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Implications of the Proposed WTO Tariff Reduction Modalities: Case of Kenya's Agricultural Tariff Structure

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Abstract

Various proposals in the World Trade Organization agricultural market access negotiations are explained and their implication to tariff reduction in terms of meeting stated objects evaluated in reference to Kenya's agricultural tariff structure. A partial equilibrium model is used to assess the impact of the tariff reductions to trade and revenue to Kenya. The results show that proposals involving deeper cuts will reduce Kenya's flexibility in using tariffs as a trade policy tool instrument when it comes to protecting domestic production as a result of unfair trade practices. The "water in tariff" will be significant eroded in some of the proposals. Deeper tariff cuts will also lead to revenue loss, although not significant as most formulae will affect only a few applied tariff lines. Although the current revised draft modalities for negotiation provides some reasonable flexibility in terms of difference between the bound and applied tariff, the ACP proposal gives more flexibility for Kenya. Given that the country has made significant progress in agriculture trade liberalization through structural adjustment programmes and its own voluntary trade reforms, there is need to negotiate for credit or any other form of consideration for this voluntary effort. For products to be affected by the formula, Kenya should consider designating them as special products to receive less cuts as envisaged in the July framework.

Table of contents

List of Tables

List of Figures

1.0 Introduction

World trade organization Member states are currently engaged in negotiations for agricultural trade liberalization. Market access is key in any multilateral trade negotiations. It therefore follows that, the method and pace of tariff reductions are at the heart of market access pillar in agricultural negotiations. The negotiations are currently focused on the modalities for tariff reduction which have been bogged for many years, after the commitments agreed upon during the Uruguay round agreements concluded in 1994. Concerns have a risen on the modalities to be adopted in the eventual reduction of tariffs, tariff peaks, tariff escalation including domestic support measures. Various member countries among them Japan, India, America, China, Korea, Switzerland, USA, G20, G33, the European community and the ACP countries, have presented proposals for and consideration. Although there are convergence on some issues, especially on the modalities for tariff reduction in general no acceptable approach been agreed. There is clear divergence on a number of issues among the various groups. These divergences are emerging due to the necessity that before any country can exchange tariff concessions there must be an agreement on the fundamental rules and parameters for tariff reduction or elimination, including certain negotiating methods and modalities. Some of the key issues which members are concerned with include:

I. The base rate or starting point from which tariffs will be reduced
II. The timetable and pace of tariff elimination
III. The method of determining concessions
IV. Product classification
V. The reference period for trade data
VI. Implication to the country's tariff structure and revenue base
VII. Treatment of special products and the issue of preferential erosion

Although the base rate or starting point from which tariff will be cut has been agreed as the current bound rate and reference period for trade data as 1999-2001, most of the other issues remain contentious. Kenya as a small country that generally highly not only depends on tariff revenues, but also use tariffs as a policy instrument in protecting the poor farmers, tariff negotiations will be critical, because tariff reductions have a direct impact on domestic production, employment and revenue

The negotiations have put a lot of pressure on developing countries to bind and reduce tariffs thus opening up markets to other countries, especially the developed countries.

Developing countries are concerned with the implications this will have on their economies, especially to their less vulnerable economies, especially infant small industries, poor farmers, employment and other sever adjustment processes in many sectors.

This paper seeks to analyse the various proposals presented on agriculture negotiations in order to ascertain the likely implications to Kenya's agricultural tariff structure and revenue base

1.1 Why concern on Agriculture?

. Agriculture forms the back borne of the Kenyan economy. The sector contributes to about 26% of GDP (economic survey 2005) and a further 27% through links with manufacturing, distribution and other services sub-sectors. The sector contributes to about 60% of the country's export earnings and about 80% of population living in rural areas derive their livelihood from agriculture. In the Economic recovery strategy for wealth creation and employment (ERS) (2003-2007), agriculture is identified as one of the prime movers of the recovery strategy programme**.**

1.2 Objectives of the study

The main objective of this study is to analyse the implications of the WTO proposed formulae for tariff reduction in the on-Going WTO negotiations on Agricultural market access on the Kenya's agricultural tariff structure and revenue base. The specific objectives include:

I. Provide an analysis of the importance of the agricultural sector
II. Analyse the Evolution of agricultural trade policy Kenya
III. Analyse the implications of various formulae proposed in the WTO
IV. Provide policy implication and recommendation and negotiation issues

1.3 Methodology

The study mainly used secondary data. Secondary data was sought from various government official documents such as the economic survey, statistical abstracts and Kenya position papers in the negotiations. Other sources of information include the World Bank, UNCTAD website and World trade organisation data bases. The study uses a global trade model (Agricultural trade Policy simulation Model ATPSM) developed by UNCTAD to do simulate on the implication of the formulae. Agricultural trade Policy simulation Model Is a partial equilibrium model used to analyse trade effects resulting from multilateral trade negotiations.

1.4 Structure of the paper

The rest of the paper is as follows. Chapter two gives an overview of the evolution of Kenya's agricultural trade policy and experiences of past trade liberalisation. Chapter two provides the theoretical foundation of the formulae approach for tariff reduction and the evolution of trade liberalisation through tariff reduction modalities. Chapter three discusses the current state of play in the on-going WTO negotiations for agricultural tariff reductions, while chapter four provides simulation results on the effects of the proposed formulae to Kenya's tariff structure and revenue base. Chapter five is conclusions and policy recommendations.

2.0 Evolution of Trade Policy Features and reforms

Kenya's tariff reform and trade policy has been largely influenced by bilateral, regional integrations and multilateral trade agreements. This is mainly due to the fact that Kenya is a member of WTO, common Market for Eastern and Southern Africa (COMESA), East African Community (EAC) and ACP-EU trade arrangements. Kenya's current trade policy objectives focuses on moving towards a more open trade regime, strengthening international and regional market access for her products (especially processed goods), and further integration into the global economy. To achieve these objectives, Kenya has taken several measures including: reforming the trade regime under the SAPs, engaging in several regional and bilateral trade negotiations, and actively participating in negotiations to increase its trade in the multilateral trading system. The trade reforms are documented and articulated in the 1979-84 Development Plan, and subsequent development plans, Sessional Paper No.1 of 1986 on economic management for renewed growth (which marked a major turning point towards liberalization of the trade policy framework), Sessional paper No. 2 of 1997 and the recent Economic Recovery Strategy (ERS) Paper. The necessary reforms spelt out in these documents have either been completed or are presently being implemented.

Kenya's trade policy instruments can be categorised into two trade regimes. The period over two decades to 1993 characterised by protectionism measures and the period after may 1993, period of drastic reforms. The trade policy over two decades to 1993 depended on licensing. Licensing applied to all imports and a large share of exports, and on import duties. Foreign exchange licensing and surrender requirements were also applied. Tariffs were also used and applied on an ad valorem basis. In 1992 variable duties were introduced on several important agricultural products. Highest rates of duties were applied to imports of assembled motor vehicles, radios and other telecommunication equipment assembled locally, as well as textiles, clothing, leather and most food products. Until the Uruguay round Kenya's tariffs were unbound. In 1992, import licensing was, in principle, automatic for nearly 90 percent of tariff lines with a remainder concentrated in the agriculture sector Export licensing and duties were applied to certain agricultural and food products in the context of self-sufficiency and diversification policies. Export taxes applied to a number of products whose export in raw form, the Government wished to discourage with a view to increasing content. Products, which attracted export taxes, include; Raw hides and skin, which provided significant revenues. There were also schemes that promoted exports by providing

incentives such as duty and tax concessions. The export compensation scheme provided exporters producing at least 30 percent value added with a fixed rate of 18 percent of the f.o.b value of their exports.

The period after 1993 was characterised by drastic trade reforms, which saw the removal of all quantitative measures. The major trade policy instrument available in this period is tariffs. Through regional trade arrangements, safeguard measures are also used which enable the use of quantitative measures in terms of quotas and additional duties. After the Uruguay round, Kenya committed to bound all its tariffs at 100 percent The export-processing zone gives incentives to exporters in terms of manufacturing under bond and tax holidays.

2.1. Reforms during the period 1984-1988

Up to 1989, stringent border controls, in the form of licensing, high rising tariffs and foreign exchange restrictions continuously were the policy intervention measures the government used for protectionism. The process of tariffication began in the late 1980s and since, 1989; tariff peaks and dispersion have been lowered.

The 1984-88 plan period envisaged to continue carrying out the previous plan trade reforms in addition to new ones as given below:

I. Export compensation schemes. Providing partial compensation for tariffs on imported components of eligible exports. The scheme was reorganised in the late 1982 to pay as compensation both a basic rate of 10 percent of eligible earnings and a bonus of 15 Percent on increases in export earnings so long as the goods achieved a minimum of 30 percent domestic value added criteria. Other promotion measures included export credit guarantee scheme, production under bond and establishment of export processing zones.

II. Favourable treatment of exporters in foreign exchange allocation.

III. Establishment of Export credit and Insurance Guarantees Corporation.

IV. Export incentive schemes such manufacture under bond for products using Kenyan labour and intermediate goods.

V. Pursue bilateral, multilateral and regional trade negotiations such as ACP-EEC and preferential trade Area agreement to improve the conditions of world trade.

VI. Reduce quantitative restrictions, but create a monopolies and price commission to monitor prices, collect financial information to investigate unfair business practices which mislead or limit the choice of consumers, suppliers or competitors.

VII. Price controls of essential goods. The national Cereals and produce board was given the responsibility of controlling prices of food grains

VIII. The Government continued to control volume of imports by maintaining a realistic exchange rate and if required by manipulating tariffs. Tools such as monitoring

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IX. For excess stocking, foreign exchange allocation, and ministerial approval were used.

X. To promote capacity of exports; imports of plant machinery equivalent to 20 percent in value of export earnings of an industrial enterprise were allowed free from any restrictions, high import duty on agro based industries such as palm oil to protect local industries such as sunflower were imposed, normal compensation of 10 percent was allowed on the export of carcass meat, butter, cheese, ghee and dry milk were to be considered for higher compensation, to improve the capacity of textile, cotton was to be compensated the price differential between local and international and on tanning and latter, export duty on net blue to be abolished.

2.2. Reforms during the period 1989-1993

The government removed price controls on various items in the general list retaining only twelve items in the specific list. These items include; charcoal, salt, maize and maize meal, sifted maize meal, milk, fats and edible oils, bread, scones and buns, wheat flour, tea, rice, sugar and beer and stouts. To guard against the abuse of the removal of price control by monopolist, the government published the Restrictive Trade practices, monopolies and price control act to guard against monopoly and collusion in price fixing and the control of markets by large firms against the smaller ones.

Although tariffs had been drastically reduced from a maximum rate of 135 in 1988 to a rate of 60 in 1992. The government recognised that the then import policy based

on high tariffs and quantitative restrictions typified by import licensing and foreign exchange rationing was too restrictive to allow for competition. The government therefore made a commitment during the plan period to make a comprehensive review of the tariff structure with a view to lowering tariff rates generally and to achieve equitable levels of protection as a continuation of liberalisation of imports started in the previous plan period. As mentioned earlier, tariffs had been reduced, both the tariff and VAT structures made homogeneous, number of rates reduced from nearly 42 percent in 1988, unweighted tariff average reduced to 34 percent in 1992. As at the end of 1987, the import schedules had been revamped into the following three main categories:

Schedule 1: containing mainly high priority capital goods, raw materials and intermediate Inputs with relatively few problems of identification or erroneous invoicing.

Schedule 2: containing those items of relatively high priority which require ministerial or Government Agency approval to granting of licence subject to meeting certain technical criteria

Schedule 3: items in this category were further categorised into three groupings:-

Schedule3A: Containing items similar to those in schedule 1 but also includes some final Goods, which will be subject to tariffs rather than administrative controls for protection.

Schedule 3B: Containing low priority goods, which should be able to compete with Imports which enter relatively freely subject to tariffs rather than Controls some of this items required prior approval.

Schedule 3C: Containing items for which government will continuously review the desirability of importation.

Prior to the 1988/89 budget, there were 23 different advalorem tariff categories ranging from 10 to 170 percent plus a number of specific duties and free category. The government found these classifications complex and with no economic justification. The 1988/89 budget therefore outlined the process of restructuring the tariff reforms with a view of providing effective rates of protection to all firms taking

into account on their effects on government revenue, effective rates of protection, balance of payments and the impact on taxation structure in general. To guard ant dumping, legislation laws were to be put in place.

During the plan period the government realised the need to move towards market based programmes as away of reducing government controls and licensing in the management of foreign exchange controls. Managed floating exchange rate and a rationalised tariff regime were redeemed appropriate with a long-term objective of using exchange rate management as a major instrument for regulating imports.

In 1991 import licensing was in principle made automatic for most industrial products and the requirement of letters of approval prior to importation abolished. But, a number of agricultural products were restricted to government approval before importation in March 1993. Import licensing was complemented by foreign exchange licensing, but depending on the balance of payment situation. A severe foreign exchange shortage in the late 1991 and part of 1993 led to the slowing down of the approval of foreign exchange applications for many industrial goods while imports of agricultural and industrial products were effectively banned. In may 1993 import and foreign exchange licensing were abolished and foreign exchange could be freely accessed in the market rates through authorised banks and exporters allowed to hold 50 percent of their foreign exchange earnings in retention accounts. To encourage investment in the export industries special measures were introduced. The Government began providing tax and investment allowances, assistance in infrastructure, duty-free imports and waivers of exchange control to companies within the export processing zones and a “one stop” system of administrative procedures to minimize bureaucratic obstacles to investment. A number of export promotion programmes were put in place which included export promotion programmes office (EPPO), Kenya export development support programme (KEDS), The Green channel scheme, Kenya export development assistance (KEAs), export promotion council (EPC), export Credit Insurance and Guarantee scheme, export information and Promotion preferential Trade Area.

In November 1992, exporters of traditional products were allowed to retain 50 percent of their foreign exchange earnings.

2.3Reforms during the period 1994-1996

The seventh development plan acts as a midway through Kenya's structural adjustment programme outlined in sessional paper No.1 of 1986 on Economic Management for renewed growth. The central thrust of the new policies is to rely on market forces to mobilize resource for growth and development. The government is left with the role of regulatory policy framework, public infrastructure and social services. During the plan period, the Government aimed at continuing with the reform process by transforming the economy into a modern market oriented economy. The plan envisages completing the structural adjustment programme resulting into the economy relying extensively on market forces. The specific policies the plan will pursue include;

I. Import liberalisation to continue while strengthening the implementation of the restrictive trade practices, Monopolies and price control Act (1988) to act as abuse of decontrol..

II. Flexible exchange rate policy to be followed during the plan period leading to gradual full convertibility of the Kenyan shilling.

III. Promotion of competition and efficiency in distributive trade with a view of ensuring consistency in trade flows of goods and services until there is eventual private and market oriented mode of distribution system.

IV. The Kenya National trading corporation established in 1965 to assist indigenous businesses in distributive trade to be reviewed with a view of phasing it out in line with the liberalisation strategy.

V. The activities of various commercial bodies such as export promotion programmes office (EPPO), Kenya export development support programme (KEDS), Kenya export development assistance (KEAs), export promotion council (EPC) and Kenya external trade authority (KETA) to be harmonised.

2.4 Reforms during the period 1997-2006

Trade reforms carried out in the period 1997-2006 are spelled out in the eight and ninth development plans. The plan covers the first phase of the seasonal paper or industrial transformation to the year 2020. The plan calls for policies that will make the country an outward oriented and raise the share of manufactured exports in the

total value of exports. The plan also aims at deepening the structural reforms through further liberalisation of markets. The following specific trade reforms were envisaged to be carried out during the plan period.

I. Progressively reduce import tariffs including liberal reduction in rates for capital equipment and primary raw materials.

II. Amend agricultural cooperative sector Act to allow cooperatives to operate competitively, and the role of the ministry to focus on regulation.

III. Commercialising NCPB operations and other marketing boards.

IV. Privatise sugar factories.

V. Eliminate marketing monopoly of the pyrethrum Board of Kenya.

VI. Fully liberalise the cotton industry emphasizing farmer ownership of ginneries.

VII. Review edible oil seed tariff to encourage local utilisation and production in the country.

VIII. Fully liberalise the diary sector so as to encourage private sector participation.

IX. Amend the dairy Act to strengthen the regulatory powers of the Dairy board and allow more actors in the industry.

X. Put incentives in place to attract private sector investments in agro-processing industries, packaging and storage facilities.

As a way of the realisation that liberalisation is envitable, the government has envisaged a policy in the 2002-2008 of enhancing productivity and competitiveness (republic of Kenya 2002-2008). The specific policy objectives include:

I. Provision of credit to small-scale enterprises through the loans joint board and micro-enterprises support programme.

II. Provision of credit to exporters through African Export import bank and other financial institutions

III. Provide technical assistance to private export enterprises on quality control, produce design, development, market testing produce packaging, trading and labelling.

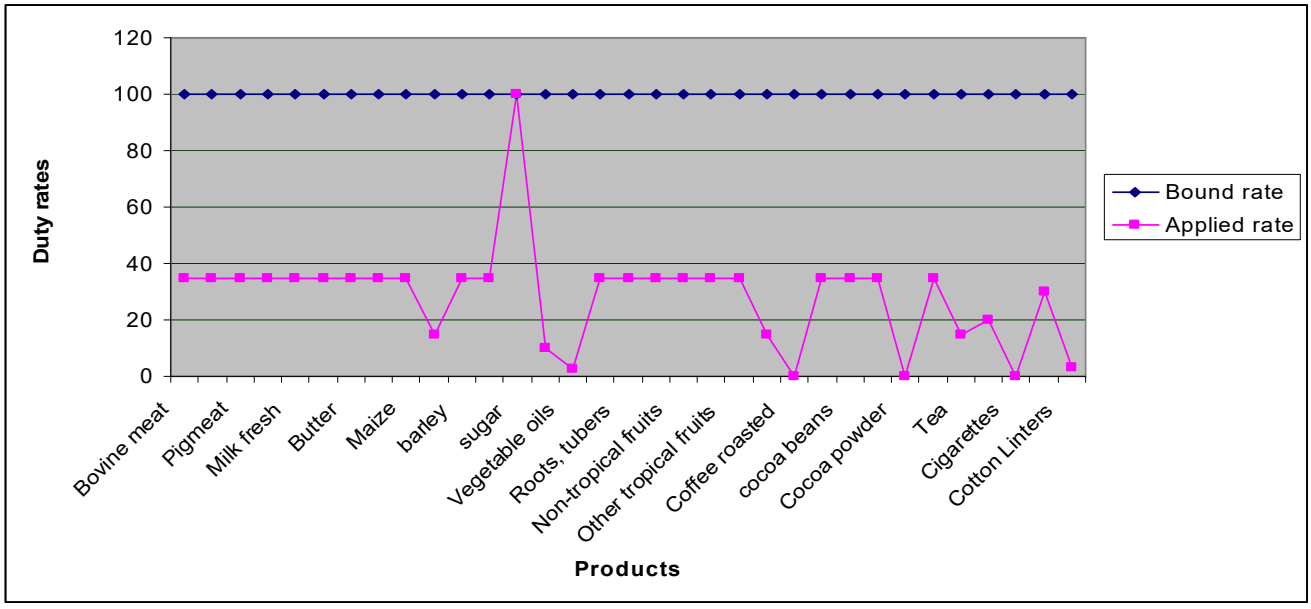
2.5 Kenya's Current agricultural tariff structure

As part of the market liberalization efforts, removal of quantitative restrictions and reduction in tariffs started in 1980 and by 1991, the only items protected through quantitative restrictions were for the reasons of health and public safety. All the other items were automatically licensed. There has been a policy to harmonize the structure and reduction of tariff levels. As a result average tariff rates, both weighted and un-weighted, have also come down since 1990. The import-weighted tariff was reduced from 30% in 1984/1985 to 23% in 1991/1992 and to about 18% in 1999. The tariff dispersion has been lowered and the number of tariff bands reduced from seven in the 1980s to only three in 2001. The highest tariff level has decreased from above 70 in 1980s to 35% in 1999. On becoming a member of WTO, the country bound its tariffs at 100% for all agricultural products and 70% on fish. The country also committed itself to elimination of all non-tariff barriers on agricultural imports. The tariff levels have since then been substantially reduced from between 40% to 60% for most commodities to below 35% for most of the agricultural commodities and processed products. The tariff levels have never reached the bound ceilings set although suspended duties are sometimes used to raise the duties when there is a need to protect the industry. This has occurred for sugar where the tariff rate plus suspended duties were 100% in 2001. The use of suspended duties was necessary to reduce the level of imports which were considered to be cheaper than domestically produced sugar. Negotiations on Agriculture brought agricultural products under more effective multilateral rules paving way for further liberalization of agricultural production and trade. The new negotiations launched during the Doha ministerial Declaration of 2001 brought a range of subjects, which include the 'built-in' negotiations on agriculture, which had already begun in 2000 under the Marrakech Agreement.

Kenya's agricultural bound and applied tariffs in 2006 are provided in figure 2.1. As a result of the Uruguay round commitments, Kenya bound its agricultural tariff lines at 100%. The applied tariff lines on average are around 24.4%. With the current structure of the agricultural tariff lines, there is some flexibility in policy space given the reasonable difference between the bound and applied tariff ("water in tariffs"). However, further movement from 100% downwards is likely to limit this policy space given that some

products such as sugar have applied tariffs equal almost to bound tariff rate (100%) and yet the sector experiences import surges.

Figure 2.1: Kenya's Agricultural bound and applied tariffs 2006



Source: Mac Map 2007

Agricultural tariff structure of other WTO members.

The Uruguay Round Agreement on Agriculture "tariffied" and bound many non-tariff barriers. Although some progress was made in reducing tariffs on fast growing, high valued added products, much remains to be done, especially in reducing tariff peaks and tariff escalation. Agriculture still remains heavily protected with significant tariffs and even high tariffs in particular products of interest to developing countries. The tariff structure of some selected developed and developing countries is provided in table 2.2, Kenya included for comparison purposes. The table depicts the level of flexibilities that developed countries have in terms of policy space for protecting their sensitive sectors. Their initial peak applied tariffs are extremely high as compared to Kenya. For the US , it is 182.7, EU 456.9 and Japan 534.8, while Kenya is only 100. The implication of this is that even if a formula is applied, unless the formula targets these tariff peaks, no meaningful reductions will be achieved, it will be a public relations exercise. These are the basic important issues that Kenya needs to take into consideration while negotiating. In that the approach to be used must specifically target the high tariffs and tariff peaks in

developed countries at the some time taking into account policy space and preferential erosion for developing countries.

Table 2.1: Agricultural tariffs of selected WTO Members

Country	Average initial bound tariff %	Spread of bound tariff %	Peak initial applied tariff %	Average initial applied tariff %	Spread of applied tariffs %	Peak initial applied tariffs	Applied over bound average tariffs	Peak bound over average bound %
Developed countries								
US	6.4	257.8	182.7	6.4	254.7	182.7	100.0	2854.7
EU	17.4	170.1	456.9	17.4	170.1	456.9	100.0	2625.9
Japan	20.8	245.7	534.8	18.5	242.7	477.9	88.9	2571.2
Developing countries	35.5	29.6	55.0	12.5	43.2	55.0	35.2	154.9
Brazil	91.9	37.4	227.0	14.8	35.1	20.0	16.1	247
Colombia	115.1	45.9	300.0	42.6	63.1	210.0	37	260.6
India	100.0	0.0	100.0	23.1	52.4	85	23.1	100
Kenya								

Source: Konandreas (2004)

The above analysis shows that over the years, through structural adjustment programmes and deliberate policy reforms geared towards outward market orientation, Kenya has drastically reduced her agricultural tariff lines to low levels, especially the applied tariffs. Although agricultural tariff lines are bound at 100 percent for all the tariff lines, it is in rate cases, only when increased imports threaten the local industry that has increased tariff rate to the level of 100, mainly the case of sugar. Such voluntary liberalization should be taken into consideration in the on going negations on tariff reductions such that credit given in such endeavors.

3.0 Theoretical foundations to Formula approaches

Formula approaches to tariff reductions can be categorized into two; one that reduces the applicable tariff rates by the same percentage, regardless of the initial tariff rate referred to as tariff independent formulae and one in which the percentage reduction rates depends on the initial tariff rate referred to as tariff dependent.

(a) Tariff independent formulae

Tariff independent formulae reduce applicable tariff rates by the same percentage, regardless of the initial tariff rate. These formulae do not depend on initial tariff in anyway and the most important feature of the formulae is the rate of reduction. An example is the one used in the Kennedy round of negotiations (1964-1967)[1]. A mathematically an illustration of this type of formulae is given below;

Assume that the initial rate prior to negotiations is given by t_0 and the final tariff rate resulting from the negotiations is t_1 and c is a constant parameter. The expression relating the two tariff rates can be given as:

$$t_1 = c\ (t_0) \text{ ---------- (a)}$$

In equation (a), the final tariff rate depends both the constant parameter c and the initial tariff rate. But the rate of reduction is independent of the tariff rate. To demonstrate this, let q be the rate of reduction given as:

$$q = \left\langle \frac{t_1 - t_0}{t_0} \right\rangle \text{ ---------- (b)}$$

Substituting a into b we get an expression which is independent of the initial tariff rate as.

[1] The Kennedy round of negotiations used a linear formula and adopted a working hypothesis of 50%

$$q = \frac{c(t_0) - t_0}{t_0}$$ ----------(c)

$$q = \frac{t_{0(c-1)}}{t_0}$$ ---------- (d)

$$q = c - 1$$ ---------- (e)

This expression illustrates that the rate of reduction in the original tariff rate depends only on the parameter c and the original rate does not determine the rate of reduction. The implication is that all tariffs will be reduced by the same amount.

The formulae can therefore be rewritten as

$$t_1 = (1 - c) * t_0$$ ---------- (f)

Where $c - 1$ is the rate of tariff reduction, which is not dependent upon base rate. The implication of this outcome is that, the formula has no impact on tariff escalation and high tariffs.

(b) Tariff Dependent modalities

Also referred to as harmonization formulae, these formulae unlike the previous where the rate of reduction is independent of the initial tariff rate, these formulae are a function of the initial tariff. The main characteristic of these formulas is they aim at achieving higher reduction for higher tariffs. The overall dispersion of the tariff profile is reduced. The formula can be either linear or non-linear.

(i) Linear reduction formulae

An example of a basic linear formula is a generalization of the tariff independent formula by adding an intercept:

$$t_1 = a + c \times t_0$$

There are two possible cases depending on the value of *a*:

- *a*<0 : it implies that tariff rates below a certain threshold are reduced to zero and tariff rates above that threshold are cut by an increasing percentage as the tariff rates increase.

- *a*>0 : under the assumption that an increase in tariff rates is out of question, it implies that tariff rates below a certain threshold are not reduced at all, and that above that threshold tariff rates are cut by an increasing percentage as the tariff rates increase.

Linear formulae that are tariff dependent and harmonizing can be used in 'tariff band' approaches, which propose different linear cuts for different ranges or intervals of the tariff profile.

To illustrate the impact of the linear formula we take a hypothetical tariff profile as shown in table 3.2 with various coefficients. The table shows that all tariff lines are reduced by the same percentage, final tariff depends on the initial tariff.

Table 3.2 Impact of linear cut on the hypothetical tariff profile for various coefficients

	Initial	Final tariff rate after reduction			Reduction in percent		
Tariff line	tariff rate	c=.90	c=.75	c=.5	c=.90	c=.75	c=.5
Line 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Line 2	2.5	2.3	1.9	1.3	10.0	25.0	50.0
Line 3	5.0	4.5	3.8	2.5	10.0	25.0	50.0
Line 4	7.5	6.8	5.6	3.8	10.0	25.0	50.0
Line 5	10.0	9.0	7.5	5.0	10.0	25.0	50.0
Line 6	12.5	11.3	9.4	6.3	10.0	25.0	50.0
Line 7	15.0	13.5	11.3	7.5	10.0	25.0	50.0
Line 8	17.5	15.8	13.1	8.8	10.0	25.0	50.0
Line 9	20.0	18.0	15.0	10.0	10.0	25.0	50.0
Line 10	22.5	20.3	16.9	11.3	10.0	25.0	50.0

Line 11	25.0	22.5	18.8	12.5	10.0	25.0	50.0
Line 12	27.5	24.8	20.6	13.8	10.0	25.0	50.0
Line 13	30.0	27.0	22.5	15.0	10.0	25.0	50.0
Line 14	32.5	29.3	24.4	16.3	10.0	25.0	50.0
Line 15	35.0	31.5	26.3	17.5	10.0	25.0	50.0
Line 16	37.5	33.8	28.1	18.8	10.0	25.0	50.0
Line 17	40.0	36.0	30.0	20.0	10.0	25.0	50.0
Line 18	42.5	38.3	31.9	21.3	10.0	25.0	50.0
Line 19	45.0	40.5	33.8	22.5	10.0	25.0	50.0
Line 20	47.5	42.8	35.6	23.8	10.0	25.0	50.0
Line 21	50.0	45.0	37.5	25.0	10.0	25.0	50.0
Line 22	52.5	47.3	39.4	26.3	10.0	25.0	50.0
Line 23	55.0	49.5	41.3	27.5	10.0	25.0	50.0
Line 24	57.5	51.8	43.1	28.8	10.0	25.0	50.0
Line 25	60.0	54.0	45.0	30.0	10.0	25.0	50.0

Source: Computations from WTO database 2006

(ii). Non-Linear reduction formulas

A general non-linear formula can be specified by squaring the initial tariffs rate as shown in equation (a)

$$q = \left(t_0\right)^2 \text{ ---------- (a)}$$

The implication is that, the formula increases the reduction rate by a factor that is directly related to the initial tariff rate.[2] The formula results into all tariffs above 10 percent being reduced to zero. Due to the significant impact created by linear formula, the above equation has been amended to reduce its impact by deflating the amount of the reduction. This is done by dividing the above equation by a constant plus the original tariff rate as shown in the equation below.

$$q = \frac{\left(t_0\right)^2}{20} \text{ ----------(b)}$$

[2] Except where the initial tariff rate s less than or equal to 1.

$$q = \frac{(t_0)^2}{20 + t_0}$$ ----------(c)

The Swiss formula

An example of a non-linear formula, which has been used in the past, is the Swiss formula which was initially proposed by Switzerland during the Tokyo round of negotiations and adopted by developing countries and therefore the name Swiss formulae. . The formula can be specified as follows:

Let t_1 be the final tariff, t_0 the initial tariff. The Swiss Formula is given as:

$$t_1 = \frac{at_0}{a + t_0}$$ ---------- 1

Differentiating between the new tariff and the old tariff we get:

---------- 2

We know that the rate of reduction is given as:

$$R = \left| \frac{t_1 - t_0}{t_0} \right| \cdot 100$$ ----------3

Substituting equation 2 into equation 3 we get

$$R = \left| \frac{\frac{-(t_0)^2}{(a+t_0)}}{t_0} \right| \cdot 100$$

$$= \left| \frac{-(t_0)^2}{(a+t_0)t_0} \right| \cdot 100 \quad \text{----------4}$$

$$= \left| \frac{t_0}{a+t_0} \right| \cdot 100$$

The resulting formula is given below which indicates that as coefficient “A” increases the rate of tariff reduction decreases i.e. as the denominator increases the whole fraction decreases

i.e., the higher t_0 the higher will be the cut and the higher the coefficient “” A the lower will be the cut. Another important feature of the formulae is that, maximum of t_1 is always lower than the coefficient A.

$$t_1 = \frac{A * t_0}{A + t_0}$$

The formula has an element of asymmetry;

I. If the base rate is less than “A”, reduction rate will be less than 50%,
II. If the base rate is equal to “A”, reduction rate is also equal to 50%,
III. If the base rate is greater than “A”, the reduction rate is greater than 50%.

To give an elaborate illustration on how this formula works and since the value of the coefficient is critical to the effectiveness of the formula to reduce tariffs, five values are chosen: 5, 15, and 50 an hypothetical profile for various coefficients as shown in table 3.3 The table shows that an increase in the value of the coefficient results in a smaller overall reduction of the key descriptive statistics. When a is equal to 5, the average tariff reduction is 3.9 percent, tariff escalation ratio is 1.3. When a is equal to 15, the average tariff reduction increases to 8.8 percent, but the escalation coefficient rises slightly to 1.5. Finally, when a is 50, there is still a significant cut in the overall average. Despite

significant increase in the value the parameter by threefold, the escalating parameter rises by only 1.7. The implication is that the value of the coefficient is critical to the effectiveness of the formula in tariff reduction

Table 3.3 Impact of Swiss formula on the hypothetical tariff profile for various coefficients

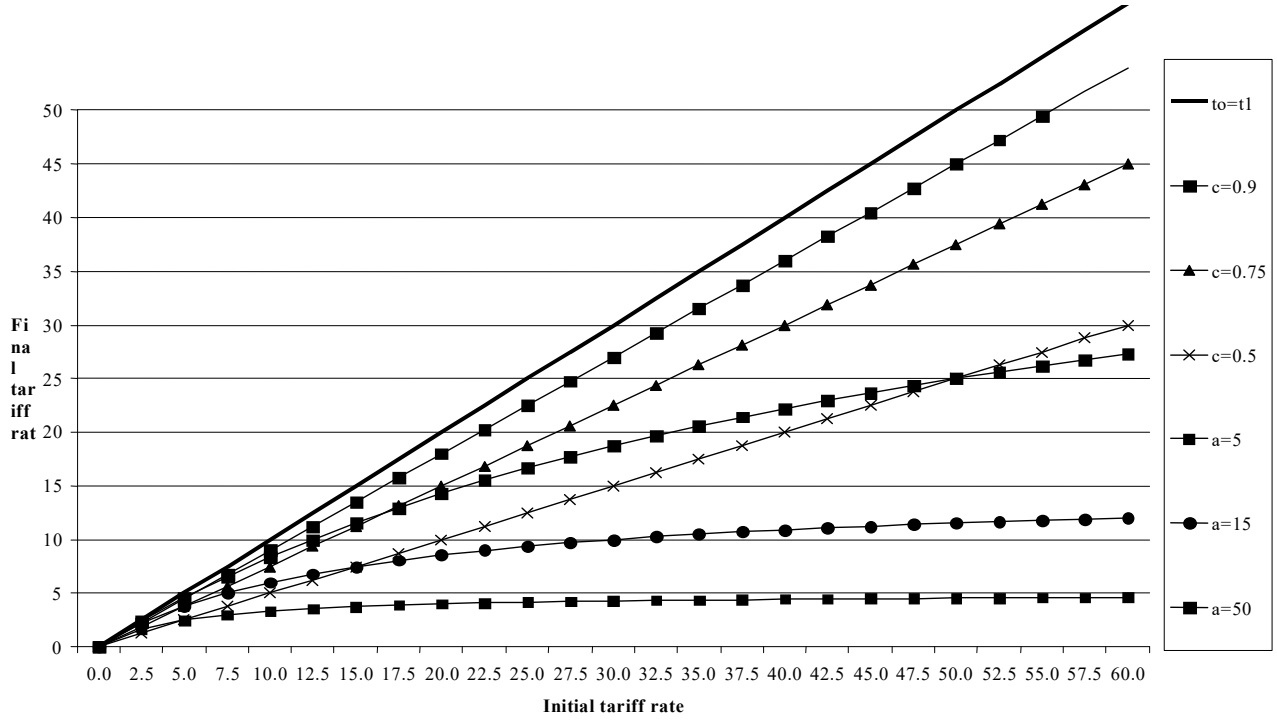
	Initial	Final tariff rate after reduction			Reduction in percent		
Tariff line	Tariff rate	A=5	a=15	a=50	a=5	a=15	a=50
Line 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Line 2	2.5	1.7	2.1	2.4	33.3	14.3	4.8
Line 3	5.0	2.5	3.8	4.6	50.0	25.0	9.1
Line 4	7.5	3.0	5.0	6.5	60.0	33.3	13.0
Line 5	10.0	3.3	6.0	8.3	66.7	40.0	16.7
Line 6	12.5	3.6	6.8	10.0	71.4	45.5	20.0
Line 7	15.0	3.8	7.5	11.5	75.0	50.0	23.1
Line 8	17.5	3.9	8.1	13.0	77.8	53.9	25.9
Line 9	20.0	4.0	8.6	14.3	80.0	57.1	28.6
Line 10	22.5	4.1	9.0	15.5	81.8	60.0	31.0
Line 11	25.0	4.2	9.4	16.7	83.3	62.5	33.3
Line 12	27.5	4.2	9.7	17.7	84.6	64.7	35.5
Line 13	30.0	4.3	10.0	18.8	85.7	66.7	37.5
Line 14	32.5	4.3	10.3	19.7	86.7	68.4	39.4
Line 15	35.0	4.4	10.5	20.6	87.5	70.0	41.2
Line 16	37.5	4.4	10.7	21.4	88.2	71.4	42.9
Line 17	40.0	4.4	10.9	22.2	88.9	72.7	44.4
Line 18	42.5	4.5	11.1	23.0	89.5	73.9	46.0
Line 19	45.0	4.5	11.3	23.7	90.0	75.0	47.4
Line 20	47.5	4.5	11.4	24.4	90.5	76.0	48.7
Line 21	50.0	4.6	11.5	25.0	90.9	76.9	50.0
Line 22	52.5	4.6	11.7	25.6	91.3	77.8	51.2
Line 23	55.0	4.6	11.8	26.2	91.7	78.6	52.4
Line 24	57.5	4.6	11.9	26.7	92.0	79.3	53.5
Line 25	60.0	4.6	12.0	27.3	92.3	80.0	54.6

Average	30.0	3,9	8,8	17,00	77,2	58,9	34,0
Maximum	60.0	4,6	12,0	27,3			
Std. Dev	18.4	1,1	3,3	8,1			
Coeff. Var.	61.3	28,1	36,8	47,7			
Escalation (line13/line5)	3.0	1,3	1,7	2,3			

Source:

Figure 3.1 gives a comparison of the linear cut and Swiss formula

Figure 3.1: Comparison of linear cut and Swiss formula



Source:

3.1 Tariff Negotiations, Techniques, Modalities and Formula Approaches

Since the start of trade negotiations many procedures and modalities of trade negotiations have evolved. At the beginning of GATT negotiations, contracting parties negotiated reciprocal bilateral market access concessions, which were provided to other contracting parties by virtual of their MFN principle (this procedure was referred to as request and offer procedure). This approach managed to reduce tariffs on industrial products by about 20% (Baldwin 1987). The technique was also used during the next four rounds of negotiations (Annecy (1949), Torquay (1950-01), Geneva (1955-56) and Dillon Round (1960-620), but during these rounds little liberalization was achieved, barely an average of 2.5 percent reduction in average tariffs (Laird, Santiago and Vanzetti 2003).

More comprehensive tariff reduction formulas evolved during the Kennedy and Tokyo round of negotiations. The simplest method used was the proportional cut or the linear reduction approach. During the Kennedy Round (1963-67) a 50 percent coefficient of tariff reduction was used, but because of the exceptions, the final average was only 35 percent reduction. The popular Swiss formula came into use during the Tokyo Round (1994-79) and a achieved a 30 percent reduction in average tariffs. The formula was referred to as harmonization approach because it makes more than proportional cuts to higher tariffs rates. It is particularly useful for reducing tariff peaks and tariff escalation.

The Swiss and linear cut formulas resulted into greater market access concessions as products with higher tariffs were liberalized more than those with low tariffs. These approaches provided improvements in market access for goods mostly exported by developing countries, but the permitted exemptions were precisely in those product areas.

In the Uruguay round (1986-94) a target 30 percent average reduction on industrial products was used, however the distribution between the tariff lines was left to be negotiated bilaterally i.e. by request and offer. At the same time the quad countries agreed in the Uruguay round to ten “zero-for zero” initiatives (beer, brown spirits, pulp and paper, furniture, pharmaceuticals, steel, construction equipment, medical equipment, agricultural equipment and toys) and one “harmonization” initiative-chemical products. After the Uruguay Round, the ITA used a zero-for-zero procedure, by which many countries agreed to reduce all tariffs to zero on the selected range of products.

Table 3.4 evolution of Modalities for tariff reduction

Round Covered	Developed Countries Cuts	Developing Countries Cuts
Uruguay Round (1986-94)	No Agreement reached on Formula, - Guideline quantitative **target of 33 1/3 % Cut** - at least as ambitious as Tokyo Round Trade Weighted Cuts: - *40% overall* - *37% products from Developing Countries* - *25% products from Least Developed Countries*	Concept of Less than Full Reciprocity, and Developed Countries not expected to achieve the same level, - In Agriculture, express guideline of 2/3s of the 36% set for developed countries (that is 24%) - In NAMA, tacit guideline of 22% at 2/3s of the developed, but actual level of cuts were less than 22%
Tokyo Round (1973-79)	Adoption of the Swiss Formula Approach, with achieved cuts at: – *33% weighted cut* – *39% simple average* – *But for Developing countries' products - effective cuts were only 25%* USA – used Swiss 14 EC etc – Swiss 16 *With flexibilities or exemptions subject to compensation*	**Same concept of Non-Reciprocity as in Kennedy Round, no mandatory formula approach**
Kennedy Round (1964-67)	Principle of "substantial linear tariff reductions" with **50%** "as a *working hypothesis* for the determination of the general rate of linear reduction" **-** *35% cuts achieved*	Non-Reciprocity Concept /Optional Participation for Developing Countries - Basic Reciprocity but "less than full reciprocity" to the effect that: "the developed countries cannot expect to receive reciprocity from the less developed countries"

		No Formal Linear cut obligation for developing countries
First 5 Rounds Geneva to Dillon (1947-62)	Weighted Percentage Cut - 36%	Optional Participation and only when requesting concessions

Sources: Anwarul Hoda, Tariff Negotiations and Renegotiations under the GATT and WTO Procedures and Practices, Cambridge University Press 2001

In the current on going negotiations of tariff reductions, many different proposals have been made, however not all countries place a high priority in reducing their own protection. For instance Kenya in its submission to the negotiating group have argued that they are unwilling to open their markets because they fear they will lose their newly established industries and an important source of revenue. Non of this formulas has attracted general endorsement, however many have the objectives or provisions aimed at achieving one or more of the following:

- Credit for autonomous liberalization, which will be guaranteed if the base for any tariff cuts is the bound tariff rate at or before the start of the negotiations;
- The harmonizing of tariff rates including the use of formulas that can cut higher tariffs more deeply and help reduce tariff peaks and escalation.
- The elimination of very low (“nuisance”) duties.
- A voidance of the adverse consequences of import- weighted cuts (used in the past. This cut allows countries to achieve an average cut objective while making small or no reductions in peak rates.
- Conversion of specific tariffs to advalorem equivalent rates before reduction. Specific rates are expressed as US dollars per import unit. They act as variable duties, offsetting low world market prices and eliminating consumer gains.
- Accelerated reductions under a “Swiss-type” (harmonizing) formula, leading to the elimination of duties or “zero for zero” negotiated elimination of some tariffs.

3.2 Current State of Play in the negotiations

After the collapse of the WTO trade negotiations in Cancun in December 2003.The general council of 1 August 2004 reaffirmed a full commitment to the commitment ministerial Declarations and decisions adopted at Doha and emphasized that Members should resolve to complete the Doha Work programme fully and to conclude successful negotiations launched at Doha.

In agriculture the General council adopted the framework set out in Annex A of the July package which calls for. "Substantial improvements in market access" A single approach tiered formula was proposed to ensure developed and developing country Members meet all the objectives of the Doha mandate taking into account developing countries different tariff structures. Members also agreed that special and differential treatment for developing Members would be an integral part of all elements in the negotiations."

To ensure that such a formula will lead to substantial trade expansion, the following principles were proposed for further negotiation:

I. Tariff reductions to be made from bound rates. Substantial overall tariff reductions to be achieved as a final result from negotiations.
II. Each Member (other than LDCs) to make a contribution. Operationally effective special and differential provisions for developing country Members tol be an integral part of all elements.
III. Progressivity in tariff reductions to be achieved through deeper cuts in higher tariffs with flexibilities for sensitive products. Substantial improvements in market access to be achieved for all products.

The number of bands, the thresholds for defining the bands and the type of tariff reduction in each band remain under negotiation. The role of a tariff cap in a tiered formula with distinct treatment for sensitive products to be further evaluated.

On sensitive products, the July package proposed without undermining the overall objective of the tiered approach, Members to designate an appropriate number, to be negotiated of tariff lines to be treated as sensitive taking account of existing commitments for these products. The principle of 'substantial improvement' to apply to

each product. It was further proposed that ‘Substantial improvement’ would be achieved through combinations of tariff quota commitments and tariff reductions applying to each product. On tariff quotas the July framework proposed, **“**Some MFN-based tariff quota expansion will be required for all such products. A base for such an expansion will be established taking account of coherent and equitable criteria to be developed in the negotiations. In order not to undermine the objective of the tiered approach for all such products, MFN based tariff quota expansion will be provided under specific rules to be negotiated taking into account deviations from the tariff formula. A minimum cut in the out of quota tariff rate to be established”.

In order to reach a balanced result and members, especially developing countries, the following other elements proposed included; reduction or elimination of in-quota tariff rates, and operationally effective improvements in tariff quota administration for existing tariff quotas. Tariff escalation was to be addressed through a formula to be agreed. While the issue of tariff simplification and special agricultural safeguard (SSG) remained under negotiation.

On special and differential treatment, the framework proposed that Developed and developing country Members sensitivities in agriculture are, like their tariff structures, fundamentally different. Having regard to their rural development, food security and/or livelihood security needs, special and differential treatment for developing countries will be an integral part of all elements of the negotiation, including the tariff reduction formula, the number and treatment of sensitive products, expansion of tariff rate quotas, and implementation period.”
Proportionality will be achieved by requiring lesser tariff reduction commitments from developing country Members.

The July framework recognizes the importance of long-standing preferences. Preference erosion to be addressed under conditions to be agreed.

3. An assessment of Possible tariff Reduction Formulae

Various formulae for Agricultural tariff reduction have been proposed to fulfil the objective of "substantially Improvement in market access" as envisaged in paragraph 13 of the Doha declaration Since the start of negotiations two general formula approaches have been put on the table. Those proposals range from using the UR type approach to the Swiss type, both in pure forms as well as intermediate solutions combining in different forms. The Uruguay round (UR)[3], an approach used in the Uruguay round negotiations implies that an average tariff reduction with minimum reduction rates that will be agreed and straight/linear method, specific sub case of the UR one, implying the same reduction rate across the board[4].The UR formula does not affect the tariff structures since it does not reduce the dispersion tariffs. The Swiss formula, a mathematical formula also referred to as harmonization approach implies greater reductions for high tariffs compared to low tariffs and automatically puts a ceiling on the level of tariffs[5]. The main difference between the two approaches is that the Uruguay round formula is independent of the initial tariff rate, while Swiss formula is dependent on the initial tariff rate.

To evaluate the alternative tariff reduction formulae, three aspects are used depending on the interests of each country.

I. The ability of the formulae to achieve some stated objective
II. Implications to the country's tariff structure
III. The ability to mitigate preferential erosion

In this particular paper no attempt is made to evaluate alternative tariff reduction formulae against incidence on preferential margins. The assessment is mainly based on some general qualitative considerations and a number of studies that have tried to quantify expected preferential erosion.

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[3] In mathematical terms the UR is given as $T_{1i} = (1-a_i)*T_{0i,}$ where $T_{1i,}T_{0i}$= the final (1) and the initial (0) tariff level of tariff line (i) and a_i= Reduction rate in tariff line (i), a_i is subject to the following conditions: $a_i \geq k$,k = minimum reduction rate and $\sum a_i/n = m$, n =total number of tariff lines, m = overall average reduction rate.

[4] mathematically the Linear approach is given as $T_1 = (1-a)*T_{0i}$, where T_{1i}, T_{0i} = the final (1) and the initial (0) tariff level of tariff line (i) and a= across the board deduction rate.

[5] Mathematically the swiss formula is presented as $T_{1i} = a* T_{0i} / (a + T_{oi})$, where $T_{1i,}, T_{0i,}$ = the final (1) and the initial (0) tariff level of tariff line (i), a = negotiated coefficient of the magnitude of which identifies the upper limit of tariffs.

To illustrate the ranking of various formulae with respect to stated objectives, a simplified hypothetical tariff structure is used comprised from seven tariff lines (Konadreas).The approach allows the comparison of different formulae in terms of four objectives:
Ambition through the implied tariff reductions and reduction in average tariff
Progressivity through the reductions in high and the reduction in tariff spread
Flexibility through its negative colleration to ambition and progressivity

3.3.1 Hypothetical application of the UR formula.

The UR implies an average reduction with minimum cut tariff line. For illustrative purpose the same parameters used in the UR are applied. During the UR Developed countries were to cut tariffs by an average of 36% and minimum of 15%, while developing countries were to cut tariffs by 24% and 10 % respectively. The pure UR does not significantly reduce average tariffs, but has a higher average tariff reduction, that means the outcome in terms of ambition is ambiguous. It does also not address the issue of tariff peaks and tariff escalations and leads to an increased tariff spread measured by the ratio of standard deviation to the average tariff since The UR formula does not also address the issue of tariff harmonization and has low ambition across countries, it is good in terms of flexibility and preference erosion. Members who are mainly concerned with addressing tariff peaks and tariff harmonization can not support this formula.

In mathematical terms the UR is given as $T_{1i} = (1-a_i)*T_{0i,}$ where $T_{1i,}T_{0i}$= the final (1) and the initial (0) tariff level of tariff line (i) and a_i= Reduction rate in tariff line (i), a_i is subject to the following conditions: $a_i \geq$ k,k = minimum reduction rate and $\sum a_i/n$= m, n =total number of tariff lines, m = overall average reduction rate.

Mathematically the Linear approach is given as $T_1 = (1-a)*T_{0i}$, where T_{1i}, T_{0i} = the final (1) and the initial (0) tariff level of tariff line (i) and a= across the board deduction rate

Table 3.5. Hypothetical application of the UR formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff (%)
US	6.4	182.7	36.0	15.0
EU	17.4	456.9	36.0	15.0
Japan	20.8	534.8	36.0	15.0
Brazil	35.5	55.0	24.0	10.0
Colombia	91.9	227.0	24.0	10.0
India	115.1	300.0	24.0	10.0

Kenya	100.0	00.0	24.0	10.0

Source: Konandreas (2004)

3.3.2 Application of the Swiss formula

The Swiss formula which is an extreme of the UR formula addresses the failures of the UR formula. It brings about high ambition and harmonization, even with the coefficient "a" above the 25 suggested by the US. However, it fails sought of addressing flexibility and proportionality. As it implies highly uneven reductions between countries. Since most developing countries have high bound tariffs, they will be expected to offer greater contribution in tariff reductions and serious erosion of nominal preference margins**.**

[1] Mathematically the Swiss formula is presented as $T_{1i} = a^* T_{0i} / (a + T_{oi})$, where $T_{1i,}, T_{0i,}$ = the final (1) and the initial (0) tariff level of tariff line (i), a = negotiated coefficient of the magnitude of which identifies the upper limit of tariffs.

Table 3.6. Hypothetical application of the Swiss formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff (%)
US	6.4	182.7	17.8	88.0
EU	17.4	456.9	37.1	94.8
Japan	20.8	534.8	34.6	95.5
Brazil	35.5	55.0	40.5	52.4
Colombia	91.9	227.0	63.2	81.9
India	115.1	300.0	66.6	85.7
Kenya	100.0	100.0	66.7	66.7
Note: Application the coefficient "A" of the Swiss formula was assumed to be 25 for developed countries and 50 for developing.				

Source: Konandreas (2004)

Although the above approaches were meant to reach a compromise, the different positions of country groups remained very much divergent and neither the UR type nor Swiss type on their pure form formed the basis for a compromise. As away forward and to move the negotiations a head. Harbinson, the chairman of the Agricultural negotiating committee, put forward a compromise formula aimed at bridging the gap between the two sides of the spectrum i.e. ambition (Swiss type approach) and flexibility (UR-type approach). This approach which was called the “banded approach”, tariffs for each country had to be allocated in different brands according to their respective levels. The approach proposed three bands for developed countries and four bands for developing countries. Tariff reductions in each band would be based on UR-type approach and a Swiss type was proposed across the bands which implied a higher reduction for higher bands and a lower reduction for the lower band. This proposal was rejected, especially among countries which were for flexibility and ambition (Marlena march 2005). A second attempt for a compromise approach was made jointly by the US and EU.This approach which was referred to as the “blended approach” was based on a combination of the UR and Swiss type approaches. The approach proposed a portion of tariff lines to be subjected to cuts through UR type approach, coupled with TRQs expansion while another portion through would be determined by the Swiss type approach. For the remaining portion of tariff lines, duty free access for developed countries and between 0-5% for developing countries. The approach also proposed the imposition of ceiling. Tariffs exceeding the ceiling, additional market access would have to be negotiated on a request and offer process. The designation of tariff lines in each category was left at the discretion of each WTO member. This a approach was neither accepted, facing major objection from a group ogf G-20 who instead put forward their own counter proposal.

3.3.3 Application of the Harbinson’s “banded” formula

The “banded approach” was seen as a compromise between the UR and the Swiss formula. It lies between the two formulae and includes elements from both approaches (hybrid type).The outcome of this approach may move to either side of the spectrum, depending on the parameters (averages and minimum within the band), the number of bands and thresholds.Ceteris paribus, the lower the average and minimum reductions within each band, the more the outcome will tend to be closer to pure UR approach and vice versa. Equally by increasing the number of bands by redefining the thresholds and adjusting accordingly the parameters to ensure progressivity implies that the outcome will move to the pure Swiss type approach. The banded approach leads to higher degree

of preferential erosion as compared to pure UR approach and lower preferential erosion as compared to Swiss type. The harbinson formula is therefore tougher than the pure UR, but not as ambitious as the pure Swiss, especially as regards tariff peaks.

Table 3.7. Hypothetical application of the Harbinson formula

WTO member	Average initial bound tariff (%)	Peak initial bound tariff (%)	Average tariff reduction (%)	Cut of peak tariff (%)
US	6.4	182.7	41.3	45.0
EU	17.4	456.9	44.7	45.0
Japan	20.8	534.8	44.2	45.0
Brazil	35.5	55.0	29.6	20.0
Colombia	91.9	227.0	35.8	30.0
India	115.1	300.0	36.1	30.0
Kenya	100.0	100.0	35.0	25.0

Harbinson formula

Developed countries: 3 band reduction formula

tariff > 90 average reduction of 60% with a minimum 45%
15 < tariff ≤ 90 average reduction of 50% with a minimum 35%
tariff ≤ 15 average reduction of 40% with a minimum 25%

Developing countries: 4 band reduction formula

tariff > 120 average reduction of 40% with a minimum 30%
60 < tariff ≤ 120 average reduction of 35% with a minimum 25%
20 < tariff ≤ 60 average reduction of 30% with a minimum 20%
tariff ≤ 20 average reduction of 25% with a minimum 15%

Source: Konandreas (2004)

3.3 The blended formula

The blended formula is highly depended on the parameters used and its entire specification and as such is very unpredictable. Based on existing simulation studies, the approach tends to deliver in terms of ambition, but the outcome varies between developed and developing countries as well as within the groups. The higher the portion of tariff lines subject to Swiss type, the higher the reduction in average tariffs will be and vice versa. The blended approach fails in terms of proportionality and progressivity or

harmonization effects depends from the portion of tariff lines subject to Swiss type of UR type approaches. The higher the proportion of tariff lines subject to Swiss type reductions, the greater the harmonization effects will be and vice versa. This also applies to flexibility and preference erosion.

Table 3.8. Hypothetical application of the blended formula

WTO member	**Average initial bound tariff (%)**	**Peak initial bound tariff (%)**	**Average tariff reduction (%)**						**Cut of peak tariff (%)**
			Assumed proportion of tariff lines between UR/Swiss/duty free categories (%)						
			2.5/67.5/30	***5/65/30***	***10/60/30***	***20/50/30***	***30/40/30***	***40/30/30***	
US	6.4	182.7	22.9	22.4	22.2	23.4	26.0	29.6	15.0
EU	17.4	456.9	43.8	43.0	40.9	38.6	37.8	38.3	15.0
Japan	20.8	534.8	40.1	38.7	36.8	35.0	35.0	36.1	15.0
			Assumed proportion of tariff lines between UR/Swiss/"duty free" categories (%)						
			5/90/5	***10/85/5***	***20/75/5***	***40/55/5***	***60/35/5***	***80/15/5***	
Brazil	35.5	55.0	40.3	38.3	36.1	32.6	29.6	26.4	10.0
Colombia	91.9	227.0	62.2	59.6	54.9	47.2	40.8	34.7	10.0
India	115.1	300.0	65.7	63.3	58.7	49.1	40.9	32.5	10.0
Kenya	100.0	100.0	66.0	63.8	59.6	51.0	42.5	33.9	10.0

Notes:

The choice of parameters made, in order to demonstrate the application of the blended formula, was guided to some degree by what is stated in the Framework text but were largely arbitrary otherwise. The basic assumptions made are as follows:

- In all scenaria the proportion of tariff lines under the duty free category was assumed to be the same, namely, 30% for developed countries (this comprises both those that are already zero and those to become zero), and 5% for developing. Hence, the variation between the different scenaria was between the portions of tariff lines that were assumed to fall under the UR and the Swiss formulae.
- For both developed and developing countries the tariff lines assumed to fall under the duty free category were those already low, i.e. at the very bottom of the tariff range. For developed countries these tariffs are reduced to zero while for developing to 5%.
- For both developed and developing countries it was assumed that the UR formula would apply to tariff lines at the top of the range of tariffs. The additional specification for a minimum and an average cut contained in the blended formula was ignored (for the sake of simplicity), and a linear cut was assumed instead equal to 36% for developed countries and 24% for developing.
- Finally, for the remaining middle-range of tariff lines the Swiss formula was assumed to apply with a coefficient of 25 for developed countries and 50 for developing.

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Source: Adopted from Konandreas (2004)

Based on the various submissions the chairman of the WTO general council, Perez del Castillo presented his own compromise proposal. He suggested “a blended approach” for developed countries and two alternatives for developing countries; a reduction of tariffs through the “Harbinson blended approach” with three bands including provisions for TRQs expansion of high band along with the provision to designate special products (SP) that could be subject to a minimum cut only but without TRQ expansion and tariff reductions through the use of the “blended approach” but without the requirement of restricting tariffs to a 50% maximum for certain portion of tariff lines.

The chairman of WTO ministerial Conference at Cancun, Lius Ernest Derbez, made modifications to the Castillo text which came to be called the derbez text. Derbez text was based on the adoptions of a single approach for both developed and developing countries. The “blended approach” was the basis for tariff reductions. Developed countries to apply additional discipline in the form of requirement to achieve an overall average tariff reduction target while developing countries to follow the same approach but with different reduction rates and coefficients as well as additional flexibility for special products (SP).The Derbez proposal was also not accepted.

A more compromise approach was the July framework. Like the derbez, the July framework is based on a single approach for both developed and developing countries with the “blended approach” of Harbinson named as a “tiered approach”. The approach leaves all specific method for tariff reductions optional and the number of tiers and relevant thresholds open. However, proposals it proposes subjecting higher tariffs to higher cuts and substantial tariff reductions to be achieved by taking account the need for flexibility for sensitive products and additional flexibility to specific products for developing countries.

SUMMARY OF ALTERNATIVE APPROACHES FOR TARIFF REDUCTIONS

Proposal	Core Modalities	Developed Countries	Developing Countries
Harbinson (Banded Approach)	Single approach based on the allocation of tariffs in different bands. 3bands for developed countries. 4 bands for developing countries. Reductions within the bands through UR formula.	$T_{1i} = (1-a_i)* T_{0i}$ Where: For $T_{0i} > 90\%$ $(AV)a_i = 60\%$ $(MIN)a_i = 45\%$ For $15\% < T_{0i} \leq 90\%$ $(AV)a_i = 50\%$ $(MIN)a_i = 35\%$ For $T_{0i} \leq 15\%$ $(AV)a_i = 40\%$ $(MIN)a_i = 25\%$	$T_{1i} = (1-a_i)* T_{0i}$ Where: For $T_{0i} > 120\%$ $(AV)a_i = 40\%$ $(MIN)a_i = 30\%$ For $60\% < T_{0i} \leq 120\%$ $(AV)a_i = 35\%$ $(MIN)a_i = 25\%$ For $20\% < T_{0i} \leq 60\%$ $(AV)a_i = 30\%$ $(MIN)a_i = 20\%$ For $T_{0i} \leq 20\%$ $(AV)a_i = 25\%$ $(MIN)a_i = 15\%$
Joint EU-US (Blended Approach)	Single approach based on a blend of various formulae. A portion of tariff lines subject to the U.R. formula. Another portion of tariff lines subject to Swiss formula. Finally a portion of tariff lines shall be duty-free. Reduction rates and the Swiss coefficient unspecified.	For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k = [?] $(AV)a_i$ =[?] $(MIN)a_i$ =[?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] For a portion N_l of tariff lines. $T_{1i} = 0$ Where N_l = [?] $N_k + N_m + N_l = 1$ Tariff ceiling = [?] For tariffs > than the ceiling additional market access through request and offer.	For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k = [?] $(AV)a_i$ = [?] $(MIN)a_i$ = [?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] For a portion N_l of tariff lines. $T_{1i} = 0$ Where N_l = [?] $N_k + N_m + N_l = 1$
G-20	Two different approaches: Blended for developed countries. UR for developing countries.	For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k =[?] $(AV)a_i$ = [?] $(MIN)a_i$ = [?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] For a portion N_l of tariff lines. $T_{1i} = 0$ Where	$T_{1i} = (1-a_i)* T_{0i}$ Where: $(AV)a_i$ = [?] $(MIN)a_i$ = [?]

		N_l = [?] $N_k + N_m + N_l = 1$ Target for average tariff reduction under the first two categories = [?] Target for tariff ceiling = [?]	
Perez del Castillo	Different options. Developed countries: Blended approach. Developing countries: Either Banded approach (3 bands) or Blended approach (slightly simplified)	For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k = [?] $(AV)a_i$ = [?] $(MIN)a_i$ = [?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] For a portion N_l of tariff lines. $T_{1i} = 0$ Where N_l = [?] $N_k + N_m + N_l = 1$ Tariff ceiling = [?] For tariffs > than the ceiling additional market access through request and offer.	$T_{1i} = (1-a_i)* T_{0i}$ Where: For $T_{0i} > X\%$ $(AV)a_i = A\%$ $(MIN)a_i = M\%$ For $Y\% < T_{0i} \leq X\%$ $(AV)a_i = B\%$ $(MIN)a_i = N\%$ For $T_{0i} \leq Y\%$ $(AV)a_i = C\%$ $(MIN)a_i = P\%$ Where A>B>C and M>N>P **OR** For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k = [?] $(AV)a_i$ = [?] $(MIN)a_i$ = [?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] $N_k + N_m = 1$
Derbez	Return to the single approach based on modified Blended.	For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k = [?] $(AV)a_i$ = [?] $(MIN)a_i$ = [?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] For a portion N_l of tariff lines. $T_{1i} = 0$ Where N_l = [?] $N_k + N_m + N_l = 1$	For a portion N_k of tariff lines. $T_{1i} = (1-a_i)* T_{0i}$ Where N_k = [?] $(AV)a_i$ = [?] $(MIN)a_i$ = [?] For a portion N_m of tariff lines. $T_{1i} = a_i*T_{0i}/(a_i+T_{0i})$ Where N_m = [?] a_i = [?] For a portion N_l of tariff lines. $T_{1i} = 5\%$ Where N_l = [?] $N_k + N_m + N_l = 1$

		Overall average tariff reduction rate = [?] Tariff ceiling = [?] For tariffs > than the ceiling additional market access through request and offer.	Overall average tariff reduction rate = [?]

3.4 Kenya's interest in the Tariff reduction negotiations

Kenya like many other African countries is trade and preference dependent. About 97% of Kenya's exports to the EU are duty free while the African growth and opportunity cost (AGOA) trade preferences provided by USA makes Kenya one of the leading African exporters of textile products to the US market. The US, Japan and other OECD countries although not significant offer generalized system of trade preferences (GSP) to Kenyan exports. Kenya's engagement in various African regional trading blocks such as East African community (EAC), Common market for East and Southern African (COMESA) offer market access preferences and has substantially improved Kenya's market access in the region. Kenya therefore needs to have both offensive and defensive interests in all countries participating in the negotiations.

On the offensive side, the country has to ensure that tariff reductions will offer market access opportunities for her exports in both traditional market outlets as well as new ones.

On the defensive side, the country should ensure that it retains an appropriate level of protection in domestic market since tariff revenues are important in total budgetary resources and that tariffs constitute the only practical way available to support the agricultural sector. Mitigation of preferences expected from tariff reductions in countries where Kenya enjoy preferential treatment, especially in The EU. It is expected that even with moderate tariff reductions i.e., the Harbinson's 3 band formula, there will be significant erosion of preferential margin.

3.5 Specific proposals and their implications to Kenya

3.5.1 G-20 proposal on market access

A Group of 20 developing countries comprising of Argentina, Brazil, China, Cuba, Egypt, India, Indonesia, Mexico, Nigeria, Pakistan, Paraguay, Philippines, South Africa, Thailand, Tanzania, Valenzuela and Zimbabwe has presented new proposals on market access and domestic support as part of the WTO agriculture negotiations. The Group recalls that tariff reduction formula is the main component of market access pillar and should therefore be negotiated before addressing the issues of flexibilities for developing countries. TheG-20 proposed two different scenarios, one for developed countries and the other for developing countries. According to the proposal, developed countries will undertake a tariff cut of at least 54% on average, while developing countries will be subject to a maximum tariff cut of 36% on average. The group maintains that overall proportionality of commitments between developed and developing countries should be achieved through lower tariff reductions and higher threshold for the bands. Developing countries should cut less than 2/3 of the cut to be undertaken by developed countries.

In order to accomplish that, the G-20 proposed a formula with two different set of bands as well as two sets of tariff reduction rates for developed and developing countries. Developed countries would have four bands, with thresholds of 0-20%, 20-50%, and 50-75% and above 75%. Tariffs within the bands would be subjected to linear cuts of 45%, 55%, 65% and 75% respectively. The group proposed a cap of 100 % on tariffs.

Developing countries would also have four bands, with thresholds of 0-30%, 30-80%, and 80- 130% and above 130%. Tariffs within the bands would be subjected to linear cuts of 25%, 30%, 35% and 40% respectively. There would be a cap of 150% on tariffs.

Table 3.10: Summary table of G-20 Proposal

Thresholds Developed countries	Thresholds Developing countries	Developed countries Linear cuts	*Developing countries Linear cuts*
0≤20	*45%*	*0≤30*	*25%*

Thresholds Developed countries	Thresholds Developing countries	Developed countries Linear cuts	*Developing countries Linear cuts*
>20≤50	*55%*	*>30≤80*	*30%*
>50≤75	*65%*	*>80≤130*	*35%*
>75	*75%*	*>130*	*40%*
Cap: 100%		*Cap: 150%*	

The G-20 proposed a linear cut within the bands as the middle ground in market access negotiations. In order to bring down prohibitively high tariffs the G-20 proposed a cap for developed countries of 100 percent and for developing 150 percent.

The G-20 maintained that overall proportionality of commitments between developed and developing countries should be achieved through lower tariff reductions and higher thresholds for the bands. Developing countries to cut less than two-thirds of the cut made by developed countries.

3.5.2 Proposal by the EU

The EU tabled what they called as a conditional proposal in the Doha development Round as of 10th October 2005. In seeking to find a common approach among members, the EU accepted to move away from the so-called UR approach, to one based on proposals by the G20 group by acceptance of a linear approach for the tariff reduction formula.

On market access in agriculture, the EU has proposed four tariff bands with higher cuts for higher tariffs and some limited flexibility around a linear cut in some bands. Highest band tariffs over 90% to be cut by at least 50%. The EU has proposed a 2/3 reduction for developing countries, tariff capping as proposed by the G-20 (Developed 100% and developing 150%) and 5% (100 tariff lines for EU) of tariff lines to be reserved as sensitive products.

The EU has accepted the G20's linear proposal approach to tariff cuts provided that this includes some defined and limited degree of flexibility.

3.5.3 U.S. Proposal

The United States proposes ambitious results in all three pillars of the agriculture negotiations: export competition, market access, and domestic support. The U.S. proposal is contingent on comprehensive reform in all pillars and meaningful commitments by all members, except the least developed countries. Special and differential treatment and other provisions of the July 2004 Framework will be developed in the negotiations to complement the elements below.

On Market Access Balancing, the new proposal on domestic support the Us proposes substantial reductions to be made in tariffs, yielding deeper cuts on higher tariffs as established in the July 2004 Framework, through a progressive formula based on the following parameters:

Table 3.11: Summary of the US proposal

Developed Countries			Developing Countries		
Tiers (%)`	Cuts at …		Tiers (%)	Cuts at …	
	… Beginning of tier	… end of tier		… Beginning of tier	… end of tier
0 – 20	55%	65%	0 – 20	a	b
20 – 40	65%	75%	20 – 40	b	c
40 – 60	75%	85%	40 – 60	c	d
60 →	85%	90%	60 →	d	e
Cap: 75%			Cap: x%		

The July framework calls for progressive tariff reductions delivering deeper cuts to higher tariffs. The framework committed members to substantial improvement in market access of all products including sensitive ones, to be granted through a combination of tariff quota expansion and tariff reductions. The framework established that developing countries will not be expected to cut tariffs as aggressively as developed economies.

3.5.4 ACP *proposal on market access*

The African, Caribbean and pacific (ACP) group of countries submitted a proposal on market access on agriculture in October 2005.The ACP proposal was welcomed by many members of the group, including Kenya.

The ACP countries in presenting their proposal emphasized the following;

1. The ACP is willing to contribute to the reform process in a manner that is compatible with its financial and development needs, and policy objectives. The group will not accept an outcome in market access that disproportionately places the burden of reform on developing countries.

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On the Formula for tariff reductions the ACP group of countries proposed the following:

i) Proportionality will be achieved by guaranteeing that the overall outcome of tariff reduction commitments by developing countries is lower than that required from developed countries. The average reduction of tariffs by developing countries will be adjusted downwards to guarantee the satisfactory implementation of the proportionality principle.

ii) A linear uniform cut within the bands with flexibility to allow certain tariff lines within the bands to be cut by less. The group proposes four bands with different thresholds for developing countries and developed countries as shown below.

iii) Developing countries will reduce their tariffs on the basis of the cuts proposed in the table below..

iv) The ACP considers the concept of tariff capping as prejudicial to its development concerns.

Table 3.12: Summary of the ACP proposal

Developed countries	Developing countries[6]	
Thresholds	Thresholds	Linear cut (%)
> 80	> 150	30

[6] These figures are indicative and are without prejudice to the right of individual Members to submit further proposals.

> 50 ≤ 80	> 100 ≤ 150	25
> 20 ≤ 50	> 50 ≤ 100	20
0 ≤ 20	0 ≤ 50	15
Capping:	None	None

The proposal however, does not propose rates for developed countries.

v) The overall average reduction of tariffs by developing countries shall not exceed 24%. This reduction rate are significantly lower than those proposed by the US and G20.

8. The condition of developing country Members with tariff ceilings and homogeneous low bindings must be taken into account through specific modalities which include the following options:

i) These Members will be subject to the overall average reduction only keeping in mind the need for a fair and equitable outcome and their capacity to contribute to the reform process.

ii) They will distribute their tariff lines across the lower tiers of the formula on the basis of their own assessment of sensitivities.

iii) Irrespective of the thresholds for the tiers to be agreed, they will not be expected to undertake the level of cuts required in the highest tiers.

3.5 Results of simulations

Table 3.10: G 20 and ACP proposals

	Applied tariff	In initial bound tariff	Cut by UR Proposal	Harbinson Proposal Higher ambition	Cut by EU proposal	Cut by G2o proposal I	Cut by ACP FT	Water in tariff UR proposal	Water in tariff EU proposal	Water in tariff G20 proposal	Water in tariff ACP proposal	Water in tariff ACP proposal
Bovine meat	35	100	66	65	65	65	80	31	30	30	45	30
Sheep meat	35	100	66	65	65	65	80	31	30	30	45	30
Pig meat	35		66	65	65	65	80	31	30	30	45	30
Poultry	35	100	66	65	65	65	80	31	30	30	45	30
Milk, fresh	35	100	66	65	65	65	80 80	31	30	30	45	30
Milk, conc.	35	100	66	65	65	65	80	31	30	30	45	30
Butter	35	100	66	65	65	65	80	31	30	30	45	30
Cheese	35	100	66	65	65	65	80	31	30	30	45	30
Wheat	35	100	66	65	65	65	80	31	30	30	45	30
Rice	35	100	66	65	65	65	80	31	30	30	45	30
Barley	35	100	66	65	65	65	80	31	30	30	45	30
Maize	34.48	100	66	65	65	65	80	31.52	30.52	30.52	45.52	30.52
Sorghum	15	100	66	65	65	65	80	31	50	50	65	50
Pulses	35	100	66	65	65	65	80	31	30	30	45	30
Tomatoes	35	100	66	65	65	65	80	31	30	30	45	30
Roots & tubers	35	100	66	65	65	65	80	31	30	30	45	30
Apples	35	100	66	65	65	65	80	31	30	30	45	30

Citrus fruits	35	100	66	65	65	65	80	31	30	30	45	30
Bananas	35	100	66	65	65	65	80 80	31	30	30	45	30
Other tropical fruits	35	100	66	65	65	65	80	31	30	30	45	30
Sugar	100	100	66	65	65	65	80	-34	-35	-35	-20	30
Coffee green	15	100	66	65	65	65	80	51	50	50	65	30
Coffee roasted	0	100	66	65	65	65	80	66	65	65	80	30
Coffee extracts	35	100	66	65	65	65	80	31	30	30	45	30
Cocoa beans	15	100	66	65	65	65	80	41	50	50	65	30.52
Cocoa powder	0	100	66	65	65	65	80	66	65	65	80	50
Cocoa butter	15	100	66	65	65	65	80	41	50	50	15	30
Chocolate	35	100	66	65	65	65	80	31	30	30	45	30
Tea	15	00	66	65	65	65	80	41	50	50	15	30
Tobacco leaves	20	100	66	65	65	65	80	46	45	45	60	30
Cigars	0	100	66	65	65	65	80	66	65	65	80	30
Cigarettes	0	100	66	65	65	65	80	66	65	65	80	30
Other mfr tobacco20	30	100	66	65	65	65	80 80	31	35	35	50	30

Oilseeds	10.2	100	66	65	65	65	80	55.8	54.8	54.8	69.8	30
Cotton linters	3	100	66	65	65	65	80	63	62	62	77	30
Vegetable oils	2.64	100	66	65	65	65	80	63.30	62.30	62.30	77.56	30

Source: Author simulations

From the two tables above, the following observations can be made

I. The ACP proposal cuts Kenya's agricultural tariffs less than any of other the other four proposals simulated, the G20 , the EU, Harbinson and the Uruguay round proposal. The final average bound tariff after the application of the ACP formula is 80 percent. The "water in tariff", the difference between the average bound tariff rate and the average applied tariff rate is around 56.6 percent. This gives the country some flexibility to raise tariffs from the current applied when a nee arises. However, the applied tariff for sugar is equivalent to the bound tariff rate.

II. This implies that at anew bound rate of 80 percent, Kenya will not be able to protect the sector any more from imports.

III. The Uruguay round cuts Kenya's agricultural bound tariff by 24 percent, implying that the new average bound tariffs will be 76 percent, therefore "water in tariff" will be 51.6 percent. Like the ACP, the UR affects only, the Sugar sector applied tariffs and gives room for some flexibility given that most of Kenya's tariffs are around 35 percent apart from the dairy sector whose maximum applied tariffs are currently at 60 percent.

IV. The Harbinson, G-20 and the EU proposals cuts Kenya's agricultural bound tariffs by 35 percent bringing the new bound tariff to 65 percent. These three proposals, although affects only the applied tariff for sugar, they significantly reduce the "water in tariff" and therefore reduce the level of flexibility, especially for the dairy sector. While most of the other tariff lines will have" water in tariff" of

about 39.5 percent at minimum, some of the tariff lines in the dairy sector will have flexibility of only 5 percent.

3.5.5 The Revised draft Modalities for Agriculture

After the Hong Kong Ministerial conferences in 2005, the chairman of the agricultural committee on special sessions has drafted a revised version of the modalities for agricultural negotiations as per the mandate given to him. The draft identifies small and vulnerable economies using indicators of average share for the period 1999-2004 of the world merchandise trade. The draft defines small and vulnerable economies as countries whose world trade merchandise does not exceed 0.16 percent while Agricultural trade and Non-agricultural trade (NAMA) does not exceed 0.10 percent and 0.40 percent respectively. Kenya's share of total merchandise trade is 0.052 percent (imports and exports), share of world agriculture 0.215 percent and share of NAMA 0.062 percent and therefore qualifies to be in that category (WTO job (07)/128).

Implications to Agricultural Tariff Structure

According to the chairman draft, Kenya is expected to reduce agricultural tariff lines maximum by 24%. This means that, Kenya's agricultural final bound tariff will be on average 76%. This means that like the Uruguay formula, "water in tariff" will be 51.6 percent, only the Sugar sector applied tariffs will be affected. The proposal allows for some flexibility given that most of Kenya's tariffs are around 35 percent apart from the dairy sector whose maximum applied tariffs are currently at 60 percent.

Revenue Implications

Revenue implications are provided in table 3.11. The new draft proposal will only affect the sugar sector. The analysis done at 8 digit level shows that, imports will increase about US $ 16,280840 in trade value, but there will be loose of revenue of about US $14,987,570, about 5% of the agricultural trade revenue. The revenue loose is mainly from the sugar whose six tariff lines will be affected by the cut.

Table 3.11Tariff Lines to be affected by the revised draft

HS Code	Product Description	Trade Value (1000US$)	Initial Bound Duty (%)	Initial Applied duty	New bound duty	New applied duty
17011190	Cane sugar	3125.412	100	100	76	100
17011200	Beet sugar	12.293	100	100	76	100
17019110	Containing added flavouring or colouring matter	273.998	100	100	76	100
17019190	Containing added flavouring or colouring matter	273.998	100	100	76	100
17019910	Other	27964.666	100	100	76	100
17019990	Other	27964.666	100	100	76	100

Source: Simulations 2007

Table 3.12 Revenue implications on the revised draft proposal

Simulation Results			
Initial bound tariff average	100	I initial Import Value	6345562.17
New bound duty average	76	New import trade value	618261.354
Initial Applied tariff average	24.6	Trade creation	16290.84
New applied duty average	24.3	Revenue Loss	14987.57
		% loss in revenue	5%

Source: Simulations 2007

4.0 Policy Conclusions and Recommendations

4.1 Conclusions

I. The proposed tariff reduction formulae will reduce Kenya's flexibility in using tariffs as protection instruments

II. Over the years Kenya has either voluntary or structural adjustment programmes significantly reduced her agricultural tariff lines

III. Although bound tariffs will not be affected except for sugar, meaning that revenue loose will be minimal, only in sugar subsetcor.

4.2 Recommendations

I. Any tariff reduction modalities to be negotiated by Kenya should be able to take into consideration the country's interest.

II. Each round of negotiations should take into account the need for appropriate policy space that would allow Kenya to pursue agricultural policies that are supportive of her development need, poverty reduction, food security and live hood concerns.

III. Any modality to be agreed upon should take the issue of less than full reciprocity into account as per the Doha mandate. It should allow the operationalisation of meaningful and binding special and differential treatment for Kenya. In this respect, it should be emphasized that the non-linear approach does not provide the basis for equitable results. Developing countries need flexibity for their developmental and industrial objectives.

IV. Kenya should identify an approach, which take into account, protecting the sensitive sectors.

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Annex Table 1

	Average Tariff Rate (unweighted in %) /a			Bound Tariff Rate (unweighted in %)		Binding Coverage (in %)	
Country/Group /b	Year	All Goods	Agriculture	All Goods	Agriculture	All Goods	Agriculture
Bangladesh	2003	19.5	21.7	163.8	188.5	15.8	100.0
Benin	2004	12.1	15.2	28.3	61.8	39.4	100.0
Bhutan	2002	16.6	20.1				
Burkina Faso	2004	12.0	14.5	41.9	98.1	39.2	100.0
Burundi	2003	23.5	36.1	68.3	95.1	21.8	100.0
Cambodia	2002	16.4	19.7				
Cameroon	2003	18.0	22.0	79.9	80.0	13.3	100.0
Central Africa Rep.	2004	18.0	22.3	36.2	30.0	62.5	100.0
Chad	2004	16.8	21.4	79.9	80.0	13.5	100.0
Congo Dem Rep.	2004	12.0	13.1	96.2	98.2	100.0	100.0
Congo Rep.	2003	18.0	22.3	27.5	30.0	16.0	100.0
Cote d'Ivoire	2002	11.9	15.0	11.1	14.9	33.1	100.0
Ethiopia	2002	18.8	22.4				
Gambia	2003	12.8	15.5	102.0	103.5	13.7	100.0
Ghana	2004	12.3	18.0	92.5	97.1	14.3	100.0
Guinea	2004	6.6	6.6	20.1	39.7	38.9	100.0
Guinea-Bissau	2004	12.0	14.5	48.6	40.0	97.7	100.0
Haiti	2003	9.0		17.6	21.7	89.2	100.0
India	2004	28.3	30.0	49.8	114.5	73.8	100.0
Kenya	2004	17.2	20.1	95.7	100.0	14.6	100.0
Kyrgyz Rep.	2003	5.3	8.8	7.4	12.3	99.9	100.0
Lao PDR	2003	8.6	15.9				
Lesotho	2003	6.6	10.4	78.6	200.0	100.0	100.0
Madagascar	2003	5.4	5.5	27.4	30.0	29.7	100.0
Malawi	2003	13.4	15.7	76.1	121.7	31.2	100.0
Mali	2004	12.0	14.5	28.8	59.2	40.6	100.0
Mauritania	2004	10.6	12.4	19.6	37.7	39.3	100.0
Moldova	2004	4.9	10.3	6.7	12.2	100.0	99.9
Mongolia	2004	5.0	5.1	17.6	18.9	100.0	100.0
Mozambique	2003	12.1	16.7	97.5	100.0	13.6	100.0
Myanmar	2003	4.8	8.7	83.6	102.8	17.3	100.0
Nepal	2003	13.8	14.0				
Nicaragua	2003	5.1	10.8	41.7	43.5	100.0	100.0
Niger	2004	12.1	14.0	44.3	83.1	96.8	100.0
Nigeria	2004	26.7	40.1	118.4	150.0	19.3	100.0
Pakistan	2004	15.9	13.9	52.4	97.1	44.3	92.6
Papua New Guinea	2004	6.0	14.9	31.8	43.2	100.0	100.0
Rwanda	2003	17.5	14.3	89.5	74.3	100.0	100.0
Senegal	2002	12.0	13.9	30.0	29.8	100.0	100.0
Sierra Leone	2004	13.9	17.2	47.4	40.3	100.0	100.0
Solomon Islands	2003	22.2	34.0	78.8	70.7	100.0	100.0
Sudan	2003	21.5	28.8				

Tajikistan	2004	8.0	9.9				
Tanzania	2004	13.5	20.3	120.0	120.0	13.3	99.8
Togo	2004	12.1	15.1	80.0	80.0	14.0	100.0
Uganda	2004	7.3	9.6	73.3	77.7	15.8	100.0
Uzbekistan	2003	10.6	10.8				
Vietnam	2004	13.7	18.1				
Yemen	2000	12.8	15.2				
Zambia	2004	14.0	18.8	106.4	123.3	16.8	100.0
Zimbabwe	2003	16.6	25.7	94.1	143.4	21.0	100.0
Albania	2004	7.5	9.0	7.0	9.4	100.0	100.0
Algeria	2004	18.4	18.5				
Angola	2003	8.8	9.7	59.2	52.8	100.0	100.0
Antigua and Barbuda	2004	9.6	14.7	58.7	105.1	97.9	99.9
Argentina	2004	11.9	8.8	31.9	32.6	100.0	100.0
Armenia	2004	2.7	7.8	8.5	14.7	100.0	100.0
Azerbaijan	2002	8.7	12.7				
Barbados	2004	16.0	37.1	78.1	111.2	97.9	100.0
Belarus	2004	10.3	10.8				
Belize	2003	10.5	17.8	58.2	101.4	98.0	100.0
Bolivia	2004	7.7	7.8	40.0	40.0	100.0	100.0
Bosina and Herzegovina	2003	5.2	3.5				
Botswana	2004	5.8	9.1	18.8	37.5	96.5	99.5
Brazil	2004	10.9	10.4	31.4	35.5	100.0	100.0
Bulgaria	2004	11.5	22.9	24.5	35.6	100.0	100.0
Chile	2004	5.9	6.0	25.1	26.0	100.0	100.0
China	2004	10.3	15.0	10.0	15.8	100.0	100.0
Colombia	2004	11.6	17.1	42.9	91.9	100.0	100.0
Costa Rica	2004	7.0	15.1	42.8	42.5	100.0	100.0
Croatia	2004	5.6	12.1	6.0	9.4	100.0	100.0
Cuba	2004	10.7	10.9	21.3	37.0	30.9	100.0
Czech Rep.	2004	4.9	10.0	5.0	10.0	100.0	100.0
Djibouti	2002	31.0	20.4	40.9	47.3	100.0	100.0
Dominica	2003	9.9	19.8	58.7	112.2	94.8	100.0
Dominican Rep	2004	8.5	13.0	34.9	39.6	100.0	100.0
Ecuador	2004	11.3	15.6	21.7	25.5	99.8	99.8
Egypt	2004	19.1	18.3	37.2	95.3	98.8	99.7
El Salvador	2003	7.4	12.4	36.6	42.1	100.0	100.0
Equatorial Guinea	2003	18.0	22.3				
Estonia	2003	3.3	14.3	8.6	17.5	100.0	100.0
Fiji	2004	7.9	10.4	40.1	40.4	52.3	100.0
Gabon	2003	18.0	22.3	21.4	60.0	100.0	100.0
Georgia	2004	7.8	11.4	7.2	11.7	100.0	100.0
Grenada	2003	10.5	17.0	56.8	101.0	100.0	100.0
Guatemala	2004	5.4	7.4	42.3	51.6	100.0	100.0
Guyana	2003	11.0	20.1	56.7	100.0	100.0	100.0
Honduras	2004	4.3	5.6	32.6	32.3	100.0	100.0
Hungary	2004	8.9	17.9	9.7	27.0	96.4	100.0
Indonesia	2004	6.4	8.0	37.1	47.0	96.6	100.0

Iran, Islamic Rep.	2004	17.8	14.3				
Jamaica	2003	7.2	15.9	49.8	97.4	100.0	100.0
Jordan	2004	12.9	21.0	16.3	23.7	100.0	100.0
Kazakhstan	1998	9.5	9.0				
Latvia	2003	4.3	13.0	12.7	34.6	100.0	100.0
Lebanon	2002	5.4	14.7				
Libya	2003	17.0	23.0				
Lithuania	2003	3.3	9.7	9.3	15.2	100.0	100.0
Macedonia FYR	2004	10.9	12.3	6.9	11.3	100.0	100.0
Malaysia	2003	7.3	2.1	14.5	12.2	83.7	99.9
Maldives	2003	20.2	18.3	36.9	48.0	97.1	100.0
Mauritius	2003	18.3	21.0	93.8	119.6	17.9	100.0
Mexico	2004	15.9	26.4	34.9	35.1	100.0	100.0
Morocco	2003	28.9	33.7	41.3	54.5	100.0	100.0
Namibia	2004	5.8	9.1	19.1	39.8	96.5	99.5
Oman	2002	5.7	9.0	13.8	28.0	100.0	100.0
Panama	2002	8.3	14.8	23.5	27.7	99.9	99.8
Paraguay	2004	9.1	10.1	33.5	33.2	100.0	100.0
Peru	2004	9.8	13.5	30.1	30.8	100.0	100.0
Philippines	2004	7.5	11.8	25.6	34.7	66.8	99.4
Poland	2004	13.4	39.8	11.8	32.9	96.2	99.9
Romania	2002	11.3	18.0	40.4	98.4	100.0	100.0
Russian Fed.	2002	10.3	10.8				
Saudi Arabia	2003	6.0	6.3				
Serbia & Montenegro	2002	10.4	13.1				
Seychelles	2003	28.3	40.0				
Slovak Rep.	2003	6.0	11.6	5.0	10.0	100.0	100.0
South Africa	2004	5.8	9.1	19.1	39.8	96.5	99.5
Sri Lanka	2004	10.2	15.4	29.8	49.7	37.8	100.0
St. Kitts and Nevis	2004	9.4	13.2	75.9	108.7	97.9	100.0
St. Lucia	2004	8.9	14.8	61.9	114.6	99.6	100.0
St. Vincent	2004	9.8	15.7	62.5	114.6	99.7	100.0
Suriname	2000	17.5	23.5	18.5	19.9	26.3	100.0
Swaziland	2002	5.8	9.1	19.1	39.8	96.5	99.5
Syria	2003	14.7	14.4				
Thailand	2003	14.7	16.2	25.7	35.5	74.7	100.0
Trinidad & Tobago	2004	9.1	19.7	55.7	90.2	100.0	100.0
Tunisia	2004	32.7	68.0	57.8	116.0	57.4	98.8
Turkey	2004	10.0	42.9	29.4	60.2	47.3	100.0
Turkmenistan	2002	5.1	13.5				
Ukraine	2003	7.0	10.8				
Uruguay	2004	11.4	11.6	31.7	33.9	100.0	100.0
Vanuatu	2002	13.8	15.7				
Venezuela	2004	12.2	15.8	36.8	55.7	99.9	99.0
Bahamas	2003	30.2	24.3				
Bahrain	2004	5.1	5.6	35.5	37.5	74.8	100.0
Brunei	2002	2.6	0.0	24.3	23.2	95.3	97.6
Cyprus	2002	7.6	24.3	40.4	58.8	85.9	99.6

Hong Kong, China	2004	0.0	0.0	0.0	0.0	45.7	100.0
Israel	2002	5.6	15.9	20.8	73.0	76.4	98.5
Kuwait	2003	3.5	1.7	100.0	100.0	100.0	100.0
Macau, China	2004	0.0	0.0	0.0	0.0	26.8	100.0
Malta	2003	5.7	4.3	48.3	34.3	97.2	100.0
Qatar	2004	5.0	5.2	16.0	25.7	100.0	100.0
Singapore	2004	0.0	0.0	6.9	9.5	69.2	100.0
Slovenia	2003	10.3	13.7	23.7	23.3	100.0	100.0
Taiwan, China	2004	6.9	16.3	6.1	15.3	100.0	100.0
Australia	2004	4.2	1.1	9.9	3.2	97.0	100.0
Canada	2004	3.9	4.1	5.1		99.7	100.0
European Union	2004	4.5	9.5	4.1	5.8	100.0	100.0
Iceland	2004	3.3	5.8	13.4	43.4	95.0	100.0
Japan	2004	4.7	10.4	5.0	10.9	99.6	100.0
Korea, Rep.	2004	11.9	42.5	16.1	52.9	94.4	99.1
New Zealand	2004	3.2	1.7	10.3	5.7	99.9	100.0
Norway	2004	1.6	7.9	3.0	1.2	100.0	100.0
Switzerland /c	2003	1.9	15.0	0.0	0.0	99.8	100.0
United States	2004	4.3	8.2	3.6	6.9	100.0	100.0
Memo Items: Average							
Developing countries (134)	1998-2004	11.8	16.3	43.6	60.6	76.3	99.9
Low Income (51)	2000-2004	13.3	17.1	61.2	77.2	51.5	99.8
Middle Income (83)	1998-2004	10.8	15.8	32.7	50.4	91.7	99.9
High Inc. Non-OECDs (13)	2002-2004	6.3	8.6	26.8	33.4	80.9	99.6
High Income OECDs (10)	2003-2004	4.4	10.6	7.1	14.4	98.5	99.9

Source: World bank Database