Implications for China of the December 2008 Draft Agricultural Modalities

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ABBREVIATIONS AND ACRONYMS

AMS — Aggregate Measure of Support

AoA — Agreement on Agriculture

ASEAN — Association of Southeast Asian Nations

EU — European Union

HS-6 — Products identified at the six-digit coding level of the World Customs Organization's harmonized system

NPS — Non-product specific support

OTDS — Overall trade distorting support

PS — Product-specific support

RAMs — Recently Acceded Members

SPs — Special products

SSM — Special Safeguard Mechanism

SVE — Small, vulnerable economies

TAMS — Total AMS

TE — Tariff escalation

TP — Tropical and diversification products

TRQs — tariff rate quotas

WTO — World Trade Organization

EXECUTIVE SUMMARY

The December 2008 draft modalities (WTO, 2008) are an attempt to capture the progress has been made since July, which is the result of seven years of hard negotiations. As China does not have export subsidies, we mainly examine the implications of the modalities for China's domestic support and market access in this study.

With respect to domestic support, China did not have a total aggregate measure of support (AMS) mainly because the managed price was below the reference price during 1996-2005. Green box support has increased year by year. China has not historically had any blue box measures. In addition, as a developing country, China is not duty bound to include the special and differential treatment (Article 6.2 of AoA) in the AMS. China's domestic support policies have changed greatly in recent years, from taxing agriculture to supporting it. It has recently been reiterated that increasing farmers' income is at the top of the government's agenda. A series of subsidies have therefore been provided recently, including direct payments to farmers, improved quality seed subsidies, price subsidies on farm machines, fertiliser, electricity, irrigation, fuels, agricultural tax elimination and minimum support prices.

The domestic support issue in the World Trade Organization (WTO) revised Draft Modalities will place substantial restrictions on China's domestic agricultural policies. The support to certain key products may exceed the limits in high-price (wheat and cotton) and medium-price (cotton) scenarios according to the projection results. The non-product specific (NPS) support is far below the limits level when recent subsidies are ignored, but may be close to the limits level if included. The new Blue Box limits are RMB 108 billion (5 percent of the average production value) overall. However, the effective and applicable space for product-specific (PS) Blue Box limits is only 30 percent of the overall Blue Box limit, which is 1.5 percent of the average production value. The space left for China is quite narrow. The rapid growth of agricultural expenditure and the *de minimis* level of 8.5 percent (lower than for other developing Members) will gradually narrow the gap between the bound level and actual outlays. Therefore, WTO regulations will be important factors affecting China's agricultural policy-making.

In the case of market access, all of China's bound tariffs are of the simple ad valorem type. The simple average of bound tariffs is 15.76 percent, while the trade-weighted average is 15.33 percent[1], which is only one fourth of the world bound tariffs. Chinese agricultural tariffs are relatively low on average, which means that about 94.7 percent of the products identified at the six-digit coding level of the World Customs Organization's harmonized system (HS-6) fall within the first band of the proposed tariff reduction formula in the Draft Modalities, and hence are subject to the lowest proposed reductions. Our analysis focuses on the tiered tariff reduction formula as well as the special and differential treatment afforded to developing countries. We assume that China will designate 5.3 percent of its HS-6 tariff lines as sensitive products, and 2 categories of special products (SPs) (about 5 percent of the HS-6 lines) face no tariff cut. An additional 8 percent of the HS-6 lines will face a tariff cut of 16.6 percent.

Application of the proposed tariff reduction formula will result in an overall cut of 34.1 percent—from 15.76 percent to 10.38 percent—in the average tariffs, and 36.4 percent in the average trade-weighted bound tariffs—from 15.33 percent to 9.75 percent. The application of the recently acceded Members (RAMs) treatment would increase the rate to 12.34 percent. Flexibilities for sensitive products and special products would also have strong impacts on China's market access, increasing the country's bound rates to 13.30 percent: this net reduction of 15.60 percent is well below the maximum cut of 36 percent proposed for developing countries. Although the formula reduces tariff heterogeneity, measured by the standard deviation, flexibilities restore

heterogeneity to initial levels in key products, thereby sustaining potential distortions in Chinese agriculture. The average applied rate would fall to 7.19 percent from an initial 11.44 percent after the formula cut, but flexibilities almost eliminate the reduction, bringing it back to 10.39 percent. In general, the overall effect of the tiered formula appears to be neutralized, because the tariffs are distributed in only two bands, and they face similar cuts. The flexibility increases heterogeneity in the protection pattern compared with the result after the formula cut. As a RAM of the WTO, China has already made substantial improvements in agricultural market access.

The limited tariff rates and the tariff quota system have become the most important trade measures that China uses to protect the domestic market. The absence of flexibility in the ability to adjust tariffs will create significant pressure on further tariff reductions in China. The simulation results show that the requirements on tariff escalation have limited effects at the aggregate level. Additional liberalization of tropical and diversification products would, however, have a noticeable impact on the overall average tariff. The impacts of the tariff reduction will be substantial. China calls for larger reductions for developed country Members and moderate cuts for developing country Members. It also calls for enough flexibilities to protect Chinese agriculture and for restraint in making significant tariff reductions.

1. INTRODUCTION

The December 2008 agricultural modalities are the result of collective efforts to further promote progress in the WTO negotiations. In order to enable negotiators and policymakers to evaluate how the proposed modalities correspond with the objectives set forth in the Doha Development Agenda mandate, this paper examines the implications of the Draft Modalities for China, particularly with respect to domestic support and market access. For this purpose, we use data from the China Statistical Yearbook, China Agricultural Statistics Yearbook and information from the China Ministry of Agriculture. Some results on domestic support are from Fuzhi Cheng (2008).

Agricultural issues are special and sensitive in the Doha Round negotiations. China observes WTO regulations and implements its commitments. The impact this has had on agricultural policies so far has affected Chinese agriculture profoundly. On the one hand, the export market environment has greatly improved, and agricultural exports have increased to a significant extent. On the other hand, WTO accession has had some negative effects, such as difficult structural adjustment in the agriculture sector and challenges faced by some vulnerable agricultural regions and farmers. The Chinese government has consistently attached importance to agriculture. Due to the characteristics of Chinese agriculture, China has taken both an offensive and defensive stance in each of the three pillars at the WTO negotiation. On domestic support, China favours strict standards on Green and Blue Box provisions, as well as the substantial reduction of overall trade distorting domestic support (OTDS) for developed Members. In the case of market access, China has simultaneously argued in favour of reductions in tariffs and expansion of the quotas for advanced economies, so as to reduce imbalances in tariff levels and tariff structures. China has also called for effective flexibilities for developing countries.

China is a country characterised by mountainous areas which account for 69.2 percent of the total land area, and in which the population engaged in agricultural production represents 63.7 percent of the total. There are nearly 0.9 billion peasants, who own roughly 0.17 hectares per person. This is equivalent to about 1/6 of that in Japan, 1/30 of that in the European Union (EU15) and 1/200 of that in the United States of America. The growing scarcity of water resources is also a major constraint on agricultural productivity in China. The reform of the water resource allocation mechanism will have a notable impact on crop production costs and international competitiveness. China's inadequate resources and low level of labour productivity place it at a disadvantage in international competition.

Chinese agriculture has some unique characteristics from the perspective of global trade, primarily because China is a large agricultural developing country. Agriculture has traditionally been the foundation of China's national economy. Chinese agriculture has to meet the food requirements of over 1.3 billion people, as well as provide a living wage and income for nearly 0.9 billion employees. China's agricultural GDP was $383.42 billion in 2005, more than twice that of either the United States or the European Union (EU25), which ranked as the largest in the world[2]. In 2006, China was the world's largest producer of wheat and paddy, the second largest producer of corn, and the third largest producer of soybeans, cotton, beef, and milk. Agriculture plays a significant role in social development, farmers' employment, poverty elimination, and food security in China.

China made some concessions in its WTO accession negotiations. These included the expansion of market access, the elimination of export subsidies and reductions in domestic support. Specifically, China reduced the average tariff rate to 15.76 percent in 2006, implemented tariff quota administration on wheat, corn, rice and cotton rather than planned management of foreign trade, and expanded the share of quotas distributed to non-state

trading enterprises. China also committed to ensuring that no single agricultural product benefited from export subsidies. Since there was no aggregate measure of support (AMS) commitment and China abandoned the special and differential treatment provisions given to developing country Members under the Agreement on Agriculture (AoA), the Chinese government concentrated on Green Box support and limited 'de minimis' Amber Box support.

Chinese agriculture has changed greatly as a result of these commitments. The country's agricultural trade has grown rapidly since China's accession to the WTO. As the fifth and fourth largest exporter and importer in the world, respectively, the quantity and value of trade is tremendous. In 2007, China's agricultural imports were worth US$ 36 billion, and its exports were worth US$ 27 billion[3]. However, the opening up of China's agricultural market is quite recent compared with developed countries as well as with some other developing countries. The complete liberalization of trade would decrease employment by 6.6 percent and farmers' incomes by 3.1 percent by 2015, which would represent the largest loss in the world (Aksoy, 2005).

The pattern of Chinese agricultural trade has changed significantly over the past decade. Agricultural products like fruits, vegetables, animal products, and aquatic products have taken up dominant status in agricultural trade, while cotton, vegetable oil, and oil seed have become the main import products. China's trade is focused on a limited number of trading partners: imports mainly come from Argentina, Brazil, the United States, and Members of the Association of Southeast Asian Nations (ASEAN), while exports are primarily to the European Union (EU), Japan, Korea, the United States and ASEAN countries. The structure of products and markets keeps improving, and products are exported at an increasingly advanced stage of processing. However, trade protectionism is still critical for China because of its increasingly important status internationally and in world trade. Trade barriers and conflicts are widespread in China's export markets. Developing countries compete fiercely with China, and the costs of domestic agriculture production keep rising. China has

become a net importer of agricultural products since 2004, with a US$ 4.7 billion deficit . The trade deficit has grown rapidly, owing to higher costs in international markets and increased imports of raw materials. The financial crisis that began in 2008 has also affected Chinese agricultural trade. The trade deficit reached US$ 18.2 billion in 2008 - 4.45 times larger than the level in 2007.

To meet the requirements of WTO accession and changing market conditions, the Chinese government has adopted some positive policy measures to support producers and enterprises and improve the international competitiveness of agricultural products in terms of price, quality, and reputation. China modified its laws and regulations in accordance with WTO rules and strengthened the transparency of technological measures. China also enhanced government services to create an excellent environment for international trade and domestic policies. Free public information and food security monitoring have received particular attention. Infrastructure development, regional poverty alleviation, and pollution control have also been given priority by the government.

Recent developments in agriculture mark a significant change from the past. The Chinese government has adopted a series of new policy measures aimed at achieving harmonized urban-rural development. As reported by the national government, the overall level of appropriations from the fiscal budget of the national government for agricultural and rural development rose from RMB 214.4 billion in 2003 to RMB 595.5 billion in 2008, of which about RMB 103 billion represented direct payments to grain growers and price subsidies for improved seeds, farm machinery, and other inputs.

The degree of opening of the Chinese agriculture market is relatively high among WTO Members. In setting up agricultural trade policies, China takes into account the domestic and foreign market as a whole. Adjusting foreign trade of agriculture products and ensuring a balance of supply and demand in the domestic market are China's main priorities. In 2007, the Chinese government adjusted the tariff rate and took other measures in accordance with WTO

provisions and international conventions in order to assure the supply of soybeans. With respect to the promotion of agricultural exports, China has reinforced quality administration for agricultural products, and utilizes the fund for agricultural trade development to support the quality traceability system and improve agricultural production technology. For example, it has put in place measures to optimise the structure of export commodities and to improve the environment for Chinese agricultural trade.

China has paid more attention to agricultural development over recent years. The priorities of Chinese agricultural policies change with domestic and international conditions. However, the overall goal of agricultural policy is still to supply sufficient food at stable prices and improve farmers' incomes. China therefore places high priority on ensuring a sufficient grain supply and increasing farmers' incomes. Food security, environmental protection and the improvement of agriculture productivity are also areas of particular concern. In general, the trend with respect to agricultural policy has been to coordinate economic and social development in urban and rural areas, secure the stable supply of food, enhance the functioning of the agriculture market, and increase income and employment.

The paper seeks to provide provisional answers to a number of important questions. Does the modalities text imply any changes to applied domestic support levels in China? What are the likely constraints on domestic support? How much 'water' will be cut between bound and applied rates, and how much actual market access will be provided by applying the general tariff cut formula? What would be the impact of sensitive products and special products on Chinese exports? How would China be affected by special flexibilities for RAMs? The paper attempts to address these issues as a way of exploring the domestic and international implications of an eventual agreement on modalities.

The first two sections of the paper give an overview of the current state of Chinese agriculture, agricultural policies, and China's negotiating positions in this Round. The third section provides an overview of China's domestic support policies and a discussion on binding provisions and the potential impact of the WTO Draft Modalities for China. We then provide an analysis of the impact of the Draft Modalities on market access in China. The impact analysis focuses on tariffs with and without flexibilities. Finally, we provide an overall assessment of the impact of the Draft Modalities on China and conclude with some insights concerning the future of Chinese agricultural policies.

2. CHINESE NEGOTIATING POSITION

The Doha Round negotiation is an important means for China to take part in developing international trade regulations and ensuring the sustainable development of agriculture. China has sought to play a positive role in contributing to the WTO negotiations.

China is recognized as one of the most important countries in the Doha Round negotiations. China is not only in the most influential negotiating coalitions, the G-20 and G-33, but also has been active in all spheres of the negotiations, both formal and informal. China has the full conviction that all WTO Members will benefit from a fair and market-oriented agricultural trade system. China supports the long-term goals of the Doha Round negotiation. However, trade distortions, high tariff protection, and unbalanced rules are problems that continue to be especially evident. Therefore, the Chinese negotiating position has been both offensive and defensive.

With respect to domestic support, China supports strict standards on Green and Blue Box provisions for developed country Members, which might be beneficial for developing country Members. China also calls for substantive cuts in the OTDS and AMS of developed Members. China supports the G-20 on the use of an AMS tiered formula and the total AMS (TAMS) proposal, which stipulates that developed country Members should make larger reductions if their AMS is higher. China holds the view that larger reductions in developed countries' support would improve developing countries' share of agricultural trade. China's defensive position on domestic support policies relates to flexibilities and exceptions. The key objective of the Chinese position is to maintain and if possible improve special and differential treatment for developing countries, so as to assist low income and resource poor farmers. China also claims that developing country Members should not be subject to limits on Blue Box subsidies, and the requirements for Green Box spending should take into account developing country Members' special circumstances.

As regards the balance between developed and developing countries' interests within the domestic support pillar, it should be noted that developed countries will not be forced to reduce overall domestic support, since they have the financial resources to shift support from non-Green Box to Green Box, while developing countries will have considerable policy flexibility to increase non-Green Box support as well as Green Box support as their economic situations improve (Gifford and Montemayor, 2008). The de minimis exemptions served as AMS limits in China, and these limits are below the level of other developing country Members and far below the current AMS in developed country Members. This leaves little room for further support. At the same time, other WTO Members, especially developed country Members, have ample room to provide considerable subsidies and support.

With respect to market access, China has simultaneously argued for tariff reduction and quota expansion in developed country Members in order to eliminate high tariff rates and tariff peaks. China has also called for effective special and differential treatment for developing countries. Unlike in many developed country Members, tariffs are the only effective means to protect agriculture since China cannot afford to provide too much support in the form of subsidies. The average tariff rate for Chinese agriculture products is only 15.76 percent, less than one fourth of the world average level. According to the G-20, China has cut tariffs by up to 72 percent since 1992, which is larger than the reduction made by developed country Members (70 percent) as well as that made by other developing country Members (53 percent) in the Uruguay and Doha Rounds. Reductions in China's tariffs would affect applied tariff levels, while other Members still have significant room for tariff reductions. These concerns need to be effectively addressed, because accession to the WTO and the unfair trade liberalization that has taken place has substantive negative effects on Chinese agriculture and farmers. China considers

it a priority for developed countries to eliminate trade distortions and unequal rules, such as the unequal tariff structure and differences in the rights and obligations between developed and developing country Members. On the defensive side, China's position on developing countries' market access includes moderate tariff reductions accompanied by flexible exceptions and safeguards. Specifically, the tariff reduction formula and implications of the flexibilities including for special products, sensitive products, the special safeguard mechanism (SSM) and RAMs treatment, will be fully utilized. The defensive stance aims at minimizing the impact of external forces on Chinese agriculture.

China is a developing country Member as well as a RAM. China and other RAMs have made great contributions to the WTO multilateral trading system, although agriculture is vulnerable in these countries. Therefore, the concerns of RAMs should be effectively addressed, particularly with respect to the special and differential treatment of special products (SPs) and the special safeguard mechanism SSM. China merits the most flexible possible provisions to reduce the pressure on producers and ensure rural development and farmers' benefits. These flexibilities include a lower reduction margin, exemption of certain sensitive products and a longer implementation period.

China holds the view that developed country Members should take the lead in opening their agriculture markets, cutting domestic support that creates trade distortions, and giving special and differential treatment to developing Members. Specifically, the tiered tariff formula approach should ensure that developed Members with the highest tariffs implement the deepest cuts. It is proposed that developing countries use a tiered tariff reduction formula leading to cuts one-third smaller than those made by developed countries, and using higher tier breakpoints. The draft carries the concept of special and differential treatment one step further by also providing two special provisions that are specifically designed for and only available to developing countries. These include provisions for special products and a special safeguard mechanism. For sensitive products, developing countries would be able to designate up to one-third more tariff lines as compared with developed country Members, and would be subject to a tariff quota expansion one third smaller than that of developed countries. China has set the pace in promoting the liberalization of trade among WTO Members. There is therefore relatively little room left for further substantive concessions on special products that are important for food security, farmers' livelihoods and rural development in the new round of negotiations.

3. DOMESTIC SUPPORT

China's agriculture policy has undergone some fundamental changes in recent years. In the Central Committee Document One, The Chinese Communist Party reiterated that increasing farmers' income is at the top of the government's agenda. Policies include direct payments to farmers, subsidies for improved quality seeds and price subsidies on machines, fertilizer, electricity, irrigation, and fuels as well as elimination of the agricultural tax and minimum support prices.

These policies represent obvious transitions in the government's policy stance, from taxing agriculture to supporting it, and reflect the Chinese leadership's renewed attention to agricultural problems. The changes in domestic support policies have resulted in higher support for the agricultural sector and give rise to questions concerning whether China has complied or would comply with its WTO commitments on domestic support for agriculture.

3.1 Analysis of Past and Projected 'Shadow' WTO Notifications

China submitted the document on domestic support in 1996-1998 on 19 July 2001 (WT/ACC/CHN/38/Rev.3) in preparation for the working party meeting. The most recent domestic support notification was submitted on 10 January 2006 (G/AG/N/CHN/8). Table 1 provides a summary of China's domestic support in 1996-2001. According to the notifications, China's domestic support in this period has been well below the limits agreed at the WTO accession.

Green Box support has increased year by year, from RMB 112 billion in 1996 to RMB 242 billion in 2001. Within China's Green Box, general services are the largest component, accounting for more than 50 percent of the total Green Box. China has made no payments for marketing, income insurance, producer retirement programs, resource retirement programs, or investment aids. Also, China has not made direct payments to producers that are not linked to production decisions (decoupled income support). During this period, China's Green Box policies were targeted at social development, such as through public stockholding for food security, infrastructure, poverty alleviation, environmental protection and so forth.

China had a zero current total AMS during the period examined, and so, the de minimis (8.5 percent of value of production) exemptions[4] served as limits to AMS. As Table 1 shows, China has a large, negative market price support for specific products. For non-product specific AMS, the main items were input subsidies and interest subsidies[5]. Up until now neither the product specific *de minimis* nor the non product specific de minimis have imposed real constraints on domestic support in China. This may have something to do with the limited government revenue.

The domestic support data in 2002-2005 presented in Table 3 are from the IFPRI Discussion Paper 00793 "China: Shadow WTO Agricultural Domestic Support Notifications" by Fuzhi-Cheng (2008), who calculated the support level utilizing the same methods laid out in the existing official notifications. Because of some differences on statistics calibers, the Green Box support level calculated by Cheng in 2002 was below the level notified to the WTO in 2001. Since the Green Box is exempted from reduction, this difference has nothing to do with analyzing the trends of the Green Box in 2002-2005, but may have some impact on the projected Green Box support level in 2008-2013, which is measured according to the level of former years.

China's Green Box support reached RMB 276 billion in 2005. Within the Green Box, general services and public stockholding for food security purposes were still the two largest components in 2002-2005. Both of these items increased in 2002-2004 but appreciably declined in 2005. The outlays for the agricultural environment programme, regional assistance programmes and relief from natural disasters increased, while domestic food aid dropped sharply.

From 2002 to 2005, the administered prices for product specific support were below the fixed reference price (1996-1998 average border price), which resulted in negative market price protection. The interest subsidies for cotton were cancelled in 2001. Since 2002, China has started to provide improved quality seed subsidies to farmers.[6] These grew from RMB 330 million in 2003 to RMB 3870 million in 2005. However, taking the improved quality seed subsidies into account, the product specific support level was still negative.

Non product specific AMS increased from RMB 10.4 billion in 2002 to RMB 58.6 billion, or nearly 1 percent of the total value of production, in 2005. Since China has strengthened the support for agriculture inputs, including farm machinery, fertilizers, fuels, pesticides and so on, the overall trend of input subsidies was rising, though it presented a decline in 2003. The interest subsidies had grown significantly from 2004 (Cheng, 2008). So far only a few studies pay attention to water prices in China. Given that the water market is still in its infancy, it is difficult to derive the equilibrium price of water and/or implicit subsidies. However, mis-allocation of water resources is apparent, leading to underestimation of farm production costs. It is likely to alter the picture of domestic support substantially if water is priced at shadow cost.

In addition to input subsidies and interest subsidies, China introduced direct payments to nationwide farmers in 2004. The total direct payments reached RMB 11.6 billion and 13.2 billion in 2004 and 2005(MOF, 2006). There is a dispute about whether the direct payments are trade-distorting in China, because each province could set its own method for granting subsidies. Thus, the subsidy varied across regions and commodities. In this paper, we treat it as non-product specific AMS. The total AMS (product specific support together with non product specific support) in China in 2002-2005 was within the de minimis caps.

Figure 1 graphs the trend of support notified and estimated under Green Box, product specific AMS, non product specific AMS, and *de minimis*. Green Box support increased gradually, while non-product specific AMS showed a mixed trend in 1996-2003, and continued to increase in 2004 and 2005. Product specific AMS has remained negative.

3.2 The Draft Modalities on Domestic Support

The revised Draft Modalities for domestic support (December 2008), as they would apply to China, are summarized in Table 4. China has no final AMS commitments and historical Blue Box measures. In addition, as a developing country, China is not duty bound to include the special and differential treatment (Article 6.2 of AoA) in the AMS. According to the Draft Modalities, developing countries without a total AMS commitment are only required to schedule their base OTDS, but not to undertake reduction commitments in OTDS and total AMS. The base OTDS for China is 22 (8.5+8.5+5) percent of the average total value of agricultural production in the 1996-2001 base period. China is entitled to make Blue Box payments account for 5 percent of the average value of production. As to product specific Blue Box limits, the total applicable product specific Blue Box cap is 30 percent of the overall Blue Box limit, and the maximum for any single product is 10 percent of the overall Blue Box limit.

3.3 Impact of the Domestic Support Modalities

To analyze the impact of the Draft Modalities on China, there are two basic facts that need to be emphasized. First, the average net income of rural residents was RMB 4140, while the average disposable income of urban residents was RMB 13786. Thus, the absolute gap between urban and rural incomes continued to widen (MOA, 2008). Second, China had been taxing agriculture up until 2006. Compared with other countries, the subsidies to farmers in China are low. Based

on these two facts, the government is obliged to strengthen support for agriculture as well as to promote social harmony and stability.

To project the supports in 2008-2013, Cheng (2008) used four assumptions. First, the projection of the Green Box, non product specific AMS support and quantity of production is based on a linear extrapolation of historical figures for the period of 1996-2005. Second, because of the uncertainty of the continuous provision of some new subsidies (e.g., improved quality seed subsidies and farm machinery subsidies), they were not included in the projection. The subsidies related to irrigation, electricity and fuel were also excluded. Third, China will not report any Blue Box spending. Finally, as to the market price support, given the soaring inflation rates at the end of 2007, Cheng assumed two possible administered price rise trends. One is "High Price," which increases 20 percent in 2008-2010 and a further 20 percent in 2011-2013; the other is "Medium Price," which increases 10 percent in 2008-2010 and a further 10 percent in 2011-2013. At the same time, each of the assumed administered price increase scenarios will remain effective for three consecutive years, i.e., 2008-2010 and 2011-2013.

Table 5 presents preliminary estimates of China's domestic support for 2006-2007, and a projection of major aggregates to 2013 from Cheng (2008). The Green Box expenditures may increase to nearly RMB 461 billion by 2013. According to the amended Green Box in the draft modality, China needs to clarify the support made to farmers. Marketing and promotional services, as well as infrastructure services support are the two possible measures that China would add in 2008-2013. Along with the gradually increased expenditure allocated to agriculture, rural areas and peasants, China is likely to take advantage of new flexibilities for developing countries in the Green Box.

If current commodity programmes are to be continued, e.g. only the administered price to wheat and rice are applied, China will absolutely comply with its commitments under the medium-price scenario. Under the high-

price scenario, the price support to wheat may exceed its de minimis limit in 2011-2013. Considering the four commodity programmes (price support extended to cotton and corn), the support to cotton will exceed the de minimis from 2008 in the high-price scenario, and exceed it from 2011 in the medium-price scenario. The product specific support limits will have substantial impacts for China.

The non product specific support increases gradually. Compared with the non product specific AMS limits (8.5 percent of total value of production) in 2008-2013 from Table 5, the subsidies are small, even less than 10 percent of the limits. However, it should be emphasized that ignoring the subsidies to farm machinery and integrated agricultural inputs is not in line with reality given the large scale of budget outlays in recent years. Given the current situation, we adjusted Cheng's non product specific supports projection by adding these subsidies from the annual report of China's Ministry of Finance, as presented in rows in italic format in Table 5. The budget outlays in 2006-2009 are far beyond Cheng's projection, at almost eight times the amount of his calculations for 2009. Though it is also below the de minimis level during 2006-2009, the projection for 2010-2013 based on real budgets may exceed the de minimis level, which means the non product specific support limits will have a substantial impact for China.

Although China may have ample flexibilities to extend domestic support under the new Blue Box provisions, measures in compliance with the Blue Box disciplines have different impacts on agricultural production and trade, and thus are not equally effective with respect to achieving the same policy objectives. This means that measures under the Amber Box and the Blue Box are not totally substitutable. This difference is important in WTO negotiations since China and many other developing countries still place a high priority on food security, while developed countries usually focus more on farm income .

The new Blue Box implies that China has ample flexibilities to extend domestic support up to RMB 108 billion overall (5 percent of total value of production), but the actual applicable space

for total product specific Blue Box support is only 30 percent of the overall Blue Box limit, that is 1.5 percent of the total value of production. The product specific Blue Box limit is easy to reach, because of the large production of some key products. For example, cotton production in 2007 was RMB 101.6 billion (MOA, 2007). Once China begins to provide Blue Box supports, the product specific Blue Box limits will become a severe constraint.

In general, the domestic support issue in the WTO revised Draft Modalities for agriculture has limited impacts on China's current commitments, but it will be one of the main factors affecting China's future policy-making. The rapid growth of agricultural expenditure and the limit of 8.5 percent of the value of production for the de minimis level (lower than other developing country Members) will gradually narrow the gap between the bound level and actual outlays. Market price support for certain key commodities may exceed the limits under high-price (wheat and cotton) and medium-price (cotton) scenarios. The non product specific support is far below the limit level when recent subsidies are ignored, but may be close to the limit level if the recent subsidies are taken into account. The total Blue Box limit is RMB 108 billion (5 percent of the average value of production) overall, but the total actual applicable space for the product specific Blue Box is strictly constrained to only 10 percent of the total Blue Box limit.

4. MARKET ACCESS

China is a RAM of the WTO, and one of the least protected markets for agricultural products in the developing world. China acceded to the WTO in 2001. It abolished non-tariff measures, such as import licensing, quantity restrictions and so on, and reduced the level of tariffs on agricultural products during the process of implementing its accession commitments. China's average agricultural tariffs dropped from 21 percent in 2001 to 15.76 percent in 2005, which represents a reduction of 67 percent compared with the level of the base tariff in the Uruguay Round. Some of the agricultural products' tariff rates (such as rapeseed) were reduced by more than 90 percent. China applied tariff quota administration on ten kinds of staple agricultural products, such as grain, cotton, oil plants, sugar and so forth. The government also improved and perfected the quota administration. For example, it expanded the proportion of quota allocated to non-state trading enterprises and increased the quantity of quotas that were subject to in-quota tariff rates of between 1 and 10 percent. As a RAM of the WTO, China has made substantial improvements in agricultural market access.

At present, China's agricultural tariff rate is low, and the average of bound tariffs is 15.76 percent, which is only one fourth of average world bound tariffs. All of the bound tariffs are of the simple ad valorem kind; the tariff structure is unitary; and there is no complex bound tariff that can provide recessive protection against agricultural imports. The applied tariffs are identical to the bound tariffs, and the highest tariffs are bound at 65 percent, hence there are no tariffs peaks. The quantity of tariff quota in China is large and exceeds 5 percent of products' domestic consumption established by the Uruguay Round. For example, wheat is 9 percent, sugar is 20 percent, and wool is 72 percent.

Therefore, the level of protection from agricultural imports in China cannot be a real obstacle to trade, and can only affect imported products' prices. The limited tariff rates and the tariff quota system have become the most important trade measures: these are used to adjust agricultural imports and exports, to balance processing and consumption of agricultural products, as well as to promote agricultural development and improve farmers' incomes. There is great pressure for further tariff reductions in China, but the impact of any tariff reduction will be substantial.

In the market access negotiation, China argues that the Members with high tariff rates should undertake larger reductions. The key point is to reduce the tariff peaks and tariff escalation in order to eliminate or reduce the huge differences and unevenness among WTO Members. China insists on effective special and differential treatment being granted to developing country Members and RAMs, and ensuring that flexibilities are provided for special products, in order to address the problems of food security, farmers' livelihoods, rural development and poverty elimination.

4.1 Market Access Measures

All of China's bound tariffs on agricultural products are of the ad valorem kind, as are most applied tariffs, except for those on three products: the frozen cut and edible offal of chicken (HS 020714); the cold or frozen gizzard of chicken (HS 05040021); and cotton that has not been carded or combed (HS 520100), of which the out-of-quota imports are subject to a sliding tariff as interim duty.

Table 6 shows the bound tariff of China's agricultural products. The simple average of bound tariffs is 15.76 percent (calculated on HS-6 digit level).[7] The trade-weighted average tariff is 15.33 percent, which is a little lower than the simple average.[8] The trade value column of Table 7 shows that the important agricultural imports are oilseeds (chapter 12)

and vegetable oil (15); cereals (10); and inputs for the textile industry and clothing industry: cotton (52), hides and skins (41), and wool (51). The import value of these 6 chapters accounts for 76 percent of the total value of agricultural products in China.

The tariff revenue column of Table 7 reflects the relationship between trade and tariff rates of agricultural products and shows how the present trade policy attaches importance to sectional products. If the trade value in a chapter is larger or tariffs are higher, tariff revenue is likely to be higher, such as chapters 52, 10, 51, 15, 12 and 17. The calculated

results suggest that these six chapters account for about 80 percent of the total incidence of Chinese agricultural protection.

The last column of Table 7 shows the bound tariffs for each chapter. Six chapters have an average bound tariff rate below 10 percent: live animals chapter (01); live trees (06); oil seeds (12);food residues (23); hides and skins (41); and other vegetable fibres (53). In comparison, three chapters have an average bound rate of more than 25 percent: milling products and starches (11); sugar (17); and tobacco (24). Moreover, there are 24 chapters with average tariff rates of between 10 and 25 percent.

4.2 Tiered Formula, Sensitive Products, and Special Products

Since the July 2004 draft WTO modalities, the tiered tariff reduction formula has become the focus of market access negotiations. Four bands have been defined for both developed and developing country Members, and RAMs were entitled to a moderate cut. The depth of cuts varies across bands as shown in Table 9. The tariff reduction formula seems aggressive relative to the Uruguay Round, with provisions for larger proportional cuts on higher tariffs. In accordance with the principle of special and differential treatment, the cuts for developing countries in each band are two thirds of those for the developed countries, and the bands are also wider. In addition, under the December 2008 modalities (paragraph 66) all RAMs are entitled to exempt final bound tariffs at or below 10 percent from reduction.

In the case of China, understanding the implications of the formula for different products requires taking into account both the flexibility and the parameters of commitments. The key elements of our analysis of the tariff cuts that China would have to undertake are presented in Table 10 and are based on the December 2008 Draft Modalities. In order to reconcile domestic political objectives with the strict discipline of the formula, Members are entitled to have a limited number of products that will partially be exempt from liberalization. In addition to the provisions concerning RAMs,

another important category of flexibility is the provisions for sensitive products. These could be used by developed and developing countries but require that deviation from the formula cut be compensated, to some extent, by the creation or enlargement of tariff rate quotas (TRQs). The December 2008 modalities (paragraph 78) introduce three options for developing countries to cut tariffs by less than would otherwise be required by the formula. The third option is really attractive in China's case, given the existing large quotas and the relatively low domestic commercial consumption. Tariffs can be protected more easily just with a larger deviation in the tariff cut. We assume that China will designate 5.3 percent of its HS-6 lines as sensitive products (according to the December 2008 Draft Modalities, paragraph 71 and 72), and the subject to one third of the formula cut.

In addition, developing countries benefit from 'special products' (paragraph 129 and 131 of the December 2008 Draft Modalities) with significantly more flexibilities than sensitive products. There are 12 percent of tariff lines available for self designation as SPs, of which 5 percent of lines may have no cut, and the overall average cut shall be 11 percent. RAMs are granted more favorable treatment: they can designate 13 percent of tariff lines as special, for which tariffs must be cut by an average of 10

percent. We divide SP tariff lines into two tiers:

- Special products I (SP-I): 5.0 percent of the HS-6 lines will not be subject to tariff cuts ;

- Special products II (SP-II): 8.0 percent of the HS-6 lines with a tariff cut of 16.6 percent to realize the overall average cut of 10 percent.

Even if sensitive and special products are accorded different treatment, and to some extent, respond to different motivations, they both meet the same needs of policymakers in both developed countries and developing countries when the pure discipline imposed by the formula cut may not be feasible. To be consistent with their domestic agendas (redistribution, rural development, food security, political factors), some products cannot undertake the full formula cut envisioned in the WTO Draft Modalities. Moreover, as developing country Members have limited resources to deal with structural adjustment from trade liberalization, they have additional flexibilities in the form of special products in accordance with the principle of special and differential treatment.

It is not clear how a developing Member would choose its set of special and sensitive products. There is much interesting discussion on the issue, such as in the papers put forward by Jean, Laborde and Martin (2008) and Gopinath (2008). In the case of China, since the tariff rates and the number of tariff lines in Band II are both limited, any solution including tariff cuts will be inferior to any other form of flexibility, especially for some key products that have been specified previously (Sun Zhengcai, 2008). Therefore, we introduce hierarchy in the use of flexibilities. Special products with zero tariff cut are chosen first

(SP-I), followed by special products with a tariff cut (SP-II), then, sensitive products with as low a cut as possible.

Table 11 provides a quick overview of the results from the above selection procedure for sensitive and special products. The most important products are grouped under SP-I, which accounts for 22 percent of total imports (US$ 4825.0 million, 33 HS-6 tariff lines) and mainly includes and Chapter 51. The remaining important products, such as Other Animal Products (05) and Milling Products, Starches (11), are included in SP-II category, which includes 55 HS-6 tariff lines. The sensitive products appear to be very attractive and may be used to shelter the remaining higher tariff products, which consist of 36 HS-6 tariff lines listed in Table 11.

In the following tariff cut simulation, we use the bound tariff and 2003-2005 import data (from the China Customs database). Our main source of information is IDB database and the WTO Accession Protocol of China for bound tariffs, and the Import Tariff of the People's Republic of China (various issues) for the applied tariffs. We work at the HS-6-digit level to facilitate international comparisons.

Table 12 presents the product distribution in each band of the tiered formula. China's agricultural products could cover only the first band and the second band. 94.6 percent of all bound tariff lines are in the first band (tariffs below 30 percent), representing 78.1 percent of import value. Only 5.3 percent of lines are in Band II, representing 22.0 percent of import value. The December 2008 modalities (paragraph 66) specify that all RAMs are entitled to exempt from cuts final bound tariffs at or below 10 percent. Therefore, we divided Band I into two parts. The distribution characteristics enable China to designate most products in Band II as sensitive products and special products.

4.3 Impact of the Formulas for China's Tariffs

Table 13A, 13B, and Table 14 display the simulation results of the tiered formula. Table 13A and 13B present the average tariff and the tariff heterogeneity (measured by the standard deviation), Table 14 gives the trade-weighted

tariff level and the results of all bands. The first results in these tables are those reflecting just the tiered formula, then also the flexibility accorded to RAMs and flexibilities for sensitive and special products. The last five rows of

Table 13A and 13B provide tariff averages for the products belonging to different categories, including sensitive and special products.

Applying the formula by bands in Table 14 will result in an overall cut of 34.1 percent in the average bound tariffs—from 15.76 percent to 10.38 percent—and a cut of 36.4 percent in the average trade-weighted bound tariffs—from 15.33 percent to 9.75 percent. Once the RAMs flexibilities are also taken into account, the cuts in average bound tariffs are reduced to 21.7 percent while the cut in the average trade-weighted bound tariff becomes 22.4 percent. The bound tariffs for sensitive products decreases to 21.7 percent from 33.6 percent, reprensenting a decline of 35.4 percent; SP-I (with no cut) and SP-II (with cut) fall to 28.39 percent and 12.45 percent from 45.41 percent and 18.69 percent respectively. Following the formula cut, the average bound tariffs of the remaining products are down to 8.36 percent from a previous level of 12.54 percent.

The flexibilities accorded to sensitive and special products have strong impacts on market access in China. The overall average bound rate climbs back to 13.30 percent, while the tariff cut is reduced to 15.60 percent on average, and the average trade-weighted

bound tariff returns to 14.93 percent with only a 2.6 percent cut. Without any flexibility, the overall average cut appears relatively homogenous for all chapters, from 32 percent to 38 percent. The RAMs provision makes the average cut for all chapters decrease quickly: tariffs in chapter 01, 41, 50 and 53 undertake no cut; chapters 18, 23 and 35 are cut by less than 10 percent; and tariffs in the remaining chapters are cut by 14 to 25 percent. Moreover, employing flexibilities for sensitive and special products will lead to significant further sectoral concentration of flexibilities.

Table 13B presents the tariff heterogeneity as measured by the standard deviation, which is initially at 11.44 percent for the overall average, and the coefficient of variation, which is 72.6 percent. While application of the tariff reduction formula reduces the standard deviation by 34 percent, the coefficient of variation remains almost unchanged. The harmonizing objective of the tiered formula appears to be neutral, because the tariffs are distributed in only two bands and they face similar cuts. As expected, the flexibility increases heterogeneity in the protection pattern compared with the pattern resulting from the full formula cut. The standard deviation increases to 10.39 percent and the coefficient of variation reaches 78.1 percent.

4.4 Tariff Escalation and Tropical and Diversification Products

As a developing country, China is not obliged to reduce tariff escalation (TE) nor to provide for additional liberalisation for tropical and diversification products (TP). Considering the latest version of the draft modalities text, this paper calculates the possible implications of provisions for tariff escalation and tropical products.

At the HS-6 digit level, tariff lines on the tariff escalation list (ANNEX D of the December 2008 Draft Modalities) represent 19.3 percent of all agricultural products. Of these, the share of primary products and processed products is 4.4 percent and 14.9 percent, respectively. The share of tropical and diversification products in ANNEX G is 19.8 percent. The import value of

tariff escalation primary products and processed products represents 38.8 percent and 16.7 percent of all agricultural products, while the share of tropical products is 23.5 percent.

The tariff escalation products are mostly concentrated in vegetable preparations (chapter 20); vegetable oil (15); milling products and starches (11); cereal preparations (19); and food residues (23).The distribution of tariff lines is similar to the distribution of trade value. In the case of tropical products, tariff lines and trade value are concentrated mainly in the following chapters: vegetable preparations (chapter 20); oilseeds (12); edible fruit and nuts (8); vegetables (7); and vegetable oil (15).

If the effect of the tariff escalation and tropical product modalities is taken into account, processed products should also take the cut in the next highest band, bearing in mind however that China's agricultural products are only distributed in the first and second band. The rate of reduction for the processed product should be moderated to ensure that the final bound rate of the processed product equates to, but does not fall below, the final bound rate for the primary product. Sensitive and special products are exempt from the tariff escalation treatment. As regards tropical and diversification products, where the tariff is less than 10 percent, it shall be reduced to zero. If the tariff is greater than or equal to 10 percent, it shall be reduced by 38.7 percent, which is the tariff cut that RAMs must apply to tariffs in the top band.

The average tariff rate will be reduced from 13.30 percent (the rate for RAMs, taking into account flexibilities for sensitive and special products) to 13.25 percent and 12.68 percent once requirements for tariff escalation and tropical products have been factored in. The initial average tariff will be reduced by 15.90 percent by the tariff escalation requirements, and by 19.50 percent by the tropical product requirements. From the different components of the tariff reduction simulation, we see that tariff escalation has small effects at the aggregate level. Additional liberalization of tropical and diversification products would, however, have a noticeable impact on the overall average tariff.

4.5 Implications of Draft Market Access Modalities for China's Exports

China is a big agricultural exporter, with US$ 27,250 million in agricultural products exports in 2007. This analysis will therefore also consider China's offensive interests. Japan is one of the main markets for China's agricultural exports, representing 22.6 percent of market share, followed by the EU (14.6 percent); the US(12.0 percent); ASEAN (10.7 percent); and the Republic of Korea (9.7 percent).

To assess the effects of the Draft Modalities in creating new market access for Chinese exporters, we apply the tariff reduction formula to all WTO Members, taking into consideration the special treatment for RAMs, for small, vulnerable economies (SVE) and for LDCs. We also calculate the impacts by applying flexibilities like sensitive products for all WTO Members and special products for other developing country Members. Moreover, developed economies are subject to additional cuts on tropical products and products facing tariff escalation (Blandford, Laborde, and Martin, 2008).

Table 15 and Table 16 calculate the impact of tariff cuts facing China's exports overall and by chapter, which are provided by Dr. David Laborde of IFPRI. As regards the impact on developed country Members, the pure formula will cut the applied tariffs faced by China by 49.4 percent, bringing it to 8.2 percent from the initial 16.2 percent (Table 15). However, flexibilities for developed countries will increase the applied protection to 10.8 percent, a net reduction of 33 percent. The impact of flexibilities on developing countries is more profound, with a net reduction of only 1.1 percent. SVE markets, the most protected initially (13.9 percent) will not grant any new market access opportunities to China, owing to the special and differential treatment accorded to SVEs. For the RAM group, whose results are driven by China, applied tariff reduction is very limited, at 0.9 percentage points. A similar pattern appears for developing countries (including South Korea), where the initial average protection of 17.7 percent is cut by 1.1 percent. Applying the tiered formula for developing countries (non SVE, non RAM and non LDC) would deliver a cut of 32 percent, which brings down their tariffs to 12.0 percent.

Finally, significant liberalization will take place only on 30 percent of China's exports. In the developed country markets that are China's main export targets (Table 15), applied protection will be cut by 33.3 percent (5.4

percentage points) from 16.2 percent to 10.8 percent. Looking at the different components of the tariff reduction, we can see that tariff escalation and tropical and diversification products have small effects at the aggregate level. The sensitive products option granted to developed economies reduces the average cut from 55 percent to 33.3 percent.

The sector level results in Table 16 show that chapter 10 (cereals), which represents one fourth of total agricultural exports, receives minimal new market access opportunities because the tariff cereals face only fall from 30.3 percent to 20.1 percent. Two main factors can explain this result. The low tariff cut for developing countries (due to the special and differential treatment provided and the 'water' in bound tariffs) does not allow the formula to achieve real tariff reduction. Then, flexibilities take away any meaningful tariff reductions, since rice will probably be regarded as a sensitive product in developed country importers (EU, Japan) and a special product or sensitive product in developing countries. The other three most important chapters (07- vegetables, 12- oilseeds, 20- vegetable preparations) face initial protection (16.8 percent, 26.0 percent, and 15.7 percent, respectively), while the tariff reduction range is 32.7 percent, 2.7 percent, and 35.0 percent. Therefore, the tariff reduction of China's main export products may gain significant new market access opportunities, which might benefit China to some extent.

5. CONCLUSION

In this study, we examined the implications of the December 2008 WTO Draft Modalities for China. China's overall objective is to reduce trade distortions and open up the agricultural market among WTO Members, as well as ensure the tariff protection level and domestic support space needed for the development of Chinese agriculture. China no longer has the policy option of promoting exports by using export subsidies. In the future, as other Members remove their export subsidies, China may gain additional export opportunities, and the competitive pressure on China's imports may ease. Therefore, our focus has been on the likely impact of proposed agricultural modalities on China's domestic support and market access policies.

China's domestic support policies have changed greatly in recent years as obvious transitions have taken place in China's policy stance. The domestic support within the period we examined shows that the modalities will have limited impacts on China's current commitments. The domestic support of China has been well below the WTO limits. Specifically, during 1996-2005, China's Green Box support kept increasing, but the expenditure level is not high. China did not have a total AMS within the period examined, so the de minimis exemptions served as limits to AMS. China's product specific support is characterised by a large, negative figure for market price support. Input subsidies and interest subsidies are the main items for non product specific support. However, neither the product specific de minimis nor the non product specific de minimis have imposed real constraints on China's domestic support, owing to the country's limited financial resources. China has no historical Blue Box measures.

Projections from 2008 to 2013 suggest that the December 2008 WTO Modalities will have substantial impacts on China's future commitments. Based on the assumptions used by Cheng (2008), it is estimated that China's Green Box support may increase to nearly RMB 461 billion by 2013. Expenditure on general services and public stockholding for food security purposes will still represent the main components. If current commodity programmes are continued and the four commodity programmes are taken into consideration, the support to certain key commodities may exceed the limits in high-price (wheat and cotton) and medium-price (cotton) scenarios. The non product specific support is far below the limits level when recent subsidies are ignored, but may be close to the limits level if they are considered. The new Blue Box implies that China has ample flexibilities to extend domestic support up to RMB 108 billion overall, but the actual applicable space is only 30 percent of the overall Blue Box limits. Considering the substantial production of some key products, the product specific Blue Box limits will have a significant impact once China begins to provide Blue Box support. China should take WTO regulations into consideration and be cautious when developing agricultural policies.

China is one of the least protected markets for agricultural products in the developing world. The simple average of bound tariffs is 15.76 percent, while the trade-weighted average is 15.33 percent, roughly equivalent to only one fourth of the world bound tariffs. China's average tariff rate for agricultural products dropped from 21 percent in 2001 to 15.76 percent in 2005. All of China's bound tariffs are of the simple ad valorem kind, and the tariff structure is unitary. The quantity of tariff quota in China is large, exceeding the benchmark of 5 percent of the product's domestic consumption that was established in the Uruguay Round.

Our analysis focused on the tiered tariff reduction formula and on the special and differential treatment afforded to developing countries in the form of sensitive and special products as well as RAMs treatment. We assumed that China will designate 5.3 percent of its HS-6 tariff lines as sensitive products; two categories of special products are also considered. About

5 percent of the HS-6 lines will not face tariff reduction, and an additional 8 percent of the HS-6 lines are subject to a tariff cut of 16.6 percent. To better understand policymakers' preference for protecting agriculture industry, especially their willingness to define higher and more costly tariffs on certain products, we draw on a related study, which leads to a selection approach that helps us to identify potential special and sensitive products.

Application of the proposed tariff reduction formula will result in an overall cut from 15.76 percent to 10.38 percent in average tariffs, while application of the RAMs treatment would increase the rate to 12.34 percent. Flexibilities increase the bound rates to 13.30 percent, resulting in a net reduction of 15.60 percent, well below the maximum cut of 36 percent proposed for developing countries. Although the formula reduces tariff heterogeneity, flexibilities restore heterogeneity to initial levels in key products that maintain tariff protection. The

standard deviation of the average applied rate would fall to 7.19 percent from an initial 11.44 percent after the formula cut, but flexibilities almost eliminate the reduction, bringing it back up to 10.39 percent. All in all, the overall average cut appears relatively homogenous for all chapters; the RAMs provision leads to a substantial reduction in the cut, and employing flexibilities for sensitive and special products weaken its impact further. The simulation results show that the requirements on tariff escalation have limited effects at the aggregate level. Additional liberalization of tropical and diversification products would, however, have a noticeable impact on the overall average tariff. The conclusions are consistent with China's offensive position in calling for larger reductions for developed Members and moderate cuts for developing Members. The findings also support the defensive position that China has taken, seeking enough flexibility to protect Chinese agriculture and restraint in making significant tariff reductions.

ENDNOTES:

1. The results are calculated on HS-6 digit level. As a recently acceded Member, the tariff reduction committed by China was mostly fulfilled between 2001 and 2005.

2. The data are from FAO Statistical Database.

3. The trade value comes from China Customs Database.

4. In the WTO accession agreements, China agreed a de minimis exemption level of 8.5 percent of the value of production, while for other developing countries the de minimis was 10 percent of the value of production.

5. Interest subsidies are provided to agricultural producers in poor areas through loans with preferential interest rates.

6. The seed subsidy support level of specific commodities was not available.

7. The result calculated at HS-6 digit level is different from the result calculated at HS-8 digit tariffs. The simple average of bound tariffs calculated at HS-8 digit level is 15.10 percent. The difference is due to the fact that the average calculated from the HS-8 digit tariffs was used to estimate the tariff rate of the HS-6 digit lines.

8. The trade-weighted average tariff calculated at HS-8 digit level is 15.50 percent which is little higher than the simple average.

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ANNEX: TABLES AND FIGURES

Figure 1. China's Domestic Support levels and Value of Production in 1996-2005
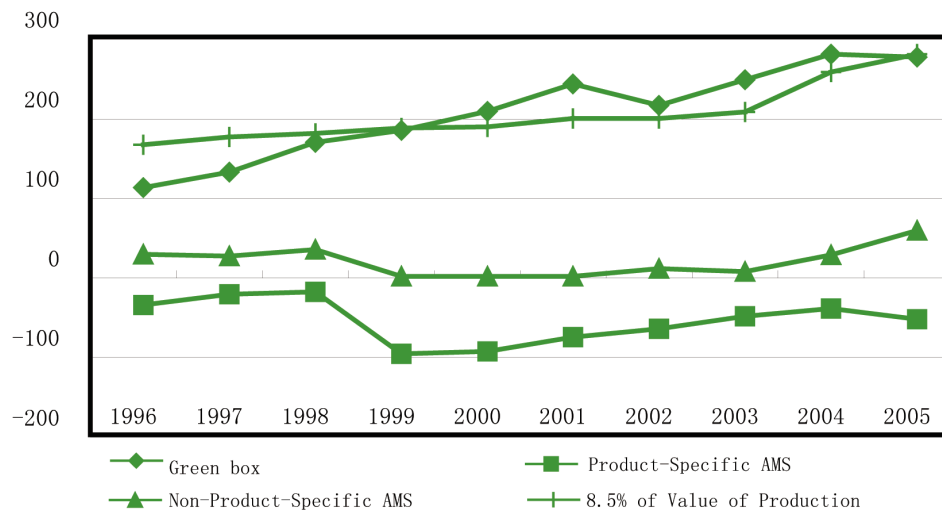
Table 1. China's Official WTO Domestic Support Notifications, 1996-2001 (Million RMB)

	1996	1997	1998	1999	2000	2001
Green Box	112178	131254	169351	184335	207899	242332
AMS	-6953	4006	15500	-95801	-92911	-75409
Product-Specific AMS	-34980	-22053	-18622	-96501	-93656	-76157
a) Market Price Support	-34980	-22053	-18622	-99355	-97159	-77866
Wheat	-6075	-11223	-6541	-16783	-19698	-22156
Rice	-17647	-9970	-12011	-67966	-67664	-46971
Corn	-5767	2401	6171	-14606	-9797	-8739
Cotton	-5491	-3261	-6241	0	0	0
b) Other Product-Specific budgetary outlays	0	0	0	2854	3503	1709
Cotton	0	0	0	2854	3503	1709
Non-Product-Specific AMS	28027	26059	34122	700	745	748
a) Input Subsidies	26559	24524	33242	205	151	148
b) Interest Subsidies	1468	1535	880	495	594	600
Total (before de minimis)	-6953	4006	15500	-95801	-92911	-75409
Total (after de minimis)	0	0	0	0	0	0

Source: WT/ACC/CHN/38/Rev.3 & G/AG/N/CHN/8 .

Table 2. China's Green Box Notifications, 1996-2001 (Million RMB)

Measure Type	1996	1997	1998	1999	2000	2001
1)General services	66648	74542	94485	109110	121230	145046
Research	3551	4078	4545	2561	2743	3227
Pest and disease control	1957	2145	2294	2055	2252	2409
Training	194	211	220	370	410	447
Extension and advisory services	5635	6111	7008	14706	16459	19184
Inspection services	1016	1436	1500	1598	1578	2418
Marketing and promotional services	0	0	0	0	0	0
Infrastructure services	40367	44907	60483	73566	81849	97688
Other general services	13928	15654	18435	14254	15939	19673
2)Public stockholding for food security purpose	28773	35335	51027	47596	53799	59685
3)Domestic food aid	2012	1875	1766	2640	2360	683
4)Decoupled income support	0	0	0	0	0	0
5)Income insurance and income safety-net programs	0	0	0	0	0	0
6)Payments for relief from natural disasters	3791	4042	5453	5023	5317	5956
7)Structural adjustment assistance provided through producer retirement programs	0	0	0	0	0	0
8)Structural adjustment assistance provided through resource retirement programs	0	0	0	0	0	0
9)Structural adjustment assistance provided through investment aids	0	0	0	0	0	0
10)Environmental programs	4954	5460	5620	7097	12700	17475
11)Regional assistance programs	6000	10000	11000	12869	12493	13487
Total	112178	131254	169351	184335	207899	242332

Source: WT/ACC/CHN/38/Rev.3 & G/AG/N/CHN/8 .

Table 3. China's Shadow Domestic Support Notification (Million RMB)

Measure Type	2002	2003	2004	2005
Green Box				
a) General services	115284	124829	140616	137021
b) Public stockholding for food security purposes	48172	52264	62079	53746
c) Domestic food aid	160	128	128	93
d) Decoupled income support	0	0	0	0
e) Income insurance and income safety-net programs	0	0	0	0
f) Payments for relief from natural disasters	5808	7216	7725	9276
i) Structural adjustment assistance provided through investment aids	0	0	0	0
j) Environmental programs	33346	46862	51994	55386
k) Regional assistance programs	12926	16062	17195	20646
Total	215696	247361	279737	276168
AMS				
Product-Specific AMS	-65152	-49878	-40136	-53146
Wheat	-28275	-20973	-7193	-11902
Rice	-25126	-18831	-26919	-32385
Corn	-11751	-10404	-8874	-12729
Other non-exempt PS Support	0	330	2850	3870
Non-Product-Specific AMS	10391	6370	27314	58554
Input Subsidies	9871	6051	14952	43096
Interest Subsidies	520	319	787	2268
Direct payment to farmers	0	0	11575	13190
Total (before *de minimis*)	-54761	-43508	-12822	5408
Total (after *de minimis*)	0	0	0	0
8.5% of Total Value of Production	198783	207476	257653	279855

Source : Fuzhi Cheng (2008).
Note: 1. In calculating the market price support, reference prices are fixed, 1996-1998 average border prices.
2. Other non-exempt product specific support included improved quality seed subsidies.
3. Input subsidies were primarily price subsidies for means of production provided to agricultural input manufacturers, including fertilizer, pesticide and mulching film firms.
4. Interest subsidies are provided to agricultural producers through loans with preferential interest rates.
5. Cheng (2008) assumed direct payments to farmers were Green Box. However, to follow the mainstream method, this paper considers the direct payments to farmers as non-product specific support.

Table 4. Main Domestic Support Provisions of the Draft Modalities and China's Commitments

	Categories Draft Modalities	China's Commitments
OTDS		
Base Level	Final bound total AMS +10 percent (or 20 percent) VOP + higher of average blue box payment or 5 percent VOP	22 percent of VOP
Reduction	Tiered reduction	No reduction
Total AMS		
Base Level	Final bound values in 2000	0
Reduction	Tiered reduction	No reduction
PS AMS		
Cap	Base period average PS AMS	de minimis
De Minimis		
Reduction	50% or 60%	No reduction
Blue Box		
Overall Cap	2.5% or 5% VOP	5% VOP
PS Cap	Base period average PS support	No more than 30 percent of the overall blue box limit for the total applicable PS blue box cap and no more than 10 percent for any single product
Cotton		
AMS	Formula reduction	No reduction
Blue Box	1/3 of PS Blue Box cap	1/3 of PS Blue Box cap
VOP		
Base Period	1995-2000 average	1996-2001 average

Source: Fuzhi Cheng (2008) and TN/AG/W/4.
Notes: VOP is the abbreviation of the average total value of agricultural production.

Table 5. Projection of China's Notifications under Current WTO Commitments 2006-2013 (Million RMB)

Policy Category	2006	2007	2008	2009	2010	2011	2012	2013
Green box	317235	337809	358383	378957	399531	420105	440679	461253
PS Support								
High Price								
A: Total (before *de minimis*)	-62665	-62802	-21486	-20793	-20099	33331	35022	36713
Total (after *de minimis*)	0	0	7874	8107	8341	40099	41134	42168
B: Total (before *de minimis*)	-42294	-43778	-24504	-23875	-23246	296	1060	1823
Total (after *de minimis*)	0	0	0	0	0	13832	14152	14472
Medium Price								
A: Total (before *de minimis*)	-62665	-62802	-42213	-41935	-41657	-17208	-16473	-15738
Total (after *de minimis*)	0	0	0	0	0	9311	9564	9818
B: Total (before *de minimis*)	-44294	-43778	-33882	-33310	-32737	-21662	-21028	-20393
Total (after *de minimis*)	0	0	0	0	0	0	0	0
NPS Support								
Total (before *de minimis*)	10,751	10,373	10,355	13,624	13,350	13,816	13,803	13,420
Omitted Subsidies Items	*14,349*	*33,527*	*56,945*	*93,976*				
Adjusted Total NPS Support	*25,100*	*43,900*	*67,300*	*107,600*				
Total (after *de minimis*)	0	0	0	0	0	0	0	0
8.5% of Value of Production	261,635	272,525	283,416	294,306	305,197	316,087	326,977	337,868
Current Total AMS								
High Price:A	0	0	7,874	8,107	8,341	40,099	41,134	42,168
High Price:B	0	0	0	0	0	13,832	14,152	14,472
Medium Price:A	0	0	0	0	0	9,311	9,564	9,818
Medium Price:B	0	0	0	0	0	0	0	0
OTDS (High Price:A)	-51,914	-52,429	-11,131	-7,169	-6,749	47,147	48,825	50,133

Source: Fuzhi Cheng (2008). The rows "Omitted Subsidies Items" and "Adjusted Total NPS Support" are added by the authors. The omitted subsidies items are farm machinery subsidies, direct payments to farmers and integrated agricultural input subsidies, which are assumed to be zero by Cheng when projecting .The data are from MOF (2006, 2007, 2008, 2009).

Note: 1. To project the market price support, reference prices are fixed, 1996-1998 average border prices.

2. High price: administered price increases 20 percent in 2008-2010 and 2011-2013, respectively. Medium price: administer price increases 10 percent in 2008-2010 and 2011-2013, respectively.

3. A: program covered commodities include wheat, rice, corn and cotton. B: program covered commodities include wheat and rice.

4. PS support only includes market price support.

5. Projection of Green Box, NPS support and production is based on linear regression.v

Table 6. China's Bound Tariffs on Agricultural Products

	Simple average(%)	Trade-weighted average(%)
All products	15.76	15.33

Note: The import value (2003-2005 average) are used for calculating weights of the products.

Table 7. China's Agricultural Imports and Tariffs by HS Chapter

HS2	Chapter Title	Trade (Million USD)	Tariff Revenue (Million USD)	Bound Tariff(%)
01	Live Animals	148.7	1.8	5.9
02	Meat and Offal	606.7	66.9	18.0
04	Dairy Products	420.1	37.9	15.0
05	Other Animal Products	227.8	34.1	12.6
06	Live Trees	55.1	2.0	7.9
07	Vegetables	390.1	31.1	10.7
08	Edible Fruit and Nuts	590.6	95.5	18.7
09	Coffee, Tea and Spices	34.0	4.3	13.9
10	Cereals	1352.2	663.6	24.9
11	Milling Products, Starches	170.1	25.1	25.4
12	Oil Seeds	7064.3	184.1	8.6
13	Gums and Resins	57.4	6.5	10.1
14	Vegetable Planting	76.1	5.7	11.1
15	Animal/Vegetable Fats/Oils	3465.0	317.3	12.9
16	Prepared Meat	4.3	0.6	14.6
17	Sugar	334.5	146.7	29.9
18	Cocoa and Preparations	143.1	14.7	11.0
19	Cereal Preparations	194.3	28.7	18.8
20	Vegetable Preparations	144.3	18.5	21.0
21	Miscellaneous Food	364.1	72.5	22.0
22	Beverages and Spirits	285.7	32.1	21.8
23	Food Residues	181.5	10.1	5.6
24	Tobacco	328.1	44.1	29.1
29	Organic Chemicals	13.3	1.8	12.0
33	Essential Oils/Perfumery	60.1	11.0	19.3
35	Albuminoids	171.8	18.3	10.6
38	Misc Chemicals	11.7	1.3	14.4
41	Hides and Skins	1211.7	69.7	7.0
43	Furs	131.2	21.4	19.5
50	Silk	11.1	1.0	8.4
51	wool	1044.4	388.3	20.9
52	Cotton	2534.7	1007.7	22.0
53	Other Vegetable Fibers	204.4	12.3	6.0
all	all	22032.6	3376.7	15.8

Note: The tariff revenue column does not display actual duty collection, it is a substitute computed by multiplying the tariffs and import value (2003-2005 average).

Table 8. China's TRQs and Imports

Products	Quota (1000 ton)	Import under TRQ (1000 ton)				
		2002	2003	2004	2005	2006
Wheat	9636	632	450	7260	3540	610
Corn	7200	10	<5	<5	<5	70
Rice	5320	237	260	770	520	729
Soya-bean oil	3587.1	870	1880	2520	1690	
Palm oil	3168	1695	2330	2390	2840	
Rape-seed oil	1243	78	150	350	180	
Sugar	1945	1183	780	1210	1390	1370
Wool	287	191	170	220	250	280
Cotton	894	177	870	1910	2570	894

Note: The details of the products description are listed in WTO files G/AG/N/CHN/.*

Table 9. Tiered Formula for Agricultural Tariff Cuts

Band	Developed Members		Developing Members		
	Range (%)	Cut (%)	Range (%)	Cut (%)	Cut (for RAMs) (%)
I	0-20	50	0-30	33.3	0 (range 0-10) 25.3 (range10-30)
II	20-50	57	30-80	38.0	30.0
II	50-75	64	80-130	42.7	34.7
IV	>75	70	>130	46.7	38.7
Average Cut	Min	54	Max	36	

Table 10. Key Factors Concerning the Tariff Cuts Used in the Analysis

Bands	0/30/80/130
Proportional cut	25.3 (no cut when tariffs at or below 10 percent)/30.0/-/-
Average cut	limited to 36%
Sensitive Products	5.3% of HS6 tariff lines with one third of the formula cut
Special Products I	5% of HS6 tariff lines with no cut
Special Products II	8% of HS6 tariff lines with a 16.6% cut

Table 11. Distribution of Sensitive and Special Products

HS2	Chapter Title	SE		SP I		SP II	
		Number	Million USD	Number	Million USD	Number	Million USD
02	Meat and Offal	0		4	0.1	38	8.7
04	Dairy Products	0		2	0.5	4	4.0
05	Other Animal Products	0		0		1	127.5
08	Edible Fruit and Nuts	8	28.0	0		0	
10	Cereals	0		7	1004.9	0	
11	Milling Products, Starches	0		8	11.8	10	19.8
15	Animal/Vegetable Fats/Oils	1	6.7	0		0	
17	Sugar	0		4	277.7	0	
20	Vegetable Preparations	9	11.6	0		1	0.4
21	Miscellaneous Food	5	237.1	0		0	
22	Beverages and Spirits	9	60.6	0		0	
24	Tobacco	4	54.6	0		0	
51	Wool	0		6	1016.1	1	0.1
52	Cotton	0		2	2514.1	0	
all	all	36	398.5	33	4825.0	55	160.5

Table 12. The Distribution of Products Across the Bands of the Tiered Formula

	Band I a (%)	Band I b (%)	Band II (%)	Band III (%)	Band IV (%)
Number of HS6 lines	39.1	55.5	5.3	0	0
Import Trade Value	68.2	9.9	22.0	0	0

Note: a - The products that have tariff rates less than or equal to 10 percent and are free of reduction for the RAMs; b - Other products in the first level of the tiered formula.

Table 13A. Implications of the Tiered Formula for China's Tariffs: Average Tariff

HS2	Chapter Title	Average Tariff(%)			
		Initial	Developing Member	Developing Member+RAMs	Formula+SE+SP
01	Live Animals	2.5	1.7	2.5	2.5
02	Meat and Offal	13.0	8.6	9.8	11.0
04	Dairy Products	10.1	6.8	8.2	8.7
05	Other Animal Products	4.5	3.0	3.6	3.7
06	Live Trees	6.2	4.1	5.4	5.4
07	Vegetables	6.7	4.5	5.3	5.3
08	Edible Fruit and Nuts	13.1	8.8	10.2	10.5
09	Coffee, Tea and Spices	10.3	6.9	8.0	8.0
10	Cereals	18.9	11.8	13.6	18.9
11	Milling Products, Starches	25.4	16.3	18.8	23.5
12	Oil Seeds	3.5	2.3	2.9	2.9
13	Gums and Resins	7.0	4.7	5.8	5.8
14	Vegetable Planting	8.8	5.8	7.3	7.3
15	Animal/Vegetable Fats/Oils	12.2	8.1	10.4	10.5
16	Prepared Meat	10.1	6.8	7.6	7.6
17	Sugar	24.3	15.7	18.3	21.6
18	Cocoa and Preparations	11.0	7.3	10.1	10.1
19	Cereal Preparations	16.5	11.0	12.4	12.4
20	Vegetable Preparations	11.4	7.6	8.7	9.0
21	Miscellaneous Food	17.2	11.2	12.7	13.4
22	Beverages and Spirits	20.5	13.2	15.7	17.2
23	Food Residues	4.4	2.9	4.3	4.3
24	Tobacco	27.3	17.4	20.2	22.4
29	Organic Chemicals	12.0	8.0	9.6	9.6
33	Essential Oils/Perfumery	11.9	7.9	8.9	8.9
35	Albuminoids	9.1	6.1	8.2	8.2
38	Misc Chemicals	14.4	9.6	11.1	11.1
41	Hides and Skins	5.7	3.8	5.7	5.7
43	Furs	17.5	11.7	13.1	13.1
50	Silk	3.3	2.2	3.3	3.3
51	Wool	16.8	10.6	12.4	16.7
52	Cotton	22.0	13.9	17.2	22.0
53	Other Vegetable Fibres	6.0	4.0	6.0	6.0
all	all	15.76	10.38	12.34	13.30
all	No_SE and Non-SP	12.54	8.36	10.22	10.22
all	SE	33.60	21.70	24.39	27.65
all	SP with cut	18.67	12.45	13.94	15.64
all	SP with no cut	45.41	28.39	32.02	45.41

Table 13B. Implications of the Tiered Formula for China's Tariffs: Standard Deviation

HS2	Chapter Title	Standard Deviation (%)			
		Initial	Developing Member	Developing Member+RAMs	Formula+SE+SP
01	Live Animals	3.4	2.2	3.4	3.4
02	Meat and Offal	4.6	3.0	3.3	4.3
04	Dairy Products	4.3	2.9	2.4	3.3
05	Other Animal Products	5.7	3.8	4.0	4.1
06	Live Trees	7.3	4.9	5.3	5.3
07	Vegetables	3.6	2.4	2.4	2.4
08	Edible Fruit and Nuts	7.5	5.0	5.0	5.7
09	Coffee, Tea and Spices	5.0	3.3	3.3	3.3
10	Cereals	30.7	18.9	21.1	30.7
11	Milling Products, Starches	20.2	12.3	13.5	20.9
12	Oil Seeds	6.8	4.5	5.1	5.1
13	Gums and Resins	5.4	3.6	3.9	3.9
14	Vegetable Planting	4.3	2.9	2.7	2.7
15	Animal/Vegetable Fats/Oils	5.9	3.9	3.5	3.7
16	Prepared Meat	0.9	0.6	0.7	0.7
17	Sugar	16.3	10.0	10.5	16.4
18	Cocoa and Preparations	4.1	2.7	2.3	2.3
19	Cereal Preparations	5.8	3.9	4.1	4.1
20	Vegetable Preparations	7.0	4.7	4.8	5.3
21	Miscellaneous Food	7.1	4.4	4.6	5.8
22	Beverages and Spirits	17.5	10.7	11.5	13.8
23	Food Residues	2.1	1.4	1.4	1.4
24	Tobacco	24.6	15.0	16.0	19.4
29	Organic Chemicals	3.5	2.3	1.4	1.4
33	Essential Oils/Perfumery	1.4	0.9	1.0	1.0
35	Albuminoids	3.6	2.4	2.3	2.3
38	Misc Chemicals	2.3	1.5	1.0	1.0
41	Hides and Skins	1.9	1.2	1.9	1.9
43	Furs	1.7	1.1	1.2	1.2
50	Silk	1.5	1.0	1.5	1.5
51	Wool	14.2	8.6	8.8	14.4
52	Cotton	16.4	9.9	9.9	16.4
53	Other Vegetable Fibres	0.0	0.0	0.0	0.0
all	all	11.44	7.19	7.70	10.39
all	No_SE and Non-SP	6.65	4.43	4.54	4.54
all	SE	13.95	8.30	9.42	11.12
all	SP with cut	3.57	2.38	2.67	2.99
all	SP with no cut	17.55	10.54	11.95	17.55

Table 14. Implications of the Tiered Formula for Different Bands

		Initial	Developing Member	Developing Member+RAMs	Formula+SE+SP
Average Tariff	Band I [a]	7.08	4.72	-	-
	Band I [b]	18.42	12.28	13.75	14.27
	Band II	51.83	32.14	36.28	49.00
	All	15.76	10.38	12.34	13.30
Weighted-Average	Band I [a]	3.64	2.42	-	-
	Band I [b]	1.71	1.14	1.28	1.32
	Band II	9.98	6.19	6.98	9.97
	All	15.33	9.75	11.90	14.93
Standard Deviation	Band I [a]	3.22	2.15	-	-
	Band I [b]	5.16	3.44	3.85	4.36
	Band II	13.33	8.27	9.33	13.78
	All	11.44	7.19	7.70	10.39

Note: a - The products with tariff rates less than or equal to 10 percent and free of reduction for the RAMs; b - Other products in the first level of the tiered formula.

Table 15. Impact of Tariff Cuts on China's Exports

(Trade-Weighted Average of Faced Tariffs)

Importer	Initial	Tiered Formula	TF + TP + TE	With Flexibility
WTO Developed Countries	16.2%	8.2%	7.3%	10.8%
WTO Developing Countries (non SVE, non RAMs, non LDCs)	17.7%	12.0%	12.0%	17.5%
SVE	14.2%	13.9%	13.9%	14.2%
RAMs	12.4%	10.0%	10.0%	11.5%
LDCs	13.4%	13.4%	13.4%	13.4%

Note: Thanks to Dr. David Laborde from IFPRI for providing this table. TF means tiered formula, TE denotes tariff escalation, and TP denotes the fullest liberalization of trade in tropical and diversification products.

Table 16. Impact of Tariff Cuts on China's Exports by HS Chapters

(Trade-Weighted Average of Faced Tariffs)

HS2	Chapter Title	Export (mil. USD)	Initial	Tiered Formula	TF + TP + TE	With Flexibility
01	Live Animals	328.5	0.3%	0.3%	0.3%	0.3%
02	Meat and Offal	698.6	8.4%	5.5%	5.5%	6.2%
04	Dairy Products	241.1	10.9%	5.8%	5.8%	6.5%
05	Other Animal Products	907.4	1.0%	0.9%	0.9%	0.9%
06	Live Trees	63.6	2.4%	2.0%	1.1%	1.2%
07	Vegetables	2590.0	16.8%	9.4%	8.9%	11.3%
08	Edible Fruit and Nuts	911.8	11.4%	8.7%	8.3%	9.6%
09	Coffee, Tea and Spices	805.4	18.2%	11.8%	11.5%	17.3%
10	Cereals	1580.5	30.3%	19.6%	17.1%	29.1%
11	Milling Products, Starches	170.6	79.6%	45.7%	42.6%	77.0%
12	Oil Seeds	1234.9	26.0%	14.9%	14.4%	25.3%
13	Gums and Resins	86.4	10.7%	6.6%	6.1%	9.8%
14	Vegetable Planting	46.2	1.4%	1.3%	1.2%	1.3%
15	Animal/Vegetable Fats/Oils	187.5	4.6%	4.1%	3.9%	3.9%
16	Prepared Meat	940.8	19.9%	8.5%	8.5%	11.2%
17	Sugar	289.0	16.2%	10.9%	10.5%	12.5%
18	Cocoa and Preparations	78.0	15.3%	9.7%	7.2%	11.8%
19	Cereal Preparations	646.5	14.9%	9.0%	8.9%	11.4%
20	Vegetable Preparations	2613.5	15.7%	8.9%	8.8%	10.2%
21	Miscellaneous Food	624.2	11.5%	8.4%	8.4%	9.8%
22	Beverages and Spirits	695.6	9.9%	6.5%	6.5%	8.8%
23	Food Residues	450.0	5.7%	3.9%	3.9%	4.4%
24	Tobacco	514.6	30.5%	21.8%	21.8%	29.5%
29	Organic Chemicals	5.7	13.2%	9.8%	9.8%	9.9%
33	Essential Oils/Perfumery	74.9	3.4%	2.9%	2.9%	3.0%
35	Albuminoids	193.1	9.2%	6.2%	6.2%	8.3%
38	Misc Chemicals	2.3	5.4%	4.6%	4.6%	4.7%
41	Hides and Skins	2.7	0.2%	0.2%	0.2%	0.2%
43	Furs	7.1	0.2%	0.2%	0.2%	0.2%
50	Silk	250.1	31.3%	20.4%	20.4%	24.8%
51	Wool	48.3	1.5%	1.4%	1.4%	1.4%
52	Cotton	53.7	1.8%	1.5%	1.5%	1.8%
53	Other Vegetable Fibers	2.8	1.6%	1.6%	1.6%	1.6%
all	all	17345.4	16.7%	10.2%	9.7%	13.7%

Note: Thanks to Dr. David Laborde from IFPRI for providing the tariff data in this table.
The export data are the average value from 2003 to 2005, calculated by the author.

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