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Recent Developments in World Trade

by Glenn W. Harrison, University of South Carolina

World trade is undergoing one of the most important liberalizations of the century as the result of the recently concluded round of multilateral negotiations. These negotiations proceeded under the auspices of the GATT, and are generally referred to as the Uruguay Round (UR) after the country in which they began several years ago. What are the main features of the round, and what do they portend for the future of world trade and the welfare of the United States?

The UR is a complex agreement which includes agreements in many areas: (i) tariff reductions in manufactured products; (ii) tariffication of non-tariff barriers in agriculture and binding commitments to reduce the level of agricultural protection; (iii) the reduction of export and production subsidies in agriculture; (iv) the elimination of Voluntary Export Restraints (VERs) and the Multi-Fibre Arrangement (MFA); (v) institutional and rule changes, such as the creation of the World Trade Organization (WTO) and safeguards, anti-dumping and countervailing duty measures; (vi) new areas such as Trade Related

Investment Measures (TRIMs), Trade Related Aspects of Intellectual Property Rights (TRIPs), General Agreement on Trade in Services (GATS); and (vii) areas receiving greater coverage, such as government procurement. At the very least, it is apparent that GATT negotiations generate more unpronounceable names than the average Russian novel! On the other hand, many features of the round are amenable to quantification using relatively standard tools of economic analysis.

To provide a sense of perspective, consider the overall effect of the round on welfare. In a recent study¹ undertaken for

the World Bank, I find that the world as a whole gains substantially from the reforms of the Uruguay Round: about \$53 billion annually in 1992 dollars in the short-run, and up to \$188 billion annually in the long-run. However, the gains are concentrated in developed countries, especially the United States, the European Union (EU) and Japan. In the short-run the United States gains \$10 billion, the EU gains \$26 billion, and Japan gains \$8 billion. In fact, in the short-run a number of Less Developed Countries (LDCs) are estimated to lose on balance from the Uruguay Round.



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Regions	AGR	MFA	MFRS	FULL
AUS	.776	.023	-.003	.792
NZL	.313	-.003	-.015	.294
CAN	.256	.599	-.340	.521
USA	2.286	7.415	.058	9.813
JPN	6.678	-.387	1.980	8.350
KOR	2.657	-.515	-.405	1.693
E_U	18.148	6.167	1.366	25.765
IDN	.016	.003	.469	.442
MYS	.366	-.119	.424	.613
PHL	.122	-.166	.194	.093
SGP	.275	-.263	.353	.354
THA	.548	-.148	.520	.837
CHN	-.525	-.405	1.042	.133
HKG	.843	-1.555	-.309	-1.031
TWN	-.118	-.435	1.001	.463
ARG	.358	.010	.058	.426
BRA	.123	-.059	.300	.358
MEX	.049	-.114	.239	.162
LAM	1.119	-.541	.103	.633
SSA	-.057	-.063	.015	-.192
MNA	-.384	-.429	.678	-.349
EIT	-.129	-.493	.449	-.419
SAS	.352	-.311	.980	.629
EFTA	1.140	-.207	1.056	2.203
LDC	5.615	-5.601	6.110	4.844
DEV	29.597	13.606	4.101	47.738
WLD	35.211	8.005	10.210	52.582

AGR Agricultural reform
MFA MFA reform of textiles and clothing
MFRS Manufacturing sector reforms
FULL Complete UR

Table 1: Short-run welfare effects of the Uruguay Round (\$billion per year).

The detailed short-run results are listed in Table 1, and use the definitions of regions and the level of sectoral detail listed in Table 2.

The overall explanation for this outcome is intuitive: it is the industrialized countries, especially the United States and the EU, that "gave up" the most in the UR in the (misleading) mercantilist sense. In other words, these countries are reducing policies that are very costly in terms of foregone welfare to themselves, most notably MFA protection in clothing and agricultural distortions. On the other hand, LDCs reduce agricultural distortions relatively less and do not restrict imports under the MFA. The only general exception is that LDCs reduce protection in manufactures by more than OECD countries, since OECD countries have relatively lower benchmark protection on average in this area.

One particularly important component of the UR is **agricultural reform**. First, it was agreed to "tariff" all *non-tariff barriers* in agriculture, to incorporate all agricultural product lines within the GATT, and to reduce the tariffs (including the tariff equivalents of the non-tariff barriers) by an unweighted average of 36% for developed countries and by 24% for developing countries (other than the least developed countries, who committed to no reductions). Second, the UR calls for a reduction of the budgetary outlay on *export subsidies* in agriculture by 36% for developed countries and 24% for developing countries at the tariff line level. Third, the Aggregate Measure of Support (AMS) to agriculture, which primarily includes *subsidies to domestic production*, should be reduced by 20% for developed countries (except for the EU, which should reduce its AMS by only 16.8%), and developing countries are to reduce their AMS by 13%. There is some skepticism regarding whether the AMS will actually bind the contracting parties.

Our estimates show the EU, United States and Japan to be the big winners from agricultural reform, for different and predictable reasons. Japan gains from reducing its high agriculture tariffs, while the European Union and the United States gain from reducing their export and production subsidies. Many nations gain relatively smaller amounts from reduction of their agriculture production subsidies. In order to obtain an understanding of the impact of the various components of agricultural reform, Table 3 decomposes the

overall agricultural reform scenarios into its three major components.

The results of column AGR1 show the impact of reducing *export subsidies* in agriculture; other components of agriculture reform are not implemented in this scenario. The estimates show that the EU should gain \$8.6 billion, whereas many other regions lose (viz., JPN, CHN, MNA, EIT and EAS). This component of agricultural reform was the one feared by the "net food importing" countries, who suffer an adverse terms of trade loss.

In column AGR2 we report the impact of reducing agricultural *production subsidies*. As mentioned above, there is some skepticism regarding whether this aspect of the UR will be binding. While we have included the reduction of agricultural production subsidies as part of the Uruguay Round reform package, our decomposition of the benefits allows the reader to evaluate the benefits of each component. With a few exceptions (HKG, MYS and ARG) the available data indicate that all countries in the model have at least some production subsidies. In some cases, such as grains in MNE and paddy rice in the KOR, the subsidy is extremely high, although often on a low volume. Thus, the reduction of this production distortion produces benefits for most countries.

In column AGR3 we show the impact of reducing *import protection* in agricultural products. The two dominant effects in this scenario are the gains to JPN, which is not surprising given its extremely high level of agricultural protection (the protection rate on grains is initially 329%), and KOR. The other regions which gain are those with relatively high agricultural protection. CHN and the EU are the two regions that lose small but non-trivial amounts from this scenario. The EU loses because in this scenario its export and production subsidies in agriculture are maintained. Hence the additional exports they obtain from the reduction of import protection in the rest of the world aggravates their already-costly export position: the rest of the world is saying "go ahead, subsidize more of my food," and the EU is just writing blank checks with the same initial export subsidy attached to them. In the case of CHN, it suffers an adverse terms of trade effect because other countries are lowering tariffs and attracting imports, which drives up the price of agricultural products on world markets. Since protec-

22 Sectors	
PDR	Paddy rice
WHT	Wheat
GRO	Grains (other than rice and wheat)
NGC	Non-grain crops
FOR	Forestry-fishing-lumber-wood-paper wool
PCR	Processed rice
MIL	Milk products
TEX	Textiles
WAP	Wearing apparel
CRP	Chemicals-rubber-plastics
I_S	Primary iron and steel
NFM	Non-ferrous metals
FMP	Fabricated metal
TRN	Transport industry
T_T	Trade and transport
CGD	Investment good
MEA	Meat products and livestock
ENR	Energy and energy products
MIN	Minerals and mineral products
FOO	Food-beverages-tobacco
MAC	Machinery-equipment-other manufacturing
SER	Services and utilities
24 Regions	
AUS	Australia
NZL	New Zealand
CAN	Canada
USA	United States
JPN	Japan
KOR	South Korea
E_U	E.E.C.-12
IDN	Indonesia
MYS	Malaysia
PHL	Philippines
SGP	Singapore
THA	Thailand
CHN	China
HKG	Hong Kong
TWN	Taiwan
ARG	Argentina
BRA	Brazil
MEX	Mexico
LAM	Rest of Latin America
SSA	Sub-Saharan Africa
MNA	Middle East and North Africa
EIT	Eastern Europe and Former Soviet Union
SAS	South Asia
EFTA	Other European (EFTA-Switzerland-Turkey-South Africa)

Table 2: Sectors and regions.

tion levels in CHN are unchanged, it does gain from trade liberalization like the other countries. For the other countries, the benefits of more efficient resource allocation, dominate the adverse terms of trade effect.

In column AGR the combined effects of all the components of agricultural reform are assessed jointly. The EU gains over \$18 billion from the agriculture reform package, due to the reduction of its subsidies. JPN gains from the reduction of its high import protection. Although CHN and some of the aggregate developing country regions lose somewhat small amounts, there are surprisingly few losers, given the concern about losses of the "net food importing" countries. This is explained by the fact that most regions have something to gain by reducing their own production subsidies and most also export some food, even if they are net food importers.

In the case of **textiles and clothing reform**, the UR is resulting in a removal of quota restrictions on imports into the United States and other developed countries (most notably the EU and Canada). These quotas have been provided to exporting countries to administer, so their removal results in major losses of revenue to those exporting countries. The effect on the United States and other importing countries is very simple: lower prices for textile and clothing, resulting in a major reduction in the cost of living and an increase in welfare. These gains in welfare derive largely from the effects on clothing prices, since it is here that the United States is the least competitive.

The most important conclusion of our study is the finding that **some developing countries will be net losers from the Uruguay Round in the short-run**. The reason we find this, in contrast to previous studies, is primarily due to the greater level of country detail in our study as well as by plausible parameter choices with respect to trade elasticities that we believe are justified by econometric evidence and *a priori* judgement. Since the losses for LDCs derive from the reduction of agriculture subsidies in the United States, EU and EFTA, and the capture of MFA quota rents by OECD countries in the form of gains in consumer surplus, those developing countries that lose have little in the way of policy instruments to prevent the outcome.

What they can do, however, is further reduce their own self-inflicted costs by reducing their trade barriers further. The post-UR environment presents a more open global trading environment in which the benefits of efficient resource allocation derived from unilateral tariff reduction will be presumably magnified. Moreover,

Region	AGR	AGR1	AGR2	AGR3
AUS	.771	.178	.141	.407
NZL	.311	.147	.069	.093
CAN	.244	.086	.252	-.118
USA	2.248	.162	1.425	.462
JPN	6.632	-1.938	-.652	9.218
KOR	2.646	-.138	.026	2.710
EU	18.194	8.646	9.777	-.282
IDN	.016	-.019	.076	-.035
MYS	.356	-.046	.055	.347
PHL	.116	-.086	.009	.209
SGP	.276	.011	-.005	.256
THA	.541	.020	.165	.341
CHN	-.533	-.201	-.014	-.295
HKG	.839	.151	.071	.570
TWN	-.117	-.093	-.018	-.002
ARG	.353	.070	.185	.085
BRA	.120	-.045	.170	-.002
MEX	.045	-.032	-.010	.077
LAM	1.100	-.029	.940	.175
SSA	-.103	-.340	.078	.160
MNA	-.471	-.810	.185	.146
EIT	-.238	-.543	.238	.036
SAS	.222	-.004	.121	.094
EFTA	1.255	-.366	1.275	.225
LDC	5.168	-2.138	2.274	4.874
DEV	29.656	6.915	12.286	10.005
WLD	34.824	4.777	14.560	14.879
AGR	Reduce import distortions and subsidies on agricultural goods			
AGR1	Reduce export subsidies in agriculture			
AGR2	Reduce production subsidies in agriculture			
AGR3	Reduce import distortions in agriculture			

Table 3: Decomposing the welfare effects of agricultural reform (\$ billion).

in the long-run, our estimates suggest that higher elasticities and income levels will lift many countries that may lose in the short-run. This suggests that all countries at least have the potential to gain from the Uruguay Round.

On the other hand, many would argue that the relevant basis for comparison when judging the UR should not be "business as usual" but "business without any rules." That is, if these negotiating rounds had collapsed, the world could have fallen into a protracted series of trade wars, possibly pitting one regional trading bloc against another. If one undertakes the correct comparisons in this way² then virtually any agreement was a good agreement. ■

Footnotes

¹ Glenn W. Harrison, Thomas Rutherford and David Tarr, Quantifying the Uruguay Round, in W. Martin and L.A. Winters (eds.), *The Uruguay Round and the Developing Economies*

(New York: Cambridge University Press, forthcoming).

² For two studies that undertake this type of calculation, see Glenn W. Harrison, Elisabet Rutström and Randall Wigle, "Costs of Agricultural Trade Wars," in A. Stoeckel, D. Vincent, and S. Cuthbertson (eds.), *Macroeconomic Consequences of Farm Support Policies* (Durham, NC: Duke University Press, 1989) and Glenn W. Harrison and Elisabet Rutström, "Trade Wars, Trade Negotiations, and Applied Game Theory," *The Economic Journal*, 101, May 1991, 420-435.

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