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Technical Annex

Triggers, Remedies, and Tariff Cuts: Assessing the Impact of a Special Safeguard Mechanism for Developing Countries

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This document is the technical annex to the full paper “Triggers, Remedies, and Tariff cuts: Assessing the Impact of a Special Safeguard Mechanism for Developing Countries” which is available separately.

Table A1 Individual Country Results, Scenario 2

-----Wheat Variables-----																
Country	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
Developed																
Australia	-0.90	9.46	-0.52	-0.94	0.22	5.89	-0.83	-1.00	0.38	2.03	-1.32	-1.97	----	----	-0.60	-1.91
Canada	-0.90	14.11	-0.55	-0.72	0.58	10.99	-1.01	-0.44	0.36	1.46	-1.31	-0.59	----	----	-0.55	-1.29
EU-25	-0.25	-0.60	-0.15	-1.44	0.14	-0.56	-11.62	-3.69	0.28	-0.29	-0.36	-3.44	18.36	13.52	0.00	-0.56
Israel	-0.90	12.19	-0.35	12.19	0.50	7.08	0.55	7.31	0.16	0.14	-1.10	11.55	-0.39	6.44	0.25	0.34
Japan	-0.90	5.09	-1.29	1.11	0.42	3.73	0.50	3.87	0.76	3.67	-2.10	-0.25	-0.28	1.85	0.51	2.76
USA	-0.66	2.14	-0.31	-0.14	0.46	11.71	-1.23	-0.72	0.17	1.01	-0.87	-0.73	120.64	72.02	-0.13	-0.93
DCG	-0.90	10.35	-1.48	4.11	0.33	2.09	1.06	4.79	0.52	1.10	-2.72	2.24	0.09	-0.94	0.37	0.77
Developing																
Algeria	1.39	23.27	0.86	-4.87	-0.30	-2.77	-0.64	-10.98	-0.62	-3.01	1.53	-5.40	91.09	3076.84	0.28	0.45
Argentina	-0.90	16.45	-0.49	-0.66	0.30	1.37	-0.82	-0.61	0.61	1.70	-1.26	-0.64	----	----	-0.56	-1.08
Brazil	4.43	-14.87	3.08	-12.30	-2.61	-19.73	-4.62	-32.62	-4.86	-22.73	5.71	-12.47	39.20	837.07	-0.15	-3.26
China	-0.84	13.62	-0.12	-0.74	0.57	10.83	-23.70	-2.37	1.13	11.12	-0.94	-1.89	----	----	0.02	-0.27
Columbia	0.63	-19.59	----	----	-0.23	-6.66	-0.23	-6.66	-0.50	-7.37	0.63	-19.59	10.93	329.29	0.49	1.00
Egypt	-0.26	-1.39	-0.12	-0.67	0.06	-0.90	0.24	-1.45	0.11	-0.88	-0.35	-1.48	20.70	179.11	0.16	0.13
Indonesia	5.82	-12.76	----	----	-6.25	-33.15	-6.20	-33.15	-13.22	-39.44	----	----	A	B	0.41	-4.30
Iran	-0.90	14.96	-0.59	0.45	0.17	0.84	1.25	1.05	0.35	1.03	-1.31	0.25	----	----	0.14	0.34
Iraq	-0.90	16.45	-0.59	0.44	0.08	-0.04	0.22	-0.09	0.14	0.03	-1.26	-0.11	----	----	0.12	0.02
Kazakhstan	-0.90	2.10	-0.46	0.00	0.26	0.24	-1.29	0.02	0.17	-0.01	-1.21	-0.56	----	----	-0.21	-0.20
Malaysia	-0.03	-18.21	----	----	0.01	-2.03	0.01	-2.03	0.01	-2.08	----	----	8.03	325.26	0.52	2.48
Mexico	3.79	68.14	2.54	-13.08	-2.06	11.64	-8.79	-5.10	-3.50	3.13	5.62	-2.62	6.34	63.76	-0.60	-2.59
Morocco	7.05	165.95	6.43	-22.59	-1.59	14.37	-7.93	-32.97	-3.21	11.86	9.49	-17.82	15.62	87.90	-0.78	5.16
Nigeria	3.33	33.38	2.44	0.25	-4.93	-29.01	-5.11	-29.05	-10.37	-34.11	5.33	4.88	3.54	28.86	-2.57	-20.08

See table notes next page

Table A1 continued

-----Wheat Variables-----																
Country	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
Developing																
Peru	0.52	0.38	0.40	-2.63	-0.19	-6.93	-0.27	-8.47	-0.43	-7.52	0.82	-1.88	7.61	287.82	0.43	0.58
Philippines	0.37	-21.81	----	----	-0.39	-16.53	-0.39	-16.53	-0.30	-3.72	----	----	9.14	480.21	0.68	1.20
South Korea	0.22	-12.76	----	----	-0.25	-12.47	-0.25	-12.47	-0.21	-9.03	0.22	-12.76	29.17	2496.29	1.04	6.42
Tunisia	9.16	198.32	5.82	-17.80	-2.30	-15.36	-11.44	-38.64	-4.69	-17.33	12.83	-9.24	42.49	249.55	-0.57	-2.96
United A.E	10.68	313.89	----	----	-5.83	-29.67	-5.84	-29.67	-13.01	-37.77	10.68	313.89	297.57	2074.42	-0.47	-3.82
Venezuela	0.05	-16.69	0.03	-0.08	-0.02	-3.52	-0.02	-3.52	-0.06	-3.70	0.07	-1.90	6.52	251.67	0.63	2.01
AFD	2.75	36.75	3.01	-5.08	-2.10	-17.20	-3.54	-22.44	-4.32	-18.89	5.62	-2.79	10.78	187.23	-0.41	-7.38
CTA	1.43	38.87	----	----	-0.73	-14.50	-0.73	-14.50	-1.64	-16.24	1.43	38.87	53.59	1981.15	0.81	1.05
STA	3.08	17.84	3.00	-16.29	-1.48	-4.01	-7.97	-18.76	-2.99	-6.17	5.79	-14.12	25.76	263.94	-0.20	0.34
ASG	1.25	-0.43	1.08	-7.31	-0.94	-13.28	-2.23	-20.71	-1.86	-14.02	2.00	-6.99	20.54	384.85	0.29	0.50
MEG	0.16	-18.74	----	----	-0.06	-4.23	-0.06	-4.23	-0.14	-4.51	0.16	-18.74	596.61	33257.84	0.70	2.86
ROW	-0.90	15.86	-0.69	3.74	0.72	1.30	4.20	3.19	1.41	1.58	-1.42	4.50	3.05	0.47	0.29	0.51
Least-Developed																
Bangladesh	16.62	573.97	5.75	77.28	-9.28	0.48	-28.18	32.29	-17.49	-9.99	21.96	379.28	53.77	297.25	-2.86	-24.15
Ethiopia	8.47	163.77	3.36	-9.73	-4.19	-21.12	-28.25	-36.21	-8.63	-24.74	10.43	11.19	134.71	311.43	-0.55	-2.18
Yemen	6.51	192.88	1.55	2.70	-2.75	-27.27	-3.10	-27.69	-5.99	-31.59	7.63	46.10	C	D	0.26	-1.96
SAG	0.85	0.35	0.71	0.43	-0.58	-12.00	-0.80	-12.16	-1.21	-13.05	1.46	2.45	27.15	1362.01	0.68	0.57
NAG	3.08	58.09	2.73	6.43	-2.86	-19.62	-2.99	-19.36	-5.92	-22.90	5.83	13.71	56.84	1353.06	0.41	-5.41
World	-0.90	16.45	-0.09	-2.32	-0.09	-2.32	----	----	----	----	----	----	----	----	-0.18	-5.30

Welfare Difference from Tariff Cuts Alone (\$US) = \$-204 Million

Note: Tariff revenues in Indonesia and Yemen are zero in scenario one (the benchmark), so the percentage change calculation is not well defined. Thus, we report actual tariff revenues and standard deviations when the two countries use the SSM. The numbers are as follows: A = 264,760,602; B = 400,417,652; C = 2,958,037; D = 5,452,505.

Table A2 Individual Country Results, Scenario 3

-----Wheat Variables-----																
Country	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
Developed																
Australia	-1.15	12.92	-0.67	-1.25	0.29	8.35	-1.06	-1.33	0.48	3.04	-1.70	-2.51	----	----	-0.77	-2.47
Canada	-1.16	19.47	-0.70	-0.91	0.74	15.29	-1.30	-0.47	0.46	2.08	-1.68	-0.54	----	----	-0.70	-1.61
EU-25	-0.33	0.02	-0.20	-1.77	0.19	0.07	-15.20	-4.05	0.36	0.38	-0.47	-3.96	20.69	14.10	0.00	-0.67
Israel	-1.16	16.98	-0.45	16.98	0.64	9.93	0.71	10.26	0.20	0.18	-1.41	16.08	-0.50	9.23	0.32	0.47
Japan	-1.15	7.55	-1.65	1.66	0.53	5.58	0.63	5.77	0.97	5.46	-2.63	-0.16	-0.37	2.91	0.65	4.13
USA	-0.81	2.56	-0.37	-0.14	0.59	16.10	-1.54	-0.91	0.22	1.41	-1.05	-0.85	167.06	98.19	-0.17	-1.21
DCG	-1.16	13.81	-1.90	5.50	0.43	2.76	1.37	6.37	0.66	1.44	-3.48	3.01	0.11	-1.26	0.47	1.01
Developing																
Algeria	1.30	23.02	0.80	-4.93	-0.28	-2.79	-0.60	-11.11	-0.58	-3.00	1.39	-5.57	97.56	3133.96	0.36	0.78
Argentina	-1.16	22.43	-0.64	-0.91	0.38	1.89	-1.06	-0.84	0.78	2.32	-1.61	-0.74	----	----	-0.71	-1.39
Brazil	4.39	-15.28	3.05	-12.47	-2.59	-20.23	-4.58	-33.28	-4.82	-23.16	5.64	-12.74	40.88	851.80	-0.01	-2.61
China	-1.06	17.68	-0.15	-0.96	0.71	14.04	-29.81	-2.93	1.43	14.42	-1.18	-2.12	----	----	0.02	-0.32
Columbia	0.56	-19.37	----	----	-0.20	-7.19	-0.21	-7.19	-0.45	-7.92	0.56	-19.37	12.15	362.59	0.64	1.47
Egypt	3.61	55.33	1.72	-6.56	-0.77	-17.13	-3.34	-25.56	-1.60	-18.13	4.71	13.82	137.48	2714.76	0.09	-1.73
Indonesia	6.90	0.56	----	----	-7.42	-34.03	-7.35	-34.03	-15.36	-40.51	----	----	A	B	0.14	-7.23
Iran	-1.16	20.40	-0.75	0.66	0.22	1.13	1.60	1.47	0.44	1.38	-1.68	0.47	----	----	0.18	0.45
Iraq	-1.16	22.43	-0.76	0.64	0.10	-0.06	0.28	-0.13	0.18	0.04	-1.61	-0.03	----	----	0.15	0.02
Kazakhstan	-1.16	2.78	-0.59	0.00	0.34	0.31	-1.67	0.02	0.22	-0.02	-1.55	-0.71	----	----	-0.27	-0.25
Malaysia	-0.13	-17.84	----	----	0.04	-2.03	0.04	-2.03	0.08	-2.07	----	----	9.37	391.94	0.67	3.41
Mexico	3.91	73.05	2.63	-12.90	-2.13	13.70	-9.09	-3.46	-3.61	4.57	5.82	-1.50	6.96	66.69	-0.59	-2.54
Morocco	6.97	164.89	6.36	-22.65	-1.57	13.92	-7.84	-33.25	-3.17	11.44	9.33	-18.03	16.04	88.05	-0.73	5.15
Nigeria	3.36	33.43	2.46	0.20	-4.97	-29.98	-5.16	-30.04	-10.48	-34.98	5.37	4.85	3.89	29.86	-2.43	-20.40

See table notes next page

Table A2 continued

-----Wheat Variables-----																
Country	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
Developing																
Peru	0.44	0.67	0.34	-2.78	-0.16	-7.22	-0.23	-8.83	-0.37	-7.79	0.69	-2.10	8.47	305.04	0.55	0.94
Philippines	0.72	-16.06	----	----	-0.76	-16.81	-0.75	-16.81	-0.57	-6.03	----	----	12.74	825.89	0.79	-0.02
South Korea	1.35	-21.07	----	----	-1.57	-21.97	-1.53	-21.97	-1.24	-18.59	1.35	-21.07	59.50	7265.04	1.10	3.68
Tunisia	9.08	197.52	5.78	-18.04	-2.28	-15.17	-11.35	-38.66	-4.65	-17.12	12.71	-9.57	43.46	251.20	-0.53	-2.88
United A.E	10.54	311.28	----	----	-5.76	-29.55	-5.76	-29.55	-12.86	-37.58	10.54	311.28	300.55	2071.61	-0.21	-3.52
Venezuela	-0.05	-16.19	-0.03	0.03	0.02	-3.75	0.02	-3.75	0.03	-3.91	-0.07	-1.78	7.50	288.56	0.81	2.79
AFD	2.69	37.57	2.95	-5.15	-2.05	-17.72	-3.47	-23.08	-4.25	-19.37	5.49	-2.97	11.48	192.68	-0.24	-7.23
CTA	1.39	41.19	----	----	-0.72	-14.85	-0.72	-14.85	-1.60	-16.55	1.39	41.19	58.40	2098.96	1.06	1.72
STA	4.49	67.03	4.37	-4.11	-2.16	24.04	-11.63	8.86	-4.26	18.64	8.83	1.81	23.13	218.25	-0.53	2.67
ASG	2.84	65.94	2.46	-7.67	-2.14	16.27	-5.07	1.22	-4.00	5.29	4.85	-4.96	29.16	558.13	-0.10	0.36
MEG	0.06	-19.32	----	----	-0.02	-4.24	-0.02	-4.24	-0.06	-4.49	0.06	-19.32	685.97	36169.67	0.90	4.00
ROW	-1.16	21.73	-0.89	5.27	0.92	1.84	5.39	4.50	1.82	2.14	-1.82	6.36	3.87	0.75	0.38	0.65
Least-Developed																
Bangladesh	16.94	577.69	5.86	77.23	-9.46	0.95	-28.72	32.69	-17.80	-9.67	22.37	380.82	56.85	303.87	-2.87	-24.25
Ethiopia	15.62	372.41	6.19	-4.68	-7.73	-25.54	-52.10	-36.56	-15.29	-31.22	19.93	76.10	40.27	227.81	-1.85	-7.22
Yemen	6.43	192.04	1.53	2.71	-2.72	-27.27	-3.06	-27.69	-5.92	-31.56	7.54	45.83	C	D	0.45	-1.68
SAG	0.80	1.27	0.67	0.81	-0.54	-12.37	-0.75	-12.47	-1.15	-13.42	1.38	2.81	30.44	1459.47	0.91	2.23
NAG	3.21	61.89	2.85	6.58	-2.98	-20.14	-3.12	-19.87	-6.16	-23.48	6.07	14.19	62.09	1419.55	0.71	-5.26
World	-1.16	22.43	-0.10	-2.95	-0.10	-2.95	----	----	----	----	----	----	----	----	-0.20	-5.56
Welfare Difference from Tariff Cuts Alone (\$US) = \$-223 Million																

Note: Tariff revenues in Indonesia and Yemen are zero in scenario one (the benchmark), so the percentage change calculation is not well defined. Thus, we report actual levels of tariff revenues and standard deviations when the two countries use the SSM. The numbers are as follows: A = 264,760,602; B = 400,417,652; C = 2,958,037; D = 5,452,505.