

\$TITLE: M10-4c.gms

\*CALIBRATES MODEL TO SHEET IO-1 IN M10-IOTABLE.XLS

\*TRADE SURPLUS OF 5

\*NETS OUT CROSS-HAULING: domestic and foreign goods perfect substitutes

\*assumes a portion of capital in each sector is sector specific

\*uses net trade, no Armington assumption

\$ONTEXT

		Ag	Man	Ser	Cons	Exports	Imports	
		1	2	3	4	5	6	UM(1:5) - (6)
Ag	1	5	6	9	30		5	45
Man	2	10	15	20	60	10		115
Ser	3	12	13	5	110			140
Wages	4	9	30	66				105
Rents	5	9	51	40				100
		45	115	140	200	10	-5	

Micro consistent: total value added (205 = 105+100) =  
consumption + trade surplus (205 = 200 + 10 - 5)

	<i>Net Ag</i>	<i>Net Man</i>	<i>Net Ser</i>	<i>Export</i>	<i>Imports</i>	<i>Welf</i>	<i>Cons</i>	<i>Row</i>
<i>Ag</i>	40	-6	-9		5	-30		0
<i>Man</i>	-10	100	-20	-10		-60		0
<i>Ser</i>	-12	-13	135			-110		0
<i>Wages</i>	-9	-30	-66				105	0
<i>Rents</i>	-9	-51	-40				100	0
<i>For ex</i>				10	-5		-5	0
<i>Welfare</i>						200	-200	0
<i>Col sums</i>	0	0	0	0	0	0	0	

\$OFFTEXT

### PARAMETERS

PWA world price of agriculture

PWM world price of manufactures

SHS share of sector-specific capital in total capital;

PWA = 1;

PWM = 1;

SHS = 0.6;

\$ONTEXT

\$MODEL:M10\_4

\$SECTORS :

AGR  
MAN  
SER  
IMAGR EXAGR  
EXMAN IMMAN  
WELFARE

\$COMMODITIES :

PAGR  
PMAN  
PSER  
PL  
PK  
PKA PKM PKS  
PFX  
PWEL

\$CONSUMERS :

CONS

\$PROD:AGR s:1

O:PAGR Q:45  
I:PAGR Q:5  
I:PMAN Q:10  
I:PSER Q:12

*I:PL*      *Q:9*  
*I:PK*      *Q:(9\*(1-SHS))*  
*I:PKA*     *Q:(9\*SHS)*

\$PROD:MAN      s:1

*O:PMAN*    *Q:115*  
*I:PAGR*    *Q:6*  
*I:PMAN*    *Q:15*  
*I:PSER*    *Q:13*  
*I:PL*      *Q:30*  
*I:PK*      *Q:(51\*(1-SHS))*  
*I:PKM*     *Q:(51\*SHS)*

\$PROD:SER      s:1

*O:PSER*    *Q:140*  
*I:PAGR*    *Q:9*  
*I:PMAN*    *Q:20*  
*I:PSER*    *Q:5*  
*I:PL*      *Q:66*  
*I:PK*      *Q:(40\*(1-SHS))*  
*I:PKS*     *Q:(40\*SHS)*

\$PROD:IMAGR

*O:PAGR*    *Q:5*  
*I:PFX*     *Q:(5\*PWA)*

\$PROD: EXMAN

O: PFX Q: (10 \* PWM)

I: PMAN Q: 10

\$PROD: EXAGR

O: PFX Q: (5 \* PWA)

I: PAGR Q: (5 \* 1.001)

\$PROD: IMMAN

O: PMAN Q: (10 \* 0.999)

I: PFX Q: (10 \* PWM)

\$PROD: WELFARE s: 1

O: PWEL Q: 200

I: PAGR Q: 30

I: PMAN Q: 60

I: PSER Q: 110

\$DEMAND: CONS

D: PWEL

E: PL Q: 105

E: PK Q: (100 \* (1 - SHS))

E: PKA Q: (9 \* SHS)

E: PKM Q: (51 \* SHS)

E: PKS Q: (40 \* SHS)

E: PFX Q: (-5)

\$OFFTEXT

\$SYSINCLUDE MPSEGET M10\_4

PWEL.FX = 1;

M10\_4.ITERLIM = 0;

\$INCLUDE M10\_4.GEN

**SOLVE** M10\_4 USING MCP;

M10\_4.ITERLIM = 2000;

\$INCLUDE M10\_4.GEN

**SOLVE** M10\_4 USING MCP;

*\* counterfactual: double the world price of the export good M*

PWM = 2;

\$INCLUDE M10\_4.GEN

**SOLVE** M10\_4 USING MCP;

*\* counterfactual: double the world price of the import good A*

PWM = 1;

PWA = 2;

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$INCLUDE M10_4.GEN  
SOLVE M10_4 USING MCP;
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