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Will Special Agricultural Safeguards Advance or Retard LDC Growth and Welfare? A Dynamic General Equilibrium Analysis

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May 6, 2005

**Paper prepared for presentation at the American Agricultural Economics Association
Annual Meeting in Providence, R.I., July 24-27, 2005.**

**The viewpoints and conclusions expressed in this manuscript are their own and not
necessarily those of ERS/USDA.**

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Abstract

This study examines the potential magnitude and distribution of the costs and benefits of allowing developing countries to establish Special Safeguards (SSGs) for staple agricultural commodities. An inter-temporal general equilibrium model used to simulate the static and dynamic effects of SSGs. Our results indicate that developing countries in aggregate lose welfare when SSGs are imposed for staple food and for all agricultural commodities as opposed to agricultural trade liberalization without SSGs. However, the distribution of gains and losses among developing countries is not uniform.

Keywords: developing countries, CGE model, special safeguards.

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Abstract:

In the WTO Doha negotiations several developing countries have proposed special safeguards mechanisms [SSMs] for sensitive agricultural commodities. This study examines the potential magnitude and distribution of the welfare from allowing developing countries to establish [SSMs] for grains and oilseeds. It employs an inter-temporal general equilibrium model including 13 countries/regions and 7 commodity groups, based GTAP 5.2 database, to simulate the dynamic effects of imposing SSMs.

The simulations indicate that allowing developing country SSMs for grains and oilseeds reduces the welfare gains of full agricultural liberalization, but the reduction in welfare is relatively modest: about 99% of the welfare gain of full liberalization is realized with SSM—that is, share of welfare gain foregone is about 1%. The relative welfare foregone is greatest for developing countries, and least for developed countries. Among developing regions, Asian countries (excluding China) forego the greatest relative welfare gain.

Abbreviations used in text

AoA	(Uruguay Round) Agreement on Agriculture
GATT	General Agreement on Tariffs and Trade
Members	WTO Member countries
SSG	Special (Agricultural) Safeguard, under Article 5 of AoA
SSM	Special (Agricultural) Safeguard Mechanism, in Harbinson Proposal (2003)
TFP	Total Factor Productivity
TRQ	Tariff-rate Quota
UR	Uruguay Round
WTO	World Trade Organization

1. Introduction

Countries have devised various forms of contingent protection to moderate the impact of changes in international market conditions on the domestic economy. The simplest form of contingent protection is for a country to raise or lower its tariff to regulate the import volume of the sensitive commodity. Imposing import bans, discretionary licensing, adjustable quotas or limiting import authority to a state agency, were other common means of trade management, although most have now been effectively disciplined by the GATT or the Uruguay Round Agreement on Agriculture (AoA). Despite the Uruguay Round reforms many countries still maintain high bound tariffs on many agricultural products. A high bound tariff can provide a country considerable discretion over its applied tariff. The applied rate can be raised to the bound rate to inhibit or impede imports, and can be reduced or waived when imports are needed.

In addition to adjusting tariffs in response to market conditions and domestic political demands, there are other, more formal means of contingent protection—or “trade remedies” as they are often called. They were a persistent source of tension under the GATT. The Uruguay Round established guidelines for proper use of trade remedies and solved many of the ambiguities in the earlier agreements. Three agreements considerably limit the discretion of WTO member countries to invoke contingent protection measures at will—the Agreement on Subsidies and Countervailing Measures, the Agreement of Safeguards, and the Agreement on Antidumping. These agreements define the procedures and standards of evidence required for legitimate trade remedy actions. Countervailing duties require proof of foreign subsidies and domestic injury; antidumping duties require proof of sales below normal price and domestic injury; and safeguards merely require demonstration that an increase in imports poses a threat of serious injury. Each process is quasi-judicial.

In addition, and as a transitional measure towards a tariff-only regime, Article 5 of the Agreement on Agriculture allowed members to create Special Safeguards (SSGs) for those agricultural commodities subject to tariffication in the Uruguay Round. Article 5 includes the rules for constructing price-triggered and volume-trigger SSGs. The triggers and the corresponding increases in tariffs they allow must be included in members’ WTO tariff schedules. In general they allow the Member to raise tariffs toward the level of protection that existed prior to the Uruguay Round: in principle the maximum SSG is no worse than pre-reform levels of protection. In contrast to ‘general’ safeguards (allowed under the Agreement on Safeguards), these special agricultural SSGs are automatic: they do not require a quasi-judicial process to determine whether contingent protection is merited.

In the agricultural negotiations of the Doha Development Agenda several members have proposed eliminating existing special agricultural SSGs. Developed countries account for most SSGs notified to the WTO and account for virtually all SSG use since their introduction in 1995. While some developed countries are seriously considering phasing-out or eliminating SSGs, several developing countries are proposing new agricultural safeguards for developing countries only. Various justifications exist, among them food security and the stabilization of subsistence farmer incomes. The automatic or mechanical feature of the Uruguay Round AoA SSG also appeals to developing countries, as they often cannot afford the legal and administrative burden of standard trade remedies.

The proposals for a new or extended agricultural safeguard for developing countries that are abstracted in what is commonly known as the “Harbinson Proposal” share a common ancestry. In motivation, there is a common desire to maintain existing discretion over imports of selected “sensitive commodities” however defined. In design, the Special Safeguards of Article 5 of the Agreement on Agriculture appear to be the model for most proposals. The mechanism is automatic (thus low or zero administrative cost), no-fault, and requires no compensation. Each of these characteristics appeals to the importing/imposing country. From the exporters’ perspective, the requirements that the triggers and consequent tariffs be specified and notified in countries’ tariff schedules, provides transparency and reasonable predictability. It also limits the number of commodities for which the safeguard may be used to those notified in the tariff schedule.

To distinguish between existing SSGs and the new safeguards that could be permitted as part of the Doha Development Agenda for Agriculture, we refer to the latter as Special Safeguard Mechanism or SSM. This is the language employed in the Harbinson Proposal—the relevant paragraphs of which are included in the appendix.

The objective of this paper is to provide an estimate of the potential net welfare effect of allowing developing countries to adopt special safeguard mechanisms [SSMs] for sensitive agricultural commodities. If permitted would these provisions largely negate the effort to liberalize agricultural trade, or are they only a minor and perhaps necessary cost of adjustment? To our knowledge no one has attempted to answer this fundamental question. This paper is thus a first attempt. Section 2 explains how special agricultural safeguard mechanisms generally operate and how they can be represented for simulation and modeling. Section 3 highlights significant aspects of model specification and data. Section 4 presents the simulation results and their discussion. Section 5 concludes with a summary of the significant findings, caveats and remaining questions.

2. Modeling Special Agricultural Safeguard Mechanisms

For partial-equilibrium analysis of a specific safeguard mechanism one can devise an explicit and exact safeguard algorithm, that is, if the parameters of the mechanism are known. Existing special safeguards and most proposed special safeguards are sets of if-then statements. For price-triggered special safeguards the if-then statements are of the form: if the import price is between $x\%$ and $y\%$ of the reference (base) price then an additional tariff of $z\%$ may be imposed. The lower the import price is relative to the base price, the greater the additional tariff allowed. Similarly, volume-triggered special safeguards have if-then statements that make the additional duty a scheduled function of the degree to which the volume of imports exceeds a reference or base volume.¹ For general equilibrium simulation of a general safeguard mechanism one can reduce the general mechanism to an additional expected *ad valorem* equivalent tariff. The additional tariff (t) generated by the safeguard algorithm is some function of the relevant trade-related variable (x), typically this is either an import price indicator or an import volume indicator. Thus $t = f(x)$ represents the safeguard mechanism and $x = f(s)$ represents the density function of the indicator, where (s) represents the state of the world—market conditions or whatever other causal elements are relevant. Integrating the composition of the safeguard mechanism and the density function [$t = g(s)$; $g: f \rightarrow f$] over \mathbf{S} yields the expected value of the safeguard tariff.

$$E[t] = \int_{\mathbf{S}} g(s) ds$$

An illustration may help clarify the meaning of the equation. A safeguard that imposes an additional 50 percent *ad valorem* tariff but which, in the long run, is triggered 20 percent of the time has an expected value equivalent to an additional 10 percent *ad valorem* tariff. One set of simulation scenarios (below) takes this approximation literally. We simply impose a permanent

¹ The appendix includes the paragraphs describing the special agricultural safeguard mechanisms from 1) the 2003 Harbinson proposal; 2) Article 5 of the Uruguay Round Agreement on Agriculture; and 3) the most recent draft of the Free Trade Agreement between Chile and the United States.

additional *ad valorem* tariff to represent the expected value of an intermittent safeguard. Of course, because safeguards are more likely to be triggered when world prices are low and less likely to be triggered when they are high, a permanent *ad valorem* equivalent will under-represent the effects of a price- or volume-contingent safeguard. An alternative, stochastic analysis attempts to remedy this bias by making drawings from the density $f(\mathbf{S})$. The process is constructed so that the expectation and long-run observed mean of the additional safeguard tariff is the same as the fixed expected-tariff analysis. The difference is that higher moments of the distribution are represented; moreover, the safeguard tariff is intermittent and globally correlated with the state of the world drawn.

For sensitivity analysis we simulate several *ad valorem* tariff equivalents, including zero tariff (full agricultural liberalization) and zero liberalization for developing country grain and oilseed tariffs (status quo tariff). These two extreme cases establish the upper and lower bounds for the welfare analysis. Our sense, however, is that the 10% tariff equivalent is a reasonable upper bound for the welfare and trade impacts of any plausible SSM. First, SSMs are likely to be applied sporadically, by relatively few countries at any given time, and only for one or two commodities in any given country. Even if the additional SSM tariff were 100% for all developing countries and for all grains and oilseeds, the likelihood that SSMs would be imposed on 10 percent of all developing country grain and oilseed trade at any given moment is low. And the likelihood of observing a 10-percent long run frequency is remote.

Second, in our SSM simulations *all* developing countries/regions represented in the model apply the additional tariff on *all* grains and oilseeds. One developing country applying a 10% tariff on its grain and oilseed imports is unlikely to have a significant impact on global grain and oilseed markets or global welfare. Most countries fit the economic definition of a “small country”: their market share of global trade is too small to influence global welfare measures. However, if all developing countries simultaneously impose a 10% tariff on grain and oilseed imports, then the small country assumption no longer holds. The sum of many small countries is a large country and the joint impact matters.

Third, few countries are likely to designate all grains and oilseeds as sensitive commodities. Japan, for example, demands special treatment for rice, but its wheat and feedgrain imports, although critically important to Japan’s economy and food security, are not reserved for special treatment. Also, most of the items that countries deem sensitive are not standard bulk commodities (and are therefore not represented directly in our standard trade models). India, for example, considers onions to be a sensitive commodity: it is a key input in household meal production and its price is volatile: there were widespread ‘onion riots’ in India in the fall of 1998—potatoes are subject to similar shocks and crises. The Free Trade Agreement between Chile and the United States provides more examples. In the agreement the United States establishes price and volume safeguards on 51 commodities, and Chile, on 10 commodities. The U.S. commodity list includes no bulk commodities: the list is comprised of items such as dried onions, garlic powder, various preserved mushrooms, tomato-based products, peach- pear- and apricot-based products, and various fresh vegetables, such as spinach, broccoli, carrots and sweet corn. These products exist at the eight- or ten-digit-tariff level and are not captured in the one- or two-digit aggregates used in most trade models. The Chilean list includes shell eggs, milled rice, rice flour, wheat flours, wheat starch and wheat gluten. The list does not include bulk (rough)

rice or bulk wheat: it is the viability or adjustment of the Chilean milling sector that appears to be sensitive, not the production or consumption of the underlying commodity. The SSMs for such eccentric eight- and ten-digit-tariff line commodities can cause large welfare effects relative to the particular, narrow market and industry, but in a national or global context, the effects are almost always trivial.

For all of these reasons—the expected value, the large country effect, and the ten-digit-tariff-line incidence of most SSM—the 10-percent tariff equivalent more than captures the welfare impact of any plausible SSM. Thus, we contend that it provides a generous and reasonable upper bound for the SSM welfare effect. The 30-percent tariff equivalent and 10-percent stochastic SSM can be viewed as super-generous upper bounds.

3. Model Specification and Data

Model: The model used in this study was initially developed to examine the dynamic effects of agricultural trade liberalization on developing countries, particularly with regard to how liberalization induces productivity and technology transfer. A detailed description about the dynamic model can be found in Diao and Somwaru (2001). In this section we comment only on those aspects of the model relevant for the analysis of safeguards.

Data: Drawing upon a global database (GTAP 5.2, 2002) we aggregate to 7 commodity groups and 13 countries/regions to allow a more solvable inter-temporal model in which savings and investments are endogenous variables and international capital flows are permitted.

Dynamic specification: While static analyses ignore the effect of reform on saving, investment, and the pattern of growth in a country's capital stock, the dynamic approach used in this analysis captures these linkages. A dynamic specification requires an inter-temporal channel: this is provided by households' willingness to substitute current consumption for future consumption by means of savings and investment. We allow for international capital flows in clearing the domestic capital market.²

Welfare measurement: the analysis employs the equivalent variation as the measure of the social welfare gains or losses due to agricultural policy reform.

Scenarios: The baseline is GTAP 5.2 trade and policy database. Full liberalization is a zero / zero / zero scenario: all tariffs on agricultural products in all countries are set to zero—thus full

² This is a typical Ramsey-type growth model specification with an additional productivity growth factor related to trade. The model was initially constructed to incorporate the welfare effects of the observed correlation between TFP growth and trade expansion/increased openness in simulations of the dynamic welfare effects of agricultural trade liberalization. The model and various simulation results focusing on TFP effects are discussed in Diao and Somwaru (2001) and Diao et al., (2001). To keep the focus of the current paper on safeguards we have not reported simulation results that include TFP effects or information about the dynamic paths of welfare changes. Including TFP resulted in greater welfare gains, as one would expect, and the absolute welfare foregone from imposing SSMs was also greater; however the proportionate or relative welfare foregone did not differ greatly between simulation with and without TFP effects. Simulation results including TFP effects and dynamic paths are available from the authors.

market access; domestic support (WTO amber box) for agriculture in all countries is set to zero; and there are zero agricultural export subsidies.

There are two basic SSM scenarios. 1) A fixed expected tariff of 10 percent is imposed on all grains and oilseeds in all developing countries. This scenario assumes that the expected value of an intermittent and variable safeguard tariff is represented by its expected fixed tariff equivalent. 2) A series of tariffs are drawn (randomly and with replacement) from a distribution of tariffs with an expected value of 10 percent. The drawn tariff is applied for all grains and oilseeds for all developing countries. The drawing occurs annually. The process is iterated until values converge with pre-defined relative bounds. This scenario attempts to capture some of the effects excluded by the fixed tariff scenario. Two additional scenarios, one with a fixed 30 percent tariff and one keeping the pre-liberalization tariffs for developing country grains and oilseeds (Status quo scenario) are run to check sensitivity.

4. Results and discussion

There are several propositions one can assert *a priori* before turning to the simulation results. First, it is almost certain that partial liberalization will lead to greater welfare than no liberalization (Status Quo), although second-best effects could confound an unambiguous ranking. Second, it is axiomatic that full liberalization dominates partial liberalization. Third, for an equivalent expected *ad valorem* tariff (t), a stochastic SSM results in lower welfare than a static SSM. These three propositions lead to the following welfare ordering:

$$W[\text{Status Quo}] < W[\text{Stochastic SSM}_t] < W[\text{Static SSM}_t] < W[\text{Full Liberalization}]$$

Table 1 summarizes the simulation results. It reports, for developed, developing, and global aggregates, the absolute welfare changes (\$Billion), and percentage welfare changes from baseline levels for five scenarios: full liberalization, 10% SSM, 30% SSM, 10% stochastic and status quo. Status quo in this context means that developing countries maintain baseline tariffs for all grains and oilseeds, but all other aspects of full liberalization are implemented. All results are for the 15th (last) year of a dynamic adjustment model, which is our approximation of the long run. Table 1 also reports all of the magnitudes relative to the welfare gain realized under full liberalization. The gains (absolute and relative) are in the order hypothesized above. This result is not surprising: it merely indicates that the relative magnitudes are consistent with theory.

Figure 1 plots the relative welfare gains for the simulations. A consistent pattern across all simulations is that SSMs effect a greater welfare loss for developing countries than for developed countries. This is significant because it is a sub-set of developing countries that is advocating SSMs, however the welfare foregone is relatively minor. This leads to the second pattern: the welfare gains with 10% and 30% SSMs are not substantially below the welfare gains from full liberalization. The 10% SSM results in relative welfare in excess of 99% of full liberalization, and worst outcome among the 30% SSM scenarios, that for developing countries is 97.8%. Thus, the first general result is that the welfare cost of SSMs is relatively small.

Table 2 reports and Figure 2 plots the relative welfare gains for the fixed and stochastic 10% SSMs at the country/regional level. Figure 2 reveals some variation within the aggregates. India

and Mexico, for example, forego no welfare with fixed SSMs, but a stochastic SSMs Mexico foregoes 2.8% [1.000-.972] of the full liberalization welfare gain, but the cost is still relatively small. Other Asia foregoes the greatest gain under both specifications: 2.0% and 3.7%. With the fixed 10% SSM all other country/regions face welfare costs of less than 1 percent. For the United States and the European Union, the cost is 0.6% and 0.3% respectively.

The results indicate the kind of countries that advocate SSMs—developing countries—are the countries for which SSMs produce the greatest foregone welfare. Our simulations measure the welfare as the equivalent variation of the representative household—call this aggregate welfare [AW]. Governments, representative or otherwise, often have other objectives than the maximization of the welfare of the representative household. Food security, national security, domestic tranquility, or simple rent-seeking and special interest protectionism can, and usually do, influence government policy and particularly trade policy. Thus a government’s weighting of arguments comprising aggregate welfare can differ from the aggregate welfare ordering—that is, government welfare [GW] need not correspond exactly to AW.

$$AW[SSM_i] < AW[Full Liberalization]$$

$$GW[Full Liberalization] < GW[SSM_i]$$

5. Conclusion

There is a political aspect to how one frames the results of the welfare analysis of special agricultural safeguard mechanisms [SSMs]. Advocates of full liberalization frame safeguards as the negation of potential gains: safeguards cause a *loss* of welfare relative to full liberalization. Advocates of safeguards frame safeguards as a necessary condition for any liberalization: safeguards allow or facilitate a welfare *gain* over the status quo. The neutral stance that we attempt to take here is to frame the welfare foregone as an insurance premium. Developing countries, at least those that advocate SSMs, to forego no more than one to two percent of the potential welfare gains of liberalization, in order to gain some limited insurance against price or volume shocks for sensitive agricultural commodities.

References

Diao, X., A. Somwaru and T. Roe “A Global Analysis of Agricultural Reform in WTO Member Countries,” *Agriculture Economic Report 802*, Economic Research Service, USDA, 2001.

Diao, X., and A. Somwaru. “A Dynamic Evaluation of the Effects of a Free Trade Area of the Americas - An Intertemporal, Global General Equilibrium Model.” *J. Econ. Integration* 16(first quarter, 2001):21-47.

Appendix: Examples of existing or proposed special safeguard mechanisms for agricultural commodities.

1. Safeguard related paragraphs of the “Harbinson Proposal” (2003)

http://www.wto.org/english/tratop_e/agric_e/negoti_mod1stdraft_e.htm

TN/AG/W/1
17 February 2003

Committee on Agriculture
Special Session

Negotiations on Agriculture First Draft of Modalities for the Further Commitments

10. Developing countries shall have the flexibility to declare up to [] agricultural products at the [6-digit] HS level as being strategic products with respect to food security, rural development and/or livelihood security concerns and designate these products with the symbol “SP” in Section I-B of Part I of their Schedules (hereafter referred to as “SP products”). For all agricultural products other than SP products, the reduction commitments of developing countries shall be implemented applying the following formula:

12. The simple average reduction rate for all SP products shall be [10] per cent subject to a minimum cut of [5] per cent per tariff line [, except for SP products for which a developing country opts to have access to the special safeguard provisions under paragraph 24 below].

Special and differential treatment

24. For SP products [subject to tariff reductions in accordance with paragraph 10 above], developing countries shall have the flexibility to apply a special safeguard mechanism to be based on the provisions of Article 5 of the Agreement on Agriculture. This right shall be reserved by designating in their Schedules with the symbol “SSM” the products concerned. Only products designated in this way in the Schedule, as well as items already currently covered and designated with the symbol “SSG”, shall be eligible for measures under Article 5.

25. Participants undertake to review the provisions of Article 5 of the Agreement on Agriculture with a view to ensuring that these provisions are operationally effective and enable developing countries to effectively take account of their development needs, including food security, rural development and livelihood security concerns. This review shall take into account the various proposals on possible safeguard mechanisms submitted by developing countries in the negotiations under the Doha Development Agenda and shall be completed no later than [].

2. SSG design from Article 5 of the Agreement on Agriculture (1994)

http://www.wto.org/english/docs_e/legal_e/14-ag_01_e.htm#articleV

1. Notwithstanding the provisions of paragraph 1(b) of Article II of GATT 1994, any Member may take recourse to the provisions of paragraphs 4 and 5 below in connection with the importation of an agricultural product, in respect of which measures referred to in paragraph 2 of Article 4 of this Agreement have been converted into an ordinary customs duty and which is designated in its Schedule with the symbol “SSG” as being the subject of a concession in respect of which the provisions of this Article may be invoked, if:

(a) the volume of imports of that product entering the customs territory of the Member granting the concession during any year exceeds a trigger level which relates to the existing market access opportunity as set out in paragraph 4; or, but not concurrently:

(b) the price at which imports of that product may enter the customs territory of the Member granting the concession, as determined on the basis of the c.i.f. import price of the shipment concerned expressed in terms of its domestic currency, falls below a trigger price equal to the average 1986 to 1988 reference price for the product concerned.

.....

4. Any additional duty imposed under subparagraph 1(a) shall only be maintained until the end of the year in which it has been imposed, and may only be levied at a level which shall not exceed one third of the level of the ordinary customs duty in effect in the year in which the action is taken. The trigger level shall be set according to the following schedule based on market access opportunities defined as imports as a percentage of the corresponding domestic consumption during the three preceding years for which data are available:

(a) where such market access opportunities for a product are less than or equal to 10 per cent, the base trigger level shall equal 125 per cent;

(b) where such market access opportunities for a product are greater than 10 per cent but less than or equal to 30 per cent, the base trigger level shall equal 110 per cent;

(c) where such market access opportunities for a product are greater than 30 per cent, the base trigger level shall equal 105 per cent.

In all cases the additional duty may be imposed in any year where the absolute volume of imports of the product concerned entering the customs territory of the Member granting the concession exceeds the sum of (x) the base trigger level set out above multiplied by the average quantity of imports during the three preceding years for which data are available and (y) the absolute volume change in domestic consumption of the product concerned in the most recent year for which data are available compared to the preceding year, provided that the trigger level shall not be less than 105 per cent of the average quantity of imports in (x) above.

5. The additional duty imposed under subparagraph 1(b) shall be set according to the following schedule:

(a) if the difference between the c.i.f. import price of the shipment expressed in terms of the domestic currency (hereinafter referred to as the "import price") and the trigger price as defined under that subparagraph is less than or equal to 10 per cent of the trigger price, no additional duty shall be imposed;

(b) if the difference between the import price and the trigger price (hereinafter referred to as the "difference") is greater than 10 per cent but less than or equal to 40 per cent of the trigger price, the additional duty shall equal 30 per cent of the amount by which the difference exceeds 10 per cent;

(c) if the difference is greater than 40 per cent but less than or equal to 60 per cent of the trigger price, the additional duty shall equal 50 per cent of the amount by which the difference exceeds 40 per cent, plus the additional duty allowed under (b);

(d) if the difference is greater than 60 per cent but less than or equal to 75 per cent, the additional duty shall equal 70 per cent of the amount by which the difference exceeds 60 per cent of the trigger price, plus the additional duties allowed under (b) and (c);

(e) if the difference is greater than 75 per cent of the trigger price, the additional duty shall equal 90 per cent of the amount by which the difference exceeds 75 per cent, plus the additional duties allowed under (b), (c) and (d).

Free Trade Agreement between Chile and the United States (2003)

DRAFT (Subject to Legal Review for Clarity and Consistency) April 3, 2003

<http://www.ustr.gov/new/fta/Chile/text/03text.pdf>

Article 3.18: Agricultural Safeguard Measures

1. Notwithstanding Article 3.3(2), each Party may impose a safeguard measure in the form of additional import duties, consistent with paragraphs 2 through 7, on an originating agricultural good listed in its section of Annex 3.18. The sum of any such additional duty and any import duties or other charges applied pursuant to Article 3.3(2) shall not exceed the lesser of:

- (a) the prevailing most-favored-nation (MFN) applied rate; or
- (b) the MFN applied rate of duty in effect on the day immediately preceding the date of entry into force of this Agreement.

2. A Party may impose a safeguard measure only if the unit import price of the good enters the Party's customs territory at a level below a trigger price for that good as set out in that Party's section of Annex 3.18.

(a) The unit import price shall be determined on the basis of the C.I.F. import price of the good in U.S. dollars for goods entering Chile, and on the basis of the F.O.B. import price of the good in U.S. dollars for goods entering the United States.

(b) The trigger prices for the goods eligible for safeguard measure, which reflect historic unit import values for the products concerned, are listed in Annex 3.18. The Parties may mutually agree to periodically evaluate and update the trigger prices.

3. The additional duties under paragraph 2 shall be set in accordance with the following schedule:

(a) if the difference between the unit import price of the item expressed in terms of domestic currency (the "import price") and the trigger price as defined under paragraph 2(b) is less than or equal to 10 per cent of the trigger price, no additional duty shall be imposed;

(b) if the difference between the import price and the trigger price (the "difference") is greater than 10 per cent but less than or equal to 40 per cent of the trigger price, the additional duty shall equal 30 per cent of the difference between the MFN rate applicable under paragraph 1 and the preferential tariff rate;

(c) if the difference is greater than 40 per cent but less than or equal to 60 per cent of the trigger price, the additional duty shall equal 50 per cent of the difference between the MFN rate applicable under paragraph 1 and the preferential tariff rate;

(d) if the difference is greater than 60 per cent but less than or equal to 75 per cent, the additional duty shall equal 70 per cent of the difference between the MFN rate applicable under paragraph 1 and the preferential tariff rate; and

(e) if the difference is greater than 75 per cent of the trigger price, the additional duty shall equal 100 per cent of the difference between the MFN rate applicable under paragraph 1 and the preferential tariff rate.

4. Neither Party may, with respect to the same good, at the same time:

- (a) impose a safeguard measure under this Article; and
- (b) take a safeguard action under Chapter Eight (Trade Remedies).

5. Neither Party may impose a safeguard measure on a good that is subject to a measure that the Party has imposed pursuant to Article XIX of GATT 1994 and the Safeguards Agreement, and neither Party may continue maintaining a safeguard measure on a good that becomes subject to a measure that the Party imposes pursuant to Article XIX of GATT 1994 and the Safeguards Agreement.

6. A Party may impose a safeguard measure only during the 12-year period beginning on the date of entry into force of this Agreement. Neither Party may impose a safeguard measure on a good once the good achieves duty-free status under this Agreement. Neither Party may impose a safeguard measure that increases a zero in-quota duty on a good subject to a tariff-rate quota.

...

END.

	Developing	Developed	Global
Full liberalization	33.11	76.12	109.23
10% SSM	32.86	75.84	108.70
30% SSM	32.37	75.31	107.68
10% stochastic	32.29	75.23	107.53
Status quo	30.32	73.38	103.70
Percent Change in Welfare from Base Levels			
	Developing	Developed	Global
Full liberalization	0.670	0.420	0.470
10% SSM	0.665	0.418	0.468
30% SSM	0.655	0.416	0.463
10% stochastic	0.654	0.415	0.463
Status quo	0.614	0.405	0.446

	Welfare Changes from Base, \$Billion				Change Relative to Liberalization		
	Full Liberalization	10% SSM	30% SSM	10% stochastic	10% SSM	30% SSM	10% stochastic
GLOBAL	109.23	108.70	107.68	107.53	0.995	0.986	0.984
DEVELOPED	76.12	75.84	75.31	75.23	0.996	0.989	0.988
USA	25.06	24.91	24.64	24.60	0.994	0.983	0.982
European Union	26.97	26.88	26.70	26.68	0.997	0.990	0.989
DEVELOPING	33.11	32.86	32.37	32.29	0.992	0.978	0.975
China	1.89	1.88	1.84	1.83	0.995	0.974	0.968
Other Asian countries	5.43	5.32	5.25	5.23	0.980	0.967	0.963
India	1.82	1.82	1.79	1.80	1.000	0.984	0.989
Mexico	2.12	2.12	2.07	2.06	1.000	0.976	0.972
Rest of the Americas	3.73	3.71	3.64	3.63	0.995	0.976	0.973
Africa	3.84	3.82	3.77	3.76	0.995	0.982	0.979
Rest of the world	14.28	14.19	14.01	13.98	0.994	0.981	0.979

Figure 1. Safeguard Relative Welfare Effects

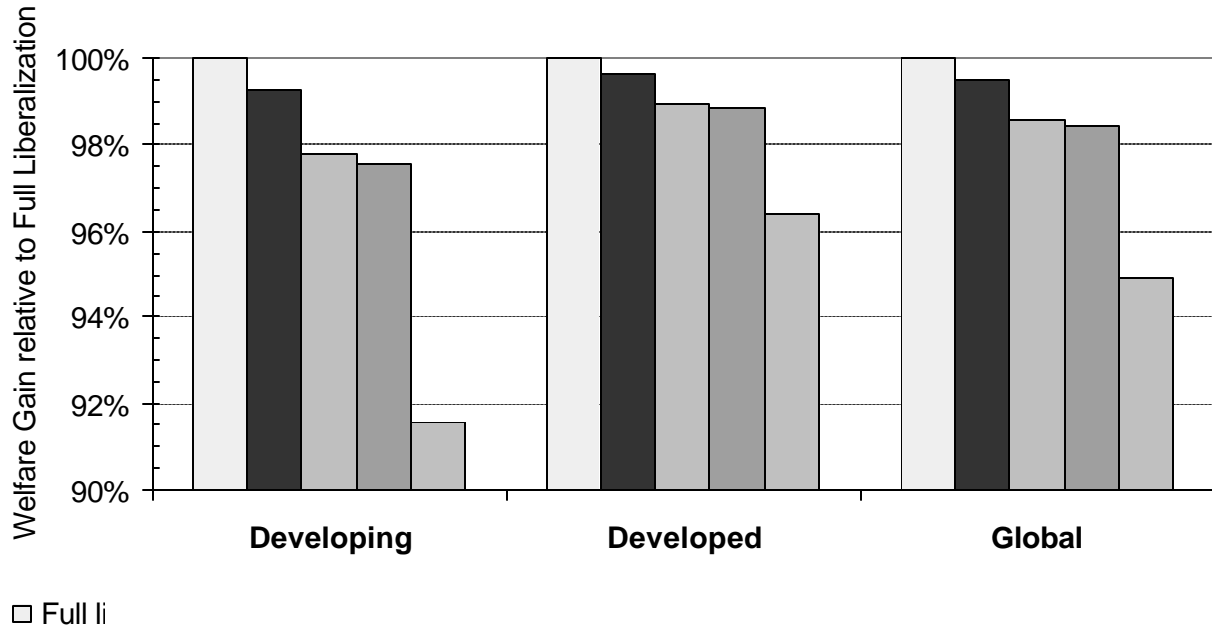


Figure 2. Welfare gain of liberalization with 10%-SSMs relative to no Safeguards

