 V5TAX(c,s) = V5TAX(c,s)\*[x5(c,s) + p0(c,s)]/100 +

 [V5BAS(c,s)+V5TAX(c,s)]\*t5(c,s)/100;

! Excerpt 9 of TABLO input file: !

! Data coefficients relating to primary-factor flows !

Coefficient ! Primary Factor and Other Industry costs!

 (all,k,KAP)(all,i,N\_AGIND) V1CAPN(k,i) # Capital rentals by mobility #;

 (all,i,AGIND) V1CAPA (i) # Capital rentals, agri. #;

 (all,i,IND) V1CAP(i) # Capital rentals #;

 (all,i,IND)(all,o,OCC) V1LAB(i,o) # Wage bill matrix #;

 (all,i,IND) V1LND(i) # Land rentals #;

 (all,i,IND) V1OCT(i) # Other cost tickets #;

Read

 V1CAPN from file MDATA header "1CAP";

 V1CAPA from file MDATA header "1CAG";

 V1LAB from file MDATA header "1LAB";

 V1LND from file MDATA header "1LND";

 V1OCT from file MDATA header "1OCT";

Update

 !(all,i,IND) V1CAP(i) = p1cap(i)\*x1cap(i);!

 (all,i,IND)(all,o,OCC) V1LAB(i,o) = p1lab(i,o)\*x1lab(i,o);

 (all,i,AGIND) V1LND(i) = p1lnd(i)\*x1lnd(i);

 (all,i,IND) V1OCT(i) = p1oct(i)\*x1oct(i);

! Excerpt 10 of TABLO input file: !

! Data coefficients relating to commodity outputs and import duties !

Coefficient (all,c,COM)(all,i,IND) MAKE(c,i) # Multiproduction matrix #;

Read MAKE from file MDATA header "MAKE";

Update (all,c,COM)(all,i,IND) MAKE(c,i)= p0com(c)\*q1(c,i);

Coefficient (all,c,COM) V0TAR(c) # Tariff revenue #;

Read V0TAR from file MDATA header "0TAR";

Coefficient (all,c,COM) V0IMP(c) # Total basic-value imports of good c #;

! V0IMP(c) is needed to update V0TAR: it is declared now and defined later !

Update (change) (all,c,COM)

 V0TAR(c) = V0TAR(c)\*[x0imp(c)+pf0cif(c)+phi]/100 + V0IMP(c)\*t0imp(c)/100;

! Excerpt 11 of TABLO input file: !

! Aggregates and shares of flows at purchasers' prices !

Coefficient ! Flows at Purchasers prices !

 (all,c,COM)(all,s,SRC)(all,i,IND) V1PUR(c,s,i) # Intermediate purch. value #;

 (all,c,COM)(all,s,SRC)(all,i,IND) V2PUR(c,s,i) # Investment purch. value #;

 (all,c,COM)(all,s,SRC)(all,h,HH) V3PUR(c,s,h) # Households purch. value #;

 (all,c,COM) V4PUR(c) # Export purch. value #;

 (all,c,COM)(all,s,SRC) V5PUR(c,s) # Government purch. value #;

Formula

 (all,c,COM)(all,s,SRC)(all,i,IND)

 V1PUR(c,s,i) = V1BAS(c,s,i) + V1TAX(c,s,i) + sum{m,MAR, V1MAR(c,s,i,m) };

 (all,c,COM)(all,s,SRC)(all,i,IND)

 V2PUR(c,s,i) = V2BAS(c,s,i) + V2TAX(c,s,i) + sum{m,MAR, V2MAR(c,s,i,m) };

 (all,c,COM)(all,s,SRC)(all,h,HH)

 V3PUR(c,s,h) = V3BAS(c,s,h) + V3TAX(c,s,h)

+ sum{m,MAR,V3MAR(c,s,m,h) };

 (all,c,COM)

 V4PUR(c) = V4BAS(c) + V4TAX(c) + sum{m,MAR, V4MAR(c,m) };

 (all,c,COM)(all,s,SRC)

 V5PUR(c,s) = V5BAS(c,s) + V5TAX(c,s) + sum{m,MAR, V5MAR(c,s,m) };

Coefficient ! Flows at Purchaser's prices: Domestic + Imported Totals !

 (all,c,COM)(all,i,IND) V1PUR\_S(c,i) # Dom+imp intermediate purch. value #;

 (all,c,COM)(all,i,IND) V2PUR\_S(c,i) # Dom+imp investment purch. value #;

 (all,c,COM) V1PUR\_SI(c) # Dom+imp intermediate purch. value #;

 (all,c,COM) V2PUR\_SI(c) # Dom+imp investment purch. value #;

 (all,c,COM)(all,h,HH) V3PUR\_S(c,h) # Dom+imp households purch. value #;

Formula

 (all,c,COM)(all,i,IND) V1PUR\_S(c,i) = sum{s,SRC, V1PUR(c,s,i) };

 (all,c,COM)(all,i,IND) V2PUR\_S(c,i) = sum{s,SRC, V2PUR(c,s,i) };

 (all,c,COM) V1PUR\_SI(c) = sum{i,IND, V1PUR\_S(c,i) };

 (all,c,COM) V2PUR\_SI(c) = sum{i,IND, V2PUR\_S(c,i) };

 (all,c,COM)(all,h,HH) V3PUR\_S(c,h) = sum{s,SRC,V3PUR(c,s,h)};

Coefficient ! Source Shares in Flows at Purchaser's prices !

 (all,c,COM)(all,s,SRC)(all,i,IND) S1(c,s,i) # Intermediate source shares #;

 (all,c,COM)(all,s,SRC)(all,i,IND) S2(c,s,i) # Investment source shares #;

 (all,c,COM)(all,s,SRC)(all,h,HH) S3(c,s,h) # Households source shares #;

Zerodivide Default 0.5;

Formula

 (all,c,COM)(all,s,SRC)(all,i,IND) S1(c,s,i) = V1PUR(c,s,i) / V1PUR\_S(c,i);

 (all,c,COM)(all,s,SRC)(all,i,IND) S2(c,s,i) = V2PUR(c,s,i) / V2PUR\_S(c,i);

 (all,c,COM)(all,s,SRC)(all,h,HH) S3(c,s,h) = V3PUR(c,s,h)/V3PUR\_S(c,h);

Zerodivide Off;

! Excerpt 12 of TABLO input file: !

! Cost and usage aggregates !

Coefficient ! Industry-Specific Cost Totals !

 (all,f,AGRIFAC)(all,i,AGIND)V1FAC(f,i)# Total factor input to ind. i, agri.#;

 (all,f,N\_AGRIFAC)(all,i,N\_AGIND)V1FACO(f,i) # Total factor input non-agri. #;

 (all,i,IND) V1LAB\_O(i) # Total labour bill in industry i #;

 (all,i,IND) V1PRIM(i) # Total factor input to industry i#;

 (all,i,IND) V1TOT(i) # Total cost of industry i #;

 (all,i,IND) V2TOT(i) # Total capital created for industry i #;

 (all,o,OCC) V1LAB\_I(o) # Total wages, occupation o #;

Formula

 (all,i,IND) V1LAB\_O(i) = sum{o,OCC, V1LAB(i,o) };

(all,i,AGIND) V1CAP(i) = V1CAPA(i);

 (all,i,AGIND) V1FAC("unskilled",i) = V1LAB\_O(i);

 (all,i,AGIND) V1FAC("varcap",i) = V1CAPA(i);

 (all,i,AGIND) V1FAC("fert",i) =V1PUR\_S("PpkPestisida",i);

 (all,i,AGIND) V1FAC("land",i) =V1LND(i);

 (all,i,N\_AGIND)V1CAP(i) = sum{k,KAP,V1CAPN(k,i) };

 (all,k,KAP)(all,i,N\_AGIND) V1FACO(k,i) = V1CAPN(k,i);

 (all,i,N\_AGIND) V1FACO("labcomp",i) =V1LAB\_O(i);

(all,i,AGIND) V1PRIM(i) = sum{f,AGRIFAC,V1FAC(f,i)};

 (all,i,N\_AGIND) V1PRIM(i) = sum{f,N\_AGRIFAC,V1FACO(f,i)};

 (all,i,AGIND)V1TOT(i) = V1PRIM(i) + V1OCT(i) + sum{c,NONFERT,V1PUR\_S(c,i) };

 (all,i,N\_AGIND)V1TOT(i) = V1PRIM(i) + V1OCT(i) + sum{c,COM, V1PUR\_S(c,i) };

 (all,i,IND) V2TOT(i) = sum{c,COM, V2PUR\_S(c,i) };

 (all,o,OCC) V1LAB\_I(o) = sum{i,IND, V1LAB(i,o) };

Coefficient (all,c,COM) MARSALES(c) # Total usage for margins purposes #;

Formula (all,m,MAR) MARSALES(m) =

 sum{c,COM, V4MAR(c,m) +

 sum{s,SRC,sum{h,HH,V3MAR(c,s,m,h)} + V5MAR(c,s,m) +

 sum{i,IND, V1MAR(c,s,i,m) + V2MAR(c,s,i,m) }}};

Formula (all,n,NONMAR) MARSALES(n) = 0.0;

Coefficient (all,c,COM) DOMSALES(c) # Total sales to local market #;

Formula (all,c,COM)

 DOMSALES(c) = sum{i,IND, V1BAS(c,"dom",i) + V2BAS(c,"dom",i) }

 + sum(h,HH,V3BAS(c,"dom",h)) + V5BAS(c,"dom") + V6BAS(c,"dom") +MARSALES(c);

Coefficient (all,c,COM) SALES(c) # Total sales of domestic commodities #;

Formula (all,c,COM) SALES(c) = DOMSALES(c) + V4BAS(c);

! Coefficient (all,c,COM) V0IMP(c) # Total basic-value imports of good c #; !

! above had to be declared prior to V0TAR update statement!

Formula (all,c,COM) V0IMP(c) =

 sum{i,IND, V1BAS(c,"imp",i) + V2BAS(c,"imp",i) }

 + sum(h,HH,V3BAS(c,"imp",h)) + V5BAS(c,"imp") + V6BAS(c,"imp");

Coefficient (all,c,COM) V0CIF(c) # Total ex-duty imports of good c #;

Formula (all,c,COM) V0CIF(c) = V0IMP(c) - V0TAR(c);

! Excerpt 13 of TABLO input file: !

! Income-Side Components of GDP !

Coefficient ! Total indirect tax revenues !

 V1TAX\_CSI # Total intermediate tax revenue #;

 V2TAX\_CSI # Total investment tax revenue #;

 V3TAX\_CS # Total households tax revenue #;

 V4TAX\_C # Total export tax revenue #;

 V5TAX\_CS # Total government tax revenue #;

 V0TAR\_C # Total tariff revenue #;

 V0TAX\_CSI # Total indirect tax revenue #;

Formula

 V1TAX\_CSI = sum{c,COM, sum{s,SRC, sum{i,IND, V1TAX(c,s,i) }}};

 V2TAX\_CSI = sum{c,COM, sum{s,SRC, sum{i,IND, V2TAX(c,s,i) }}};

 V3TAX\_CS = sum{c,COM, sum{s,SRC, sum{h,HH, V3TAX(c,s,h) }}};

 V4TAX\_C = sum{c,COM, V4TAX(c) };

 V5TAX\_CS = sum{c,COM, sum{s,SRC, V5TAX(c,s) }};

 V0TAR\_C = sum{c,COM, V0TAR(c) };

 V0TAX\_CSI = V1TAX\_CSI + V2TAX\_CSI + V3TAX\_CS + V4TAX\_C + V5TAX\_CS + V0TAR\_C;

Coefficient ! All-Industry Factor Cost Aggregates !

 V1CAP\_I # Total payments to capital #;

 V1LAB\_IO # Total payments to labour #;

 V1LND\_I # Total payments to land #;

 V1OCT\_I # Total other cost ticket payments #;

 V1PRIM\_I # Total primary factor payments#;

 V0GDPINC # Nominal GDP from income side #;

Formula

 V1CAP\_I = sum{i,IND, V1CAP(i) };

 V1LAB\_IO = sum{i,IND, V1LAB\_O(i) };

 V1LND\_I = sum{i,IND, V1LND(i) };

 V1OCT\_I = sum{i,IND, V1OCT(i) };

 V1PRIM\_I = V1LAB\_IO + V1CAP\_I + V1LND\_I;

 V0GDPINC = V1PRIM\_I + V1OCT\_I + V0TAX\_CSI;

! Excerpt 14 of TABLO input file: !

! Expenditure-side components of GDP !

Coefficient ! Expenditure Aggregates at Purchaser's Prices !

 V0CIF\_C # Total rupiah import costs, excluding tariffs #;

 V0IMP\_C # Total basic-value imports (includes tariffs) #;

 V2TOT\_I # Total investment usage #;

 (all,h,HH)V3TOT\_HH(h) # Total purchases by each households #;

 V3TOT # Total purchases by households #;

 V4TOT # Total export earnings #;

 V5TOT # Total value of government demands #;

 V6TOT # Total value of inventories #;

 V0GDPEXP # Nominal GDP from expenditure side #;

Formula

 V0CIF\_C = sum{c,COM, V0CIF(c) };

 V0IMP\_C = sum{c,COM, V0IMP(c) };

 V2TOT\_I = sum{i,IND, V2TOT(i) };

 (all,h,HH)V3TOT\_HH(h) = sum{c,COM, V3PUR\_S(c,h) };

 V3TOT = sum(h,HH,V3TOT\_HH(h));

 V4TOT = sum{c,COM, V4PUR(c) };

 V5TOT = sum{c,COM, sum{s,SRC, V5PUR(c,s) }};

 V6TOT = sum{c,COM, sum{s,SRC, V6BAS(c,s) }};

 V0GDPEXP = V3TOT + V2TOT\_I + V5TOT + V6TOT + V4TOT - V0CIF\_C;

Coefficient TINY # Small number to prevent singular matrix #;

Formula TINY = 0.000000000001;

! Excerpt 15 of TABLO input file: !

! Occupational composition of labour demand !

!$ Problem: for each industry i, minimize labour cost !

!$ sum{o,OCC, P1LAB(i,o)\*X1LAB(i,o) } !

!$ such that X1LAB\_O(i) = CES( All,o,OCC: X1LAB(i,o) ) !

Coefficient (all,i,IND) SIGMA1LAB(i) # CES substitution between skill types #;

Read SIGMA1LAB from file MDATA header "SLAB";

Equation E\_x1lab # Demand for labour by industry and skill group #

(all,i,IND)(all,o,OCC)

x1lab(i,o) = x1lab\_o(i) - SIGMA1LAB(i)\*[p1lab(i,o) - p1lab\_o(i)];

Equation E\_p1lab\_o # Price to each industry of labour composite #

(all,i,IND)

 [TINY+V1LAB\_O(i)]\*p1lab\_o(i) = sum{o,OCC, V1LAB(i,o)\*p1lab(i,o) };

! Excerpt 16 of TABLO input file: !

! Excerpt 16A: Primary factor proportions !

!Translog unit cost function. This is outlined in appendix G.

It is used to preserve a matrix of factor demand elasticities without the

restrictions of CRESH or CDE. See p. 133-141 of the Black Book.!

Variable

(all,f,AGRIFAC)(all,i,AGIND)x1fac(f,i) # Primary factor demands, agriculture #;

(all,f,AGRIFAC)(all,i,AGIND)p1fac(f,i) # Primary factor pirces, agriculture #;

(all,f,AGRIFAC)(all,i,AGIND)a1fac(f,i) # Primary factor tech. change, agri. #;

(all,f,N\_AGRIFAC)(all,i,N\_AGIND)a1faco(f,i)# Prim. factor tech. change, other #;

(all,f,N\_AGRIFAC)(all,i,N\_AGIND)x1faco(f,i) # Primary factor demands, other #;

(all,f,N\_AGRIFAC)(all,i,N\_AGIND)p1faco(f,i) # Primary factor price, other #;

Coefficient

(all,f,AGRIFAC) (all,i,AGIND) V1FACSH(f,i) #Agri. ind. factor share#;

(all,f,AGRIFAC)(all,v,AGRIFAC)(all,i,AGIND)

 SHR\_FAC(f,v,i)#Agri. industry modified factor share (for translog)#;

(all,f,AGRIFAC)(all,v,AGRIFAC)(all,i,AGIND)

 BETA\_A(f,v,i)#Factor demand elasticities, agri.#;

(all,f,N\_AGRIFAC)(all,i,N\_AGIND) V1FACSH\_N(f,i) #Non-ag ind. factor share#;

(all,f,N\_AGRIFAC)(all,v,N\_AGRIFAC)(all,i,N\_AGIND)

 SHR\_FAC\_N(f,v,i)#Non-ag. ind. modified factor share (for translog)#;

(all,f,N\_AGRIFAC)(all,v,N\_AGRIFAC)(all,i,N\_AGIND)

 BETA\_N(f,v,i)#Factor demand elasticities, non-ag.#;

Read

BETA\_A from file MDATA header "ALPH";

BETA\_N from file MDATA header "ALP2";

Zerodivide Default 0.33;

Formula !calculate the modified cost shares, appendix G, equation G.17!

(all,f,AGRIFAC)(all,i,AGIND)V1FACSH(f,i)=V1FAC(f,i)/sum{g,AGRIFAC,V1FAC(g,i)};

(all,f,N\_AGRIFAC) (all,i,N\_AGIND)V1FACSH\_N(f,i)=

 V1FACO(f,i)/sum{g,N\_AGRIFAC,V1FACO(g,i)};

Zerodivide Default 0.25;

Formula

(all,f,AGRIFAC)(all,v,AGRIFAC)(all,i,AGIND)SHR\_FAC(f,v,i)=

 V1FACSH(v,i) + BETA\_A(f,v,i)/V1FACSH(f,i);

(all,f,N\_AGRIFAC)(all,v,N\_AGRIFAC)(all,i,N\_AGIND)SHR\_FAC\_N(f,v,i)=

 V1FACSH\_N(v,i) + BETA\_N(f,v,i)/V1FACSH\_N(f,i);

Zerodivide off;

Coefficient (all,i,IND)SIGMA1PRIM(i);

(all,i,IND)TRNL(i);

(all,i,IND)CESFORM(i);

Read TRNL from file MDATA header "TRNL";

Formula (all,i,IND)SIGMA1PRIM(i)=0.5; !CES alternative!

(all,i,IND)CESFORM(i) = 1 - TRNL(i); !if TRNL =0, CES functional form!

Equation E\_x1fac # Primary factor demands, agriculture # ! equation G.16!

(all,f,AGRIFAC)(all,i,AGIND)x1fac(f,i) - a1fac(f,i)=

 x1prim(i) - TRNL(i)\*[p1fac(f,i) - Sum{v,AGRIFAC,SHR\_FAC(f,v,i)\*p1fac(v,i)}]

 - TRNL(i)\*[a1fac(f,i) - Sum{v,AGRIFAC,SHR\_FAC(f,v,i)\*a1fac(v,i)}]

 - CESFORM(i)\*SIGMA1PRIM(i)\*[p1fac(f,i) + a1fac(f,i) -p1prim(i)] ;

Equation E\_x1faco # Primary factor demands, non-agriculture # ! equation G.16!

(all,f,N\_AGRIFAC)(all,i,N\_AGIND)x1faco(f,i) - a1faco(f,i)=

x1prim(i)-TRNL(i)\*[p1faco(f,i) - Sum{v,N\_AGRIFAC,SHR\_FAC\_N(f,v,i)\*p1faco(v,i)}]

 -TRNL(i)\*[a1faco(f,i) - Sum{v,N\_AGRIFAC,SHR\_FAC\_N(f,v,i)\*a1faco(v,i)}]

 - CESFORM(i)\*SIGMA1PRIM(i)\*[p1faco(f,i) + a1faco(f,i) -p1prim(i)] ;

!Excerpt 16B: household supply and prices of primary factors!

!WAYANG2 factor market modifications!

Variable

(all,i,AGIND)(all,h,HH) x1lndi\_hh(i,h)# Household supply of land, agri.#;

 p1cap\_ag # National variable capital rental, agri. #;

 p1cap\_nagv # National variable capital rental, non-ag. #;

(all,h,hh) w1cap\_v(h) # Returns to variable capital by household #;

(all,h,hh) w1cap\_f(h) # Returns to fixed capital by household #;

(all,h,hh) x1cap\_vah(h) # variable capital by household, agri. #;

(all,h,hh) x1cap\_vnh(h) # variable capital by household, non-agri. #;

 x1cap\_ag # variable capital, agriculture #;

 x1cap\_nag # variable capital, non-ag. #;

(all,i,N\_AGIND)x1cap\_f(i) # fixed capital, non-ag. #;

(all,i,N\_AGIND)(all,h,hh)x1cap\_f\_hh(i,h) # fixed capital by h'hold, non-ag. #;

Coefficient

(all,h,hh)(all,f,occ) HINC(h,f) # household factor income #;

(all,i,AGIND)(all,h,HH) LANDS(i,h) #Household land rentals by industry#;

Read

 HINC from file MDATA header "HINC";

 LANDS from file mdata Header "LAND";

Update

(all,i,AGIND)(all,h,HH) LANDS(i,h) = p1fac("land",i)\*x1lndi\_hh(i,h);

(all,i,AGIND) V1CAPA(i) = p1fac("varcap",i)\*x1fac("varcap",i);

(all,k,KAP)(all,i,N\_AGIND)V1CAPN(k,i)= p1faco(k,i)\*x1faco(k,i);

Equation E\_p1lab\_i # Supply of labour #

(all,o,OCC)sum{h,HH,HINC(h,o)}\* x1lab\_i(o) =

 sum{h,HH,HINC(h,o)\*[x1lab\_i\_h(o,h)+f1lab\_i\_x(o)]};

Equation E\_p1lnd # supply of land #

(all,i,AGIND)V1LND(i)\*x1lnd(i) = Sum{h,HH, LANDS(i,h)\*x1lndi\_hh(i,h)};

Equation E\_p1capA # Price of variable + fixed capital, non-agri. #

(all,i,N\_AGIND)V1CAP(i)\*p1cap(i) = sum{k,KAP, V1CAPN(k,i)\*p1faco(k,i)};

Equation E\_p1primA # Effective price term for factor demand equations, ag. #

(all,i,AGIND) V1PRIM(i)\*p1prim(i) =

 sum{f,AGRIFAC,V1FAC(f,i)\*[p1fac(f,i) + a1fac(f,i)]};

Equation E\_p1primN # Effective price term for factor demand equations, N\_AG #

(all,i,N\_AGIND) V1PRIM(i)\*p1prim(i) =

 sum{f,N\_AGRIFAC,V1FACO(f,i)\*[p1faco(f,i) + a1faco(f,i)]};

!Excerpt 16C: Matching factor p and x to E\_x1fac and E\_x1faco!

!This block deleted if using CES form!

Equation E\_p1facLB # Industry demands for effective labour #

(all,i,AGIND) p1lab\_o(i)=p1fac("unskilled",i);

Equation E\_x1lab\_oA # Effective labour input, agriculture #

(all,i,AGIND) x1lab\_o(i)= x1fac("unskilled",i);

Equation E\_p1facF # Price of fertiliser in agri.#

(all,i,AGIND) p1fac("fert",i) = p1\_s ("PpkPestisida",i);

Equation E\_p1capB # Price of variable capital, agri. #

(all,i,AGIND)p1cap(i) = p1fac("varcap",i);

Equation E\_x1lnd # Industry demands for land #

(all,i,AGIND) x1lnd(i) = x1fac("land",i);

Equation E\_p1facL # Price of land in agri. #

(all,i,AGIND)p1lnd(i) = p1fac("land",i);

Equation E\_p1facK # Equalise price of capital in agri. #

(all,i,AGIND)p1fac("varcap",i)=p1cap\_ag ;

Equation E\_x1lab\_oB # Industry demands for effective labour #

(all,i,N\_AGIND) x1lab\_o(i) = x1faco("labcomp",i);

Equation E\_p1facoLC # Price to each industry of labour composite #

(all,i,N\_AGIND)p1faco("labcomp",i) = p1lab\_o(i) ;

Equation E\_p1facoKN # Price of variable capital in non-ag #

(all,i,N\_AGIND)p1faco("varcap",i)=p1cap\_nagv;

Equation E\_p1facoFC # supply of fixed capital by household #

(all,i,N\_AGIND)x1cap\_f(i) = x1faco("fixcap",i);

!Excerpt 16D: household supply coefficents!

Coefficient

!(all,f,OCC) (all,i,IND)PRIM(f,i) # factor income by industry #; !

(all,h,HH)(all,i,N\_AGIND)FIXEDK(h,i) #Household supplies of fixed capital#;

(all,h,HH) MMA(h) # Household supplies of agri variable capital#;

(all,h,HH) MMN(h)# Household supplies of non-agri variable capital#;

Read

! PRIM from file MDATA header "PRIM";!

FIXEDK from file mdata Header "CAPS";

MMA from file mdata Header "CAPA";

MMN from file mdata Header "CAPN";

Update

!(all,o,OCC)(all,i,N\_AGIND)PRIM(o,i) = x1lab(i,o)\*p1lab(i,o);!

(all,h,hh) (all,o,OCC) HINC(h,o) = x1lab\_i\_h(o,h)\*p1lab\_i(o)\*f1lab\_i\_x(o);

(all,h,HH)(all,i,N\_AGIND)FIXEDK(h,i) = p1faco("fixcap",i)\*x1cap\_f\_hh(i,h);

(all,h,HH) MMA(h) = p1cap\_ag \* x1cap\_vah(h);

(all,h,HH) MMN(h) = p1cap\_nagv \* x1cap\_vnh(h);

Equation E\_p1lab # Equalising of money wages #

(all,i,IND)(all,o,OCC)

p1lab(i,o)= p1lab\_i(o);

!Excerpt 16E: Market clearing of household factors!

Equation E\_x1cap\_f # supply of fixed capital by household #

(all,i,N\_AGIND)sum{h,HH,FIXEDK(h,i)}\*x1cap\_f(i) =

 sum{h,HH,FIXEDK(h,i)\*x1cap\_f\_hh(i,h)};

Equation E\_p1cap\_ag # market clearing, variable capital, agriculture #

sum{i,AGIND,V1CAP(i)}\*x1cap\_ag = sum{i,AGIND,V1CAP(i)\*x1cap(i)};

Equation E\_x1cap\_ag # household supply of variable capital, ag.#

sum{h,HH,MMA(h)}\*x1cap\_ag = sum{h,HH,MMA(h)\*x1cap\_vah(h)};

Equation E\_p1cap\_nagv # variable capital, non-ag. #

sum{h,HH,MMN(h)}\*x1cap\_nag = sum{h,HH,MMN(h)\*x1cap\_vnh(h)};

Equation E\_x1cap\_nag # market clearing for variable capital, non-ag. #

sum{i,N\_AGIND,V1CAPN("varcap",i)}\*x1cap\_nag =

 sum{i,N\_AGIND,V1CAPN("varcap",i)\*x1faco("varcap",i)};

Equation E\_x1capA # agri. industry capital, variable #

 (all,i,AGIND)x1cap(i)=x1fac("varcap",i);

Equation E\_x1capN # non-agri. industry capital, fixed + variable #

 (all,i,N\_AGIND)V1CAP(i)\*x1cap(i) = sum{k,KAP, V1CAPN(k,i)\*x1faco(k,i)};

!Summing returns to household factors!

Equation E\_w1cap\_v # Returns to variable capital by household #

(all,h,HH)[MMA(h)+MMN(h)]\*w1cap\_v(h) =

MMA(h)\* [p1cap\_ag + x1cap\_vah(h)] + MMN(h) \* [p1cap\_nagv + x1cap\_vnh(h)];

Equation E\_w1cap\_f # Returns to fixed capital by household #

(all,h,HH)sum{i,N\_AGIND,FIXEDK(h,i)}\*w1cap\_f(h) =

sum{i,N\_AGIND,FIXEDK(h,i)\*[p1faco("fixcap",i) + x1cap\_f\_hh(i,h)]};

! Excerpt 17 of TABLO input file: !

! Import/domestic composition of intermediate demands !

!$ X1\_S(c,i) = CES( All,s,SRC: X1(c,s,i)/A1(c,s,i) ) !

Coefficient (all,c,COM) SIGMA1(c) # Armington elasticities: intermediate #;

Read SIGMA1 from file MDATA header "1ARM";

Equation E\_x1 # Source-specific commodity demands #

(all,c,COM)(all,s,SRC)(all,i,IND)

x1(c,s,i)-a1(c,s,i) = x1\_s(c,i) - SIGMA1(c)\*[p1(c,s,i)+a1(c,s,i) - p1\_s(c,i)];

Equation E\_p1\_s # Effective price of commodity composite #

(all,c,COM)(all,i,IND)

p1\_s(c,i) = sum{s,SRC, S1(c,s,i)\*[p1(c,s,i) + a1(c,s,i)] };

! Excerpt 18 of TABLO input file: !

! Top nest of industry input demands !

!$ X1TOT(i) = MIN( All,c,COM: X1\_S(c,i)/[A1\_S(c,s,i)\*A1TOT(i)], !

!$ X1PRIM(i)/[A1PRIM(i)\*A1TOT(i)], !

!$ X1OCT(i)/[A1OCT(i)\*A1TOT(i)] ) !

Equation E\_x1\_sA # Demands for commodity composites, non-agriculture #

(all,c,COM)(all,i,N\_AGIND) x1\_s(c,i) - [a1\_s(c,i) + a1tot(i)] = x1tot(i);

Equation E\_x1\_sB # Demands for commodity composites, agriculture #

(all,c,NONFERT)(all,i,AGIND) x1\_s(c,i) - [a1\_s(c,i) + a1tot(i)] = x1tot(i);

! demands for fertiliser are no longer Leontief !

Equation E\_x1\_sC # Demands for composite fertiliser inputs, agri. production #

 (all,i,AGIND)x1\_s("PpkPestisida",i) = x1fac("fert",i);

!a1\_s("C39fert") is a1fac("C39fert") in agricultural industries!

Equation E\_x1prim # Demands for primary factor composite #

(all,i,IND)x1prim(i) - [a1tot(i) + a1prim(i)] = x1tot(i);

Equation E\_x1oct # Demands for other cost tickets #

(all,i,IND) x1oct(i) - [a1oct(i) + a1tot(i)] = x1tot(i);

Equation E\_p1totA # Zero pure profits in production #

(all,i,N\_AGIND)

V1TOT(i)\*[p1tot(i)-a1tot(i)] =

 sum{c,COM, V1PUR\_S(c,i) \*[p1\_s(c,i) + a1\_s(c,i)] }

 + V1PRIM(i) \*[p1prim(i) + a1prim(i)]

 + V1OCT(i) \*[p1oct(i) + a1oct(i)];

Equation E\_p1totB # Zero pure profits in production #

(all,i,AGIND)

V1TOT(i)\*[p1tot(i)-a1tot(i)] =

 sum{c,NONFERT, V1PUR\_S(c,i) \*[p1\_s(c,i) + a1\_s(c,i)] }

 + V1PRIM(i) \*[p1prim(i) + a1prim(i)]

 + V1OCT(i) \*[p1oct(i) + a1oct(i)];

! Excerpt 19A of TABLO input file: !

! Output mix of commodities !

Coefficient (all,i,IND) SIGMA1OUT(i) # CET transformation elasticities #;

Read SIGMA1OUT from file MDATA header "SCET";

Equation E\_q1 # Supplies of commodities by industries #

(all,c,COM)(all,i,IND)

q1(c,i) = x1tot(i) + SIGMA1OUT(i)\*[p0com(c) - p1tot(i)];

Coefficient

 (all,i,IND) MAKE\_C(i) # All production by industry i #;

 (all,c,COM) MAKE\_I(c) # Total production of commodities #;

Formula

 (all,i,IND) MAKE\_C(i) = sum{c,COM, MAKE(c,i) };

 (all,c,COM) MAKE\_I(c) = sum{i,IND, MAKE(c,i) };

Equation E\_x1tot # Average price received by industries #

(all,i,IND) MAKE\_C(i)\*p1tot(i) = sum{c,COM, MAKE(c,i)\*p0com(c) };

Equation E\_x0com # Total output of commodities #

(all,c,COM) MAKE\_I(c)\*x0com(c) = sum{i,IND, MAKE(c,i)\*q1(c,i) };

! Excerpt 19B of TABLO input file: !

! CET between outputs for local and export markets !

Coefficient

 (all, c,COM) EXPSHR(c) # share going to exports #;

 (all, c,COM) TAU(c) # 1/elast. of transformation, exportable/locally used #;

Zerodivide Default 0.5;

Formula

 (all,c,COM) EXPSHR(c) = V4BAS(c)/SALES(c);

 (all,c,COM) TAU(c) = 0.0; ! if zero, p0dom = pe, and CET is nullified !

Zerodivide Off;

Equation E\_x0dom # supply of commodities to export market #

 (all,c,COM) TAU(c)\*[x0dom(c) - x4(c)] = p0dom(c) - pe(c);

Equation E\_pe # supply of commodities to domestic market #

 (all,c,COM) x0com(c) = [1.0-EXPSHR(c)]\*x0dom(c) + EXPSHR(c)\*x4(c);

Equation E\_p0com # Zero pure profits in transformation #

 (all,c,COM) p0com(c) = [1.0-EXPSHR(c)]\*p0dom(c) + EXPSHR(c)\*pe(c);

! Map between vector and matrix forms of basic price variables !

Equation E\_p0dom # Basic price of domestic goods = p0(c,"dom") #

 (all,c,COM) p0dom(c) = p0(c,"dom");

Equation E\_p0imp # Basic price of imported goods = p0(c,"imp") #

 (all,c,COM) p0imp(c) = p0(c,"imp");

! Excerpt 20 of TABLO input file: !

! Investment demands !

!$ X2\_S(c,i) = CES( All,s,SRC: X2(c,s,i)/A2(c,s,i) ) !

Coefficient (all,c,COM) SIGMA2(c) # Armington elasticities: investment #;

Read SIGMA2 from file MDATA header "2ARM";

Equation E\_x2 # Source-specific commodity demands #

(all,c,COM)(all,s,SRC)(all,i,IND)

x2(c,s,i)-a2(c,s,i) - x2\_s(c,i) = - SIGMA2(c)\*[p2(c,s,i)+a2(c,s,i) - p2\_s(c,i)];

Equation E\_p2\_s # Effective price of commodity composite #

(all,c,COM)(all,i,IND)

p2\_s(c,i) = sum{s,SRC, S2(c,s,i)\*[p2(c,s,i)+a2(c,s,i)] };

! Investment top nest !

!$ X2TOT(i) = MIN( All,c,COM: X2\_S(c,i)/[A2\_S(c,s,i)\*A2TOT(i)] ) !

Equation E\_x2\_s # Demands for commodity composites #

(all,c,COM)(all,i,IND) x2\_s(c,i) - [a2\_s(c,i) + a2tot(i)] = x2tot(i);

Equation E\_p2tot # Zero pure profits in investment #

(all,i,IND) V2TOT(i)\*(p2tot(i) - a2tot(i)) =

 sum{c,COM, V2PUR\_S(c,i) \*[p2\_s(c,i)+a2\_s(c,i)] };

! Excerpt 21 of TABLO input file: !

! Import/domestic composition of household demands !

!$ X3\_S(c,i) = CES( All,s,SRC: X3(c,s)/A3(c,s) ) !

Coefficient (all,c,COM) SIGMA3(c) # Armington elasticities: households #;

Read SIGMA3 from file MDATA header "3ARM";

Equation E\_x3 # Source-specific commodity demands #

(all,c,COM)(all,s,SRC)(all,h,HH)

x3(c,s,h)-a3(c,s) = x3\_s(c,h) - SIGMA3(c)\*[ p3(c,s,h)+a3(c,s) - p3\_s(c,h) ];

Equation E\_p3\_s # Effective price of commodity composite #

(all,c,COM)(all,h,HH) p3\_s(c,h) = sum{s,SRC, S3(c,s,h)\*[p3(c,s,h)+a3(c,s)] };

! Excerpt 22 of TABLO input file: !

! Data and formulae for coefficients used in household demand equations !

Coefficient (all,h,HH)FRISCH(h) # Frisch LES 'parameter'= - (total/luxury) #;

Read FRISCH from file MDATA header "P021";

Update (change) (all,h,HH)FRISCH(h) = FRISCH(h)\*[w3tot\_hh(h) - w3lux(h)]/100.0;

Coefficient (all,c,COM)(all,h,HH)

 EPS(c,h) # Household expenditure elasticities #;

Read EPS from file MDATA header "XPEL";

Update (change)

(all,c,COM)(all,h,HH) EPS(c,h) =

EPS(c,h)\*[x3lux(c,h)-x3\_s(c,h)+w3tot\_hh(h)-w3lux(h)]/100.0;

Coefficient (all,c,COM)(all,h,HH) S3\_S(c,h) # Household average budget shares #;

Formula (all,c,COM)(all,h,HH) S3\_S(c,h) = V3PUR\_S(c,h)/V3TOT\_HH(h);

Coefficient (all,c,COM)(all,h,HH)B3LUX(c,h)

 # Ratio, (supernumerary expenditure/total expenditure), by commodity #;

Formula (all,c,COM)(all,h,HH) B3LUX(c,h) = -EPS(c,h)/FRISCH(h);

Coefficient(all,c,COM)(all,h,HH)S3LUX(c,h) # Marginal household budget shares #;

Formula (all,c,COM)(all,h,HH)S3LUX(c,h) = EPS(c,h)\*S3\_S(c,h);

! Excerpt 23 of TABLO input file: !

! Commodity composition of household demand !

Equation E\_x3sub # Subsistence demand for composite commodities #

 (all,c,COM)(all,h,HH) x3sub(c,h) = q(h) + a3sub(c,h);

Equation E\_x3lux # Luxury demand for composite commodities #

(all,c,COM)(all,h,HH) x3lux(c,h) + p3\_s(c,h) = w3lux(h) + a3lux(c,h);

Equation E\_x3\_s # Total household demand for composite commodities #

(all,c,COM)(all,h,HH) x3\_s(c,h) =

 B3LUX(c,h)\*x3lux(c,h) + [1-B3LUX(c,h)]\*x3sub(c,h);

Equation E\_utility # Change in utility disregarding taste change terms #

(all,h,HH)utility(h) + q(h) = sum{c,COM, S3LUX(c,h)\*x3lux(c,h) };

Equation E\_a3lux # Default setting for luxury taste shifter #

(all,c,COM)(all,h,HH)a3lux(c,h) = a3sub(c,h) - sum{k,COM,S3LUX(k,h)\*a3sub(k,h)};

Equation E\_a3sub # Default setting for subsistence taste shifter #

(all,c,COM)(all,h,HH)a3sub(c,h) = a3\_s(c,h) - sum{k,COM, S3\_S(k,h)\*a3\_s(k,h) };

! Excerpt 24 of TABLO input file: !

! Export and government demands !

Coefficient (all,c,COM) EXP\_ELAST(c)

 # Export demand elasticities: typical value -20.0 #;

Read EXP\_ELAST from file MDATA header "P018";

Equation E\_x4A # export demand functions #

(all,c,COM) x4(c) - f4q(c) = EXP\_ELAST(c)\*[p4(c) - phi - f4p(c)];

Equation E\_x5 # Government demands #

(all,c,COM)(all,s,SRC) x5(c,s) = f5(c,s) + f5tot;

Equation E\_f5tot # Overall government demands shift #

 f5tot = x3tot + f5tot2;

! Excerpt 25 of TABLO input file: !

! Margin demands !

Equation E\_x1mar # Margins to producers #

(all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR) x1mar(c,s,i,m) = x1(c,s,i) + a1mar(c,s,i,m);

Equation E\_x2mar # Margins to capital creators #

(all,c,COM)(all,s,SRC)(all,i,IND)(all,m,MAR) x2mar(c,s,i,m) = x2(c,s,i) + a2mar(c,s,i,m);

Equation E\_x3mar # Margins to households #

(all,c,COM)(all,s,SRC)(all,m,MAR)(all,h,HH) x3mar(c,s,m,h) = x3(c,s,h) + a3mar(c,s,m);

Equation E\_x4mar # Margins to exports #

(all,c,COM)(all,m,MAR) x4mar(c,m) = x4(c) + a4mar(c,m);

Equation E\_x5mar # Margins to government users #

(all,c,COM)(all,s,SRC)(all,m,MAR) x5mar(c,s,m) = x5(c,s) + a5mar(c,s,m);

! Excerpt 26 of TABLO input file: !

! The price system !

Equation E\_p1 # Purchasers prices - producers #

(all,c,COM)(all,s,SRC)(all,i,IND)

[V1PUR(c,s,i)+TINY]\*p1(c,s,i) =

 [V1BAS(c,s,i)+V1TAX(c,s,i)]\*[p0(c,s)+ t1(c,s,i)]

+ sum{m,MAR, V1MAR(c,s,i,m)\*[p0dom(m)+a1mar(c,s,i,m)] };

Equation E\_p2 # Purchasers prices - capital creators #

(all,c,COM)(all,s,SRC)(all,i,IND)

[V2PUR(c,s,i)+TINY]\*p2(c,s,i) =

 [V2BAS(c,s,i)+V2TAX(c,s,i)]\*[p0(c,s)+ t2(c,s,i)]

+ sum{m,MAR, V2MAR(c,s,i,m)\*[p0dom(m)+a2mar(c,s,i,m)] };

Equation E\_p3 # Purchasers prices - households #

(all,c,COM)(all,s,SRC)(all,h,HH)

[V3PUR(c,s,h)+TINY]\*p3(c,s,h) =

 [V3BAS(c,s,h)+V3TAX(c,s,h)]\*[p0(c,s)+ t3(c,s)]

+ sum{m,MAR,V3MAR(c,s,m,h)\*[p0dom(m)+a3mar(c,s,m)] };

Equation E\_p4 # Zero pure profits in exporting #

(all,c,COM)

[V4PUR(c)+TINY]\*p4(c) = [V4BAS(c)+V4TAX(c)]\*[pe(c)+ t4(c)]

+ sum{m,MAR, V4MAR(c,m)\*[p0dom(m)+a4mar(c,m)] };

! note that we refer to export taxes,not subsidies !

Equation E\_p5 # Zero pure profits in distribution of government #

(all,c,COM)(all,s,SRC)

[V5PUR(c,s)+TINY]\*p5(c,s) = [V5BAS(c,s)+V5TAX(c,s)]\*[p0(c,s)+ t5(c,s)]

+ sum{m,MAR, V5MAR(c,s,m)\*[p0dom(m)+a5mar(c,s,m)] };

Equation E\_p0A # Zero pure profits in importing #

(all,c,COM) p0(c,"imp") = pf0cif(c) + phi + t0imp(c);

! Excerpt 27 of TABLO input file: !

! Market clearing equations !

Equation E\_p0B # Demand equals supply for non margin commodities #

(all,n,NONMAR)

 DOMSALES(n)\*x0dom(n) =

 sum{i,IND, V1BAS(n,"dom",i)\*x1(n,"dom",i)

 + V2BAS(n,"dom",i)\*x2(n,"dom",i) }

 + sum{h,HH, V3BAS(n,"dom",h)\*x3(n,"dom",h)}

 + V5BAS(n,"dom")\*x5(n,"dom") ! note exports omitted !

 + 100\*LEVP0(n,"dom")\*delx6(n,"dom");

Equation E\_p0C # Demand equals supply for margin commodities #

(all,m,MAR)

 DOMSALES(m)\*x0dom(m) = ! basic part first !

 sum{i,IND, V1BAS(m,"dom",i)\*x1(m,"dom",i)

 + V2BAS(m,"dom",i)\*x2(m,"dom",i) }

 + sum{h,HH, V3BAS(m,"dom",h)\*x3(m,"dom",h)}

 + V5BAS(m,"dom")\*x5(m,"dom") ! note exports omitted !

 + 100\*LEVP0(m,"dom")\*delx6(m,"dom") ! now margin part !

 + sum{c,COM, V4MAR(c,m)\*x4mar(c,m) ! note nesting of sum parentheses !

 + sum{s,SRC,sum(h,HH, V3MAR(c,s,m,h)\*x3mar(c,s,m,h))

 + V5MAR(c,s,m)\*x5mar(c,s,m)

 + sum{i,IND, V1MAR(c,s,i,m)\*x1mar(c,s,i,m)

 + V2MAR(c,s,i,m)\*x2mar(c,s,i,m) }}};

Equation E\_x0imp # Import volumes #

(all,c,COM)

 [TINY + V0IMP(c)]\*x0imp(c) =

 sum{i,IND, V1BAS(c,"imp",i)\*x1(c,"imp",i)

 + V2BAS(c,"imp",i)\*x2(c,"imp",i) }

 + sum{h,HH, V3BAS(c,"imp",h)\*x3(c,"imp",h)}

 + V5BAS(c,"imp")\*x5(c,"imp")

 + 100\*LEVP0(c,"imp")\*delx6(c,"imp");

Equation E\_x1lab\_i # Demand equals supply for labour of each skill #

(all,o,OCC) V1LAB\_I(o)\*x1lab\_i(o) = sum{i,IND, V1LAB(i,o)\*x1lab(i,o) };

! Excerpt 28 of TABLO input file: !

! Tax rate equations !

Equation

E\_t1 # Power of tax on sales to intermediate #

 (all,c,COM)(all,s,SRC)(all,i,IND) t1(c,s,i) = f0tax\_s(c) + f1tax\_csi;

E\_t2 # Power of tax on sales to investment #

 (all,c,COM)(all,s,SRC)(all,i,IND) t2(c,s,i) = f0tax\_s(c) + f2tax\_csi;

E\_t3 # Power of tax on sales to households #

 (all,c,COM)(all,s,SRC) t3(c,s) = f0tax\_s(c) + f3tax\_cs;

E\_t4A # Power of tax on sales to traditional exports #

 (all,c,COM) t4(c) = f4tax\_x(c) + f4tax\_c;

E\_t5 # Power of tax on sales to government #

 (all,c,COM)(all,s,SRC) t5(c,s) = f0tax\_s(c) + f5tax\_cs;

! Excerpt 29 of TABLO input file: !

! Indirect tax revenue !

Equation

E\_w1tax\_csi # Revenue from indirect taxes on flows to intermediate #

 [TINY + V1TAX\_CSI]\*w1tax\_csi = sum{c,COM, sum{s,SRC, sum{i,IND,

 V1TAX(c,s,i)\*[p0(c,s)+x1(c,s,i)]+[V1TAX(c,s,i)+V1BAS(c,s,i)]\*t1(c,s,i) }}};

E\_w2tax\_csi # Revenue from indirect taxes on flows to investment #

 [TINY + V2TAX\_CSI]\*w2tax\_csi = sum{c,COM, sum{s,SRC, sum{i,IND,

 V2TAX(c,s,i)\*[p0(c,s)+x2(c,s,i)]+[V2TAX(c,s,i)+V2BAS(c,s,i)]\*t2(c,s,i) }}};

E\_w3tax\_cs # Revenue from indirect taxes on flows to households #

 [TINY + V3TAX\_CS]\*w3tax\_cs = sum{c,COM, sum{s,SRC,sum{h,HH,

 V3TAX(c,s,h)\*[p0(c,s)+ x3(c,s,h)] + [V3TAX(c,s,h)+V3BAS(c,s,h)]\*t3(c,s)}}};

E\_w4tax\_c # Revenue from indirect taxes on exports #

 [TINY + V4TAX\_C]\*w4tax\_c = sum{c,COM,

 V4TAX(c)\*[pe(c) + x4(c)] + [V4TAX(c)+ V4BAS(c)]\*t4(c) };

E\_w5tax\_cs # Revenue from indirect taxes on flows to government #

 [TINY + V5TAX\_CS]\*w5tax\_cs = sum{c,COM, sum{s,SRC,

 V5TAX(c,s)\*[p0(c,s)+ x5(c,s)] + [V5TAX(c,s)+V5BAS(c,s)]\*t5(c,s) }};

E\_w0tar\_c # Tariff revenue #

 [TINY+V0TAR\_C]\*w0tar\_c = sum{c,COM,

 V0TAR(c)\*[pf0cif(c) + phi + x0imp(c)] + V0IMP(c)\*t0imp(c) };

! Excerpt 30 of TABLO input file: !

! Factor incomes and GDP !

Equation

E\_w1lnd\_i # Aggregate payments to land #

 V1LND\_i\*w1lnd\_i = sum{i,AGIND, V1LND(i)\*[x1lnd(i)+p1lnd(i)] };

E\_w1lab\_io # Aggregate payments to labour #

 V1LAB\_IO\*w1lab\_io = sum{i,IND, sum{o,OCC, V1LAB(i,o)\*[x1lab(i,o)+p1lab(i,o)]}};

E\_w1cap\_i # Aggregate payments to capital #

 V1CAP\_I\*w1cap\_i = sum{i,IND, V1CAP(i)\*[x1cap(i)+p1cap(i)] };

E\_w1oct\_i # Aggregate other cost ticket payments #

 V1OCT\_I\*w1oct\_i = sum{i,IND, V1OCT(i)\*[x1oct(i)+p1oct(i)] };

E\_w0tax\_csi # Aggregate value of indirect taxes #

 V0TAX\_CSI\*w0tax\_csi = V1TAX\_CSI\*w1tax\_csi + V2TAX\_CSI\*w2tax\_csi

 + V3TAX\_CS\*w3tax\_cs + V4TAX\_C\*w4tax\_c + V5TAX\_CS\*w5tax\_cs + V0TAR\_C\*w0tar\_c;

E\_w0gdpinc # Aggregate nominal GDP from income side #

 V0GDPINC\*w0gdpinc = V1LND\_I\*w1lnd\_i + V1CAP\_I\*w1cap\_i + V1LAB\_IO\*w1lab\_io

 + V1OCT\_I\*w1oct\_i + V0TAX\_CSI\*w0tax\_csi;

! Excerpt 31 of TABLO input file: !

! GDP expenditure aggregates !

E\_x2tot\_i # Total real investment #

 V2TOT\_I\*x2tot\_i = sum{i,IND, V2TOT(i)\*x2tot(i) };

E\_p2tot\_i # Investment price index #

 V2TOT\_I\*p2tot\_i = sum{i,IND, V2TOT(i)\*p2tot(i) };

E\_w2tot\_i # Total nominal investment #

 w2tot\_i = x2tot\_i + p2tot\_i;

E\_x3tot\_hh # Real consumption #

 (all,h,HH)V3TOT\_HH(h)\*x3tot\_hh(h)=sum{c,COM,sum{s,SRC,V3PUR(c,s,h)\*x3(c,s,h)}};

E\_p3tot\_hh # Household price index #

 (all,h,HH)V3TOT\_HH(h)\*p3tot\_hh(h)=sum{c,COM,sum{s,SRC,V3PUR(c,s,h)\*p3(c,s,h)}};

E\_w3tot\_hh # Household budget constraint #

(all,h,HH)w3tot\_hh(h) = x3tot\_hh(h) + p3tot\_hh(h);

E\_x3tot # Real consumption #

 V3TOT\*x3tot = sum{h,HH,V3TOT\_HH(h)\*x3tot\_hh(h)};

E\_p3tot # Consumer price index #

 V3TOT\*p3tot = sum{h,HH,V3TOT\_HH(h)\*p3tot\_hh(h)};

E\_w3tot # Household budget constraint #

 w3tot = x3tot + p3tot;

E\_x4tot # Export volume index #

 V4TOT\*x4tot = sum{c,COM, V4PUR(c)\*x4(c) };

E\_p4tot # Exports price index, rupiah #

 V4TOT\*p4tot = sum{c,COM, V4PUR(c)\*p4(c) };

E\_w4tot # rupiah border value of exports #

 w4tot = x4tot + p4tot;

E\_x5tot # Aggregate real government demands #

 V5TOT\*x5tot = sum{c,COM, sum{s,SRC, [TINY+V5PUR(c,s)]\*x5(c,s) }};

E\_p5tot # Government price index #

 V5TOT\*p5tot = sum{c,COM, sum{s,SRC, V5PUR(c,s)\*p5(c,s) }};

E\_w5tot # Aggregate nominal value of government demands #

 w5tot = x5tot + p5tot;

E\_x6tot # Inventories volume index #

 V6TOT\*x6tot = 100\*sum{c,COM, sum{s,SRC, LEVP0(c,s)\*delx6(c,s) }};

E\_p6tot # Inventories price index #

 [TINY+V6TOT]\*p6tot = sum{c,COM, sum{s,SRC, V6BAS(c,s)\*p0(c,s) }};

E\_w6tot # Aggregate nominal value of inventories #

 w6tot = x6tot + p6tot;

E\_x0cif\_c # Import volume index, C.I.F. weights #

 V0CIF\_C\*x0cif\_c = sum{c,COM, V0CIF(c)\*x0imp(c) };

E\_p0cif\_c # Imports price index, rupiah C.I.F. #

 V0CIF\_C\*p0cif\_c = sum{c,COM, V0CIF(c)\*[phi+pf0cif(c)] };

E\_w0cif\_c # Value of imports, rupiah C.I.F. #

 w0cif\_c = x0cif\_c + p0cif\_c;

E\_x0gdpexp # Real GDP, expenditure side #

 V0GDPEXP\*x0gdpexp = V3TOT\*x3tot + V2TOT\_I\*x2tot\_i + V5TOT\*x5tot

 + V6TOT\*x6tot + V4TOT\*x4tot - V0CIF\_C\*x0cif\_c;

E\_p0gdpexp # Price index for GDP, expenditure side #

 V0GDPEXP\*p0gdpexp = V3TOT\*p3tot + V2TOT\_I\*p2tot\_i + V5TOT\*p5tot

 + V6TOT\*p6tot + V4TOT\*p4tot - V0CIF\_C\*p0cif\_c;

E\_w0gdpexp # Nominal GDP from expenditure side #

 w0gdpexp = x0gdpexp + p0gdpexp;

! Excerpt 32 of TABLO input file: !

! Trade balance and other aggregates !

Equation

E\_delB # %(Balance of trade)/GDP #

 V0GDPEXP\*delB = V4TOT\*w4tot - V0CIF\_C\*w0cif\_c

 -(V4TOT-V0CIF\_C)\*w0gdpexp;

E\_x0imp\_c # Import volume index, duty paid weights #

 V0IMP\_C\*x0imp\_c = sum{c,COM, V0IMP(c)\*x0imp(c) };

E\_p0imp\_c # Duty paid imports price index #

 V0IMP\_C\*p0imp\_c = sum{c,COM, V0IMP(c)\*p0(c,"imp") };

E\_w0imp\_c # Value of imports (duty paid) #

 w0imp\_c = x0imp\_c + p0imp\_c;

E\_x1cap\_i # Aggregate usage of capital,rental weights #

 V1CAP\_I\*x1cap\_i = sum{i,IND, V1CAP(i)\*x1cap(i) };

E\_p1cap\_i # Average capital rental #

 V1CAP\_I\*p1cap\_i = sum{i,IND, V1CAP(i)\*p1cap(i) };

Equation E\_employ # Employment by industry #

(all,i,IND) V1LAB\_O(i)\*employ(i) = sum{o,OCC, V1LAB(i,o)\*x1lab(i,o) };

E\_p1lab\_io # Average nominal wage #

 V1LAB\_IO\*p1lab\_io = sum{i,IND, sum{o,OCC, V1LAB(i,o)\*p1lab(i,o) }};

E\_realwage # Average real wage #

 realwage = p1lab\_io - p3tot;

E\_x1prim\_i # Aggregate output: value-added weights #

 V1PRIM\_I\*x1prim\_i = sum{i,IND, V1PRIM(i)\*x1tot(i) };

E\_p0toft # Terms of trade #

 p0toft = p4tot - p0cif\_c;

E\_p0realdev # Real devaluation #

 p0realdev = p0cif\_c - p0gdpexp;

! Excerpt 33 of TABLO input file: !

! Investment equations !

! Follows Section 19 of DPSV - warts and all. In particular, the

ratios Q and G are treated as parameters, just as in the original

ORANI implementation. Attempts to improve the theory by updating

these parameters have been found to occasionally lead to perversely

signed coefficients !

Variable

(all,i,IND) finv(i) # Investment shifter #;

(all,i,IND) r1cap(i) # Current rates of return on capital #;

 omega # Economy-wide "rate of return" #;

Equation E\_r1cap # Definition of rates of return to capital #

(all,i,IND) r1cap(i) = 2.0\*(p1cap(i) - p2tot(i));

! Note: above equation comes from DPSV equation 19.7. The value 2.0

 corresponds to the DPSV ratio Q (= ratio, gross to net rate of

 return) and is a typical value of this ratio. !

Equation E\_x2totA # Investment rule #

(all,i,ENDOGINV)

x2tot(i) - x1cap(i) = finv(i) + 0.33\*[r1cap(i) - omega];

! Note: above equation comes from substituting together DPSV

 equations 19.8-9. The value 0.33 corresponds to the DPSV ratio

 [1/G.Beta] and is a typical value of this ratio. !

Equation E\_x2totB # Investment in exogenous industries #

(all,i,EXOGINV) x2tot(i) = x2tot\_i + finv(i);

! Excerpt 34 of TABLO input file: !

! Indexing and other equations !

Equation E\_p1oct # Indexing of prices of "other cost" tickets #

(all,i,IND) p1oct(i) = p3tot + f1oct(i); ! assumes full indexation !

E\_delx6 # possible rule for stocks #

(all,c,COM)(all,s,SRC) 100\*LEVP0(c,s)\*delx6(c,s)=V6BAS(c,s)\*x0com(c)+fx6(c,s);

! Excerpt 35 of TABLO input file: !

! Decomposition of Fan !

Set FANCAT # parts of Fan decomposition #

 (LocalMarket, ImportShare, Export, Total);

Variable

(all,c,COM) x0loc(c) # real percent change in LOCSALES (dom+imp) #;

(change)(all,c,COM)(all,f,FANCAT) fandecomp(c,f) # Fan decomposition #;

Coefficient

 (all,c,COM) LOCSALES(c) # Total local sales of dom + imp commodity c #;

 (all,c,COM) INITSALES(c) # Initial volume of SALES at final prices #;

Formula

 (all,c,COM) LOCSALES(c) = DOMSALES(c) + V0IMP(c);

 (initial) (all,c,COM) INITSALES(c) = SALES(c);

Update

 (all,c,COM) INITSALES(c) = p0com(c);

Equation E\_x0loc # %growth in local market #

(all,c,COM) LOCSALES(c)\*x0loc(c) =

 DOMSALES(c)\*x0dom(c) + V0IMP(c)\*x0imp(c);

Equation E\_fandecompA # growth in local market effect #

(all,c,COM) INITSALES(c)\*fandecomp(c,"LocalMarket") = DOMSALES(c)\*x0loc(c);

! The local market effect is the % change in output that would have occurred

if local sales of the domestic product had followed dom+imp sales (x0loc) !

Equation E\_fandecompB # export effect #

(all,c,COM) INITSALES(c)\*fandecomp(c,"Export") = V4BAS(c)\*x4(c);

Equation E\_fandecompC # import leakage effect - via residual #

(all,c,COM) fandecomp(c,"Total") =

fandecomp(c,"LocalMarket") + fandecomp(c,"ImportShare") + fandecomp(c,"Export");

Equation E\_fandecompD # Fan total = x0com #

(all,c,COM) INITSALES(c)\*fandecomp(c,"Total") = SALES(c)\*x0com(c);

! Excerpt 44 of TABLO input file: !

! Fiscal extension !

Set TYPE (expend, recp);! expend=govt. payments, recp=govt. receipts !

Variable

(all,h,HH)(all,t,TYPE)fgov\_h(h,t) # Shift in transfers: govt. -- households #;

(all,t,TYPE) fgov\_f(t) # Shift in transfers: govt. -- foreign #;

(all,h,HH)(all,t,TYPE)gov\_h(h,t) # Transfers: govt. -- households #;

(all,t,TYPE) gov\_f(t) # Transfers: govt. -- foreign #;

(all,h,HH) w0hhtax(h) # % change in personal income tax #;

(all,h,HH)w0hhinc(h) #Aggregate nominal take-home income earned by households #;

(change) delbudget # Rupiah change in budget balance G-T #;

 w0govt\_t # Aggregate government revenue#;

 w0govt\_g # Aggregate government expenditure#;

 f1inc\_tax # Overall income tax shifter #;

Coefficient

 GOVTREV # Total government revenue #;

 GOVTEXP # Nominal total current and capital government expenditure #;

 (all,i,EXOGINV)V2TOT\_G(i) # Total govt. funding of capital created for i #;

 (all,t,TYPE)TRANSFER\_F(t) # Government transfers: payments/receipts foreign#;

 (all,h,HH)(all,t,TYPE)TRANSFER\_H(h,t) # Govt transfers to and from h'holds#;

 (all,h,HH)V0HHTAX(h) # Personal income tax on all household factors #;

 (all,h,HH)V0HHINC(h) # Income earned by households #;

Read

 V0HHTAX from file MDATA header "PINC";

 TRANSFER\_F from file MDATA header "TRAN";

 TRANSFER\_H from file MDATA header "GOHH";

Update (all,t,TYPE) TRANSFER\_F(t) = gov\_f(t);

 (all,h,HH)(all,t,TYPE)TRANSFER\_H(h,t) = gov\_h(h,t);

 (all,h,HH) V0HHTAX(h) = w0hhtax(h);

Formula

 (all,i,EXOGINV)V2TOT\_G(i) = sum{c,COM, V2PUR\_S(c,i) }\*0.3;

 !allocation of public investment!

 GOVTREV = V0TAX\_CSI + sum{h,HH,V0HHTAX(h)} +

 TRANSFER\_F("recp") +sum{h,HH,TRANSFER\_H(h,"recp")};

 GOVTEXP = V5TOT + Sum{i,EXOGINV, V2TOT\_G(i)} +

 TRANSFER\_F("expend") +sum{h,HH,TRANSFER\_H(h,"expend")};

Equation E\_w3lux # consumption function #

(All,h,HH)

w3tot\_hh(h) = f3tot + f3tot\_h(h) + w0hhinc(h);

Equation E\_w0hhtax #Aggregate nominal income tax paid by households #

(all,h,HH)w0hhtax(h) = w0hhinc(h) + f1inc\_tax;

!Equation E\_w0hhtax constrains any exogenous shifts in the income tax rate to

being equal across all household factors of production. Note that take-home

household income is used in the consumption function.!

Equation E\_gov\_f # Government transfers to and from foreigners #

(all,t,TYPE)gov\_f(t) = p3tot + fgov\_f(t);

Equation E\_gov\_h # Government transfers to and from households #

(all,h,HH)(all,t,TYPE)gov\_h(h,t) = p3tot + fgov\_h(h,t);

Formula (all,h,HH)V0HHINC(h) =

sum{i,AGIND,LANDS(i,h)} + sum{o,OCC,HINC(h,o)} +

MMA(h)+MMN(h) + sum{i,N\_AGIND,FIXEDK(h,i)}

 + TRANSFER\_H(h,"expend") - TRANSFER\_H(h,"recp")

 - V0HHTAX(h);

Equation E\_w0hhinc #Aggregate nominal take-home income earned by households #

(all,h,HH)V0HHINC(h)\*w0hhinc(h)=

sum{i,AGIND,LANDS(i,h)\*[p1lnd(i) + x1lndi\_hh(i,h)]} +

sum{o,OCC,HINC(h,o)\*[x1lab\_i\_h(o,h) + p1lab\_i(o) + f1lab\_i\_x(o)]} +

 [MMA(h)+MMN(h)]\*w1cap\_v(h) + sum{i,N\_AGIND,FIXEDK(h,i)}\*w1cap\_f(h)

 + TRANSFER\_H(h,"expend")\*gov\_h(h,"expend")

 - TRANSFER\_H(h,"recp")\*gov\_h(h,"recp")

 - V0HHTAX(h)\*w0hhtax(h);

Equation E\_w0govt\_t # Aggregate government revenue #

GOVTREV\*w0govt\_t = V0TAX\_CSI\*w0tax\_csi + sum{h,HH,V0HHTAX(h)\*w0hhtax(h)}

 + TRANSFER\_F("recp")\*gov\_f("recp") +

 sum{h,HH,TRANSFER\_H(h,"recp")\*gov\_h(h,"recp")};

Equation E\_w0govt\_g # Aggregate government expenditure #

GOVTEXP\*w0govt\_g = V5TOT\*w5tot

 + Sum{i,EXOGINV, V2TOT\_G(i)\*[x2tot(i) + p2tot(i)]}

 + TRANSFER\_F("expend")\*gov\_f("expend")

+ sum{h,HH,TRANSFER\_H(h,"expend")\*gov\_h(h,"expend")};

Equation E\_delbudget # Change in budget balance G-T # !increased deficit >0!

100\*delbudget = GOVTEXP\*w0govt\_g - GOVTREV\*w0govt\_t ;

! Excerpt 45 of TABLO input file: !

! Data for Checking Identities !

File (new) SUMMARY # Summary and checking data #;

Coefficient ! coefficients for checking !

 (all,i,IND) PURE\_PROFITS(i) # COSTS-MAKE\_C : should be zero #;

 (all,c,COM) LOST\_GOODS(c) # SALES-MAKE\_I : should be zero #;

 (all,h,HH) EPSTOT(h) # Average Engel elasticity: should = 1 #;

Formula

 (all,i,IND) PURE\_PROFITS(i) = V1TOT(i) - MAKE\_C(i);

 (all,c,COM) LOST\_GOODS(c) = SALES(c) - MAKE\_I(c);

 (all,h,HH) EPSTOT(h) = sum{c,COM, S3\_S(c,h)\*EPS(c,h)};

Write

PURE\_PROFITS to file SUMMARY header "PURE" longname "COSTS-MAKE\_C: should = 0";

LOST\_GOODS to file SUMMARY header "LOST" longname "SALES-MAKE\_I: should = 0";

EPSTOT to file SUMMARY header "ETOT" longname "Average Engel elast: should = 1";

! Excerpt 46 of TABLO input file: !

! Components of GDP from income and expenditure sides !

Set EXPMAC # Expenditure Aggregates #

 (Consumption, Investment, Government, Stocks, Exports, Imports);

Coefficient (all,e,EXPMAC) EXPGDP(e) # Expenditure Aggregates #;

Formula

 EXPGDP("Consumption") = V3TOT;

 EXPGDP("Investment") = V2TOT\_I;

 EXPGDP("Government") = V5TOT;

 EXPGDP("Stocks") = V6TOT;

 EXPGDP("Exports") = V4TOT;

 EXPGDP("Imports") = -V0CIF\_C;

Write EXPGDP to file SUMMARY header "EMAC" longname "Expenditure Aggregates";

Set INCMAC # Income Aggregates # (Land, Labour, Capital, OCT, IndTaxes);

Coefficient (all,i,INCMAC) INCGDP(i) # Income Aggregates #;

Formula

 INCGDP("Land") = V1LND\_I;

 INCGDP("Labour") = V1LAB\_IO;

 INCGDP("Capital") = V1CAP\_I;

 INCGDP("OCT") = V1OCT\_I;

 INCGDP("IndTaxes") = V0TAX\_CSI;

Write INCGDP to file SUMMARY header "IMAC" longname "Income Aggregates";

Set TAXMAC # Tax Aggregates #

 (Intermediate,Investment,Consumption,Exports,Government,Tariff);

Coefficient (all,t,TAXMAC) TAX(t) # Tax Aggregates #;

Formula

 TAX("Intermediate") = V1TAX\_CSI;

 TAX("Investment") = V2TAX\_CSI;

 TAX("Consumption") = V3TAX\_CS;

 TAX("Exports") = V4TAX\_C;

 TAX("Government") = V5TAX\_CS;

 TAX("Tariff") = V0TAR\_C;

Write TAX to file SUMMARY header "TMAC" longname "Tax Aggregates";

! Excerpt 47 of TABLO input file: !

! Matrix of Industry Costs !

Set COSTCAT # Cost Categories #

 (IntDom, IntImp, margin, IndTax, Lab, Cap, Lnd, ProdTax); ! co !

Coefficient (all,i,IND)(all,co,COSTCAT) COSTMAT(i,co);

Formula

(all,i,IND) COSTMAT(i,"IntDom") = sum{c,COM, V1BAS(c,"dom",i)};

(all,i,IND) COSTMAT(i,"IntImp") = sum{c,COM, V1BAS(c,"imp",i)};

(all,i,IND) COSTMAT(i,"margin") =

 sum{c,COM, sum{s,SRC, sum{m,MAR, V1MAR(c,s,i,m)}}};

(all,i,IND) COSTMAT(i,"IndTax") = sum{c,COM, sum{s,SRC, V1TAX(c,s,i)}};

(all,i,IND) COSTMAT(i,"Lab") =V1LAB\_O(i);

(all,i,IND) COSTMAT(i,"Cap") =V1CAP(i);

(all,i,IND) COSTMAT(i,"Lnd") =V1LND(i);

(all,i,IND) COSTMAT(i,"ProdTax") =V1OCT(i);

Write COSTMAT to file SUMMARY header "CSTM" longname "Cost Matrix";

Formula (all,i,IND)(all,co,COSTCAT) ! convert to % shares and re-write !

 COSTMAT(i,co)= 100\*COSTMAT(i,co)/(TINY+V1TOT(i));

Write COSTMAT to file SUMMARY header "COSH" longname "Cost Share Matrix";

! Excerpt 48 of TABLO input file: !

! Matrix of domestic commodity sales with total imports !

Set ! Subscript !

SALECAT # SALE Categories #

(Interm, Invest, HouseH, Export, GovGE, Stocks,margins, Total, Imports);

Coefficient (all,c,COM)(all,sa,SALECAT) SALEMAT(c,sa);

Formula

(all,c,COM) SALEMAT(c,"Interm") = sum{i,IND, V1BAS(c,"dom",i)};

(all,c,COM) SALEMAT(c,"Invest") = sum{i,IND, V2BAS(c,"dom",i)};

(all,c,COM) SALEMAT(c,"HouseH") = sum{h,HH,V3BAS(c,"dom",h)};

(all,c,COM) SALEMAT(c,"Export") = V4BAS(c);

(all,c,COM) SALEMAT(c,"GovGE") = V5BAS(c,"dom");

(all,c,COM) SALEMAT(c,"Stocks") = V6BAS(c,"dom");

(all,c,COM) SALEMAT(c,"margins") = MARSALES(c);

(all,c,COM) SALEMAT(c,"Total") = SALES(c);

(all,c,COM) SALEMAT(c,"Imports") = V0IMP(c);

write SALEMAT to file SUMMARY header "SLSM" longname

 "Matrix of domestic commodity sales with total imports";

Formula

 (all,c,COM)(all,sa,SALECAT) SALEMAT(c,sa) = 100\*SALEMAT(c,sa)/[TINY+SALES(c)];

 (all,c,COM) SALEMAT(c,"Imports")= 100\*V0IMP(c)/[TINY+DOMSALES(c)+V0IMP(c)];

Write SALEMAT to file SUMMARY header "SLSH" longname

 "market shares for domestic goods with total import share";

! Excerpt 49 of TABLO input file: !

! Weight Vectors for use in aggregation and other calculations !

Write

V1TOT to file SUMMARY header "1TOT" longname "Industry Output";

V2TOT to file SUMMARY header "2TOT" longname "Investment by Industry";

V1PUR\_SI to file SUMMARY header "1PUR" longname "Interm.Usage by com at PP";

V2PUR\_SI to file SUMMARY header "2PUR" longname "Invest.Usage by com at PP";

V3PUR\_S to file SUMMARY header "3PUR" longname "Consumption at Purch.Prices";

V4PUR to file SUMMARY header "4PUR" longname "Exports at Purchasers Prices";

V1LAB\_O to file SUMMARY header "LAB1" longname "Industry Wages";

V1CAP to file SUMMARY header "1CAP" longname "Capital Rentals";

V1PRIM to file SUMMARY header "VLAD" longname "Industry Factor Cost";

! Excerpt 50 of TABLO input file: !

Set

SALECAT2 # SALE Categories # (Interm, Invest, HouseH, Export, GovGE, Stocks);

FLOWTYPE # type of flow # (Basic, margin, Tax);

Coefficient

(all,c,COM)(all,f,FLOWTYPE)(all,s,SRC)(all,sa,SALECAT2) SALEMAT2(c,f,s,sa)

 # Basic, margin and tax components of purchasers' values #;

Formula

(all,c,COM)(all,f,FLOWTYPE)(all,s,SRC)(all,sa,SALECAT2) SALEMAT2(c,f,s,sa)=0;

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Basic",s,"Interm") = sum{i,IND,V1BAS(c,s,i)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Tax" ,s,"Interm") = sum{i,IND,V1TAX(c,s,i)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"margin",s,"Interm") =

 sum{i,IND, sum{m,MAR, V1MAR(c,s,i,m) }};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Basic",s,"Invest") = sum{i,IND,V2BAS(c,s,i)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Tax" ,s,"Invest") = sum{i,IND,V2TAX(c,s,i)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"margin",s,"Invest") =

 sum{i,IND, sum{m,MAR, V2MAR(c,s,i,m) }};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Basic",s,"HouseH") = sum{h,HH,V3BAS(c,s,h)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Tax" ,s,"HouseH") = sum{h,HH,V3TAX(c,s,h)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"margin",s,"HouseH")=

sum{m,MAR,sum(h,HH,V3MAR(c,s,m,h))};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Basic",s,"GovGE") = V5BAS(c,s);

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Tax" ,s,"GovGE") = V5TAX(c,s);

(all,c,COM)(all,s,SRC) SALEMAT2(c,"margin",s,"GovGE")= sum{m,MAR,V5MAR(c,s,m)};

(all,c,COM) SALEMAT2(c,"Basic","dom","Export") = V4BAS(c);

(all,c,COM) SALEMAT2(c,"Tax" ,"dom","Export") = V4TAX(c);

(all,c,COM) SALEMAT2(c,"margin","dom","Export")= sum{m,MAR,V4MAR(c,m)};

(all,c,COM)(all,s,SRC) SALEMAT2(c,"Basic",s,"Stocks") = V6BAS(c,s);

write SALEMAT2 to file SUMMARY header "MKUP" longname

 "Basic, margin and tax components of purchasers' values";

Write GOVTREV to file SUMMARY header "TGOV";

 GOVTEXP to file SUMMARY header "GGOV";

! end of file !

Lampiran 2. Input *file* c*losure* jangka pendek dan jangka panjang

! Closure Short-Run ! ! "!\*!" indicates difference from longrun

Exogenous q ; !HH! Number of households

Exogenous f5 ; !COM\*SRC! Government demand shift

Exogenous f4p ; !COM! Price (upward) shift in export demand schedule

Exogenous f4q ; !COM! Quantity (right) shift in export demands

Exogenous delx6 ; !COM\*SRC! Inventories demands !\*!

Exogenous phi ; !1! Exchange rate, rupiah/$world

Exogenous a3\_s ; !COM\*HH! Taste change, hhold imp/dom composite

Exogenous finv ; !IND! Investment shifter

Exogenous a1fac ; !AGRIFAC\*AGIND! Primary factor tech. change, agri.

Exogenous a1tot ; !IND! All input augmenting technical change

Exogenous a2tot ; !IND! Neutral technical change - investment

Exogenous f1oct ; !IND! Shift in price of "other cost" tickets

Exogenous f3tot ; !1! Ratio, consumption /income

Exogenous x2tot\_i ; !1! Aggregate real investment expenditure !\*!

Exogenous t0imp ; !COM! Power of tariff

Exogenous a1faco ; !N\_AGRIFAC\*N\_AGIND! Prim. factor tech. change, other

Exogenous a1prim ; !IND! All factor augmenting technical change

Exogenous a1prim ; ! IND All factor augmenting technical change

Exogenous x5tot ; !1! Aggregate real government demands !\*!

Exogenous fgov\_f ; !TYPE! Shift in transfers: govt. -- foreign

Exogenous fgov\_h ; !HH\*TYPE! Shift in transfers: govt. -- households

Exogenous pf0cif ; !COM! C.I.F. foreign currency import prices

Exogenous f0tax\_s ; !COM! General sales tax shifter

Exogenous f4tax\_x ; ! COM General sales tax export

Exogenous f3tot\_h ; !HH! Ratio, consumption/income by hh

Exogenous f3tax\_cs ; !1! Uniform % change in powers taxes household usage

Exogenous f5tax\_cs ; !1! Uniform % change in powers taxes government usage

Exogenous f1inc\_tax ; !1! Overall income tax shifter

Exogenous realwage ; !OCC! Average nominal wage !\*!

Exogenous x1cap\_i; !1! Agregat Capital Stock !\*!

Exogenous f1tax\_csi ; !1! uniform % change powers of taxes intermediate usage

Exogenous f2tax\_csi ; !1! Uniform % change in powers of taxes on investment

Exogenous x1cap\_vah ; !HH! variable capital by household, agri.

Exogenous x1cap\_vnh ; !HH! variable capital by household, non-agri.

Exogenous x1lab\_i\_h ; !OCC\*HH! Household labour supply

Exogenous x1lndi\_hh ; !AGIND\*HH! Household supply of land, agri.

Exogenous f4tax\_c ; !1! Unif % change in powers of taxes on exports

Exogenous x1cap\_f\_hh ; !N\_AGIND\*HH! fixed capital by hhold, non-ag.

Rest endogenous;

cpu=yes ; ! (Optional) Reports CPU times for various stages

|  |  |  |
| --- | --- | --- |
| Closure | SR | LR |
| Swap | delx6 | fx6 |
| x2tot\_i | omega |
| x1cap\_i | delB |
| x5tot | f5tot2 |
| Realwage | p1lab\_io |

Lampiran 3. Komponen data dasar 35 sektor

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No. | Header | Type | Dimension |  Coeff |  Total |  Name |
| 1. | 0TAR | RE | COM | V0TAR | 22.766,1 |  Tariff Revenue |
| 2. | 1ARM | RE | COM | SIGMA1 | 103,52 |  Intermediate Armington |
| 3. | 1CAG | RE | AGIND | V1CAPA | 51.012,33 |  Capital Rent |
| 4. | 1CAP | RE | KAP\*N\_AGRI | V1CAPN | 2.963.754 |  V1CAPN(RNANL:NAI) |
| 5. | 1LND | RE | IND | V1LND | 573.372,6 |  Land |
| 6. | 1OCT | RE | IND | V1OCT | -199.702 |  Other Cost |
| 7. | CAPA | RE | HH | MMAN | 51.012,33 |  MMAN (HH) |
| 8. | CAPN | RE | HH | MMNN | 856.197,2 |  Mobile cap owned by HH non AGR |
| 9. | CAPS | RE | HH\*N\_AGRI | FIXEDK | 2.107.557 |  Fix capital owned by HH non AGR |
| 10. | SLAB | RE | IND | SIGMA1LAB | 14,12 |  Labour Sigma |
| 11. | P028 | RE | IND | SIGMA1PRIM | 17,5 |  Primary Factor Sigma |
| 12. | 2ARM | RE | COM | SIGMA2 | 103,52 |  Investment Armington |
| 13. | 3ARM | RE | COM | SIGMA3 | 103,52 |  Household Armington |
| 14. | SCET | RE | IND | SIGMA1OUT | 0 |  Output Sigma |
| 15. | P021 | RE | HH | FRISCH | -23,25 |  Frisch LES parameter |
| 16. | TRAN | RE | TYPE | TRANSFER\_F | 30.990,8 |  Gov Trans foreign |
| 17. | GOHH | RE | HH\*TYPE | TRANSFER\_H | 284.107,4 |  Gov Trans Household |
| 18. | HINC | RE | HH\*OCC | HINC | 12.672.181 |  HH Labor Income |
| 19. | LAND | RE | AGIND\*HH | LANDS | 573.372,6 |  household land rental by ind |
| 20. | P018 | RE | COM | EXP\_ELAST | -152,44 |  Individual Export Elasticities |
| 21. | 1BAS | RE | COM\*SRC\*IND | V1BAS | 5.200.711 |  Intermediate Basic |
| 22. | 2BAS | RE | COM\*SRC\*IND | V2BAS | 1.378.153 |  Investment Basic |
| 23. | 2BS\_ | RE | COM\*SRC | V2BASOLD | 1.378.153 |  Investment Basic |
| 24. | 2TOT | RE | IND | V2TOT | 1.405.455 |  Investment (by IND) |
| 25. | 3BAS | RE | COM\*SRC\*HH | V3BAS | 3.100.906 |  Household Basic |
| 26. | 4BAS | RE | COM | V4BAS | 1.460.607 |  Export Basic |

Lampiran 3. Komponen data dasar 35 sektor (*lanjutan*)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No. | Header | Type | Dimension |  Coeff |  Total |  Name |
| 27. | 5BAS | RE | COM\*SRC | V5BAS | 415.977,6 |  Government Basic |
| 28. | 6BAS | RE | COM\*SRC | V6BAS | 103.375,2 |  Stocks |
| 29. | 1MAR | RE | COM\*SRC\*IND\*MAR | V1MAR | 0 |  Intermediate Margins |
| 30. | 2MAR | RE | COM\*SRC\*IND\*MAR | V2MAR | 0 |  Investment Margins |
| 31. | 3MAR | RE | COM\*SRC\*MAR\*HH | V3MAR | 0 |  House. Margins |
| 32. | 4MAR | RE | COM\*MAR | V4MAR | 0 |  Exports Margins |
| 33. | 5MAR | RE | COM\*SRC\*MAR | V5MAR | 0 |  Government Margins |
| 34. | 1TAX | RE | COM\*SRC\*IND | V1TAX | 134.998,3 |  Tax Intermediate Basic |
| 35. | 2TAX | RE | COM\*SRC\*IND | V2TAX | 27.302,61 |  Tax Investment Basic |
| 36. | 2TX\_ | RE | COM\*SRC | V2TAXOLD | 27.302,61 |  Investment Tax |
| 37. | 3TAX | RE | COM\*SRC\*HH | V3TAX | 94.898,86 |  Tax Hausehold Basic |
| 38. | 4TAX | RE | COM | V4TAX | 26.631,02 |  Tax Export Basic |
| 39. | 5TAX | RE | COM\*SRC | V5TAX | 889,1 |  TAX Government Basic |
| 40. | 1LAB | RE | IND\*OCC | V1LAB | 1.606.250 |  Labour |
| 41. | MAKE | RE | COM\*IND | MAKE | 10.330.397 |  Multiproduct Matrix |
| 42. | XPEL | RE | COM\*HH | EPS | 303,48 |  Expenditure Elasticity |
| 43. | ALPH | RE | AGRIFAC\*AGRIFAC\*AGIND | BETA\_A | 0 |  BETA\_A |
| 44. | TRNL | RE | IND | TRNL | 0 |  TRNL |
| 45. | ALP2 | RE | N\_AGRIFAC\*N\_AGRIFAC\*N\_AGRI | BETA\_N | 0 |  BETA\_N |
| 46. | PINC | RE | HH | V0HHTAX | 27.247 |  Personal Income Tax Collection |
| 47. | P027 | RE | IND | QCOEF | 145,14 |  Gross/Net Rate of Return |

Lampiran 4. Nilai PDB Indonesia dari sisi pengeluaran dan sisi pendapatan

(miliar rupiah)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Pengeluaran | Nilai | No. | Pendapatan | Nilai |
| 1. | Konsumsi | 3.195.805 | 1. | Lahan | 573.373 |
| 2. | Investasi | 1.405.455 | 2. | Tenaga kerja | 1.606.250 |
| 3. | Pengeluaran pemerintah | 416.867 | 3. | Modal | 3.014.766 |
| 4. | Stok | 103.375 | 4. | Subsidi | -199.702 |
| 5. | Expor | 1.487.238 | 5. | Pajak tidak langsung | 307.486 |
| 6. | Impor | -1.306.567 |   |   |   |
| Total | 5.302.173 | Total | 5.302.173 |

Sumber: Tabel I-O 2008 dan SNSE 2008 (diolah)

Lampiran 5. Nilai penjualan sektoral

(miliar rupiah)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sektor | Produk antara domestik | Investasi | Konsumsi RT | Ekspor | Pengeluaran pemerintah | Stok | Total |
| 1. Padi | 164.956 | 0 | 0 | 0 | 0 | 3.027 | 167.983 |
| 2.TanMakLn | 110.619 | 5 | 200.215 | 658 | 0 | -12.507 | 298.990 |
| 3. Karet | 34.693 | 212 | 0 | 95 | 0 | 807 | 35.807 |
| 4. Tebu | 10.117 | 0 | 63 | 1 | 0 | 113 | 10.293 |
| 5. KelapaSawit | 76.717 | 684 | 0 | 298 | 0 | -700 | 76.999 |
| 6. Tembakau | 3.362 | 0 | 717 | 0 | 0 | -151 | 3.928 |
| 7. Kopi | 3.998 | 187 | 644 | 6.600 | 0 | -726 | 10.702 |
| 8. Teh | 844 | 12 | 129 | 23 | 0 | -2 | 1.005 |
| 9. Kakao | 1.158 | 9 | 178 | 6.894 | 0 | 119 | 8.358 |
| 10. TanKebLn | 39.898 | 338 | 10.810 | 4.439 | 0 | -351 | 55.133 |
| 11. Peternakan | 138.038 | 735 | 133.555 | 426 | 0 | -8.139 | 264.614 |
| 12. Kayu | 38.219 | 0 | 1.966 | 113 | 0 | 2.229 | 42.527 |
| 13. HasHutln | 5.818 | 0 | 3.173 | 287 | 0 | 477 | 9.755 |
| 14. Perikanan | 72.228 | 0 | 111.657 | 2.829 | 0 | -4.588 | 182.126 |
| 15. Pertambangan | 389.470 | 959 | 1.042 | 235.277 | 0 | 67.021 | 693.769 |
| 16. Makanan | 112.207 | 0 | 163.562 | 27.448 | 0 | -1.305 | 301.913 |
| 17. IndKlpSwt | 57.066 | 0 | 18.151 | 130.005 | 0 | -10.498 | 194.724 |
| 18. Beras | 54.749 | 0 | 196.761 | 187 | 0 | -14.568 | 237.128 |
| 19. Terigu | 39.845 | 0 | 59.146 | 3.035 | 0 | 351 | 102.377 |
| 20. Gula | 12.982 | 0 | 9.173 | 254 | 0 | 130 | 22.539 |

Lampiran 5. Nilai penjualan sektoral (*lanjutan*)

(miliar rupiah)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sektor | Produk antara domestik | Investasi | Konsumsi RT | Ekspor | Pengeluaran pemerintah | Stok | Total |
| 21. Minuman | 3.830 | 0 | 12.666 | 246 | 0 | -750 | 15.993 |
| 22. Rokok | 6.855 | 0 | 63.899 | 2.466 | 0 | 402 | 73.621 |
| 23. Pemintalan | 21.963 | 0 | 430 | 16.788 | 0 | -497 | 38.685 |
| 24. TeksPakKlt | 70.765 | 164 | 86.102 | 84.960 | 0 | 12.302 | 254.293 |
| 25. BambuKyRotan | 97.821 | 137 | 33.058 | 37.445 | 0 | 4.144 | 172.606 |
| 26. KrtsKrbon | 89.917 | 0 | 15.122 | 40.187 | 0 | 140 | 145.367 |
| 27. PpkPestisida | 43.188 | 0 | 767 | 2.908 | 0 | 2.119 | 48.982 |
| 28. Kimia | 188.448 | 0 | 62.115 | 55.632 | 0 | -26.809 | 279.386 |
| 29. OlahKaret | 50.330 | 0 | 7.539 | 54.335 | 0 | 295 | 112.499 |
| 30. Semen | 34.083 | 0 | 0 | 699 | 0 | 568 | 35.351 |
| 31. IndustriLain | 795.674 | 84.281 | 333.195 | 429.965 | 0 | 27.106 | 1.670.221 |
| 32. ListrkGasAir | 81.692 | 0 | 37.337 | 0 | 0 | 0 | 119.029 |
| 33. Bangunan | 98.558 | 1.129.077 | 0 | 0 | 0 | 0 | 1.227.635 |
| 34. DagResHot | 478.337 | 37.695 | 603.718 | 186.286 | 0 | 3.638 | 1.309.674 |
| 35. Jasa | 877.761 | 27.668 | 658.394 | 129.822 | 411.823 | 918 | 2.106.386 |
| Total | 4.306.204 | 1.282.165 | 2.825.282 | 1.460.607 | 411.823 | 44.315 | 10.330.397 |

Sumber: Tabel I-O 2008 dan SNSE 2008 (diolah)

Lampiran 6. Biaya produksi sektoral

(miliar rupiah)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sektor | Input antara domestik | Input antara impor | Pajak tak langsung | Upah/Gaji | Kapital | Lahan | Pajak produksi | Total |
| 1. Padi | 34.698 | 7.864 | 764 | 21.866 | 1.068 | 102.332 | -609 | 167.983 |
| 2. TanMakLn | 41.152 | 5.558 | 705 | 42.685 | 2.161 | 207.007 | -278 | 298.990 |
| 3. Karet | 11.780 | 421 | 135 | 12.173 | 614 | 10.684 | 0 | 35.807 |
| 4. Tebu | 2.643 | 523 | 51 | 2.441 | 252 | 4.382 | 0 | 10.293 |
| 5. KelapaSawit | 26.462 | 7.386 | 621 | 13.457 | 1.580 | 27.493 | 0 | 76.999 |
| 6. Tembakau | 2.010 | 91 | 21 | 744 | 58 | 1.005 | 0 | 3.928 |
| 7. Kopi | 3.949 | 116 | 46 | 1.680 | 267 | 4.645 | 0 | 10.702 |
| 8. Teh | 146 | 11 | 2 | 305 | 29 | 513 | 0 | 1.005 |
| 9. Kakao | 1.946 | 116 | 19 | 1.159 | 278 | 4.840 | 0 | 8.358 |
| 10. TanKebLn | 14.370 | 417 | 163 | 9.504 | 1.667 | 29.012 | 0 | 55.133 |
| 11. Peternakan | 127.582 | 5.614 | 2.149 | 43.402 | 29.295 | 56.572 | 0 | 264.614 |
| 12. Kayu | 9.116 | 801 | 162 | 7.111 | 5.738 | 19.599 | 0 | 42.527 |
| 13. HasHutln | 1.917 | 123 | 29 | 1.746 | 1.345 | 4.595 | 0 | 9.755 |
| 14. Perikanan | 44.747 | 3.105 | 568 | 26.451 | 6.659 | 100.694 | -98 | 182.126 |
| 15. Pertambangan | 115.221 | 24.593 | 3.215 | 83.499 | 467.241 | 0 | 0 | 693.769 |
| 16. Makanan | 195.811 | 9.538 | 3.089 | 27.682 | 65.793 | 0 | 0 | 301.913 |
| 17. IndKlpSwt | 125.444 | 522 | 1.275 | 23.539 | 43.944 | 0 | 0 | 194.724 |
| 18. Beras | 182.428 | 61 | 2.041 | 10.564 | 42.033 | 0 | 0 | 237.128 |
| 19. Terigu | 49.539 | 21.144 | 2.285 | 9.417 | 19.992 | 0 | 0 | 102.377 |
| 20. Gula | 16.357 | 238 | 275 | 1.957 | 3.711 | 0 | 0 | 22.539 |

Lampiran 6. Biaya produksi sektoral (*lanjutan*)

(miliar rupiah)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sektor | Input antara domestik | Input antara impor | Pajak tak langsung | Upah/Gaji | Kapital | Lahan | Pajak Produksi | Total |
| 21. Minuman | 10.314 | 551 | 260 | 2.024 | 2.844 | 0 | 0 | 15.993 |
| 22. Rokok | 32.971 | 7.972 | 3.690 | 8.758 | 20.231 | 0 | 0 | 73.621 |
| 23. Pemintalan | 15.808 | 9.345 | 2.014 | 2.527 | 8.992 | 0 | 0 | 38.685 |
| 24. TeksPakKlt | 133.531 | 17.918 | 5.044 | 33.404 | 64.396 | 0 | 0 | 254.293 |
| 25. BambuKyRotan | 90.098 | 8.680 | 2.262 | 20.355 | 51.210 | 0 | 0 | 172.606 |
| 26. KrtsKrbon | 73.564 | 17.121 | 2.607 | 15.752 | 36.322 | 0 | 0 | 145.367 |
| 27. PpkPestisida | 26.757 | 4.633 | 1.489 | 11.994 | 19.272 | 0 | -15.164 | 48.982 |
| 28. Kimia | 129.599 | 64.800 | 7.721 | 26.487 | 50.778 | 0 | 0 | 279.386 |
| 29. OlahKaret | 66.811 | 10.099 | 2.191 | 12.818 | 20.579 | 0 | 0 | 112.499 |
| 30. Semen | 19.421 | 1.355 | 728 | 4.127 | 9.720 | 0 | 0 | 35.351 |
| 31. IndustriLain | 620.982 | 348.275 | 39.175 | 201.702 | 558.004 | 0 | -97.917 | 1.670.221 |
| 32. ListrkGasAir | 69.626 | 7.021 | 1.809 | 31.571 | 92.909 | 0 | -83.907 | 119.029 |
| 33. Bangunan | 643.203 | 128.166 | 20.964 | 167.856 | 267.445 | 0 | 0 | 1.227.635 |
| 34. DagResHot | 596.671 | 43.014 | 10.929 | 204.971 | 454.090 | 0 | 0 | 1.309.674 |
| 35. Jasa | 769.529 | 137.315 | 16.500 | 520.521 | 664.249 | 0 | -1.729 | 2.106.386 |
| Total | 4.306.204 | 894.507 | 134.998 | 1.606.250 | 3.014.766 | 573.373 | -199.702 | 10.330.397 |

Sumber: Tabel I-O 2008 dan SNSE 2008 (diolah)