Trade Liberalization and Technological Spillover

- comparison of two scenarios:

  - base: output augmenting technological shock in the processed food sector (pcf); aoall (pcf, EUR) = +10%; H and D ignored; 2*E

  - base + import tariff abolishment tms (pcf; EUR; ALL_REG)

Base results:

|	Spillover Coeff	output	output decomp	deco dom use	supply price	qpd
NAM	2.41	-1.3	both ('-0.7, '-0.6)	firm ('-0.84)	-3.23	exp. (0.26)
JAN	2.57	0.32	SHRDM (0.4)	cons (0.81)	-3.48	exp. (1.27)

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Reasons:

• NAM = net exporter, JAN = net importer

• world price decreases by 6.2%

• GDP and wage increase in JAN relatively higher than in NAM

• cost share in consumption in pcf higher in JAN
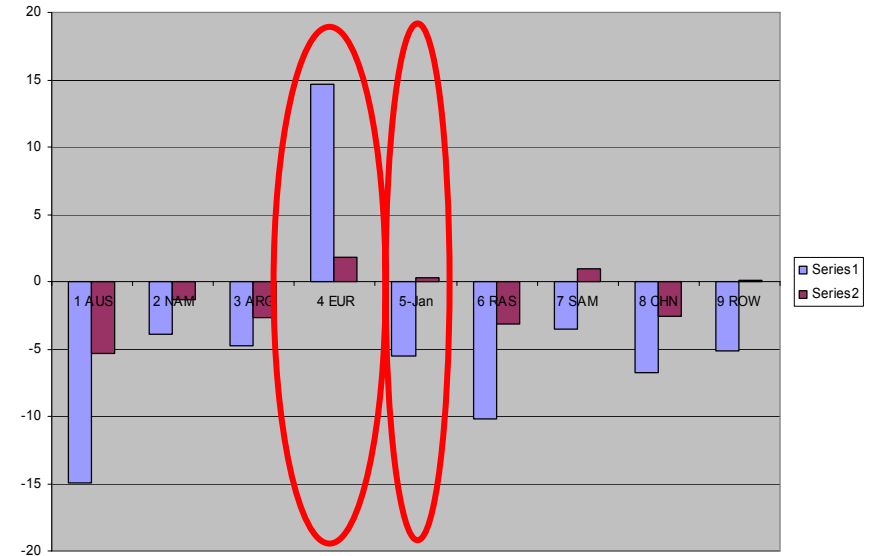
=> Higher private consumption demand in JAN for pcf

Trade Liberalization and Technological Spillover

Consideration of trade liberalization: comparison with base

Spillover coeff:
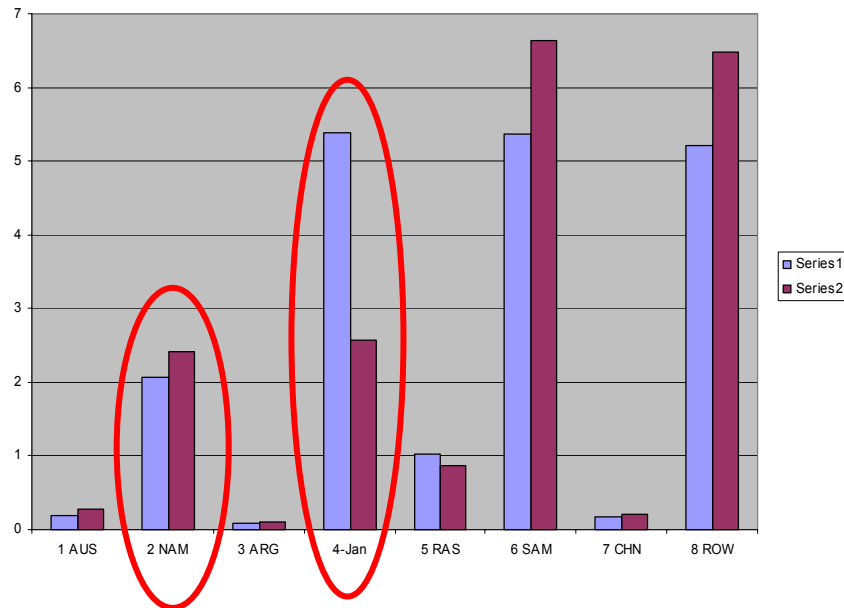
output:

Trade Liberalization and Technological Spillover

Reasons:

• domestic demand goes down

• intermediate demand in pcf sector declines

• tariff rates: JAN: 119%, imports from the EUR increase

• imports dominate domestic supply

Welfare:

• relatively less after liberalization in EUR

• JAN becomes net exporter

• alloc. efficiency in EUR goes down because pcf highly subsidized

=> More exports => more expenses due to subsidies

Inovation in Machinery with labor augmenting

Spillover coeff		qo	STC(labor cost share)	ps	SHRXMD
0.49	AUS	0.2%	28%	-1.78%	51.3%
0.36	NAM	-1.2%	17%	-0.94%	29.3%
source	EUR	1.3%	33%	-3.74%	14.7%
0.65	JAN	1.1%	37%	-2.55%	0.0%
0.43	CHN	0.4%	40%	-2.22%	2.1%

Welfare Decomposition

	Alloc	Tech	Tot	Total
AUS	-0.3	42	-55	-18
NAM	234	468	-229	435
EUR	-284	2,489	-43	2,180
JAN	-480	1,575	245	1,397
CHN	250	997	-108	1,107