AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Volume 10 Number 1, 2009/p.242-246 esteyjournal.com

The Estey Centre Journal of
International Law
and Trade Policy

Technical Annex

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

Jason H. Grant
Department of Agricultural & Applied Economics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia
Karl D. Meilke
Department of Food, Agriculture, and Resource Economics, University of Guelph, Guelph, Ontario

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															
	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
Country	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															
	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
Country	**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															
	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
Country	**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															
	Price (%)		Production (%)		Total Use (%)		Net Trade (%)		Cons. Surplus (%)		Prod. Surplus (%)		Gov't Revenue (%)		Net Welfare (%)	
Country	**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.