

TMD DISCUSSION PAPER NO. 68

**CHINA'S WTO ACCESSION: CONFLICTS WITH
DOMESTIC AGRICULTURAL POLICIES AND
INSTITUTIONS**

Hunter Colby
**Economic Research Service, U.S. Department of
Agriculture**

Xinshen Diao
International Food Policy Research Institute

Francis Tuan
**Economic Research Service, U.S. Department of
Agriculture**

**Trade and Macroeconomics Division
International Food Policy Research Institute
2033 K Street, N.W.
Washington, D.C. 20006, U.S.A.**

February 2001

TMD Discussion Papers contain preliminary material and research results, and are circulated prior to a full peer review in order to stimulate discussion and critical comment. It is expected that most Discussion Papers will eventually be published in some other form, and that their content may also be revised. This paper is available at <http://www.cgiar.org/ifpri/divs/tmd/dp.htm>

China's WTO Accession: Conflicts with Domestic Agricultural Policies and Institutions

Hunter Colby, Xinshen Diao, and Francis Tuan¹

Abstract

This analysis examines the implications of WTO accession for China's domestic policies and institutions by identifying some of Chinese agricultural policies and institutional arrangements that may generate conflicts with WTO requirements and analyzing the nature and extent of the conflict that may be introduced by WTO accession. We differentiate three alternative ways that China's current domestic policy or institutions may conflict with or be incompatible with WTO accession: (1) the domestic policy or institution is expressly prohibited by WTO rules and principles; (2) the changes required by WTO accession impose additional costs on the government such that the existing policy or institutions are difficult to sustain; and (3) the changes required for WTO accession reduce the effectiveness of the policies or institutions.

Based only on the incomplete information currently available on China's WTO commitments, we suggest that the greatest conflicts center on China's policies that manage agricultural supply, distribution, and trade of major commodities. First, China's state trading enterprises will no longer have a monopoly on trade. This is likely to reduce the government's ability to use STE as a policy instrument to limit imports in order to support domestic production. Second, the most important conflict with China's WTO commitment is likely to be China's use of a state-run monopoly procurement system for grains and cotton. This change will diminish the government's current policy goal of managing supply and distribution of key agricultural commodities. The impact on farmers, however, is likely to be mixed and will be influenced by general agricultural supply and demand conditions. Third, the change in China's import tariff duties is not expected to have a significant impact on either domestic policy or on government revenues. However, in terms of domestic support, China will face a conflict in the operation of its grain stockholding policy, while the large number of government programs that meet the WTO "Green Box" criteria will be increasingly important to China's agriculture. In this way, China's farmers will hopefully be able to reduce costs, increase yields, and improve their competitiveness.

¹ Hunter Colby and Francis Tuan are agricultural economists in the Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture. Xinshen Diao is a Research Fellow at the International Food Policy Research Institute, Washington, DC.

Table of Contents

China's WTO Commitments	2
Tariff Barriers to Trade	3
Non-Tariff Barriers to Trade.....	5
Import quotas or licenses	5
State trading	9
Value-added tax	10
Domestic Marketing and Distribution	11
Production policy	12
Price policy	13
Stock or food security policy	13
Marketing policy.....	14
China's domestic support commitments	14
Conclusion	16
References	19
List of Discussion Papers	20

China's impending accession to the World Trade Organization (WTO) is an important event for China and for agricultural exporting nations around the world. In the broadest terms, trade policy reform under the Uruguay Round Agreement on Agriculture involves three key areas. These areas, sometimes described as the three pillars of the agreement, are market access (tariffs, tariff rate quotas and other trade barriers), domestic support, and export subsidies. As part of its WTO accession commitment, China agreed to reduce its agricultural protection and trade barriers in all three areas, including reducing barriers to agricultural imports, expanding and creating new market opportunities for exporters, eliminating export subsidies, and capping domestic support of agriculture at current levels.

Although implementation of China's commitments is expected to impact the world economy, especially international trade flows and commodity prices, it will also have an enormous impact on China itself. As in many developing countries with large rural populations and a large share of the national economy drawn from agriculture, China's agricultural protection policies are concentrated on limiting market access. Reflecting this concentration, two critical components of China's WTO accession commitments are reduced and bound tariff rates and the introduction of a tariff-rate quota system for certain key commodities such as grains and cotton. But there are also other, less well-publicized commitments from China to liberalize its domestic economy; the most important of which may be liberalizing its internal marketing and distribution system.

This analysis examines the implications of WTO accession for China's domestic agricultural policies and institutions. China's agricultural trade policies, especially non-tariff barriers, are part of an agricultural policy structure geared towards protecting agriculture in order to maintain self-sufficiency in agricultural supply, especially in food grain production. However, China's domestic agricultural policy environment, as well as its current system of agricultural institutions, may not be compatible with the rules and trade policy changes required by WTO accession. This study focuses on identifying some of the agricultural policies and institutional arrangements in China that may generate conflicts with WTO requirements, and will analyze the nature and extent of the conflict that may be introduced by WTO accession.

Current domestic policy or institutions may conflict with or be incompatible with WTO accession in three different ways. One type of conflict is where China's domestic policy or institution is expressly prohibited by WTO rules and principles or is expressly addressed in China's market access or domestic support commitments. Another type of conflict is where the changes required by WTO accession impose additional costs on the government such that the existing agricultural policy or institutions are difficult to sustain. And finally, a third type of conflict is where the changes required for WTO accession reduce the effectiveness, wholly or in part, of the agricultural policies or institutions.

This paper will address three of the most important changes that China agreed to make as part of its commitment package. The first two changes are in the area of market access and involve changes in China's agricultural trade policies. These changes can be categorized by the type of barrier to trade, i.e., tariff barriers and non-tariff barriers. As most non-tariff

barriers are linked with China's domestic policies and its institutional system, the paper will examine non-tariff barriers most closely. Within the non-tariff barrier category, the two most significant changes are that China committed to replace its current import quota and licensing system with a tariff-rate quota system and will relax the state trading company monopoly over agricultural trade.

The third key area of change China agreed to make as part of its commitment package is to liberalize its domestic agricultural distribution system for major grain and oil products. China committed to allow foreign companies to have full trading rights and distribution rights, including rights in retailing, wholesaling, warehouse, and transportation. This will clearly be incompatible with China's current agricultural marketing and distribution system—a system based on a near monopoly by the government over procurement and allocation of priority agricultural commodities. In China, the agricultural marketing and distribution system is a complex system of interlocking policies and government institutions. The government utilizes this system to implement many of its agricultural policies. Therefore, this final section will examine China's WTO commitments in the area of marketing and distribution from the perspective of the government's key current policy initiatives, including production policy, marketing policy, price and procurement policy, and finally, stock or food security policy. This section will conclude with a brief discussion of the separate, but closely related, issue of China's domestic support commitments required as part of its WTO accession package.

China's WTO Commitments

A great deal is still not known about the terms of China's accession. China has concluded bilateral agreements with every nation except for Mexico (for which a bilateral agreement is expected to be concluded shortly). The U.S.-China agreement is the only agreement currently available to the public. However, China's commitments differ from one bilateral agreement to another. Therefore, once all the bilateral agreements are concluded, the WTO Secretariat will combine the "best" commitments from each and aggregate them into a single text. The combined text will be the basis for China's accession to the WTO and all member countries will have recourse to it. This means the U.S.-China agreement is a minimum set of commitments, and additional commitments will likely improve the final package.

The second phase of the accession process, multilateral negotiations, is still underway. This phase of the negotiation will produce two documents, the Protocol of Accession and the Working Party Report, specifying the commitments China makes in terms of market access, giving the details of how they will implement those commitments, and explaining how the rules of the WTO would apply to China. This multilateral phase of the negotiations will include China's commitments on domestic support.

This analysis is based on the bilateral U.S.-China agreement signed on November 15, 1999, the only definitive information that is currently available on the terms of China's accession to the WTO. Based on the agreement, upon joining the WTO China agreed to reduce its average tariff rate on agricultural imports from 22 percent to 17.5 percent. A second major

commitment by China is to reduce many of its current non-tariff barriers to trade. The most important such barriers are quotas, import licenses and the use of state trading companies. The third type of change that China committed to make is to liberalize the right to own and operate domestic distribution services over a three-year period, including opening up sectors related to distribution services, such as repair and maintenance, warehousing, and trucking services. In the following sections, the assessment of domestic policy implications of China's accession to the WTO will focus on these three types of policy changes and the possible conflicts between these changes and China's current agricultural policies and institution system. As the analysis is solely based on the information contained in the bilateral U.S.-China agreement, this is a preliminary examination, and a more rigorous and extensive analysis will be needed after the complete package of accession commitments and the accession protocol are finalized and made public.

Tariff Barriers to Trade

The first type of trade change that China committed to make is to reduce tariff barriers to trade. Currently, China's average agricultural import tariff rates by commodity class are 21 percent for live animals and animal products, 7 percent for grains, 17 percent for fats and oils, 29 percent for processed foods, beverages and tobacco products, and 27 percent for textiles and other processed agricultural products. Table 1 shows a selection of China's tariff reduction commitments.

Table 1—Selected tariff cuts:

Item	Base (%)	2004 (%)
Beef	45	12
Pork	20	12
Poultry	20	10
Citrus	40	12
Grapes	40	13
Apples	30	10
Almonds	30	10
Wine	65	20
Cheese	50	12
Ice cream	45	19

Source: U.S.-China bilateral agreement.

China's tariff cuts may not generate any direct conflict with its current agricultural policies and institutions. However, by raising the cost of imports, China's tariffs are a means of protecting or supporting less competitive domestic agricultural producers, processors, or

domestic distribution enterprises. Therefore, China's tariff cuts may be incompatible with some of its domestic policy goals or programs. It is possible that, after acceding to the WTO, China will choose to assist domestic producers and distribution organizations formerly protected or supported by high import tariff duties by introducing new policies or programs—though these would have to conform to WTO rules against implementing new trade-distorting measures.

The reduction in tariff duties is expected to reduce government revenues. However, the experience of other developing countries reducing relatively high import tariff rates shows that in some cases an import duty reduction may actually increase tariff revenues. This occurs because the relatively high tariff rates create an incentives to bypass the collection of tariffs, either by illegally eliciting the support of customs officials to reduce the declared value of the imports, or else evading the collection of the duties altogether (smuggling or other gray market behaviors). Reducing the incentive to cheat by lowering the average tariff rate, therefore, could result in more goods moving through official import channels and an increase in tariff revenues.

However, even if there is a reduction in total duty revenue to the government, it is unlikely to have an important impact on domestic policy since tariff revenue, especially the revenue collected from agricultural imports, is quite small. Secondly, the government can relatively easily offset a decline in agricultural tariff revenue with an increase in other sources of revenue. Thirdly, and different from many developing countries in which tariff duties are one of the few effective means of collecting operating revenue for the central government, in China, tariff revenue is a very small component of the government's total tax revenue (table 2), and agricultural imports are a small component of total imports (table 3). Therefore, it seems likely that, if a reduction in tariff revenues occurs, it will not have a noticeable impact on government agricultural policy or expenditure decisions.

Table 2—China's government tax revenue

	Total (bil RMB)	Tariffs (bil RMB)	Share (%)
1990	282.2	15.9	5.63
1991	299.0	18.7	6.26
1992	329.7	21.3	6.45
1993	425.5	25.6	6.03
1994	512.7	27.3	5.32
1995	603.8	29.2	4.83
1996	691.0	30.2	4.37
1997	823.4	31.9	3.88
1998	926.3	31.3	3.38
1999	1068.3	56.2	5.26

Source: China 2000 Statistical Yearbook, p. 258.

Table 3—Share of China’s agricultural imports in total imports

	Total imports (bil US\$)	Agricultural imports (bil US\$)	Agriculture share of total imports (%)	Effective tariff rate (total tariff revenue over total imports) (%)
1990	53.3	4.5	8.39	6.23
1991	63.8	3.7	5.83	5.51
1992	80.6	3.9	4.85	4.79
1993	104.0	3.0	2.83	4.27
1994	115.6	5.0	4.34	2.74
1995	132.1	9.1	6.91	2.65
1996	138.8	7.9	5.67	2.62
1997	142.2	6.3	4.43	2.70
1998	140.2	5.5	3.89	2.70
1999	165.7	5.2	3.13	4.10

Source: China 2000 Statistical Yearbook, p. 590.

Non-Tariff Barriers to Trade

The second major commitment by China is to reduce non-tariff barriers to trade. Two of the most important such barriers are import quotas or licenses, and the use of state trading companies. Compared to tariff barriers, non-tariff barriers are much more complex forms of intervention and are closely linked to China’s agricultural policies and institutional system in general. This section will address the potential for conflict between China’s current domestic policies and institutions and the proposed changes in the two major types of non-tariff barrier to agricultural trade addressed in the bilateral U.S.-China Agreement—import quotas or licenses and state trading. And finally, the analysis will close with a brief discussion of one of China’s more recent trade policy instrument innovations—the value-added tax (VAT). The discussion will examine how this instrument is used to manage import and export flows and what, if any, conflict this policy may have with China’s accession commitments.

Import quotas or licenses

For more than four decades China’s trade in cotton and grains, especially wheat, rice, and corn, has been strictly controlled by the government and treated as a strategic activity rather than simply buying or selling commodities. After more than two decades of economic reform, China has decentralized many economic activities, and many agricultural commodities are now relatively freely traded. However, there has been very little liberalization of grain and cotton trade.

China's import quota and licensing measures are an integral part of the system the government employs to control domestic prices, marketing and distribution of grains and edible oils. For this reason, China's quota and license system is different from systems operating in other countries. First, in the case of import quotas, China has never published a description of the system or the regulations or policies controlling the trade. Second, the determination and allocation of quotas are not transparent operations, either to markets or to end users of imported commodities in China. In general, the only way to determine the amount of an import quota is through ex post facto examination of trade flows.

Nominally, China's State Development and Planning Commission (SDPC) recommends a quota amount, reviewed and approved by the State Council, which the SPDC then allocates to individual provinces. In practice, however, provincial governments also play a crucial role in determining the total amount of the quota and its distribution. The amount of quota that each province obtains is determined through an unofficial negotiation process between the central and provincial governments. The process is further complicated by the fact that the total national quota amounts as well as the allocation among provinces are likely to be revisited several times during the year. Once the initial quota negotiation process between the central and provincial governments is complete, there is a similar process that occurs between provincial and local governments, whereupon the quota is finally allocated to firms holding import licenses or government-owned domestic wholesalers. In other words, quota determination and allocations are not only unannounced, they may change several times during the year depending on the outcome of negotiations between each level of government.

After the amount and allocation are determined, the implementation of the quota is monitored and administered by the Ministry of Foreign Trade and Economic Cooperation (MOFTEC), with the state trading companies (COFCO for grains and Chinatex for cotton) conducting the trade on behalf of the quota-holder. In most cases, quota-holders have no right to import directly from abroad, to choose their trading partners, or to specify a type or characteristic (such as the protein content of wheat) of a commodity.

A related means of managing imports is the government's import license system. China's Ministry of Foreign Trade and Economic Cooperation (MOFTEC) administers a national system of import licensing. Under current practice, in addition to a quota allocation, a firm wishing to import also has to obtain an import license. In the case of the key state trading companies for grain and cotton (COFCO and Chinatex), obtaining a license from MOFTEC is automatic. In general, for most other firms trading in major agricultural products, the procedure can be fraught with obstacles and hidden costs, and obtaining a license may sometimes be due more to good relations with the issuing agency rather than through meeting clear or objective criteria. More importantly, China currently does not allow any private companies to import or export grains, vegetable oils or cotton.

After WTO accession, China agreed to replace the current quota system with a transparent tariff-rate quota (TRQ) regime for wheat, rice, corn, cotton, and soybean oil imports (Table 4). Imports within the TRQ quota amount will be at a low tariff, while imports above that quota amount will be at another much higher duty. The TRQ quantity is scheduled to rise in

equal increments until full implementation in the year 2004 (2005 for soybean oil, after which the quota is eliminated and it converts to a simple low, bound duty). The over-quota tariffs gradually decline in fixed, equal increments over the 2000-2004 implementation period (2000-2005 for soybean oil). It is important to note that the TRQ quota amount is an opportunity to import given to fulfill unmet domestic demand. It is not a minimum access commitment.

Table 4—China’s TRQ system quotas, tariff rates, and private trade share

	Quota amount		In-quota	Over-quota		Private share	
	2000 (mil tons)	2004 (mil tons)	tariff tariff (%)	Tariff 2000 (%)	2004** (%)	2000 (%)	2004** (%)
Wheat	7.30	9.64	1	77	65	10	10
Indica rice	1.33	2.66	1	77	65	10	10
Japonica rice	1.33	2.66	1	77	65	50	50
Corn	4.50	7.20	1	77	65	25	40
Cotton	0.74	0.89	4	69	40	67	67
Soy oil /1	1.72	3.26	9	74	9	50	100

** 2004 is the final year of implementation for every commodity *except* soy oil (see footnote 1 below).

/1 The final year of implementation for soy oil is 2005 (the TRQ quota reaches 3.26 million tons); for 2006 the TRQ is eliminated, converting to 100 percent private trade with a tariff rate of 9 percent.

Source: U.S.-China bilateral agreement.

In addition to changing China’s import quota system, the bilateral U.S.-China agreement prohibits China from using its import licensing system to inhibit agricultural trade. China will have to introduce a system whereby any company with trading rights can, according to transparent and objective rules and regulations, readily obtain an import license to bring in major agricultural commodities. China has committed to liberalize trading rights within three years of accession. China must also allow foreign companies to apply for and obtain an import license and directly import agricultural commodities.

The final rules for this trade policy change will not be available until after the Protocol of Accession and Working Party Report are finalized and released. Nevertheless, this trade policy change will likely stimulate increased imports of major agricultural products. In particular, ready access to import licenses combined with the allocation of a share of the TRQ quota to non-state trade companies will increase imports of wheat, corn, cotton, and soybean oil. Imports of other important agricultural commodities, such as meats, fruits, and sugar, will also rise, as more firms are readily able to obtain import licenses. However, the transition from the current system to a transparent tariff-rate quota regime that allows non-state trading companies to conduct trade in wheat, rice, corn and cotton, will present a challenge to China’s domestic policies and the institutions through which these policies are implemented.

Current domestic agricultural policy relies, in large part, on state control over agricultural commodity imports, especially imports of grains, cotton and edible oilseeds and their products. The central government uses its import quota system to manage import flows, thereby isolating the influence of international market on domestic prices and protecting domestic producers or processors. Under the new TRQ system, the government will partially lose its ability to control imports, as quota will no longer be fully carried out by the state trading companies. Non-state trading companies and foreign companies can conduct part of the within quota trade as well as the above quota trade (under the high tariff rates). With the loss of government's monopoly control over imports, the government's agricultural policies, including pricing, marketing and distribution policies, will become much less effective.

The most immediate effect of the TRQ system would appear to be to challenge China's emphasis on food self-sufficiency. From the government's point of view, food self-sufficiency is defined as grain self-sufficiency. In the late 1990s, senior leaders indicated that in order to assure China's grain self-sufficiency, grain imports have to be limited to no more than 5 percent of national consumption levels (although some unofficial reports have claimed the target was actually between 5 and 10 percent). At current levels, the TRQ quotas for grains are all less than 10 percent of consumption (Table 5). Furthermore, with consumption growth at its current pace, and even assuming constraints on future increases in China's grain production, by 2004 the ratios of imports under the full TRQ quota over total consumption may only be slightly above the 5 percent target.

Table 5—China's projected grain self-sufficiency ratio

	1999/00 consumption (mil tons)	2004 TRQ quota (mil tons)	TRQ share of consumption (%)
Wheat	117	9.64	8.2
Rice	137	5.32	3.9
Corn	117	7.20	6.2

Source: U.S.-China bilateral agreement and USDA PS&D Database.

The TRQ quota system and open access to import licenses will also likely allow domestic prices to more closely reflect world market prices. For commodities such as grains, cotton, oilseeds and oilseed products, prices may face downward pressure as increased imports raises total supply. This could negatively impact the profit margins of state trading enterprises both at the national and provincial level. In general, China's farm prices have tended to be lower than world market prices, while the inefficient grain and other commodity distribution systems often resulted in a large marketing margin and losses to those firms (traditionally subsidized but of the central government's budget). With increased competition from imported goods and from non-state-owned or foreign companies, the pressure on the current

state trading enterprises will in turn affect the implementation of government agricultural policies.

It is important to remember that introducing competition into China's agricultural economy will not necessarily hurt Chinese farmers or the food processing industry. Instead, as there are significant differences in the economic development across regions in China, allowing different regions to concentrate in different agricultural commodities in which they have a comparative advantage in production and trade, grain imports and foreign competition could benefit some Chinese farmers. Of course, to realize this, China's government has to re-think and further reform its current agricultural policy and institutional regime towards better use and allocation of inputs such as land, labor and capital.

Significant questions remain about how China will implement the new TRQ quota system. For instance, how will the quota be allocated to private traders? Will it be distributed through an auction, or on a first-come first-serve basis, or through some other means? These questions and others are still being addressed in the multilateral negotiations in Geneva, and answers must wait until their conclusion. Recent press reports indicate that China has already committed to use a one-tier method of allocation. A one-tier method of open auction, or even a first-come first-serve system, would be less distorting to the economy than a multi-tier system of allocation and would likely be more welcomed by foreign exporters. A multi-tier quota distribution system would be less transparent and more difficult to monitor. Although the details of the new TRQ system will not be completely available until China creates it, it is clear that to implement its commitments, China will either have to sharply reform its current domestic agricultural policy and institutions or to find other new policies that are WTO-compliant to replace them.

State trading

State trading and the quota and license system are two different sides of one problem. Without the state trading enterprises, the government cannot control imports under the quota system, and without the current quota and license system, it would be difficult for state-trading enterprises to survive. Another important characteristic of China's new TRQ system is that a predetermined share of the within quota imports is reserved for private import companies. It is fixed for some commodities but rises in equal increments for other commodities over the implementation period (Table 4). Any portion of the within-quota quantity reserved for state trade companies that is unused after three quarters is reallocated to private import companies. These features are geared towards creating competition among importers in China, as well as providing incentives for state trading companies to fully meet domestic demand and be more responsive to the needs of end-users.

Although China's state trading companies are currently only agents acting on the behalf of quota holders, they act as another layer of government control over grain and cotton imports. As a trading agent, state trading companies behave more or less like profit-seeking enterprises. However, in its role as an instrument of the government to control trade, these companies have to follow the instructions of the government in to conducting trade—in some

cases importing or exporting at a time when prices cannot maximize companies' profits and may even force companies to lose money.

On the other hand, the privileged knowledge of China's import quotas and monopolist position in conducting trade often allows state trading companies to extract outside profits from their trading operations. Their multi-function position provides them with information that can be used to their benefit. However, once the new system eliminates the monopoly of state trading companies over agricultural commodity imports, the introduction of private trade companies, including foreign-owned trade companies, will force the state trading companies to give up their multi-function roles in order to compete with each other and with other non-state trading companies. In contrast to the current practice, end users will have more control over the quality and other characteristics of the agricultural product they import. Transmission of international commodity prices into the domestic economy will also increase. The new system, therefore, will definitely weaken the government's control over international trade flows and domestic prices.

In terms of the impact on China's domestic agricultural policy, the elimination of the state trading company monopoly over China's grain and cotton imports is essentially identical to the impact of the new TRQ system. In addition, it will put pressure on the profit margins of state trading enterprises as barriers to the entry of private competitors fall. From the perspective of domestic policy, this trade policy change will likely not have a direct impact on domestic agricultural policy. It will have an indirect impact similar to the impact described for the TRQ quota system—increased imports and reduced effectiveness of domestic support as domestic prices fall. However, it could provide benefits to processors to the extent that more competition between domestic output and imported commodities increases buying options and potentially drives down the prices of their inputs, and therefore their cost of production.

Value-added tax

Beginning in the mid-1990s, China introduced a value-added tax (VAT) system to provide another means of increasing government tax receipts. By the late 1990s, however, the system was also being used as an important policy instrument to support exports or to discourage imports. Unlike the VAT applied by many other countries, the VAT system in China is quite flexible and the rates of VAT are often subject to change as the government attempts to manage trade flows.

The government can raise, reduce or exempt a value-added tax rate for a specific commodity, for goods produced by a specific province or a specific company, or even goods used for a specific purpose. For example, a commodity produced for export can have a low rate of VAT, a rebate, or even a tax exemption, while the same commodity bound for the domestic market faces a high VAT rate. An imported good may be charged a VAT in one year but charged little in another year. The commodities produced by a state-owned company may be exempt from the VAT, while the same commodities produced by non-state company have to pay the VAT.

Although the U.S.-China bilateral agreement does not contain language specifically addressing China's value-added tax (VAT) system, China's use of the tax to discriminate against some products (for instance, those destined for the domestic market rather than for the export market) would almost certainly run counter to the "non-discrimination" language found in GATT Article 3. Therefore, if China uses the VAT system to create "non-level playing field" for different producers, different products, or to discriminate based on the ultimate destination of a products (foreign or domestic), then China's VAT system would appear to be in direct conflict with prevailing WTO rules. However, if the VAT system is applied to producers and products in a non-discriminatory manner, taxing all substantially alike products at an equivalent rate, then the system would not conflict with WTO rules.

Domestic Marketing and Distribution

China has committed to phase in, over a three-year period, liberalization of the right to own and operate agricultural distribution services for all commodities except tobacco and salt. The liberalization applies to the services of wholesaling, retailing, commission agents, franchising, and their subordinate services. It also opens up sectors related to distribution services such as repair and maintenance, warehousing, and trucking services. At present, China restricts the right to own and operate distribution services for many agricultural commodities (grain, cotton and edible oil, for instance) to a few, select state institutions.

The government generally prohibits foreign firms from distributing products other than those they produce in China or from controlling their own distribution networks. Furthermore, China also prohibits domestic enterprises from operating distribution, warehousing operations or providing marketing or other services for certain agricultural commodities, most notably grains and cotton. Instead, purchasing, processing, distribution, and warehousing of wheat, rice, corn, and cotton are restricted to state-run agencies—China's Grain Bureau (and affiliated Grain Companies) and the All-China Federation of Supply and Marketing Cooperatives (and affiliated Cotton and Jute Companies).

The final language on China's liberalization of distribution services will not be available until the multilateral negotiations are complete. However, at a minimum, the language will include the provisions of Annex 1 of the U.S.-China bilateral agreement, which states:

“The principal services rendered in [commission agents services, wholesaling, retailing, and franchising] can be characterized as reselling merchandise, accompanied by a *variety of related subordinated services*, including inventory management; assembly, sorting and grading of bulk lots; breaking bulk lots and redistributing into smaller lots; delivery services; refrigeration; storage, warehousing and garage services; sales promotion, marketing and advertising...” [italics added].

Although the language does not explicitly include (or exclude) direct purchases from farmers or procurement, it appears that this could be considered a “related subordinated service.” If this interpretation is correct, and there is no language in the final Accession Protocol that

excludes this service, then this liberalization will have a dramatic effect on China's domestic grain and cotton procurement and marketing policies.

China's grain and cotton procurement agencies would no longer have a monopoly on procurement, but would have to compete with private (included foreign-owned) enterprises to procure from farmers. Over time, as private enterprises enter, this could sharply reduce the government's ability to intervene in the grain and cotton markets through administrative mandates to the state procurement agencies.

Currently, China's official policy prohibits any entity but an authorized grain or cotton company (and a few authorized large end users such as feed mills or yarn mills) to purchase directly from farmers. All other grain or cotton users have to purchase from the state grain companies at local or wholesale markets or from cotton companies (or from the state at the recently inaugurated China National Cotton Exchange). In practice, however, there are growing numbers of black market private dealers scouring the countryside purchasing grain and cotton at prices above the prices paid by the official state buying agencies. So to some extent, and assuming the government does not initiate a crackdown, the current policy is already weakening. This weakening of the strict government procurement monopoly may mitigate the impact of the commitment to liberalize the government marketing and distribution system.

Besides trade policies, China's government agricultural policy can generally be categorized into four broad areas—production policy, marketing policy, price policy, and finally, a stock or food security policy. The liberalization of the government grain and cotton marketing and distribution system will impact all of four of these policy areas, though in different ways and to different degrees.

Production policy

Liberalization of the government grain and cotton marketing and distribution system poses a number of conflicts for China's agricultural production policy. The current policy revolves around administrative guidance of farm production decisions. The central government sets grain or cotton sown area targets which are transmitted down through the government hierarchy to village leaders and ultimately the farmer. Local officials and party chiefs continue to have a great deal of influence over farmer planting decisions, primarily because local officials control access to education, authorizations to have children, and many other important facets of daily life. In addition, local officials are the points at which agricultural taxes and many other types of fees are collected. Farmers know from experience that disregarding instructions from local officials on agricultural matters may bring hardships to other areas of their lives.

The entrance of private procurement agents will not directly impact the government's production policy because the government's principle instrument in effecting production policy is the local official. Nevertheless, the entrance of private procurement and distribution enterprises would clearly diminish the effectiveness of the government's production policy.

Local officials could respond by increasing pressure on farmers, but given current farmer discontent and several recent instances of rural unrest, this would be a very risky policy and could spark even more problems.

Price policy

The government's use of the procurement agency monopoly for purchases from farmers provides a centrally controlled mechanism to implement the government's protection (or minimum floor price) for grains. Although provincial governments are involved in setting these protection prices, the central government continues to influence the final price levels. The protection price was established in the late 1990s in order to provide a measure of security for grain farmers during periods of low prices. The policy was enacted during a high inflation period and was not invoked for several years. Today, in an environment of low market prices for grain, the government has tried to use the monopoly power of its grain procurement agencies to protect farmers' incomes. At the same time, it did not want to increase spending to cover the costs due to the price gap between protection prices and market prices. The government hoped to provide a boost to market prices by limiting grain procurements to its grain-purchasing stations. However, market prices were not pushed up by this policy initiative. Grain-purchasing stations were not enthusiastic about buying additional grain without sufficient government funding to cover their storage costs (since the national grain surplus created an environment of low sales prices and limited demand). Thus, there have been numerous reports of grain-purchasing stations circumventing the government's protection price policy. In some areas this occurs by downgrading the quality of the farmer's grain, while in others, the grain station simply refuses to purchase all the grain the farmer wishes to sell at the protection price.

The liberalization of the governments' marketing and distribution system would further weaken the current price policy of the central government. Grain bureau companies, as monopoly purchasers, are the government's vehicle to control (at least partially) the prices farmers receive for their grain. With the emergence of private grain (and cotton) marketing enterprises, it is hard to imagine how the government will be able to utilize its current institutions and effectively maintain the current price policy. While the government might attempt to require private procurement enterprise to pay a minimum price for purchases from farmers, it would be extremely difficult to monitor and enforce.

Stock or food security policy

The government also uses its monopoly over grain purchasing and distribution to ensure that it has sufficient quantities of strategic grain reserves. Some of the grain purchased by the grain bureau system is earmarked for strategic stocks. Although it is not readily available information, government grain stocks have traditionally been purchased at prices below market prices (though more recently the situation is different—government fixed and protection prices are higher than free market prices) because of its monopoly over grain purchasing. In addition, the government can ensure it meets a grain reserve target because it can simply order grain companies to deliver grain to a reserve warehouse (or declare the

grain purchased by the grain company as reserve grain and then pay the company a subsidy for storage costs).

Once the marketing and distribution system is liberalized, the government will still be able to use the government purchasing stations to procure grain for strategic reserves. However, the government will be competing with private marketing enterprises for procurements, so its ability to purchase grain at a discount to the free market price will be limited, particularly in more developed regions of the country where competition with private marketers is likely to be fiercest. The government may be required to pay higher prices to procure grain for strategic reserves under this new system, raising government expenditures. This in turn might lead to a reassessment of the wisdom of carrying large amounts of strategic and commercial grain reserves. Furthermore, although the government would still have the ability to mandate transfers from state grain companies into state reserves, the quantity purchased by the grain companies will be reduced by the amount purchased by private companies. In time, the government could face a situation where there is insufficient grain purchased by the state grain companies to meet its reserve targets.

Marketing policy

Following liberalization of the government grain and cotton marketing and distribution system, the government will no longer be able to rely on the procurement system to stabilize and manage the grain and cotton markets. Government management of the distribution of grains and cotton to end-users would also be weakened by this liberalization. Although allocation and distribution have already been liberalized to some degree over the last decade, the government is still the dominant actor in this arena. The government periodically initiates crackdowns on illegal merchants in order to shore up that dominance.

Following accession to the WTO, the entrance of private marketing and distribution enterprises will weaken the government's ability to guide allocation of grains and cotton to favored processing enterprises, generally large, state-owned firms. The immediate result of the weakening of government control would be more choices for end users as to their supplier, higher acquisition costs for the state procurement agencies as they compete for the commodity, and lower margins for the state agencies as they lose market share. Government expenditures supporting these agencies would rise at the same time, as the effectiveness of the market management policy would diminish.

China's domestic support commitments

Another important part of China's WTO accession package is its commitment to cap domestic support for agriculture. Also, all of China's future government expenditures in support of agriculture must conform to WTO rules with regard to so-called Green and Amber Box policies.

China's domestic support commitments are still under negotiation. However, based on accession commitments from other countries that have acceded to the WTO, some likely

commitments include a cessation of export subsidies, a commitment to cap domestic support to agricultural producers, and a commitment to refrain from using clearly trade distorting domestic policies (for instance, linkages between government payments and production). In addition, China's government programs, policies, laws, regulations, payments, financial flows, and other activities that impact agriculture will have to be much more transparent than they are currently.

The compatibility of China's domestic support commitments with current domestic policy is difficult to gauge without referencing its domestic support tables and its base aggregate measure of support (AMS) notification. China's AMS notification forms the basis for capping and then reducing future product-specific and non-product-specific support payments by the government, including the use (or non-use) of the *de minimis* provision.

In general, the need to cap support to agriculture would obviously have an impact on many of the programs China's uses to support grain and cotton producers. In particular, China would not be able to pay farmers prices higher than world prices if it raised the aggregate total AMS above the cap.

The public stockholding of agricultural commodities for food security purposes will certainly fall into China's domestic support commitment. Assuming that China claims this as a "Green Box" policy—which is allowed under the Agreement on Agriculture—China will have to make significant changes in the program as it exists today. Annex 2 of the Agriculture Agreement states that:

“The volume and accumulation of such stocks shall correspond to predetermined targets related solely to food security. The process of stock accumulation and disposal shall be financially transparent. Food purchases by the government shall be made at current market prices and sales from food security stocks shall be made at no less than the current domestic market price for the product and quality in question.” (Agreement on Agriculture, Annex 2, paragraph 3)

Therefore, under general WTO rules, China will no longer be able to keep stock information secret from the world community by claiming it is a “state secret.” It will also no longer be able to use administrative prices to purchase grain for the stock program (during periods where administrative prices are higher than world market prices). China also will not be able to sell stocks at prices below current domestic market prices. And finally, these restrictions on purchases and sales of government stocks will apply to provincial grain stocks as well central government grain stocks.

Assuming that China chooses to maintain its public stockholding policy and abide by the conditions identified in Annex 2, there will clearly be an impact on both the cost and effectiveness of the current policy. China will not be able to directly support agricultural producers by paying above-market prices for grain going into state reserves. However, during a period of downward pressure on domestic prices, it will still be able to announce and implement a government grain-purchasing program at the current market price. By

entering the market, it will increase demand for the commodity and thereby provide price support. The downside to this option, of course, is that farmers will be less likely to reduce area the next year because of the government's intervention and support of the market. The government could end up burdened with growing quantities of grain stocks, and ultimately reach a point where a large area adjustment is necessary in order to bring production back in line with demand. In other words, government intervention for stock building purposes, while supporting the price in the short term, could lead to a more dramatic fall in prices in the long-term as well as rapid growth in government expenditures.

In many other areas, China's agricultural policies do not appear to conflict with the domestic support rules and commitments required by the Agreement on Agriculture. The Agriculture Agreement states that "Green Box" policies are exempt from reduction commitments, so long as they are minimally trade distorting, provide support through a publicly funded government program, do not have the effect of providing price support to producers, and do not involve direct linkages between program payments and output. In China's case, there are many different government programs that meet these criteria, including:

- Agricultural research programs at the various national, provincial, and local agricultural institutes, particularly in the area of plant breeding, insect control, and technology.
- The government's plant and animal disease and pest control programs operated by China's Ministry of Agriculture and other agencies within the national and sub-national government
- Agricultural extension services provided to all farmers through the Ministry of Agriculture's extension office network.
- Domestic food aid provided to selected poor counties designated by the central government.
- A related but separate program of regional rural development to reduce poverty by building up infrastructure (electricity, roads, bridges, markets, schools, etc.) and funding small-scale economic development projects such as establishing pasture land, reforestation, or building small-scale reservoirs.
- Rural disaster relief program for farmers and rural residents suffering loss of crops or livestock due to floods, drought, or other natural disasters.

These and other similar policies, while supporting agriculture, are generally considered to be minimally trade distorting, and as such will likely be considered exempt from any reduction commitment. In fact, so long as these policies strictly conform to the "Green Box" standards of WTO rules, there is no explicit limit to the value of the government's support of these policies.

Conclusion

On balance, and based only on the incomplete information currently available on China's WTO commitments, there will be a number of important domestic agricultural policy programs or goals that will conflict with either WTO rules or with China's bilateral

commitments. The greatest conflicts center on China's policies that manage agricultural supply, distribution, and trade of major commodities.

First and foremost, China's state trading enterprises will no longer have a monopoly on trade in wheat, rice, corn, cotton, and soybean oil. Private traders will be able to compete with state trading companies. This is likely to reduce the government's ability to use STE as a policy instrument to limit imports in order to support domestic production. However, if domestic demand surpasses available domestic supply, including the full TRQ import quantity, China can unilaterally increase the quota amount to moderate the impact of rising domestic prices on consumers. Despite the apparent loss of control over imports predicated by the introduction of the TRQ system, the quotas established in the U.S.-China bilateral agreement are roughly in line with the government's policy goal of limiting imports of key agricultural commodities to 5 percent of consumption.

The second most important conflict with China's WTO commitment is likely to be China's use of a state-run monopoly procurement system for grains and cotton. Although the text in the U.S.-China bilateral agreement is not definitive, it appears that this monopoly may be gradually reduced and eventually eliminated. The government may be required to allow private domestic and foreign firms or even farmers' own cooperatives to purchase directly from producers, and then operate wholesale distribution, warehouse, and retail operations. This change will sharply diminish the government's current policy goal of managing supply and distribution of key agricultural commodities. The impact on farmers, however, is likely to be mixed and will be influenced by general agricultural supply and demand conditions as to whether they tend to benefit or to suffer losses relative to the old system. The issue for the government, however, will be to find alternative WTO-compliant policies to meet its stated goals of stabilizing and managing agricultural markets and prices, raising farm incomes, insuring supply and reasonable prices for consumers or end users, and finally, maintaining social and political stability.

On the other hand, the change in China's import tariff duties is not expected to have a significant impact on either domestic policy or on government revenues. Revenue may not even be reduced. But if revenue does fall, tariff revenue as a share of total government revenue is already on a declining trend and, on average, only accounts for around 5 percent of total revenue.

In terms of domestic support, China will face a conflict in the operation of its grain stockholding policy. This policy will not be as effective, and could become increasingly costly as well, if it is maintained but modified to comply with WTO rules. A WTO-compliant grain stockholding policy would be less effective at managing and stabilizing the grain market, but would probably still have some efficacy in terms of implementing stock policy. The final design of the WTO-compliant system and the amount of financial resources that the government is willing to commit will be the determining factor in whether the new system can fulfill the government's current policy goals.

And finally, the large number of government programs that meet the WTO “Green Box” criteria will be increasingly important to China’s agriculture. If direct support of agriculture is capped and in some cases reduced, China will need to increase alternative types of support for farmers, including providing increased levels of resources for technical improvements in crop varieties and livestock breeds, rural infrastructure projects, timely market information, and rural development programs aimed at alleviating poverty. In this way, China’s farmers will hopefully be able to reduce costs, increase yields, and improve their competitiveness.

In sum, China’s accession to the WTO is likely to provide some serious challenges to policy makers as they struggle with the conflicts between their WTO commitments and their domestic agricultural policies and institutions. China’s leaders will need to move beyond their traditional set of policy options and look for new, creative ways of insuring sufficient farm income, providing consumers with ample high-quality food products, and providing the vast Chinese countryside with better economic opportunities and hence more efficient allocating resources along the line of their own comparative advantage. The changes that China will need to make in terms of altering domestic institutions or adjusting domestic policy will be very difficult. Nevertheless, in the late 1970s, China was successful in transforming its struggling collectivized agricultural system to its current socialist-market system. This dramatic transformation was a success by almost any measure—and one that provides some optimism for this next transition.

References

- China National Bureau of Statistics, *China Statistical Yearbook*, China Statistical Publishing House, various years.
- Colby, Hunter, Price, J. Michael, and Tuan, Francis C., "China's WTO Accession Would Boost U.S. Ag Exports and Farm Income," *Agricultural Outlook*, Economic Research Service, AGO-269, March 2000.
- Economic Research Service, U.S. Department of Agriculture, Production, Supply and Demand (PS&D) database, October 2000.
- European Commission, "Market Access Sectoral and Trade Barriers Database: China Agriculture and Fisheries," <http://mkaccdb.eu.int/mkdb.pl>.
- U.S.-China *Bilateral Agriculture Agreement*, November 15, 1999, (<http://www.chinapntr.gov>).
- Tuan, Francis C. and Cheng, Guoqiang, "A Review of China's Agricultural Trade Policy," paper presented at the IATRC Summer Meeting, China's Agricultural Trade and Policy, San Francisco, June 25-26, 1999.
- Wade, John, Bean, Ralph, and Kameny, Xander, USDA, Foreign Agriculture Service, "People's Republic of China Trade Policy Monitoring Trade Policy Update 2000," U.S. Embassy, Agriculture Office, Beijing China, Gain Report #CH0014, June 2, 2000.
- World Trade Organization, *Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations*, Cambridge University Press, 1999.

List of Discussion Papers

- No. 1 - "Land, Water, and Agriculture in Egypt: The Economywide Impact of Policy Reform" by Sherman Robinson and Clemen Gehlhar (January 1995)
- No. 2 - "Price Competitiveness and Variability in Egyptian Cotton: Effects of Sectoral and Economywide Policies" by Romeo M. Bautista and Clemen Gehlhar (January 1995)
- No. 3 - "International Trade, Regional Integration and Food Security in the Middle East" by Dean A. DeRosa (January 1995)
- No. 4 - "The Green Revolution in a Macroeconomic Perspective: The Philippine Case" by Romeo M. Bautista (May 1995)
- No. 5 - "Macro and Micro Effects of Subsidy Cuts: A Short-Run CGE Analysis for Egypt" by Hans Löfgren (May 1995)
- No. 6 - "On the Production Economics of Cattle" by Yair Mundlak, He Huang and Edgardo Favaro (May 1995)
- No. 7 - "The Cost of Managing with Less: Cutting Water Subsidies and Supplies in Egypt's Agriculture" by Hans Löfgren (July 1995, Revised April 1996)
- No. 8 - "The Impact of the Mexican Crisis on Trade, Agriculture and Migration" by Sherman Robinson, Mary Burfisher and Karen Thierfelder (September 1995)
- No. 9 - "The Trade-Wage Debate in a Model with Nontraded Goods: Making Room for Labor Economists in Trade Theory" by Sherman Robinson and Karen Thierfelder (Revised March 1996)
- No. 10 - "Macroeconomic Adjustment and Agricultural Performance in Southern Africa: A Quantitative Overview" by Romeo M. Bautista (February 1996)
- No. 11 - "Tiger or Turtle? Exploring Alternative Futures for Egypt to 2020" by Hans Löfgren, Sherman Robinson and David Nygaard (August 1996)
- No. 12 - "Water and Land in South Africa: Economywide Impacts of Reform - A Case Study for the Olifants River" by Natasha Mukherjee (July 1996)

- No. 13 - "Agriculture and the New Industrial Revolution in Asia" by Romeo M. Bautista and Dean A. DeRosa (September 1996)
- No. 14 - "Income and Equity Effects of Crop Productivity Growth Under Alternative Foreign Trade Regimes: A CGE Analysis for the Philippines" by Romeo M. Bautista and Sherman Robinson (September 1996)
- No. 15 - "Southern Africa: Economic Structure, Trade, and Regional Integration" by Natasha Mukherjee and Sherman Robinson (October 1996)
- No. 16 - "The 1990's Global Grain Situation and its Impact on the Food Security of Selected Developing Countries" by Mark Friedberg and Marcelle Thomas (February 1997)
- No. 17 - "Rural Development in Morocco: Alternative Scenarios to the Year 2000" by Hans Löfgren, Rachid Doukkali, Hassan Serghini and Sherman Robinson (February 1997)
- No. 18 - "Evaluating the Effects of Domestic Policies and External Factors on the Price Competitiveness of Indonesian Crops: Cassava, Soybean, Corn, and Sugarcane" by Romeo M. Bautista, Nu Nu San, Dewa Swastika, Sjaiful Bachri and Hermanto (June 1997)
- No. 19 - "Rice Price Policies in Indonesia: A Computable General Equilibrium (CGE) Analysis" by Sherman Robinson, Moataz El-Said, Nu Nu San, Achmad Suryana, Hermanto, Dewa Swastika and Sjaiful Bahri (June 1997)
- No. 20 - "The Mixed-Complementarity Approach to Specifying Agricultural Supply in Computable General Equilibrium Models" by Hans Löfgren and Sherman Robinson (August 1997)
- No. 21 - "Estimating a Social Accounting Matrix Using Entropy Difference Methods" by Sherman Robinson and Moataz-El-Said (September 1997)
- No. 22 - "Income Effects of Alternative Trade Policy Adjustments on Philippine Rural Households: A General Equilibrium Analysis" by Romeo M. Bautista and Marcelle Thomas (October 1997)

- No. 23 - "South American Wheat Markets and MERCOSUR" by Eugenio Díaz-Bonilla (November 1997)
- No. 24 - "Changes in Latin American Agricultural Markets" by Lucio Reza and Eugenio Díaz-Bonilla (November 1997)
- No. 25* - "Policy Bias and Agriculture: Partial and General Equilibrium Measures" by Romeo M. Bautista, Sherman Robinson, Finn Tarp and Peter Wobst (May 1998)
- No. 26 - "Estimating Income Mobility in Colombia Using Maximum Entropy Econometrics" by Samuel Morley, Sherman Robinson and Rebecca Harris (Revised February 1999)
- No. 27 - "Rice Policy, Trade, and Exchange Rate Changes in Indonesia: A General Equilibrium Analysis" by Sherman Robinson, Moataz El-Said and Nu Nu San (June 1998)
- No. 28* - "Social Accounting Matrices for Mozambique - 1994 and 1995" by Channing Arndt, Antonio Cruz, Henning Tarp Jensen, Sherman Robinson and Finn Tarp (July 1998)
- No. 29* - "Agriculture and Macroeconomic Reforms in Zimbabwe: A Political-Economy Perspective" by Kay Muir-Leresche (August 1998)
- No. 30* - "A 1992 Social Accounting Matrix (SAM) for Tanzania" by Peter Wobst (August 1998)
- No. 31* - "Agricultural Growth Linkages in Zimbabwe: Income and Equity Effects" by Romeo M. Bautista and Marcelle Thomas (September 1998)
- No. 32* - "Does Trade Liberalization Enhance Income Growth and Equity in Zimbabwe? The Role of Complementary Policies" by Romeo M. Bautista, Hans Lofgren and Marcelle Thomas (September 1998)
- No. 33 - "Estimating a Social Accounting Matrix Using Cross Entropy Methods" by Sherman Robinson, Andrea Cattaneo and Moataz El-Said (October 1998)
- No. 34 - "Trade Liberalization and Regional Integration: The Search for Large Numbers" by Sherman Robinson and Karen Thierfelder (January 1999)

- No. 35 - "Spatial Networks in Multi-Region Computable General Equilibrium Models" by Hans Löfgren and Sherman Robinson (January 1999)
- No. 36* - "A 1991 Social Accounting Matrix (SAM) for Zimbabwe" by Marcelle Thomas, and Romeo M. Bautista (January 1999)
- No. 37 - "To Trade or not to Trade: Non-Separable Farm Household Models in Partial and General Equilibrium" by Hans Löfgren and Sherman Robinson (January 1999)
- No. 38 - "Trade Reform and the Poor in Morocco: A Rural-Urban General Equilibrium Analysis of Reduced Protection" by Hans Löfgren (January 1999)
- No. 39 - "A Note on Taxes, Prices, Wages, and Welfare in General Equilibrium Models" by Sherman Robinson and Karen Thierfelder (January 1999)
- No. 40 - "Parameter Estimation for a Computable General Equilibrium Model: A Maximum Entropy Approach" by Channing Arndt, Sherman Robinson and Finn Tarp (February 1999)
- No. 41 - "Trade Liberalization and Complementary Domestic Policies: A Rural-Urban General Equilibrium Analysis of Morocco" by Hans Löfgren, Moataz El-Said and Sherman Robinson (April 1999)
- No. 42 - "Alternative Industrial Development Paths for Indonesia: SAM and CGE Analysis" by Romeo M. Bautista, Sherman Robinson and Moataz El-Said (May 1999)
- No. 43* - "Marketing Margins and Agricultural Technology in Mozambique" by Channing Arndt, Henning Tarp Jensen, Sherman Robinson and Finn Tarp (July 1999)
- No. 44 - "The Distributional Impact of Macroeconomic Shocks in Mexico: Threshold Effects in a Multi-Region CGE Model" by Rebecca Lee Harris (July 1999)
- No. 45 - "Economic Growth and Poverty Reduction in Indochina: Lessons From East Asia" by Romeo M. Bautista (September 1999)
- No. 46* - "After the Negotiations: Assessing the Impact of Free Trade Agreements in Southern Africa" by Jeffrey D. Lewis, Sherman Robinson and Karen Thierfelder (September 1999)

- No. 47* - "Impediments to Agricultural Growth in Zambia" by Rainer Wichern, Ulrich Hausner and Dennis K. Chiwele (September 1999)
- No. 48 - "A General Equilibrium Analysis of Alternative Scenarios for Food Subsidy Reform in Egypt" by Hans Lofgren and Moataz El-Said (September 1999)
- No. 49*- "A 1995 Social Accounting Matrix for Zambia" by Ulrich Hausner (September 1999)
- No. 50 - "Reconciling Household Surveys and National Accounts Data Using a Cross Entropy Estimation Method" by Anne-Sophie Robilliard and Sherman Robinson (November 1999)
- No. 51 - "Agriculture-Based Development: A SAM Perspective on Central Viet Nam" by Romeo M. Bautista (January 2000)
- No. 52 - "Structural Adjustment, Agriculture, and Deforestation in the Sumatera Regional Economy" by Nu Nu San, Hans Löfgren and Sherman Robinson (March 2000)
- No. 53 - "Empirical Models, Rules, and Optimization: Turning Positive Economics on its Head" by Andrea Cattaneo and Sherman Robinson (April 2000)
- No. 54 - "Small Countries and the Case for Regionalism vs. Multilateralism" by Mary E. Burfisher, Sherman Robinson and Karen Thierfelder (May 2000)
- No. 55 - "Genetic Engineering and Trade: Panacea or Dilemma for Developing Countries" by Chantal Pohl Nielsen, Sherman Robinson and Karen Thierfelder (May 2000)
- No. 56 - "An International, Multi-region General Equilibrium Model of Agricultural Trade Liberalization in the South Mediterranean NIC's, Turkey, and the European Union" by Ali Bayar, Xinshen Diao, A. Erinc Yeldan (May 2000)
- No. 57* - "Macroeconomic and Agricultural Reforms in Zimbabwe: Policy Complementarities Toward Equitable Growth" by Romeo M. Bautista and Marcelle Thomas (June 2000)

- No. 58 - “Updating and Estimating a Social Accounting Matrix Using Cross Entropy Methods ” by Sherman Robinson, Andrea Cattaneo and Moataz El-Said (August 2000)
- No. 59 - “Food Security and Trade Negotiations in the World Trade Organization : A Cluster Analysis of Country Groups ” by Eugenio Diaz-Bonilla, Marcelle Thomas, Andrea Cattaneo and Sherman Robinson (November 2000)
- No. 60* - “Why the Poor Care About Partial Versus General Equilibrium Effects Part 1: Methodology and Country Case” by Peter Wobst (November 2000)
- No. 61 - “Growth, Distribution and Poverty in Madagascar : Learning from a Microsimulation Model in a General Equilibrium Framework ” by Denis Cogneau and Anne-Sophie Robilliard (November 2000)
- No. 62 - “Farmland Holdings, Crop Planting Structure and Input Usage: An Analysis of China’s Agricultural Census” by Xinshen Diao, Yi Zhang and Agapi Somwaru (November 2000)
- No. 63 - “Rural Labor Migration, Characteristics, and Employment Patterns: A Study Based on China’s Agricultural Census” by Francis Tuan, Agapi Somwaru and Xinshen Diao (November 2000)
- No. 64 - “GAMS Code for Estimating a Social Accounting Matrix (SAM) Using Cross Entropy (CE) Methods” by Sherman Robinson and Moataz El-Said (December 2000)
- No. 65 - “A Computable General Equilibrium Analysis of Mexico’s Agricultural Policy Reforms” by Rebecca Lee Harris (January 2001)
- No. 66 - “Distribution and Growth in Latin America in an Era of Structural Reform” by Samuel A. Morley (January 2001)
- No. 67 - “What has Happened to Growth in Latin America” by Samuel A. Morley (January 2001)
- No. 68 - “China’s WTO Accession: Conflicts with Domestic Agricultural Policies and Institutions” by Hunter Colby, Xinshen Diao, and Francis Tuan (January 2001)

TMD Discussion Papers marked with an ‘*’ are MERRISA-related. Copies can be obtained by calling Maria Cohan at 202-862-5627 or e-mail: m.cohan@cgiar.org