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An Analysis of the Special Safeguard Mechanisms in the Doha Round of Negotiations: A Proposed Price-trigger-based Safeguard Mechanism

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Working Paper No. 189

An Analysis of the Special Safeguard Mechanisms in the Doha Round of Negotiations

A Proposed Price-trigger-based Safeguard Mechanism

Parthapratim Pal
Deepika Wadhwa

October 2006

INDIAN COUNCIL FOR RESEARCH ON INTERNATIONAL ECONOMIC RELATIONS

FOREWORD

In the Doha Round of trade negotiations, it has been acknowledged that agriculture has a special role to play in developing countries and non-trade concerns like food security, livelihood security and issues related to rural development should be given priority over trade liberalization. To enable developing countries take account of their developmental needs, two new defensive instruments have been proposed in the current round of negotiations on agriculture. First, it has been decided that developing countries will have the flexibility to designate an appropriate number of products as Special Products (SP) which will be eligible for more flexible market access commitments. Second, to temporarily protect the domestic agriculture of developing countries from international commodity price volatility and import surges, a Special Safeguard Mechanism (SSM) will be made available to these countries.

Both SP and SSM are new defensive instruments made available to developing countries in the Doha Round of trade talks and it will be important to analyze how these mechanisms are going to help developing countries in their pursuit to protect the livelihood and food security of their farmers. This paper focuses on the SSM and analyzes its implications for developing countries. It also puts forth specific suggestions regarding design and implementation of a price-trigger-based special safeguard mechanism.

It is hoped that the working paper will help policy-makers and stakeholders to take a view on this important issue. We are very grateful to the Sir Ratan Tata Trust for funding this and other research on WTO issues.

Rajiv Kumar
Director & Chief Executive
ICRIER

October 16, 2006

ABSTRACT

In the Doha Round of negotiations on agriculture it has been decided that all developing and least developed Member countries of the WTO will have access to a Special Safeguard Mechanism (SSM). This means that developing countries will now have the option to temporarily impose higher tariff rates on the import of an agricultural product if there is either a surge in its import volumes or a sharp dip in its import prices. However, the exact mechanisms of the implementation of SSMs have not been spelt out. It is also not clear what legal provisions the Member countries will have to follow to use this safeguard mechanism.

This paper takes a detailed look at the SSM and analyzes its usefulness for developing countries. It also explores how the concept of a special agricultural safeguard has evolved in the present round of negotiations and what are the country positions on SSMs in the Doha Round. The paper then proposes a price-trigger-based SSM instrument which is consistent with the goals spelt out in the Doha Development Agenda and satisfies most of the desired features of a safeguard instrument.

Jel Classification: F13, Q17
Keywords: WTO, Agriculture, Volatility, Special safeguards, Tariff rates

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I INTRODUCTION

During the Uruguay Round it was expected that the WTO Agreement on Agriculture (AoA) would bring about a structural change in global agricultural trade and more efficient agricultural producers would stand to benefit from the WTO agreement. As many developing countries are low-cost producers of agricultural goods, it was expected that these countries would significantly benefit from a more open and less distorted global agricultural trade regime.

However, the implementation experience of the AoA shows that though it has succeeded in reducing the widespread use of quantitative restrictions (QRs) in agricultural trade, agriculture still remains a distorted sector. Some large developed countries have managed to bypass the WTO rules regarding subsidy reduction. Using some loopholes in the agreement, these countries have retained the overall level of subsidy given to their farm sector. Some countries have also devised ways to comply with the rules of the AoA and still maintain a fairly high level of import restrictions. As a result, the gains for developing countries from agricultural trade liberalization have been less than expected. On the flip side, the opening up of their agriculture sector to international trade has made the farming community of the developing countries vulnerable as they are now facing problems protecting their domestic markets from the cheap and subsidized exports of the developed countries. Trade liberalization and removal of non-tariff barriers have also exposed the domestic markets of the developing countries to the volatility of international commodity prices.

Given the importance of agriculture in developing countries and the prevalent distortions in international farm trade, it was realized that to enable these countries to tackle their non-trade concerns some defense mechanisms should be made available to them. Consequently, it has been decided in this round of negotiations that[1]:

a) For developing countries, non-trade concerns like food security, livelihood security and issues related to rural development should be given priority over trade liberalization.

b) Developing-country Members should be allowed to maintain an appropriate level of tariff protection for some agricultural commodities--including some key staple foods—since exposing farmers to the artificially cheap exports of developed countries can have disastrous consequences for domestic agriculture In the Doha Round of

[1] See the Doha Ministerial Declaration, the July Framework and the Hong Kong Ministerial Declaration.

trade talks, it has been decided that developing countries will have the flexibility to designate an appropriate number of products as 'Special Products' (SP), which will be eligible for more flexible treatment. The SPs will be chosen by the developing countries themselves (self-designation) based on the relevance of these products to food security, livelihood security and rural development.

c) A special safeguard mechanism (SSM) will be made available to developing and least developed countries to temporarily protect their domestic agriculture from international commodity price volatility and import surges.

Both the SP and the SSM are new defense instruments made available to developing countries in the Doha Round of trade talks and it is important to analyze how these mechanisms are going to help these countries in their pursuit to protect the livelihood and food security of their farmers.

The SSM is a set of WTO provisions through which a WTO Member country can temporarily impose a tariff rate that is higher than the bound tariff rate on the import of a particular product. The idea behind such a safeguard instrument is that it should allow a country to use temporary protective measures to insulate its domestic economies from the short-term fluctuations of international prices. Consequently, these safeguard mechanisms are also temporary and short-term and are not meant to insulate a country from the price signals emanating from long-run or secular movements of commodity prices.

The Hong Kong Ministerial Declaration has announced that in the Doha Development Round such a provision will be made available to all developing and least developed countries that are members of WTO. Paragraph 7 of the Hong Kong Ministerial Declaration states:

'Developing country Members will also have the right to have recourse to a Special Safeguard Mechanism based on import quantity and price triggers, with precise arrangements to be further defined. Special Products and the Special Safeguard Mechanism shall be an integral part of the modalities and the outcome of negotiations in agriculture.'

This implies that, according to the Hong Kong Ministerial Declaration, a WTO Member country will have the right to impose SSMs if it finds that imports are increasing to the extent that local markets are being disrupted or threatened (a 'volume trigger' in WTO jargon) or if there is a collapse of the international price of that commodity which undermines or threatens

to undermine the otherwise viable domestic production (a 'price trigger')[2]. It has been decided in the WTO negotiations that the SSM will be provided as a part of 'Special and Differential Treatment' (S&D) which means that is, it will only be available to the developing and the least developed countries of the WTO[3]. The developed-country Members will not have access to this instrument.

It is important to mention here that in the Uruguay Round AoA a similar safeguard mechanism was available to a select group of countries. This safeguard instrument was called the 'Special Safeguards' (SSG)[4] and it was available to countries which went for the tariffication/Tariff-Rate Quota (TRQ) route in the market access negotiations of the Uruguay Round. Currently, 39 out of the 149 WTO Members have access to SSG. As most developing countries, including India, took the ceiling binding approach (or the bound tariff route) in the AoA, the SSG mechanisms were not available to them.

The Ministerial Declaration shows that though the provisions of an SSM have been announced, the exact mechanisms of the implementation of the SSMs have not been spelt out. For example, price and volume triggers have not been defined. It has not been decided what kind of temporary market access barriers can be erected to insulate a country from import surges and price volatility. It is also not clear what legal provisions the Member countries will have to follow to use this safeguard mechanism.

Against this backdrop, this paper takes a detailed look at the SSM and analyzes its usefulness for developing countries. The paper also explores how the concept of a special agricultural safeguard has evolved in the present round of negotiations and what are the country positions on SSMs in the Doha Round. The paper then proposes a price-trigger-based SSM instrument which, the authors believe, satisfies most of the desirable features of a safeguard instrument.

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[2] These definitions are from Sharma (2005) who defines import surges as: *'…the term "import surge" is used in a general sense to indicate the two external shocks mentioned in the AoA. One is the phenomenon of volume surge – for whatever reason, a country finds that imports are increasing to the extent that local markets are disrupted or are threatened. The other is depressed import prices, mostly due to movements in world market prices, which undermine or threaten to undermine otherwise viable domestic production.'* Page 1.
Also see Mosoti and Sharma (2005) for a more detailed discussion on various concepts related to import surges.

[3] In this paper, henceforth, when we are mentioning 'developing countries' we imply 'developing and least developed countries'.

[4] Article 5 of the Uruguay Round Agreement on Agriculture.

The paper is structured in the following manner. In Section II the authors seek to analyze why developing countries are dissatisfied with the existing agricultural safeguard mechanisms and why they are demanding a new and more widely available SSM. In Section III the authors explore how the concept of a new special safeguard has evolved in the present round of negotiations and analyze different country positions. In Section IV, they discuss some important operational issues regarding the SSM. Based on these discussions, a model for a price-trigger-based SSM is proposed in Section V. In Section VI the possible implementation issues regarding the use of an SSM in a developing country are discussed. Section VI concludes the study.

II WHY DO DEVELOPING COUNTRIES NEED A NEW SAFEGUARD MECHANISM?

In the current round of negotiations, many WTO Member countries have argued that a new and more widely available safeguard instrument should be made available to all developing and least developed countries. The main justification behind this argument was the fact that international commodity prices have remained extremely volatile during the WTO implementation period. Given this high volatility, it has been argued that a temporary safeguard measure, in the mould of an SSG, is likely to prove effective for insulating the domestic economy of a Member country from temporary gyrations of international commodity prices.

Developing countries are also worried because the ambitious tariff reduction proposals put forward in the present round of trade talks will reduce the ability of these countries to protect their domestic agriculture using bound tariff rates. During the Uruguay Round negotiations this concern was not paramount because at that time the general perception was that liberalization of agricultural trade would raise international commodity prices and that developing countries, as low-cost producers of agricultural goods, would emerge as viable exporters of these items. Also, in the Uruguay Round, developing countries were confident that trade liberalization and the resultant high prices of agricultural goods coupled with the high bound tariff rates would allow these countries to maintain sufficient gap between bound and applied tariff rates which, in turn, would allow these countries to counter the price volatility in the international market. Due to this reason, most developing countries did not opt for the SSG option in the Uruguay Round. However, as things turned out, the continued support and subsidy policy of the developed countries kept the world prices volatile and low.

This has created serious problems for agricultural producers in developing countries. Low and volatile commodity prices have resulted in import surges in many developing countries. Since farmers in developing countries are poor and have a low risk-taking ability, import surges can have serious consequences on the livelihood security of these farmers. Given these reasons, most developing countries have expressed concern about the non-trade issues associated with agriculture and have opined that unless a special safeguard mechanism is allowed for these countries, it will be difficult for them to participate in further tariff liberalization. This concern is evident in India's submission to the WTO where it says:

'Given the volatility of agricultural commodity markets and the inability of farmers in developing countries to bear risks arising out of violent fluctuations in international prices, an effective safeguard mechanism for preventing a surge in imports becomes absolutely essential for preserving the livelihood of farmers.' (WTO Document Number G/AG/NG/102)

II.1.1 Imbalance of the Existing Safeguard Mechanisms

International commodity prices have always been volatile and the need for a safeguard measure to protect countries from this volatility has long been recognized. As mentioned earlier, the provision of a special safeguard to allow countries impose temporary market access barriers already existed in the Uruguay Round AoA. But this provision was not available to all WTO Members. To understand why this was so it is important to review the market access component of the Uruguay Round AoA.

One of the main objectives of the AoA was improving market access by removing non-tariff barriers and lowering tariff rates on agricultural products. To attain this goal, the AoA prohibited the use of Non Tariff Barriers (NTBs) for agricultural products. As a first step, the AoA stipulated that all NTBs on the import of an agricultural product would have to be replaced by a single 'bound' tariff rate in a way that the resulting protection would be less than or equivalent to the nominal protection in the base period. This process was called 'tariffication'. Nominal protection was measured by calculating the difference between domestic prices and international prices for the reference period, 1986-90. 'Bound' rate implied that the base period tariff rates were to act as ceiling rates. No country was allowed to increase tariff rates beyond the bound rate. The AoA then stipulated that the average 'bound'

tariff rate of agricultural products would have to be reduced over a period of time with a minimum cut on the tariff rate of each product[5].

In the AoA, along with the 'tariffication' method, developing countries were given an additional option for converting their market access barriers to tariff. According to this option, for fixation of tariff rates on agricultural items, developing countries could declare a 'bound tariff rate' they thought would be appropriate for the concerned product. The advantage of this approach was that the 'bound tariff rate' was not based on the calculation of tariff equivalents but was an arbitrary rate with which the developing country felt comfortable[6]. This approach was called the 'bound rate' approach.

Table 1.gives a more detailed picture of the methods used for determining tariff bindings in the Uruguay Round AoA.

Table 1. Methods used for Determining Tariff Bindings in the Uruguay Round Agreement on Agriculture

Country Status	Binding Status	Method for determining tariff bindings for reduction purpose
Developed	Previously bound	If no NTB, use current bound rate If NTB, eliminate the NTB or apply tariffication formula
	Previously unbound	If no NTB, use the rate applied in September 1986 If NTB, apply tariffication formula
Developing and Least-developed	Previously bound	If no NTB, same as for a developed country If NTB, same as for a developed country
	Previously unbound	If no NTB, same as for a developed country or offer ceiling binding If NTB, same as for a developed country or offer ceiling binding

Note: NTB stands for Non-Tariff Barriers

In the AoA, the SSG provisions were only offered to countries that converted their market access barriers into tariffs using the tariffication option. The countries which took the 'bound rate approach' were not privy to the SSG instrument. The argument behind this dichotomous treatment was that when a country opted for the 'bound rate approach' and declared a certain

[5] For developed countries, it was 36 per cent average cut with 15 per cent minimum cut; for developing countries the corresponding figures were 24 per cent and 10 per cent, respectively. The implementation period for developed countries was 1995-2000; for developing countries it was 1995-2004.

[6] India, for example, offered bound tariff rates of 100, 150 and 300 percent for agricultural goods in the Uruguay Round AoA.

bound tariff rate, it had the flexibility to factor in a safety margin over and above the tariff rate deemed sufficient to protect the concerned product. Therefore, the 'bound rate approach' already had a certain amount of flexibility built into it and it was felt that an additional SSG instrument would not be required for these countries. To support this argument, it is often pointed out that there are large gaps between the bound rates and applied tariff rates[7] for agricultural products in most developing countries. For example, India's average bound rate for agricultural products is more than 100 per cent whereas the average applied tariff rate is around 35 per cent. Presently, among the 149 WTO Members, only 39 have the right to use the SSG and, out of these 39 countries, 22 are developing countries (see Table 2. List of Countries which have Access to SSG Table 3).

Table 2. List of Countries which have Access to SSG

These 39 WTO Members reserve the right to apply SSG on 6,156 tariff lines while the 22 developing countries among them have the right to use SSG on 2,125 tariff lines.

Table 2. List of Countries which have Access to SSG

(The numbers in brackets show number of tariff items for which the right to take recourse to the SSG has been reserved)

Australia (10)	Indonesia (13)	Poland (144)
Barbados (37)	Israel (41)	Romania (175)
Botswana (161)	Japan (121)	Slovak Republic (114)
Bulgaria (21)	Korea (111)	South Africa (166)
Canada (150)	Malaysia (72)	Swaziland (166)
Colombia (56)	Mexico (293)	Switzerland-Liechtenstein (961)
Costa Rica (87)	Morocco (374)	Chinese Taipei (84)
Czech Republic (236)	Namibia (166)	Thailand (52)
Ecuador (7)	New Zealand (4)	Tunisia (32)
El Salvador (84)	Nicaragua (21)	United States (189)
EU (539)	Norway (581)	Uruguay (2)
Guatemala (107)	Panama (6)	Venezuela (76)
Hungary (117)	Philippines (118)	
Iceland (462)		

Source: Special Agricultural Safeguard, background paper by the Secretariat, WTO Document Number G/AG/NG/S/9/Rev.119, dated February 2002.

Implementation experience of the Uruguay Round AoA shows that the existing SSG mechanism did not prove useful to developing countries. There are broadly two reasons behind this. First, and the most obvious reason, is that the SSG was not available to a large majority of the developing countries. Second, even when the SSG was available, the usage of

[7] See Figure 7. . Applied rates are the tariff rates that are actually charged or imposed on the imports.

this instrument was quite limited. Data show that among the 22 developing countries which had the right to invoke SSGs, only six have actually used it during the period 1994-2004[8]. These countries have triggered the SSG only 163 times over the period 1995-2004. FAO (2004) has calculated that the overall 'SSG utilization rate'--the ratio of actual use to potential use–is about 1 per cent when the potential uses by all 22 developing countries are taken into account. The paper by the FAO shows that even in cases where there were import surges based on depressed import prices, many developing countries did not impose the SSG measures. It has been hypothesized that the low utilization of SSG may stem from the fact that governments used these safeguards with restraint because application of an SSG can be cumbersome[9] or can involve significant administrative cost. This is understandable because most developing countries lack resources to track and monitor import volumes in real time and if a country has multiple ports or trading points then this issue becomes even more complex. Therefore, most developing countries found it extremely difficult to monitor and satisfy the volume trigger criteria laid out in the Uruguay Round AoA. Price-based SSGs are much easier to monitor and invoke but most developing countries had not exercised this option during the implementation period. The other possible reason for the limited use of SSG could be that although import prices fell or/and imports surged, the authorities may have determined that this would not lead to injury of the domestic economy and so might not have felt the need for a response. Another possible reason why SSGs were not used much could be the fact that the level of the bound tariffs was high enough for countries to raise the applied rates to an appropriate level to offset the effects of depressed import prices.

On the other hand, the users of SSG have predominantly been the developed countries (Figures 1 and 2)[10]. These figures show that for the period 1995-2001, apart from a couple of countries like Costa Rica and Slovak Republic, almost all the users of SSG belonged to the OECD group of countries[11]. In a statement to the WTO, India has pointed out that OECD countries have made liberal use of both the volume-based SSG and the price-based SSG during 1995-99[12]--the post-Uruguay Round phase.

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[8] FAO (2004).

[9] ICTSD(2005) says: *'Developing countries have repeatedly emphasized that the SSM should not replicate the shortcomings of the SSG that have made its application very cumbersome.'* Page 65.

[10] These figures are not comparable with the estimates given by the FAO. This is because of two reasons. First, while these figures represent official WTO data covering the period 1995-2001, the FAO estimates are for 1995-2004. Second, the WTO figures do not include SSG use by a number of countries, namely, Barbados, Botswana, Bulgaria, Chinese Taipei, Ecuador, Guatemala, Israel, Morocco, Nicaragua and Panama. Among them Chinese Taipei is a major user of volume-based SSG.

[11] Republic of Korea is treated as a developing country in the WTO but it is a member of the OECD.

[12] See 'Summary Report on the Nineteenth Meeting of The Committee On Agriculture Special Session

Figure 1. Price-Trigger-based SSG Utilization by WTO Member Countries Between 1995 and 2001

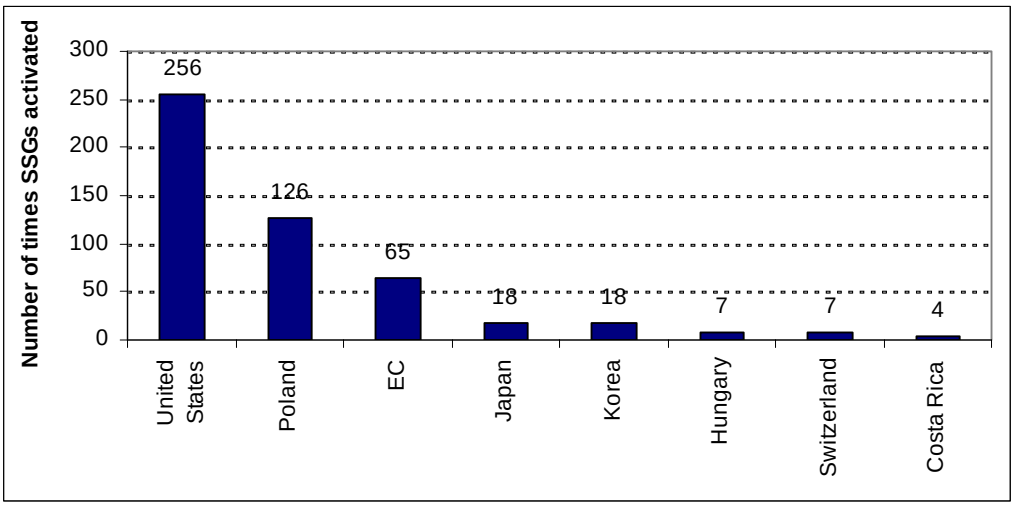
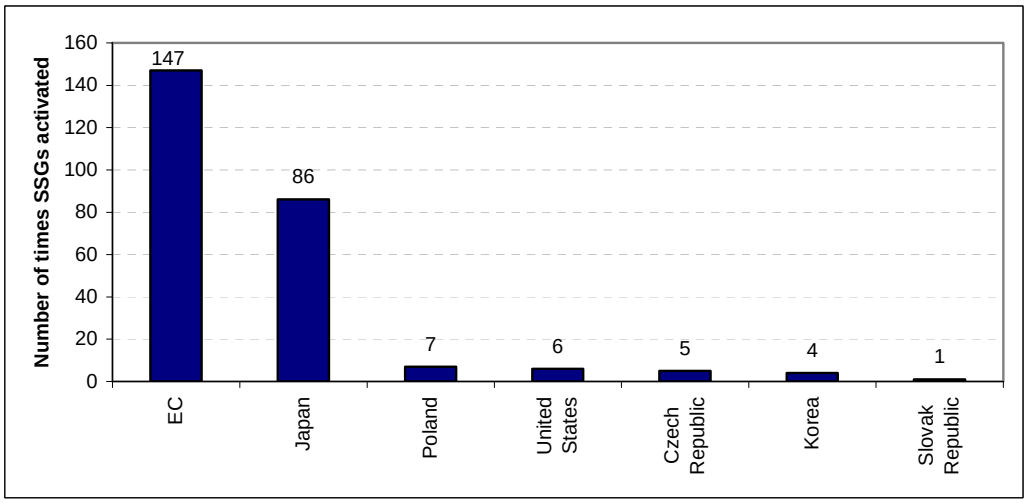


Figure 2. Volume-trigger-based SSG Utilization by WTO Member Countries Between 1995 and 2001



Source: Special Agricultural Safeguard, background paper by the Secretariat, WTO Document Number G/AG/NG/S/9/Rev.119, dated February 2002. Information on Barbados, Botswana, Bulgaria, Chinese Taipei, Ecuador, Guatemala, Israel, Morocco, Nicaragua and Panama is not included as these Members were not covered by the source used for this data.

held on 1 July 2003: Note by the Secretariat', WTO Document Number TN/AG/R/9, dated 25 August 2003, pages 29-30.

Developing countries have also not been able to effectively use other safeguard provisions of the WTO. The Uruguay Round agreement allowed its Member countries another option to impose safeguard measures in case there was an influx of cheap and subsidized imports in a Member's economy. A Member country could impose countervailing duties (CVD) against a certain commodity if they could show that the cheap imports were the results of subsidies given by another country and these imports were causing some harm to their domestic economy. However, during the implementation period, most developing countries found it difficult to impose these safeguard measures. Also, in most cases, imposition of CVD requires proof of injury which then needs to be authorized by the WTO Dispute Settlement Body (DSB). Many developing countries find it difficult to go through this legal procedure as they lack the technical abilities.

Additionally, for agricultural goods, the 'Peace Clause' or Due Restraint Clause (Article 13 of the AoA) prohibited action against subsidies under the normal procedure of the Agreement on Subsidies. However, the Peace Clause has expired and a few cases involving agricultural products have been taken to the DSB by some developing countries.

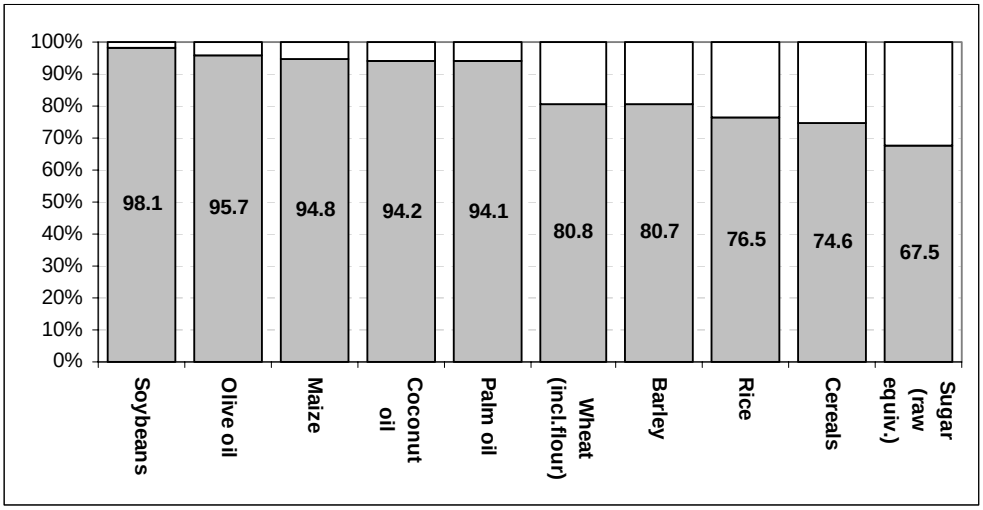
To sum up, the experience of the developing countries with WTO safeguard mechanisms show that the SSG instrument has not been utilized by most of them. Even when the SSG was available, in many cases, developing countries did not choose to utilize this option. In the current round of negotiations developing countries have emphasized that the SSM should be an improvement over the SSG.

II.2 CONTINUED VOLATILITY OF INTERNATIONAL COMMODITY PRICES

One of the main reasons behind the demand of developing countries for a special safeguard is the continued high volatility or instability of international commodity prices. International commodity prices have, traditionally, been highly volatile in nature. A number of factors, both from the supply side as well as the demand side, contribute to this high volatility. From the supply side, a distinguishing feature of international agricultural trade is that only a limited number of exporting countries dominate international trade. Figure 3 shows that for certain crops, the share of the top five exporters can account for as much as 98 per cent. Even for a widely produced crop like rice the share of the top five exporters is more than 76 per cent and for all cereals the share of the top five is almost 75 per cent. As a result of this trade

pattern, any abnormal weather conditions or any other supply shocks in those exporting countries tend to have a very high impact on the aggregate supply and, hence, on international prices. The supply side scenario is further complicated because exports of some major agricultural commodities are dominated by a small number of large-scale multinational 'grain majors' and export state trading enterprises ('single-desk sellers'). Therefore, any disturbance affecting a small number of suppliers tends to have an exaggerated reaction on the commodity prices at the international level[13].

Figure 3. Share of Top five Exporters in the World Market



Source: Using data from Grethe and Nolte (2005).

Moreover, for agricultural commodities, only a small percentage of total production actually enters trade. Therefore, compared to the total usage of these commodities, the exportable surplus is very low. For example, only about 4.5 per cent of total rice production is destined for the international market while, for wheat, the ratio is about 18.5 per cent (FAOSTAT). To put these figures into perspective, world rice trade is only about 20-22 per cent of India's rice production. Because of such 'thinness' of the world agricultural market any large import demand from any of the medium or large importing countries can have a major impact on world prices[14]. An example of such an experience was the sudden rise in the prices of major agricultural commodities in 1972, when world agricultural production fell because of

[13] It is interesting to note here that the analogy of an hourglass is often used to describe the current structure of agribusiness. There are a large number of producers and buyers at the two ends and a very small set of processors and sellers in the middle.

[14] Parikh (1998) has estimated that if India enters the world rice market as an importer of 2.5 million tonnes, it will increase the international price by 24 per cent and if it imports 5 million tonnes of rice, it will increase the international price of rice by 72 per cent.

abnormal weather conditions worldwide, and the former Soviet Union's purchase of a huge amount of food from the world market further aggravated the situation. A more recent example is the large amount of grain purchase by Indonesia in face of the Asian financial crisis[15].

To a certain extent, the shallowness of world commodity markets is attributable to measures like domestic and export subsidies undertaken in the developed countries. Subsidization results in depressed world prices and keeps many potential exporters away from the market. Recent findings of the DSB on sugar and cotton subsidies have established the causal relationship between farm subsidies, over-production of subsidized products and the consequent decline and volatility of international commodity prices.

The problem of commodity price instability was recognized during the Uruguay Round and one of the major objectives of the AoA was to reduce the instability of international agricultural trade. The Ministerial Declaration launching the Uruguay Round says:

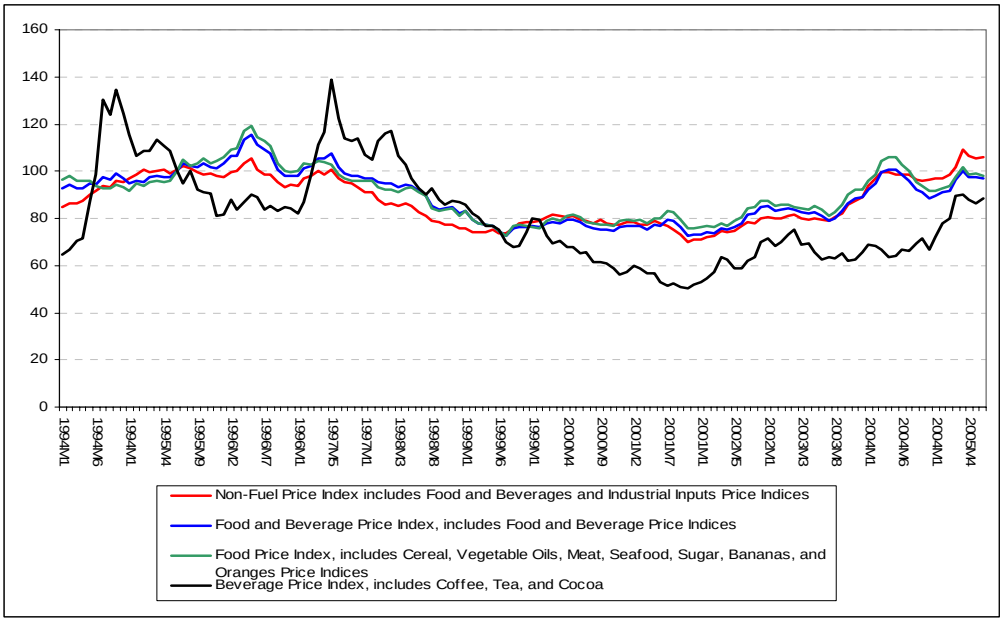
'There is an urgent need to bring more discipline and predictability to world agricultural trade by correcting and preventing restrictions and distortions including those related to structural surpluses so as to reduce the uncertainty, imbalance and instability in world agricultural markets.'

It was expected that once the AoA managed to remove the distortions which have so far plagued global farm trade, more countries would be in a position to participate in the international trade in agricultural goods. It was hypothesized that by increasing the number of countries that would be open to world price signals, the 'shocks' (arising, say, from unexpected production shortfalls) would be absorbed by a greater number of markets, thus cushioning the effect of such shocks on world prices and bringing down price instability in global farm trade.

However, if one looks back it appears that agricultural prices have remained quite volatile (Figure 4). To ascertain whether international agricultural price instability has reduced since the implementation of the AoA, we calculated volatility of international commodity prices for the pre and post-WTO period.

[15] Source: WTO Document Number G/AG/NG/W/36/Rev.1.

Figure 4. Movement of Price Indices during the WTO Implementation Period



Source: International Monetary Fund

We have used two methods to calculate volatility of international commodity prices. The first method is the standard measure of coefficient of variation, which is calculated as a ratio of standard deviation and mean.

The second measure is taken from UNCTAD and is called the 'Instability Index'. The Instability Index is defined as

$$\textit{Instability Index} = 1/n \sum [(| Y(t) - y(t) |) / y(t)]*100$$

where Y(t) is the observed magnitude of the variable, y(t) is the magnitude estimated by fitting an exponential trend to the observed value and n is the number of observations. The vertical bar indicates the absolute value (that is, disregarding signs). Accordingly, instability is measured as the percentage deviation of the variables concerned from their exponential trend levels for a given period.

We have used the monthly commodity price data available from the website of the International Monetary Fund. Monthly data for the period January 1980 to February 2006 have been used for the calculation. We have divided the data into two parts, for pre-WTO period, data for the months January 1980 to December 1994 has been used. For post WTO period, we have used data for the period January 1995 to February 2006. Figure 5. and Figure 6. show the volatility trends of some major commodity groups. More detailed commodity-specific results are given in Annex Table A1.

Figure 5. Volatility of International Commodity Prices (measured by coefficient of variation)

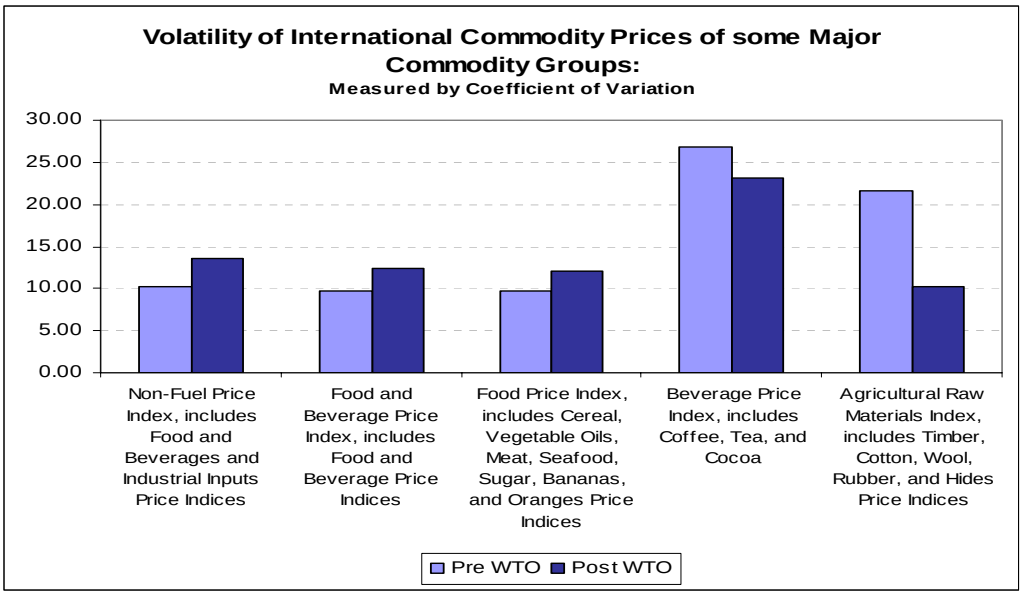
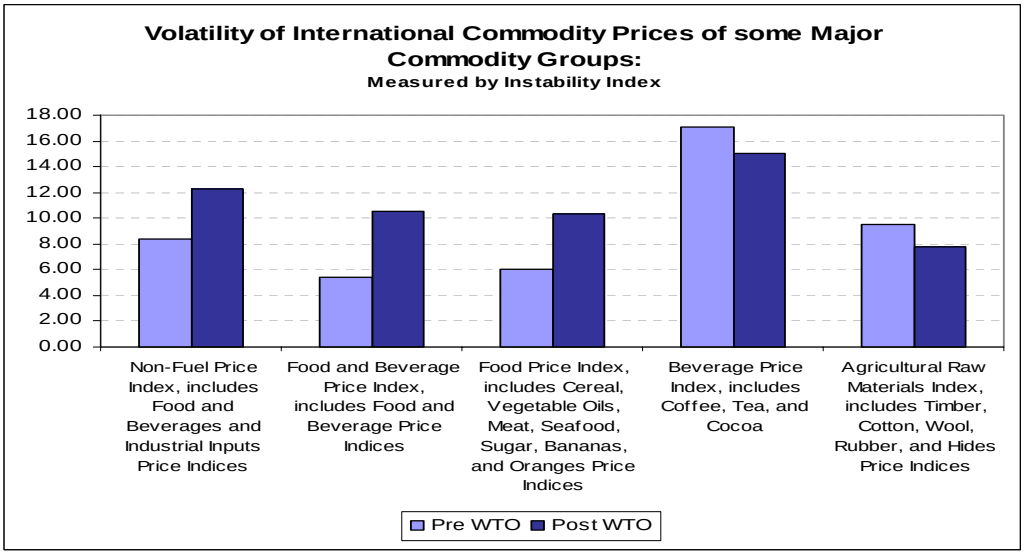


Figure 6. Volatility of International Commodity Prices (measured by the instability index)



Source: Authors' calculation based on data from the IMF.

These results show that, contrary to a priori expectations, there has been no systemic decline of volatility in the post-WTO period. In fact, in the post-Uruguay Round period, price volatility has gone up for a number of agricultural commodities. This is not surprising because the continued subsidization of agriculture and the dominance of a few developed countries in world agricultural trade have not allowed other countries to join the international farm trade. As a result, the depth of the international agricultural trade market has not increased. Therefore, prices of agricultural goods have remained as volatile as before.

Also, international commodity prices tend to be more volatile than domestic prices. In India, a study conducted by Nayyar and Sen (1994)[16] in the early 1990s revealed that the variation in price in the world market for agriculture is much more than that in the domestic market. Similar results have also been found by Bhattacharyya and Pal (2000) and Sekhar (2003).

The apprehension among the economists is that in a tariff-only regime, high international commodity price volatility will get transmitted to the domestic market and will increase the price instability of the domestic market. High volatility of agricultural commodities alters the risk perception of farmers and introduces a speculative element in agricultural prices. This is likely to have serious implications for farmers in developing countries. Recently, a committee looking into the issue of the spate of suicides by farmers in Andhra Pradesh has found that the volatility of crop prices has been a major source of income instability and distress for farmers.

In this backdrop of high instability in commodity prices and the possible threats associated with it, there is a strong case for an SSM for developing countries. Particularly, given the fact that tariff liberalization undertaken in the current round will reduce the overhang between bound and applied rates, availability of a safeguard mechanism will be very useful for developing countries. The results of this paper, which show that price volatility for many commodities has not declined in the post-WTO period, further strengthens the case.

There might be an argument that, currently, world commodity prices are quite high and if high prices prevail in the international market then, even with volatility, the threat of import surges will be less. One should be careful about this line of argument because, as the Global Economic Prospects (GEP) 2006 points out, the period of rising agricultural commodity prices seems to be over and there are indications of a stabilization and even reversal of gains in the markets for agricultural products. In fact, according to the GEP 2006, agricultural prices have been declining throughout most of this year and are down by 5 per cent since March 2005.

[16] Nayyar and Sen (1994) 'International Trade and the Agricultural Sector in India' in G. S. Bhalla (ed.) *Economic Liberalization and Indian Agriculture*.

II.3 PROPOSED TARIFF LIBERALIZATION IN AGRICULTURE AND ITS IMPACT ON DEVELOPING COUNTRIES

In the previous section it was shown that volatility of international commodity prices has not come down in the post-WTO period and, also, that many empirical studies have found that volatility of international commodity prices is much higher than domestic commodity prices in most countries. Therefore, there is a concern among developing countries that further reduction of their tariff rates will make their economy more vulnerable to the fluctuations of international commodity prices. In this section we take a look at the agricultural market access negotiations of the Doha Round and investigate how it is going to affect the developing country Members of the WTO.

Prior to the Uruguay Round, most countries maintained QRs to protect their domestic markets. As QRs are non-price-based instruments and are physical restrictions on the volume of imports, they essentially insulate domestic markets from the price signals of international commodity markets. However, due to the rules of the Uruguay Round AoA, almost all countries have dismantled the QRs and moved into a tariff-only regime. Unlike QRs, tariff is a price-based mechanism and, therefore, under this regime, the instability of international commodity prices is likely to be transmitted directly to domestic markets[17]. Because of this there has been a strong apprehension among developing countries that a sudden and sharp decline in the international prices of an agricultural commodity can lead to an import surge which, in turn, can damage the viability of domestic production.

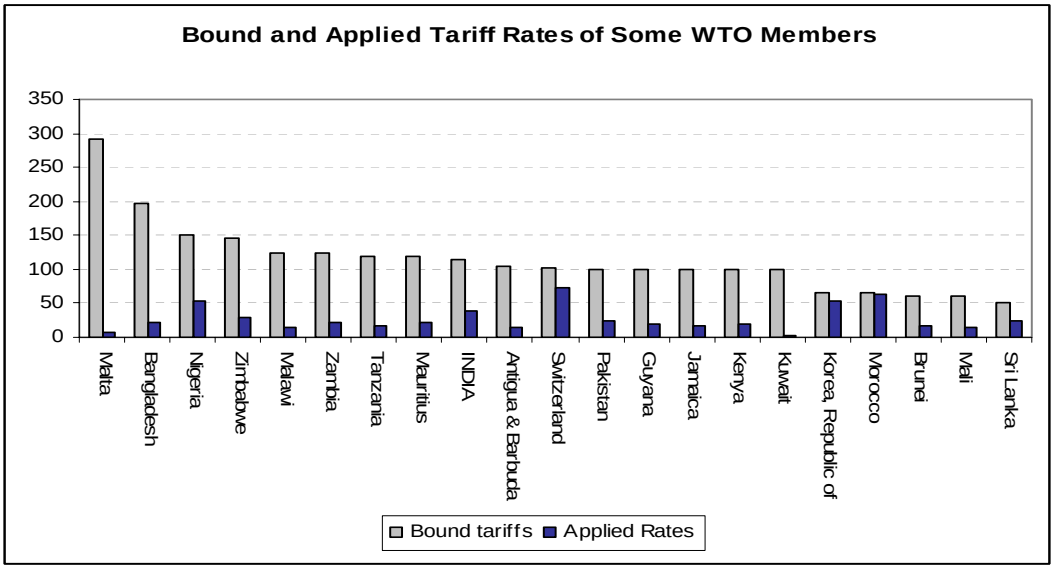
Though this concern prevailed even during the implementation of the AoA, most developing countries had felt that the tariff overhang (the gap between bound and applied tariff rates) would provide them with enough flexibility to protect their domestic markets from international price volatility (Figure 7.). However, the steady decline and the continued volatility of international commodity prices for a significant part of the implementation period of the AoA have made the situation more complex. Many developing countries realized that even with the available headroom between bound and applied tariff rates, they might sometimes find it difficult to check import surges. In such cases, a temporary safeguard measure will allow them to tide over the crises by allowing them to raise tariffs above their bound levels for a limited duration.

[17] However, even in a tariff-only regime there may not be a one to one correspondence between international and domestic prices. Domestic stock adjustments of agricultural goods may break that link.

In the current round of negotiations which, among other things, aims at 'substantial improvements in market access'[18], there is also an emphasis on progressive liberalization of tariffs to ensure better market access for agricultural goods. Once these tariff cuts are implemented, the headroom between bound and applied tariff rates will come down. Simulation exercises suggest that the tariff reduction proposal tabled by the USA would leave India's bound tariff average at 38.3 per cent, marginally above its current applied average of 37.9 per cent. On the other hand, the G-20[19] proposal would reduce Brazil's bound tariff rate from 35.7 per cent to 25.7. Simulations also show that the G-20 and the European Union proposals would 'bite' into 18.1 per cent of India's dutiable tariff lines, leaving 21.7 per cent of total farm imports subject to new reduced applied tariff rates. The US proposal would cut into almost a quarter of tariff lines, affecting 26.5 per cent of agriculture imports[20].

Under these circumstances, a trade defense mechanism like the SSM will not only help developing countries protect their domestic economy from international price instability, but it will also make the country more confident to undertake tariff liberalization. In the next sub-section we focus on India and attempt to find out the impact of the various tariff reduction formulas proposed in the present round of negotiations.

Figure 7. Bound and Applied Tariff Rates for some WTO Members (Agricultural Products)



Source: USDA (http://www.ers.usda.gov/db/wto/)

[18] Paragraph 13 of the Doha Ministerial Declaration, WTO Document Number WT/MIN(01)/DEC/1, dated 20 November 2001

[19] Various country groupings of WTO are given in Annex Table A4.

[20] Source: *Bridges Weekly*, 24 May 2006, http://www.ictsd.org/weekly/06-05-24/story1.htm

II.4 PROPOSED TARIFF LIBERALIZATION IN AGRICULTURE AND ITS IMPACT ON DEVELOPING COUNTRIES: A CASE STUDY OF INDIA

During the Uruguay Round AoA, India opted for the 'bound rate approach' and imposed ceiling bindings on all its agricultural tariffs. Prior to the Uruguay Round, India had only bound some of its agricultural tariffs. These included commodities like rice, coarse grains, dairy products and edible oils. Rice and dairy products were bound in the Geneva Protocol (1947), maize and millet in the Torquay Protocol (1951), sorghum during the Dillon Round (1962) and soybean and rapeseed oil in the Tokyo Round (1979). In the Uruguay Round India bound its tariffs at 100, 150 or 300 per cent for previously unbound agricultural products.

Till 1999, India had maintained zero duty on some foodgrains including rice. However, the steady decline in international prices and the threat of an import surge led India to renegotiate tariff bindings on some products including rice. The tariff re-negotiation became important because it was also realized at the time that the QRs India was having on the pretext of balance of payment (BoP) problems would no longer be allowed. India undertook tariff re-negotiations under Article XXVIII of GATT and, as a result of it, in 1999-2000, bound tariffs on various rice types were raised from 0 to 70-80 per cent. Table 3 gives the profile of India's bound tariff rates both before and after the tariff renegotiations.

Analysis of India's agricultural tariff structure at the 6-digit harmonized system (HS) level shows that 4 per cent of the tariff lines are bound at 300 per cent. These products are mostly edible oils. More than 49 per cent of all agricultural products have bound tariff rates between 75 to 100 per cent. The bound tariff for around 20 tariff lines is zero. These products include mostly cereals like rye, barley, oats, etc. Almost all tariffs are ad valorem and there are only a couple of instances of specific tariffs. There are also a few commodities for which the applied rate is greater than the bound rate since, for these commodities, India is still in the process of implementing its Uruguay Round reduction commitments.

Table 3 shows that India's bound tariff rates are very high. More than 85 per cent of products have bound tariff rates of 75 per cent or more. However, the average applied rate in India is considerably lower than the average bound rate. India's applied tariff structure for agricultural goods is shown in Table 4. Average bound tariff rate for India is more than 113 per cent while the average applied tariff rate is about 35 per cent. This gap between the bound and applied rate acts as a cushion against sudden international price drops and allows authorities to raise applied MFN (Most Favoured Nation) rates if and when required.

Table 3. Tariff -Structure of India: Bound Rates in the Agriculture Sector

Range of tariffs	With old bound rates		With new bound rates	
	Distribution of tariff lines	Simple average tariff	Distribution of tariff lines	Simple average tariff
(per cent)	(per cent)	(per cent)	(per cent)	(per cent)
0 to 25	5.4	13.2	3.8	18.8
25 to 50	4.5	39.5	6.4	40.0
50 to 75	3.8	56.0	4.3	59.2
75 to 100	50.6	99.5	49.3	99.3
100 to 150	32.0	150.0	32.5	150.0
150 to 300	3.8	300.0	3.8	300.0

Source: FAO (2003)[21]

Table 4. **Tariff -Structure of India: Applied Rates in the Agriculture Sector**

Range of Applied tariffs (per cent)	Distribution of tariff lines (per cent)	Simple average tariff (per cent)
0 to 25	15.5	11.0
25 to 50	73.8	30.5
50 to 75	3.6	71.6
75 to 100	5.8	95.1
100 to 150	0.0	0.0
150 and above	1.3	179.6
All	690 (Number of tariff lines)	34.7

Source: FAO (2003)

For most products the gaps between bound and applied rates are high and for some product categories the differential is more than 100 percentage points.

Table 5 shows a few of such product categories. Figure 9 shows the difference for all agricultural product categories. Table 5 and Figure 9 show that for a large number of products, the gap between bound and applied tariff rates was quite high during the Uruguay Round implementation period.

Though countries like India enjoyed considerable flexibility in the Uruguay Round because of the tariff overhang, the concern of India and many other developing countries has been that further tariff liberalization will erode much of the present tariff overhang. To ascertain the extent of this 'flexibility erosion' we now look at the agricultural market access negotiations in the Doha Development Round of trade talks.

In the present round of trade talks, one of the major objectives is to ensure 'substantial improvements in market access'[22] for agricultural goods. To attain this goal, it has been

[21] http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/Y4632E/y4632e0g.htm
[22] Paragraph 13 of the Doha Ministerial Declaration.

decided in the 'July Framework'[23] that a tiered approach of tariff reduction will be undertaken where tariffs will be classified in bands based on the bound tariff rates. Product by product linear tariff cuts will be undertaken in each band. To ensure progressive reduction of tariff rates, reduction imposed on tariffs in higher bands will be more than those in the lower bands. Within this broad framework, various countries and country-groups have submitted their proposals. So far, no consensus has been achieved on the specific tariff reduction formula to be adopted in this round; however, the proposals by Members outline the broad contours within which the final reduction formula will lie.

Table 5. Tariff Structure of Agricultural Products in India: Product Groups for which the gap between bound and applied tariff rates are high

Commodity category	Bound Tariff rate	Applied Tariff rate	Gap between Bound and Applied
Oilseed oil	222.39	30.86	191.53
Fats & oils	195.28	27.77	167.51
Horticulture: cut flowers & foliage	150.00	10.00	140.00
Coffee	137.50	10.00	127.50
Tea & tea extracts	141.67	18.33	123.34
Eggs	150.00	30.00	120.00
Essential oils	150.00	38.57	111.43
Fruit: Frozen	150.00	40.00	110.00
Tobacco: products	150.00	40.00	110.00
Vegetables: frozen or prepared (other)	120.33	13.46	106.87
Coffee: other	137.50	32.50	105.00
Meat: prepared	135.00	30.58	104.42
Vegetables: dried & fresh roots & tubers	125.00	22.00	103.00
Sweeteners	128.57	27.33	101.24
Grain products	132.86	32.50	100.36
Nuts & fruit: (dried, fresh, and prepared)	137.92	37.69	100.23

Source: Calculations based on data from USDA (http://www.ers.usda.gov/db/wto/)

Simulation exercises have been carried out to analyze the impact of various tariff reduction formulas on a country's tariff structure. One such exercise by Australia has recently been submitted in a special session of the Committee on Agriculture[24]. The results of the paper are given in Table 6. The results show that the tariff reduction undertaken during the next implementation period of the AoA will significantly narrow the gap between bound and applied tariff rates. It is noteworthy that the formula proposed by the USA will virtually eliminate the gap between bound and applied rates for India.

[23] Define July Framework

[24] 'Applied Tariff Simulations–Agriculture: Summary of Results', WTO Document Number JOB(06)/152, dated 22 May 2006.

Table 6. Various Tariff Reduction Formulas and their Impact on Average Bound and Applied Tariff Rates for India's Agricultural Goods

	Bound Tariff	Applied Tariff	Gap
Initial	113.82	37.89	75.93
G10 formula	85.30	35.60	49.7
G20 formula	74.78	34.46	40.32
The US formula	38.31	29.16	9.15

Source: Committee on Agriculture: Special Session, WTO Document Number, JOB(06)/152.

One shortcoming of the aforementioned paper is that it only provides a summarized version of the impact analysis and it may hide some important product-specific implications of the tariff reduction formulas. Here we carry out a more detailed exercise to look at the impact at the 6-digit HS level. It will also help us to identify the tariff lines where the 'tariff overhang' after the cut will be minimal or zero. We use the G-20 tariff reduction formula for this exercise. We have used the G-20 formula because it is neither too ambitious like the US formula nor is it too defensive like the G-10 formula. Also, there is a widespread feeling among the negotiators that the final tariff reduction formula will be a close approximation of the G-20 formula. The complete G-20 formula is shown in Table 7.

Table 7. G-20 Formula for Tariff Reduction

Developed countries		Developing countries	
Thresholds (in AVEs)	Tariff Reductions	Thresholds (in AVEs)	Tariff Reductions
Less than 20 percent	45 per cent	Less than 30 percent	25 per cent
More than 20 and less than 50 percent	55 per cent	More than 30 and less than 80 percent	30 per cent
More than 50 and less than 75 percent	65 per cent	More than 80 and less than 130 percent	35 per cent
More than 75	75 per cent	More than 130	40 per cent

Note: There are also proposals to introduce tariff caps at 100 per cent for developed countries and at 150 per cent for developing countries. But the status of tariff cap is unclear and we have not factored that in this simulation.

For the simulation we calculate what India's bound tariff rates will be if the G-20 reduction schedule is imposed on India. Then we compare the resultant bound tariffs with the applied tariff rates for these products. For this analysis, we have used the applied tariff data for India for the year 2004. The results of this simulation exercise in shown in Figure 8[25]. It is clear from the figure that after implementing the tariff cuts proposed by the G-20 countries the

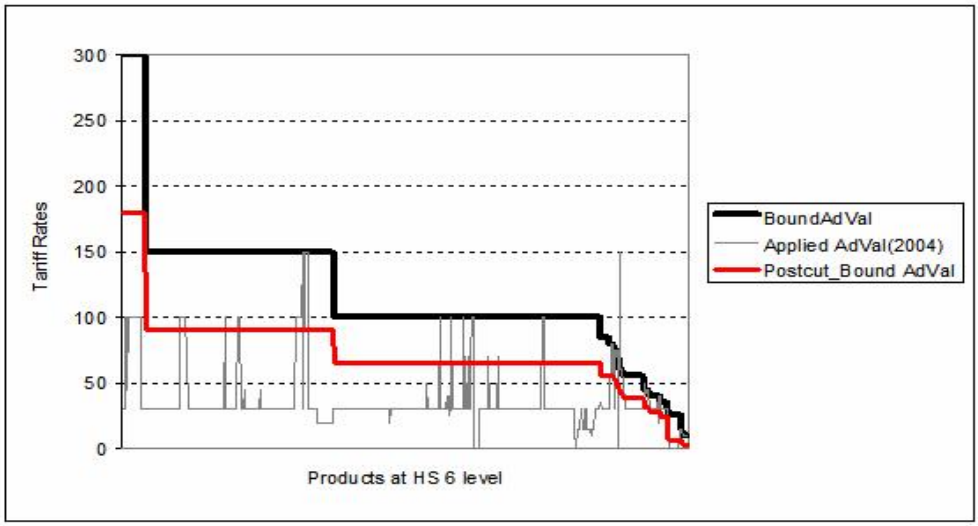
[25] These results may not exactly match the results given in Table as the paper by Australia assumes 8 per cent sensitive products, while we have not taken the sensitive products into account while running the simulation. The main justification behind this omission is that there has not been any convergence of opinion about the coverage or the treatment of sensitive products yet and even if a certain number of products are selected as sensitive products, it will be wrong to prejudge those products.

tariff overhang will either disappear or will become negligible for a number of products. However, there will be some gaps between bound and applied rates for quite a few products in India. In fact, for a number of products, the current applied rates are higher than the post-cut bound rates. So India will have to bring down the applied rates for these products.

Some important products where the gap between applied and bound rates are going to be low or negative are some varieties of coffee and tea, sugar, rice, maize, cloves, cardamoms, bay leaves, fresh grapes, apples, plums and sloes, some varieties of nuts, sorghum, millet, dairy and various vegetable products. The full list at the 6-digit HS level is given in Annex Table A2.

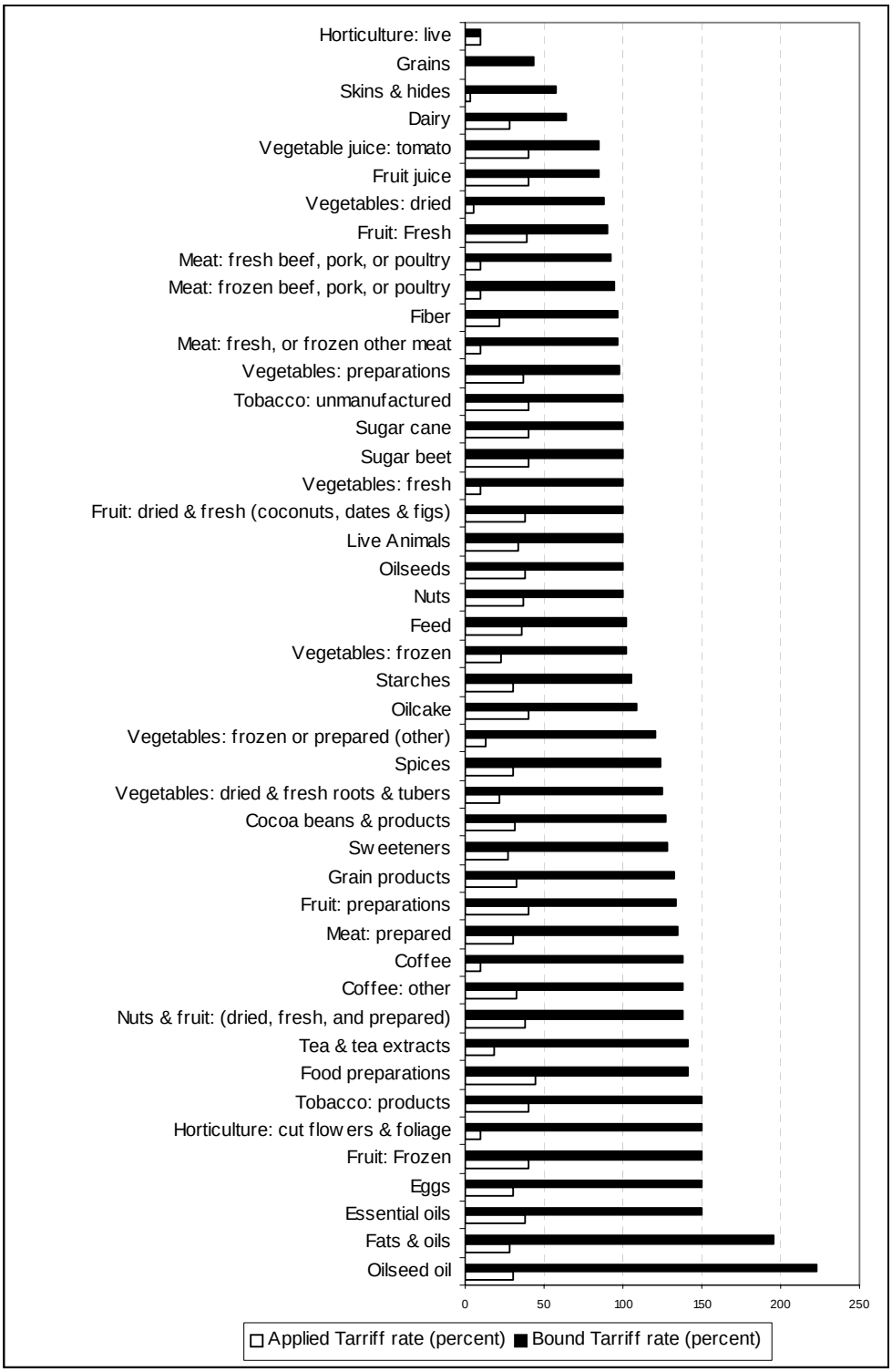
This case study of India clearly indicates that the new market access proposals--even the less ambitious ones--are going to significantly erode the tariff overhang enjoyed by the developing countries. In this situation, and given the high volatility of international commodity prices, the provision of a safeguard instrument like an SSM will definitely be a very important policy instrument for developing countries. It is not surprising that many countries have indicated that unless an SSM is provided it will be almost impossible for them to undertake the progressive tariff liberalization rules which the present round of trade talks is going to impose on them.

Figure 8. Results of the Tariff Cut Simulation for India (using the G-20 formula)



Note: The heavy black line denotes the bound ad valorem rate for agricultural products. These tariffs are given at HS 6 digit level. Products are sorted on the X-axis based on descending order of bound tariff rates. Product names could not be given in the graph because 690 names could not be accommodated. The applied rates are for the year 2004. For a few products applied MFN rate seems to be higher than the bound rate. Detailed data are available from the authors.
Source: Agricultural Market Access Database (www.amad.org) for bound tariff rates, India's Customs Tariff manual (2004) for data on applied tariff rates.

Figure 9. Bound and Applied Tariff Rates in India



Source: USDA (http://www.ers.usda.gov/db/wto/)

II.5 VULNERABILITY OF FARMERS IN DEVELOPING COUNTRIES

Developing countries have been arguing that the relevance of the agriculture sector for developed and developing countries is fundamentally different and should not be treated in the same manner. This argument is backed by the fact that whereas agriculture accounts for 2 per cent of GDP and less than 4 per cent of employment in developed countries, the share of agriculture in the GDP of low-income countries is as high as 24 per cent and it provides more than 60 per cent employment in poorer economic regions like South Asia and sub-Saharan Africa[26].

The 2005 edition of the annual publication of the FAO, called 'State of Food Insecurity in the World', shows that for the years 2000-2 there were more than 814 million undernourished people in developing countries. This figure is, approximately, about 17 per cent of the total population of the developing countries. A glance at the geographical distribution of undernourished people across the world shows that South Asia (301 million), East Asia (151.7 million), China (142.1 million), sub-Saharan Africa (203.5 million) and East Africa (86.2 million) are the major trouble spots. India, with 221.1 million undernourished people, is the worst affected country. Similar indicators also show that a very large number of people in developing countries live in abject poverty with minimum or zero access to many basic amenities of life. As the FAO report indicates, a very large proportion of this undernourished population is dependant on agriculture for its food security and livelihood.

To a large extent, the plight of the poor in developing countries can be traced to the structural limitations of the agriculture sector in these countries. In most developing countries, agriculture is dominated by small and marginal farmers who are engaged in subsistence farming. Farming in these countries is also characterized by low level of commercialization of agriculture, low productivity, weak market orientation, lack of infrastructure, high dependence on weather and susceptibility to natural calamities. As a result, most of the farmers are very poor and lack any risk-taking ability. As Ruffer et al (2002) also point out, these farmers often do not have access to any insurance mechanisms and safety nets because

[26] Figures are from World Development Indicators 2005 and Global Employment Trends 2005, ILO

governments lack resources to make transfers to farmers and other affected groups in times of crises[27].

The combination of high poverty and low risk-taking ability makes farmers in developing countries extremely vulnerable to any exogenous shocks. These countries argue that given the inability of the farmers to bear risks arising out of any external shocks, an effective safeguard mechanism for preventing a surge in imports becomes absolutely essential for preserving their livelihood[28]. It has also been pointed out that standard WTO safeguard instruments may not be effective enough for this purpose. The WTO has a set of safeguard measures to tackle emergency situations. However, to invoke these standard safeguard mechanisms a Member country has to go through a lengthy administrative procedure. The complaining country has to prove that an import surge or price depression has occurred. Second, based on a number of indicators mentioned in the Agreement, it has to prove that the surge in imports is having adverse effects on its domestic economy. Third, it has to establish that there exists a clear causal link between the import surge and the adverse effect. And, finally, it must properly identify and account for (non-attribution) injury caused by other factors (besides imports).

Given the nature of agriculture in developing countries, the complex provisions of general safeguards available under the Agreement on Safeguards are extremely time consuming and may not provide timely protection to the distressed population. Therefore, to protect the vulnerable section of the farming community, there is a necessity for a quick-acting and easy to administer safeguard instrument. A special safeguard mechanism on the lines of the special safeguard provisions (Article 5) of the AoA is an instrument better suited for these countries because, to invoke this type of safeguards, it is sufficient to establish that an import surge or a

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[27] Indian agriculture is currently going through a major stagnation. In the context of the present paper and to highlight the vulnerability of farmers from developing countries, it will be relevant to quote a paragraph from the 4th Report (submitted on 13 April 2006) of the National Commission of Farmers. The report, while describing Indian agriculture in 2005, says: *'The spoilage losses can be as high as 30 per cent in the case of vegetables and fruits. Institutions, which are supposed to help farmers, such as research, extension, credit and input supply agencies, are by and large not pro-poor and pro-women. Mechanisms for risk mitigation are poor or absent. Hardly 10 per cent of farmers are covered by crop insurance. Farm families are also not covered by health insurance. There is no Agricultural Risk Fund. Both risk mitigation and price stabilization are receiving inadequate policy support. According to farmers, the cost of production is invariably higher than the Minimum Support Price, due to ever increasing prices of diesel and other inputs. Investment in agriculture has suffered a decline over the past two decades. Capital formation in agriculture and allied sectors in relation to GDP started declining in the 1980s and is only now being reversed. This has adversely affected irrigation and rural infrastructure development.'* Page 1.

[28] See WTO Document Number G/AG/NG/W/102.

sharp price decline has occurred and is occurring. No proof of injury, causation or non-attribution is required.

II.6 INCREASED INCIDENCES OF IMPORT SURGES

The arguments in favor of an SSM for developing countries have got a further boost from a recent set of in-depth studies done under the 'FAO Import Surge Project' on the various facets of an import surge and their impact on developing countries. Under this project, Nigris (2005) studies the frequency of import surges across various countries and commodities for the period 1984 to 2003. The author has defined import surge as a *'30 percent positive deviation from a three-year moving average of import data and, alternately, as one standard error above the moving average'*[29]. Using this definition, his findings show that import surges have occurred more frequently in the post-1994 period with only a few exceptions. He has found out that the percentage occurrence of import surges (under the 30 per cent deviation) is higher in the post-1994 period for all commodities--the only exceptions being wheat, rice, maize and palm oil. As far as the countries are concerned, his results show that though almost all countries have experienced import surges, some were affected more often than others. According to his findings, import surges were more frequent in India and Bangladesh (Asia), Zimbabwe, Kenya, Nigeria, Ghana and Malawi (Africa) and Ecuador and Honduras (Latin America).

Under the same project, another paper by Sharma (2005) has listed a number of case studies where import surges have negatively affected domestic production. A few of these cases are worth mentioning here. For example, in Sri Lanka, vegetable-producing sub-sectors like onions and potatoes have suffered from import surges. In 1999, an import surge of onions and potatoes resulted in a decline in the cultivated area of these crops and affected the livelihood of approximately 300,000 persons involved in their production and marketing. As there were not many options for the affected farmers to diversify into other crops, the economic effects of this import surge have been significantly negative. Similarly, in two other widely cited cases, rice production in Haiti (in the late 1980s) and Honduras (in the early 1990s) suffered from import surges. What is even more disturbing is that, in both the cases, import surges have inflicted a permanent damage to the production of rice. According to Sharma, this

[29] Sharma (2005).

situation is known as 'material retardation' where imports prevent the revival of the industry following a shock.

The discussion in the above section highlighted the fact that due to structural problems with agriculture in developing countries, a very large number of people depending on this sector are highly vulnerable to exogenous shocks like international price spikes. Therefore, the availability of special safeguard instruments like SSMs will be imperative for protecting the livelihood of these people. This requirement becomes even more important because evidences show that incidences of import surges have increased in the post-Uruguay Round period and there are a number of cases where these import surges have resulted in material injury and loss of production base in developing countries.

III SPECIAL SAFEGUARD MECHANISMS IN THE DOHA DEVELOPMENT ROUND OF TRADE TALKS

During the mandated (Article 20) re-negotiations on agriculture, there was a convergence of opinion among Members that a special safeguard instrument in the line of the SSG should be given to developing and least developed countries. The Doha Ministerial Declaration did not explicitly mention about agricultural safeguards but had a tacit approval for such measures. While discussing the Doha Work Program the Ministerial Declaration says:

'We agree that special and differential treatment for developing countries shall be an integral part of all elements of the negotiations and shall be embodied in the Schedules of concessions and commitments and as appropriate in the rules and disciplines to be negotiated, so as to be operationally effective and to enable developing countries to effectively take account of their development needs, including food security and rural development. We take note of the non-trade concerns reflected in the negotiating proposals submitted by Members and confirm that non-trade concerns will be taken into account in the negotiations as provided for in the Agreement on Agriculture.'[30]

The Harbinson's text or the first draft modalities paper introduced the term Special Safeguard Measure or SSM. However, the Harbinson's text initially perceived very limited coverage of the SSM. Subsequent revisions of the Harbinson's text and the Derbez text (the draft Cancun Ministerial Text), however, suggested more widespread availability of SSM among

[30] Paragraph 13 of the Doha Ministerial Declaration, 20 November 2001

developing countries. The July Framework categorically mentions that an SSM will be established for use by developing-country Members. A more detailed exposition of the SSM was made in the Hong Kong Ministerial Declaration, which explicitly mentions that developing countries will have the right to impose both price-trigger and volume-trigger-based SSMs.

Table 8 shows how the concept of SSM and its coverage and applicability have evolved through various official WTO documents during the present round of trade talks.

Table 8. Official WTO positions on SSM

Paper	Date	What it says
Chairperson Stuart Harbinson Overview Paper (TN/AG/6)	18 Dec 2002	Whether, in the framework of special and differential treatment, a new safeguard mechanism and/or countervailing measure for developing countries should be established and, if so, for all agricultural products or for a limited number of products such as strategic/food security/livelihood products? Detailed possible modalities for such provisions have been submitted.
Modalities paper: First Draft (Harbinson's Text) (TN/AG/W/1)	17 February 2003	For SP products, 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.
Harbinson Text, Second Draft (TN/AG/W/1/Rev.1)	18 March 2003	An outline of a possible new special safeguard mechanism to enable developing countries to effectively take account of their development needs, including food security, rural development and livelihood security concerns, is currently subject to technical work and will be included at the appropriate stage in Attachment 2. The right to invoke this mechanism shall be reserved by designating in Schedules with the symbol "SSM" the products concerned.
Pérez del Castillo Text or Draft Cancun Ministerial Text (JOB(03)/150)	24 August 2003	A special agricultural safeguard (SSM) shall be established for use by developing countries subject to conditions and for products to be determined.
Derbez text or Revised Draft Cancun Ministerial Text (JOB(03)/150/Rev.2)	13 Sep 2003	A special agricultural safeguard (SSM) shall be established for use by developing countries subject to conditions and for products to be determined.
July Framework Agreement (WT/L/579)	1 August 2004	An SSM will be established for use by developing country Members
Hong Kong Ministerial Declaration (WT/MIN(05)/DEC)	22 December 2005	Developing country Members will also have the right to have recourse to a Special Safeguard Mechanism based on import quantity and price triggers, with precise arrangements to be further defined. Special Products and the Special Safeguard Mechanism shall be an integral part of the modalities and the outcome of negotiations in agriculture.

Source: Official WTO documents. WTO document numbers are given in brackets.

If one looks at the country positions regarding SSM, most developing countries demanded that the right to impose special agricultural safeguards should be given to all developing and least developed countries in the WTO. Many developing countries--and some developed countries like Australia--also argued that the SSG provisions for developed countries must be

abolished in the present round of negotiations. For example, in its submission to the WTO, a group of developing countries says[31]:

'Prohibit developed countries from the use of the Special Safeguard Clause. This Clause instead should be opened up to all developing countries. Developing countries should be allowed to invoke this based on low prices or excess volume' (WTO document number G/AG/NG/W/13, dated 23 June 2000).

On the other hand, most developed countries (including the European Commission, Norway and Japan), while supporting the demand by developing countries to have access to a special safeguard provision, wanted the SSG to continue for developed countries as well. However, the USA seems to have a very strong and extreme view on special safeguards. In a recent submission to the WTO[32], the USA says that SSGs should be eliminated on the first day of the implementation of the Doha Round Agreements. It also suggests that developing countries may use the SSM, under some very strict conditions, till the end of the implementation of the Doha Round. In spite of hectic negotiations on the issue of the SSM, a number of critical issues remain unresolved. Particularly, there is a division among the countries about the coverage and usability of SSMs. A snapshot of country positions is given in Table 9.

Table 9. A Summary of Country Positions on SSM in the Doha Round

Country/Country Groups	Position
G-33, most developing countries including India	Comprehensive Coverage of SSM. SSMs are fundamental to economic development and should not be constrained in its use. SSM should only be available to developing countries and SSG should be abolished.
Developed and developing countries who are big agricultural exporters (Thailand, Australia, Canada), mostly Cairns Group Members (Brazil has been quite non-committal on SSMs)	G-33 position too protectionist, Can hurt South-South farm trade. SSM should be limited in its use and coverage. SSG should be abolished.
EU and G-10	Generally not much objection to SSM but feel G-33 proposed coverage is somewhat protectionist. Want SSG to continue
USA	Proposes extremely limited coverage and usage of SSM, hints at injury test, SSM should be abolished by the end of Doha Round, SSG should be abolished at the start of the Doha Round

Source: Based on country submissions to WTO and reports by the 'Bridges Weekly'.

[31] Cuba, Dominican Republic, Honduras, Pakistan, Haiti, Nicaragua, Kenya, Uganda, Zimbabwe, Sri Lanka and El Salvador.

[32] Job(06)/120, dated 24 April 2006

The contentious issues regarding SSMs have been earmarked in a recent note prepared by the chairman of agriculture negotiations. In this note, the chairman has highlighted the following issues[33]:

1. What is the coverage of tariff lines that would be eligible for the SSM and should this be based on self-selection, guided by criteria or based on specific criteria and, if so, what are these criteria?
2. For the import quantity triggers, what should be the methodology for calculating the trigger including factors such as base period(s), trigger quantities, cases where no or minimal quantities were imported in the base period, etc.?
3. On what basis should the quantity-based SSM be calculated?
4. For the import price triggers, what should be the methodology for calculating the trigger, including base period(s), the degree, if any, of the price fall permitted before the SSM can be triggered, etc.?
5. On what basis should the price-based SSM be calculated?

In the following sections, we will analyze these issues, review the country positions and try to provide answers to some of these questions.

IV SOME OPERATIONAL ISSUES REGARDING THE SSMs

IV.1 COVERAGE OR PRODUCT ELIGIBILITY FOR SPECIAL SAFEGUARD MEASURES

Product coverage for SSMs is probably the most contentious issue about SSM administration in the current round of trade talks. Most developing countries are of the opinion that the SSM should have a broad coverage and should be available for most if not all products. However, some countries, which are essentially agricultural exporters, feel that a wide coverage of products will lead to increased protectionism and, hence, they want a limited availability of the SSM. For example, the USA is of the opinion that the coverage of SSMs should be restricted and should be limited to a certain *'percent of tariff lines at the detailed duty level that take the full tariff cut as specified by the general tariff reduction formula for developing countries which result in new bound tariffs below current applied tariffs; and products that are produced domestically or are close substitutes of products produced domestically'* (United States Communication on Special Agricultural Safeguard (SSG) and the Special Safeguard Mechanism (SSM), JOB(06)/120, dated 24 April 2006).

[33] 'Chairperson's questions for post-Hong Kong talks', dated 9th February 2006, http://www.wto.org/english/tratop_e/agric_e/ag_questions_e.htm#questions.

Most developing countries, including the G-33, the African group, the ACP group, and the least developed countries, strongly objected to this proposal and commented that the SSM is required to address their legitimate non-trade concerns and proposals to restrict its usage is not acceptable to them[34]. The position taken by these countries is not unjust because there is no a priori reason to restrict the use of the SSM. This is so because of four reasons.

First, developing countries are demanding instruments like SSMs and SPs to protect the food security and livelihoods of low income and resource poor farmers from the uncertainties associated with international trade. These objectives are perfectly consistent with the mandate of the Doha Ministerial Declaration and, therefore, no constraints should be imposed to reduce the effectiveness of these instruments. Moreover, the SSM is an emergency measure which will only be applied if there is a sudden surge in imports or depression in price. The volume and price triggers can be defined in such a manner so as to ensure that SSMs are only applicable in very special situations. Given these restrictions, it is not necessary that SSMs should be restricted further through product coverage.

Second, the results of the 'FAO Import Surge Project' show that import surges have occurred across a very wide range of products and if product coverage is restricted it is almost certain that some developing countries will face problems protecting their domestic economy from such import surges.

Third, the distortions of world agriculture and the associated problems of excessive price volatility and price depression are largely attributable to the production and trade distorting subsidies given by developed countries. Simulation results clearly indicate that the Doha Round will not lead to a substantial reduction of these subsidies[35]. Unless these distortions are completely removed, the rights of developing countries to impose safeguards should not be constrained.

Finally, the fear that the universal availability of SSMs may lead to protectionism may not be justified. As mentioned before, SSMs are only applicable if the conditionalities for their application are fulfilled. There can be built-in mechanisms to prevent misuse. But, more importantly, historical evidence of the usage of SSGs by the eligible developing countries in

[34] WTO Document Number TN/AG/GEN/17, dated 11 May, 2006
[35] See Pal (2005 and 2006).

the Uruguay Round has shown that availability of SSGs to some developing countries did not result in either overuse or abuse of the safeguard. In fact, developed countries used SSGs much more intensively than the developing ones. So the concern that widespread availability of SSMs will lead to protectionism may not be justified.

However, given the objective of SSMs, it appears that there is a case to restrict the SSMs to domestically produced goods and to goods which are substitutes of domestically produced goods.

IV.2 TRIGGER MECHANISMS FOR PRICE-BASED AND VOLUME-BASED SSMS

In administering a volume-trigger-based safeguard measure, an important requirement is to define what exactly constitutes an import surge. Similarly, for a price-trigger-based mechanism it is important to define a 'price depression'. To a large extent, the effectiveness of the safeguard mechanism depends on these definitions. To have an effective safeguard measure, the threshold of volume and price triggers should not be set so high that the usability of the safeguard mechanism is compromised but, on the other hand, it should not be set so low that the safeguard becomes too easy to invoke and essentially becomes a trade restrictive measure.

In the current round of negotiations, countries have suggested alternate views on volume triggers. The G-33 has suggested that even a 5 per cent increase from the average volume of imports of the preceding three years can set off a volume trigger. On the other hand, the USA is of the opinion that an SSM can be invoked only if imports are 130 per cent of yearly average MFN imports over the most recent 36-month period, or 130 per cent of the yearly average 2002-4 MFN imports. Nigris (2005) has conducted extensive research on volume surge under the 'FAO Import Surge Project'. He has used two alternate approaches for identifying a surge. They are:

1. Moving Average based measures: An import surge is defined as a 30 per cent positive deviation from a 3-year moving average of import data and, alternately, as one standard error above the moving average: or
2. The AoA volume trigger definition of SSG.

Interestingly, Nigris finds that, compared to the moving average method, the SSG definition identifies a much larger number of cases as incidences of 'import surge'.

It is to be noted here that within the Moving Average method, the threshold selected for identifying 'import surges' has a significant impact on the frequency of import surges reported. For example, data reported by Nigris show that for the period 1982-2003 and for wheat, changing the threshold from 10 per cent positive deviations from 3-year moving averages to 50 per cent brings down the reported cases of import surges from 609 to 100. Similarly, if a 5-year moving average is chosen over the 3-year moving average, then it increases the number of reported 'import surges'. These results underscore the fact that the parameters chosen for determining import surges will have a significant impact on the working of the new SSM and WTO Members must arrive at a consensus on these critical operational issues. Erring on either side will negatively affect the purpose of SSMs. Also, there may be a case to have a price element to the volume trigger. If a surge in import volume takes place without a decline in international price, the logic of imposing an SSM is somewhat weak. In this kind of a situation, imports are dictated more by domestic demand and production imbalances rather than international conditions.

When defining price trigger, it must be kept in mind that WTO safeguards do not intend to insulate countries from low agricultural prices emerging from long-term or secular decline of commodity prices. But the objective of the safeguard instrument is to protect the member countries from short-term price instability and the resultant sudden import surges. Therefore, for a price-trigger-based SSM, the following factors need to be clearly defined.

First, one should define the method to calculate a reference price. As Valdes and Foster (2005) have pointed out, there are several methods of doing so, including price trends and moving averages of various lengths, base-period average prices, the preceding year's price, and a minimum average cost of the world's 'most efficient' exporter. In the negotiations, Moving Average based methods have found support among many countries. However, Valdes and Foster suggest that moving average may not be the most appropriate technique to use as they found it to be *'inconsistent with the objective of protecting against exceptionally low prices'*. They find regression-trend-based methods to be better. In this context, we can propose that a variant of the method used by UNCTAD to calculate price instability can be used for calculating reference price for an SSM. UNCTAD uses an exponential-trend-based technique and Members can consider using it for calculating reference prices. It is notable here that the method used in the Uruguay Round was based on fixed base period reference price and the reference period coincided with a low-price phase of international commodity

price cycle. As a result, many countries could not use the SSM effectively during the implementation period.

Second, it is also required to define the length of the period for calculating long-term trend. Generally, a 3 to 5-year period (based on monthly data) can be suggested for calculating reference prices.

Finally, there should be a definition of price depression, that is, a definition of what percentage deviation from the trend line actually constitutes a surge. A 20 per cent drop below the reference price can be thought of as the price trigger. The G-33 will find it difficult to push its demand (that the trigger should be activated when the price drops 5 per cent below the reference price) in this round of negotiations.

Overall, we feel that price-trigger-based mechanisms are superior to volume-trigger-based mechanisms. The volume trigger is an ex-post defense and it can only be activated if a sufficiently large quantity of import already gets into a country. Therefore, some amount of damage may already occur before imposing the SSM. On the other hand, price-trigger-based mechanisms are superior as they can be triggered in the wake of a fall in international prices and can, thereby, pre-empt any damage to the domestic agriculture.

IV.3 THE SUNSET CLAUSE OR THE EXPIRY DATE FOR SSM

An SSM, by definition, is a temporary mechanism. Therefore, for such a mechanism, it is important to have a provision for a sunset clause. It was decided that an SSG invoked any time during the year would automatically lapse at the end of that calendar year, that is, on December 31 of that year. If the country wished to continue the special safeguard it would have to take stock of the situation and analyze whether the surges which necessitated the safeguard were still there. This mechanism worked satisfactorily for SSG and it can be continued for SSM.

For price-trigger-based mechanism, we propose that the Member-country government should be given at least six months time to ensure that the price decline which initiated the safeguard

action has corrected itself. To elaborate, suppose the price of a certain commodity dips below the trigger level and the price-trigger-based SSM is activated in January. Then, in April, the international price of that commodity touches or exceeds its trend level (either moving average or exponential trend, depending on the indicator the price trigger is based on). We propose that the Member country should be allowed to continue the SSM at least for the next six months (till October) to ensure that the upward movement of the international price is not merely a short-run price fluctuation. And during these six months the monthly international price of that commodity should be consistently above the price-trigger level.

V PROPOSED METHODOLOGY FOR AN ALTERNATE PRICE-TRIGGER-BASED SSM

In this section, we propose a price-based SSM which we feel satisfies the criteria of

a) providing enough latitude to developing countries to protect their domestic economy from price fluctuations and

b) it has a built-in mechanism to prevent overuse or excessive protectionist use of the safeguard instrument by the countries. Here we assume the price trigger is already decided and is based on a 3 or 5 year Moving Average of international prices.

The following points should be kept in mind while formulating a methodology for applying an SSM.

1. The SSM is a temporary trade defense mechanism to counter the volatility of international commodity prices.
2. The idea behind the SSM is to protect the domestic sector of the country from short-term fluctuation in prices. However, the SSM should not insulate the country from the long-run price movements of agricultural commodities.
3. SSMs can be imposed both through price trigger or volume trigger. Price trigger is more important as it allows the government to pre-empt the damage. However, in some cases volume triggers may become useful.
4. The methodology for applying the SSM should be transparent and easy to administer and to comprehend. Determination of injury should not be built into the administration of the SSM. The SSM is a ‘quick-acting’ mechanism and, therefore, should not be overly complicated.

Given these broad parameters, we propose that a variable-levy-based instrument can be used to implement a price-trigger-based SSM. A variable levy increases or decreases in response to changes in world prices of imported goods in such a way that the import price after payment of the duty remains steady. It may be noted here that countries of the European Union have used the variable-levy-based system and, in India, the Commission of Agricultural Cost and Prices (CACP) has also suggested the use of variable-levy-based systems to counter international price volatility[36].

We feel that this instrument will fulfill all the objectives of the SSM mentioned above and it will also be transparent and easy to administer. It may be noted here that variable levy is not allowed in the Uruguay Round AoA. But the suggestion made here is for it to be used as an SSM only. The details of the proposed SSM are given below.

As mentioned before, the objective of the SSM is to protect a country from short-term price fluctuations but not to insulate the country from long-term price signals. Therefore, to formulate a methodology for applying the SSM, it is first necessary to define the 'long-term price' for a certain commodity. For the sake of simplicity, we assume that a 3-year or 5-year moving average of international prices is taken as the long-term price for a certain commodity. Let us call this price P^*_{MA}.

Let us further assume that if the international price of a certain commodity dips X per cent below its P_{MA}, then a price trigger can be applied. Here we propose that a variable-tariff-based mechanism can be a useful safeguard device. Assuming that the conditions for activating a price trigger are fulfilled, a developing country Member may be allowed to use a variable tariff rate against the import of the product in concern. The variable tariff rate will be inversely related with the international price of the commodity. This will give the Member country the full flexibility to adjust the tariff rate to the decline and instability of international prices.

We also suggest that the Member country should be free to choose a suitable variable tariff formula for protecting its domestic market. However, to ensure that the Member country is

a) not overly protecting its domestic market or

b) using a tariff rate which is insulating the country from the long-run price movements of that particular commodity

[36] 'Reports of the Commission for Agricultural Costs and Prices for the Crops Sown during 1998-99 Season', New Delhi: Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India.

the following ceiling/condition for applying the variable tariff rate will be imposed:

$$P^*(1+tariff_{variable}) \leq P^*_{MA}(1+tariff_{bound}) \ldots 1$$

where P* is the international price of a commodity, P^*_{MA} is the 3 or 5-year moving average of international prices of that commodity (the moving average price at the time of surge can be used), $tariff_{variable}$ is a variable tariff rate inversely related to P* and $tariff_{bound}$ is the bound tariff rate for the product (the bound tariff rate can be the Doha Round bound tariff rate for the product).

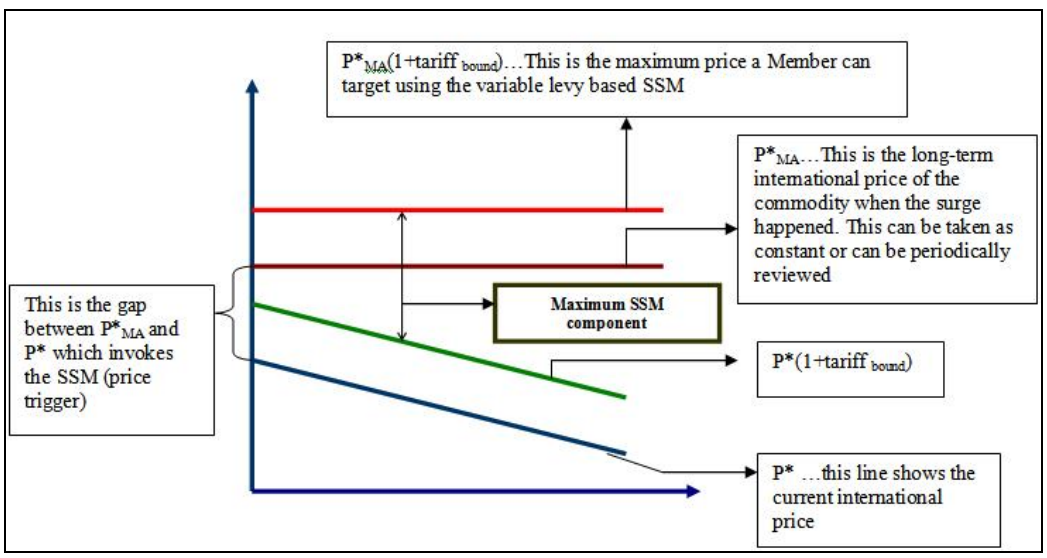
The gap ($tariff_{effective}$ - $tariff_{bound}$) can be considered as the Special Safeguard component

where: $tariff_{effective} = \frac{\ddot{P} - P^*}{P^*}$, $\ddot{P}$ is the targeted import price and the restriction on $\ddot{P}$ is

$$\ddot{P} \leq P^*_{MA}(1+tariff_{bound}).$$

Figure 10 shows the graphical exposition of the price-trigger-based SSM we are suggesting here.

Figure 10. A Graphical Exposition of the Variable Levy Based SSM



The advantages of such a simple SSM are manifold. It provides a developing country with a flexible safeguard mechanism, it sets only an upper bound (the country is free to choose the appropriate tariff adjusted landed price it wishes to target through its variable levy), it is less cumbersome to administer and it includes a built-in check to prevent prohibitive tariffs. A simulation of this formula against different scenarios is given in Annex Table A3.

Though this methodology is framed for a price-trigger-based mechanism, a similar concept for ceiling tariff rate can also be thought of[37] in case of volume triggers. For example, G-33 has recently proposed a formula for a volume-trigger-based SSM (Table 3). To ensure that implementation of such a formula is not overly defensive, one can propose to use the SSM component of it in conjunction with some variant of a ceiling tariff level mentioned above.

Table 3. Volume Trigger Based SSM Proposed by G33

Import Volume	SSM Component
less than 5 per cent increase over the three-year average	No SSM
5-10 per cent increase over the three-year average	50 per cent of bound rate or 40 percentage points
10-30 per cent increase over the three-year average	75 per cent of bound rate or 50 percentage points
More than 30 per cent increase over the three-year average	100 per cent of bound rate or 60 percentage points

VI DEVELOPING COUNTRIES AND POSSIBLE PROBLEMS WITH IMPLEMENTATION OF SSM

Even if the WTO allows the use of SSMs, one concern that has been expressed by many analysts is whether some of the poorer and less developed Members of the WTO will have the infrastructure and the state machinery to actually implement it effectively. Volume-trigger-based SSMs imply that a country will have to centrally monitor imports from all its ports and on a shipment basis. Second, there is some confusion whether imports coming through regional trading partners will be counted for invoking volume-trigger-based SSMs. It is likely that these imports will have to be tackled separately as most Regional Trade Agreements (RTAs) tend to have clauses preventing countries from imposing safeguards on imports coming from regional partners. This requires further monitoring and classification of imports on a 'rules of origin' basis. It is obvious that for this kind of monitoring a good infrastructure in information technology needs to be established. Many developing and least developed Member countries may not have the backbone of such infrastructure and trade facilitation. In comparison, price-based safeguards are easier to monitor. International price data are available on a daily basis and it is not at all difficult to identify a price depression. However, since the special safeguards are quick-acting mechanisms, in both cases it is required that there be co-ordination between the government agencies which monitor imports (typically the customs department and the Ministry of Commerce) and the agency which formulates tariff policies (typically the Ministry of Finance). Only then can these instruments be used

[37] It must be mentioned here that the case for a safeguard is somewhat weaker when an import surge is not accompanied by an import price decline.

effectively. There is an apprehension that many developing and least developed countries may not at present have such a well coordinated system in place. As a result, their ability to take advantage of the SSM will be suspect.

VII CONCLUSION

In the Doha Round of trade negotiations, developing countries are demanding that a special agricultural safeguard be made available to them. Analysis done in this paper shows that developing countries have a number of valid reasons to seek an SSM in this round. The most fundamental reason is that international commodity prices are extremely volatile and bound tariff rates may not be enough to protect countries from the gyrations of international commodity prices. Calculations done in this paper show that implementation of the AoA has not been successful in bringing down the instability of international commodity prices. Moreover, a number of studies have also pointed out that import surges have increased in the post-Uruguay Round period and that in many cases these import surges have inflicted irreparable damage to domestic production and to the livelihood of farmers in developing countries. Under these circumstances, developing countries are justified in their demand for a temporary safeguard mechanism.

To complicate the matter further, simulations show that the market access negotiations in agriculture will lead to significant cuts in tariff rates in most developing countries. As a result, the gap between the bound and applied tariff rates will come down considerably during the implementation of the Doha Round. A simulation analysis has been done in this paper using the G-20 tariff reduction formula and India's tariff rates at the 6-digit HS level. The results show that for a number of important products the gap between bound and applied rates will either disappear or will become negligible. During the Uruguay Round the tariff overhang, allowed some degree of flexibility to developing countries to deal with contingencies associated with a sudden change in commodity prices. The Doha Round of tariff cuts will take away this flexibility from developing countries. Therefore, it is not surprising that many developing countries have argued that unless the WTO allows these countries to have access to SSMs it will be difficult for them to accept the tariff liberalization package of the Doha Round.

So far the progress in the negotiations shows that the WTO recognizes these problems and has agreed to provide both price-based and volume-based SSMs to developing and least developed countries. However, the precise working mechanisms of these safeguards have not

been finalized and there are efforts from a handful of countries that are big exporters of agricultural commodities to restrict the usability of SSMs. These countries are apprehensive that widespread availability of SSMs may lead to increased protectionism. But this concern is not really justified. The implementation experience related to SSG has clearly shown that access to safeguard instruments did not necessarily translate into overuse or abuse of the system. Moreover, as per the Doha mandate, developing countries have a legitimate right to protect their domestic economy from the distortions that arise out of huge subsidization of the farm sector in developed countries. The SSM, along with the SPs, is going to be an important instrument for protecting the domestic production base, food security and livelihood security of farmers in developing countries. Imposing *a priori* and overly strict restrictions may hamper the usability of these instruments. Also, it is possible to develop in-built criteria for the implementation of SSMs so that its misuse can be minimized. This paper has outlined a possible method of doing so. It has been suggested in this paper that a built-in mechanism should be in place to ensure that countries are protecting their markets only from short-term fluctuations and not from secular price trends of agricultural commodities. Using these broad parameters, this study has proposed an alternate framework of SSM based on variable levy. It has been argued that in the absence of QRs, a variable-levy-based safeguard instrument can provide adequate protection against international commodity price volatility.

However, mere availability of safeguard instruments may not be sufficient for ensuring protection from price volatility and import surges. Developing countries need to have a proper mechanism in place to take advantage of these instruments. There is a concern that the infrastructure in most developing countries may not be adequate to monitor the volume of imports in real time. Given this problem, these countries may face difficulties in monitoring imports and invoke volume-trigger-based safeguards. Similarly, the price-based instruments require constant monitoring of international prices. The administration of these safeguards also demands co-ordination between the agencies which handle the trade of the country and those which determine the tariff policies. Unless these conditions are fulfilled, developing countries will not be able to take advantage of these instruments even if the WTO allows liberal use of SSMs. It must also be remembered that, currently, a very large proportion of trade is routed through the RTAs and such trade does not come under the WTO rules. So the WTO safeguard mechanisms cannot be used to restrict imports coming through these routes. It has often been seen that countries take pains to secure safeguards in the multilateral forum and tend to overlook the possibility of import surges through the RTAs. Developing countries must recognize this issue and adopt more comprehensive policies to tackle import surges.

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Annex Table A 1. Volatility of International Commodity Prices (Pre and Post WTO)

	Volatility Measured by Coefficient of Variation		Instability Index	
	Pre WTO	Post WTO	Pre WTO	Post WTO
Commodity Non-Fuel Price Index, 1995 = 100, includes Food and Beverages and Industrial Inputs Price Indices	10.22	13.50	8.36	12.27
Commodity Food and Beverage Price Index, 1995 = 100, includes Food and Beverage Price Indices	9.69	12.33	5.39	10.49
Commodity Food Price Index, 1995 = 100, includes Cereal, Vegetable Oils, Meat, Seafood, Sugar, Bananas, and Oranges Price Indices	9.74	12.08	5.99	10.30
Commodity Beverage Price Index, 1995 = 100, includes Coffee, Tea, and Cocoa	26.82	23.07	17.06	15.06
Bananas, Central American and Ecuador, FOB U.S. Ports, US$ per metric tonne	23.93	25.02	17.23	19.13
Barley, Canadian no.1 Western Barley, spot price, US$ per metric tonne	18.25	15.86	14.70	12.64
Beef, Australian and New Zealand 85 per cent lean fores, FOB U.S. import price, US cents per pound	8.61	15.23	6.59	7.58
Cocoa beans, International Cocoa Organization cash price, CIF US and European ports, US$ per metric tonne	29.78	21.10	15.60	16.92
Coffee, Other Mild Arabicas, International Coffee Organization New York cash price, ex-dock New York, US cents per pound	32.26	38.95	23.07	25.58
Coffee, Robusta, International Coffee Organization New York cash price, ex-dock New York, US cents per pound	38.38	48.68	29.12	25.13
Coconut Oil, Philippine, US$ per metric tonne	39.81	26.19	28.04	22.02
Cotton, Cotton Outlook 'A Index', Middling 1-3/32 inch staple, CIF Liverpool, US cents per pound	18.89	24.97	15.40	14.63
Groundnuts (peanuts), 40/50 (40 to 50 count per ounce), cif Argentina, US$ per metric tonne	36.88	10.35	24.21	8.23
Hides, Heavy native steers, over 53 pounds, wholesale dealer's price, US cents per pound	28.83	13.53	15.20	7.56
Lamb, frozen carcass Smithfield London, US cents per pound	15.56	15.75	12.96	10.90
Maize (corn), U.S. No.2 Yellow, FOB Gulf of Mexico, U.S. price, US$ per metric tonne	17.50	22.24	12.38	13.80
Olive Oil, extra virgin less than 1 per cent free fatty acid, ex-tanker price U.K., US$ per metric tonne	22.44	27.18	10.25	23.82
Oranges, miscellaneous oranges French import price, US$ per metric tonne	20.47	32.57	15.61	19.32
Palm oil, Malaysia Palm Oil Futures (first contract forward) 4-5 percent FFA, US$ per metric tonne	32.21	27.08	23.09	20.17
Swine (pork), 51-52 per cent lean Hogs, U.S. price, US cents per pound.	32.17	26.78	21.46	21.18
Poultry (chicken), Whole bird spot price, Georgia docks, US cents per pound	16.91	10.08	5.29	5.55
Rice, 5 percent broken milled white rice, Thailand nominal price quote, US$ per metric tonne	27.67	22.87	18.74	17.69
Rubber, No.1 Rubber Smoked Sheet, FOB Maylaysian/Singapore, US cents per pound	20.33	37.64	14.58	35.55
Soybean Meal, Chicago Soybean Meal Futures (first contract forward) Minimum 48 percent protein, US$ per metric tonne	17.08	22.52	12.68	17.99
Soybean Oil, Chicago Soybean Oil Futures (first contract forward) exchange approved grades, US$ per metric tonne	19.86	20.27	16.21	16.87
Soybeans, U.S. soybeans, Chicago Soybean futures contract (first contract forward) No. 2 yellow and par, US$ per metric tonne	15.60	21.11	11.58	16.91
Sugar, European import price, CIF Europe, US cents per pound	20.89	9.38	10.11	8.11
Sugar, U.S. import price, contract no.14 nearest futures position, US cents per pound	14.25	5.93	6.93	3.51
Sunflower oil, Sunflower Oil, US export price from Gulf of Mexico, US$ per metric tonne	17.21	32.50	12.35	21.35
Tea, Mombasa, Kenya, Auction Price, US cents per kilogram	23.72	16.46	14.37	13.62
Wheat, No.1 Hard Red Winter, ordinary protein, FOB Gulf of Mexico, US$ per metric tonne	14.78	20.87	11.73	16.58

Source: Authors' calculation based on data from the IMF.

Annex Table A 2. Tariff Cut Simulations of India: The Results

HS No.	Product Name	Current Bound Rate(CB)	Applied Tariffs (2004)	Post cut Bound Rate(PB)	Diff. (Applied Tariffs-PB)
090112	Coffee not roasted- Decaffeinated	150	100	90	-10
090121	Coffee roasted –Not decaffeinated	150	100	90	-10
090122	Coffee roasted- Decaffeinated	150	100	90	-10
090210	Green tea (not fermented) in immediate packing of a content not exceeding 3 kg	150	100	90	-10
090220	Other green tea (not fermented)	150	100	90	-10
090230	Black tea (fermented) and partly fermented tea, in immediate packing of a content not exceeding 3 kg"	150	100	90	-10
090240	Other black tea (fermented) and other partly fermented tea	150	100	90	-10
160100	Sausages and similar products, of meat, meat offal or blood; food preparations based on these products"	150	100	90	-10
170111	Cane sugar	150	100	90	-10
170112	Beet sugar	150	100	90	-10
170191	Refined sugar containing added flavoring or coloring matter	150	100	90	-10
170199	Other sugar	150	100	90	-10
220300	Beer made from malt	150	100	90	-10
220410	Sparkling wine	150	100	90	-10
220421	Other wine In containers holding 2L or less	150	100	90	-10
220429	-Other	150	100	90	-10
220430	-Other grape must	150	100	90	-10
220510	Vermouth and other wine of fresh grapes In containers holding 2L or less	150	100	90	-10
220590	Other	150	100	90	-10
220600	Other fermented beverages (for example, cider, perry, mead); mixture of fermented beverages and mixtures of fermented beverages and non-alcoholic beverages not elsewhere specified or included"	150	100	90	-10
220710	Undenatured ethyl alcohol of an alcoholic strength by volume of 80 per cent vol. or higher	150	150	90	-60
220820	Spirits obtained by distilling grape wine or grape marc	150	150	90	-60
220830	Whiskies	150	150	90	-60
220840	Rum and taffia	150	150	90	-60
220850	Gin and Geneva	150	150	90	-60
220890	Other alcohol	150	150	90	-60
080290	Other betel nuts	100	100	65	-35
080620	Grapes dried	100	100	65	-35
090111	Coffee not roasted -Not decaffeinated	100	100	65	-35
090411	Pepper -Neither crushed nor ground	100	70	65	-5
090700	Cloves (whole fruit, cloves and stems)"	100	70	65	-5
090830	Cardamoms	100	70	65	-5
100110	Durum wheat	100	100	65	-35
100190	Other, excluding spelt"	100	100	65	-35
120300	Copra	100	70	65	-5
120791	Poppy seeds	100	70	65	-5
151530	Castor oil and its fractions	100	100	65	-35
151540	Tung oil and its fractions	100	100	65	-35
151560	Jojoba oil and its fractions	100	100	65	-35
100610	Rice in the husk (paddy or rough)	80	80	56	-24
100620	Husked (brown) rice	80	80	56	-24

HS No.	Product Name	Current Bound Rate(CB)	Applied Tariffs (2004)	Post cut Bound Rate(PB)	Diff. (Applied Tariffs-PB)
100640	Broken rice	80	80	56	-24
100700	Grain sorghum	80	80	56	-24
151410	Crude oil	75	75	52.5	-22.5
151490	Other crude oil	75	75	52.5	-22.5
100510	Maize Seed	70	70	49	-21
100630	Semi-milled or wholly milled rice, whether or not polished or glazed"	70	70	49	-21
210690	Other food preparations	60	150	42	-108
040210	Milk and cream In powder, granules or other solid forms, of a fat content, by weight, not exceeding 1.5 per cent"	60	60	42	-18
040221	Milk and cream In powder-Not containing added sugar or other sweetening matter	60	60	42	-18
100590	Maize, Other	60	60	42	-18
080810	Apples	55	50	38.5	-11.5
080820	Pears and quinces	55	35	38.5	3.5
081320	Prunes	55	30	38.5	8.5
160210	Homogenized preparations	55	30	38.5	8.5
160241	Hams and cuts thereof	55	30	38.5	8.5
160242	Shoulders and cuts thereof	55	30	38.5	8.5
190120	Mixes and doughs for the preparation of bakers' wares of heading No1905	55	30	38.5	8.5
190410	Prepared foods obtained by the swelling or roasting of cereals or cereal products	55	30	38.5	8.5
190490	Other Prepared foods	55	30	38.5	8.5
200310	Mushrooms	55	30	38.5	8.5
200320	Truffles	55	30	38.5	8.5
200410	Potatoes	55	30	38.5	8.5
200490	Other vegetables and mixtures of vegetables	55	30	38.5	8.5
200510	Homogenized vegetables	55	30	38.5	8.5
200520	Potatoes	55	30	38.5	8.5
200540	Peas	55	30	38.5	8.5
200551	Beans, shelled"	55	30	38.5	8.5
200559	Other beans	55	30	38.5	8.5
200560	Asparagus	55	30	38.5	8.5
200570	Olives	55	30	38.5	8.5
200580	Sweet corn	55	30	38.5	8.5
200590	Other vegetables and mixtures of vegetables	55	30	38.5	8.5
210410	Soups and broths and preparations therefore	55	30	38.5	8.5
190110	Preparations for infant use, put up for retail sale"	50	50	35	-15
150710	Crude oil, whether or not degummed"	45	45	31.5	-13.5
150790	Other soybean oil	45	45	31.5	-13.5
150910	Virgin olive oil	45	45	31.5	-13.5
150990	Other olive oil	45	40	31.5	-8.5
151000	Other oils and their fractions, obtained solely from olives, whether or not refined, but not chemically modified, including blends of these oils or fractions with oils or fractions of heading No 1509	45	45	31.5	-13.5
040130	Of a fat content, by weight, exceeding 6 per cent	40	30	28	-2
040229	-Other milk	40	30	28	-2
040291	Not containing added sugar or other sweetening matter	40	30	28	-2
040299	-Other	40	30	28	-2
040410	Whey, whether or not concentrated or containing added sugar or other sweetening matter"	40	30	28	-2
040610	Fresh cheese (including whey cheese), not fermented, and curd"	40	30	28	-2

HS No.	Product Name	Current Bound Rate(CB)	Applied Tariffs (2004)	Post cut Bound Rate(PB)	Diff. (Applied Tariffs-PB)
040620	Grated or powdered cheese, of all kinds"	40	30	28	-2
040630	Processed cheese, not grated or powdered"	40	30	28	-2
040640	Blue-veined cheese	40	30	28	-2
040690	Other cheese	40	40	28	-12
350110	Casein	40	20	28	8
080610	Fresh grapes	40	40	28	-12
020441	Carcasses and half-carcasses	35	30	24.5	-5.5
071220	Onions	35	30	24.5	-5.5
071230	Mushrooms and truffles	35	30	24.5	-5.5
071290	Other vegetables; mixtures of vegetables	35	30	24.5	-5.5
090940	Seeds of caraway	35	30	24.5	-5.5
091040	Thyme; bay leaves	35	30	24.5	-5.5
110811	Wheat starch	35	30	24.5	-5.5
110813	Potato starch	35	30	24.5	-5.5
080940	Plums and sloes	30	25	7.5	-17.5
410110	Whole hides and skins of bovine animals, of a weight per skin not exceeding 8 kg when simply dried, 10 kg when dry-salted, or 14 kg when fresh, wet-salted or otherwise preserved"	25	0	6.25	6.25
410130	Other hides and skins of bovine animals, otherwise preserved"	25	0	6.25	6.25
410140	Hides and skins of equine animals	25	0	6.25	6.25
410210	Raw skins of sheep or lambs with wool on	25	0	6.25	6.25
410221	Raw skins of sheep or lambs without wool on (Pickled)	25	0	6.25	6.25
410229	Raw skins of sheep or lambs without wool on (Other)	25	0	6.25	6.25
410310	Other raw hides or skins- of goats or kids	25	0	6.25	6.25
410320	-Of reptiles	25	0	6.25	6.25
410390	-Other	25	0	6.25	6.25
510111	Shorn wool	25	15	6.25	-8.75
510119	Greasy wool, Other	25	15	6.25	-8.75
150200	Fats of bovine animals, sheep or goats, raw or rendered, whether or not pressed or solvent-extracted	15	15	3.75	-11.25
060110	Bulbs, tubers, tuberous roots, corms, crowns and rhizomes, dormant"	10	10	2.5	-7.5
060120	Bulbs, tubers, tuberous roots, corms, crowns and rhizomes, in growth or in flower; chicory plants and roots"	10	10	2.5	-7.5
060210	Unrooted cuttings and slips	10	10	2.5	-7.5
060220	Edible fruit or nut trees, shrubs and bushes, grafted or not"	10	10	2.5	-7.5
060230	Rhododendrons and azaleas, grafted or not"	10	10	2.5	-7.5
060240	Roses, grafted or not"	10	10	2.5	-7.5
120991	Vegetable seeds	10	10	2.5	-7.5
120999	Other seeds, fruits and spores	10	10	2.5	-7.5

Notes: *See notes to Figure 8*.

Annex Table A 3. Some Simulations of the Proposed SSM Formula

Scenario:

a) Suppose the long-term trend price of a commodity is 500 at time t.
b) We assume price trigger gets activated after 20 per cent drop of price from its long-term level. Therefore, the SSM is activated when international price is 400.
c) We suppose bound rate on the product is 50 per cent
d) Under this scenario, we calculate the maximum effective tariff our proposed model allows to a country for different level of price decline. The results are shown in the following table.

International Price (P*)	Price decline in per cent	Maximum Effective Tariff'	Maximum SSM Component
400	20	87.5	37.5
395	21	89.9	39.9
390	22	92.3	42.3
385	23	94.8	44.8
380	24	97.4	47.4
375	25	100.0	50.0
370	26	102.7	52.7
365	27	105.5	55.5
360	28	108.3	58.3
355	29	111.3	61.3
350	30	114.3	64.3
345	31	117.4	67.4
340	32	120.6	70.6
335	33	123.9	73.9
330	34	127.3	77.3
325	35	130.8	80.8
320	36	134.4	84.4
315	37	138.1	88.1
310	38	141.9	91.9
305	39	145.9	95.9
300	40	150.0	100.0
295	41	154.2	104.2
290	42	158.6	108.6
285	43	163.2	113.2
280	44	167.9	117.9
275	45	172.7	122.7
270	46	177.8	127.8
265	47	183.0	133.0
260	48	188.5	138.5
255	49	194.1	144.1
250	50	200.0	150.0
245	51	206.1	156.1
240	52	212.5	162.5
235	53	219.1	169.1
230	54	226.1	176.1
225	55	233.3	183.3
220	56	240.9	190.9
215	57	248.8	198.8
210	58	257.1	207.1
205	59	265.9	215.9
200	60	275.0	225.0

International Price (P*)	Price decline in per cent	Maximum Effective Tariff'	Maximum SSM Component
195	61	284.6	234.6
190	62	294.7	244.7
185	63	305.4	255.4
180	64	316.7	266.7
175	65	328.6	278.6
170	66	341.2	291.2
165	67	354.5	304.5
160	68	368.8	318.8
155	69	383.9	333.9
150	70	400.0	350.0
145	71	417.2	367.2
140	72	435.7	385.7
135	73	455.6	405.6
130	74	476.9	426.9
125	75	500.0	450.0
120	76	525.0	475.0
115	77	552.2	502.2
110	78	581.8	531.8
105	79	614.3	564.3
100	80	650.0	600.0

Notes: See Section V for the definitions.

Annex Table A 1. Country Groupings in WTO

African Group

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Congo (Democratic Republic), Côte d'Ivoire, Djibouti, Egypt, Gabon, The Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, , Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe

ASEAN

Brunei, Cambodia (from October 2004), Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand

Cairns Group

Argentina, Australia, Bolivia, Brazil, Canada (G/AG/NG/W/11, 35, 93), Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand, Uruguay

G-10

Bulgaria, Iceland, Israel, Japan, Korea, Republic of, Liechtenstein, Mauritius, Norway, Switzerland, Chinese Taipei

G-20

Argentina, Bolivia, Brazil, Chile, China, Cuba, Egypt, India, Indonesia, Mexico, Nigeria, Pakistan, Paraguay, Philippines, South Africa, Thailand, Tanzania, Venezuela, Zimbabwe

G-33

Antigua and Barbuda, Barbados, Belize, Benin, Botswana, China, Congo, Côte d'Ivoire, Cuba, Dominican Republic, Grenada, Guyana, Haiti, Honduras, India, Indonesia, Jamaica, Kenya, Rep. Korea, Mauritius, Madagascar, Mongolia, Mozambique, Nicaragua, Nigeria, Pakistan, Panama, Peru, Philippines, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Senegal, Sri Lanka, Suriname, Tanzania, Trinidad and Tobago, Turkey, Uganda, Venezuela, Zambia, Zimbabwe

G-90 (African Union/Group, ACP, least-developed countries)

Angola, Antigua and Barbuda, Bangladesh, Barbados, Belize, Benin, Botswana, Burkina Faso, Burundi, Cambodia. Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Cuba, Democratic Republic of the Congo, Djibouti, Dominica, Dominican Republic, Egypt, Fiji, Gabon, The Gambia, Ghana, Grenada, Guinea (Conakry), Guinea Bissau, Guyana, Haiti, Jamaica, Kenya, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mauritius, Morocco, Mozambique, Myanmar, Namibia, Nepal, Niger, Nigeria, Papua New Guinea, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Senegal, Sierra Leone, Solomon Islands, South Africa, Suriname, Swaziland, Tanzania, Togo, Trinidad and Tobago, Tunisia, Uganda, Zambia, Zimbabwe

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