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THE DEVELOPING COUNTRIES AND THE URUGUAY ROUND

by

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Table of Contents

	Page
1. Introduction.	1
2. The Erosion of the Multilateral Trading System in the 1980s . . .	2
3. The Uruguay Round of GATT and the Developing Countries' Interests	8
4. The Evidence of Benefits from Trade Reform	20
5. The Elements of an Agricultural Compromise	45
6. Prospects for the 1990s	47
7. Summary and Conclusions	57

1. Introduction

Agricultural trade in the 1980s became the focal point of the world trading community. Much of the focus has been on the problems and prospects for trade reform in the eighth round of global trade negotiations, the Uruguay Round. The Uruguay Round of multilateral trade negotiations (MTN) began at Punta del Este, Uruguay, in December 1986. After failure to address problems of agriculture in previous negotiations, held periodically under the General Agreement on Tariffs and Trade since 1947, the contracting parties to the GATT resolved in 1986 that the situation in world markets demanded that trade previously largely exempted from GATT rules should be subjected to greater discipline. A key area was trade in agriculture.

Although the Uruguay Round included fifteen separate negotiating areas in all, the agricultural negotiations proved central to the interests of both the rich countries of the North, where agriculture is heavily subsidized, and the poor countries of the South, where it is the principal source of export earnings and economic growth. After four years of negotiations, the outcome of the Uruguay Round remains in doubt, although there is reason to believe that some progress in agriculture will be made.

The subject of this chapter is the role and interests of the developing countries in the process of agricultural trade policy reform under GATT. It begins with an analysis of the multilateral trading system during the 1980s and the conditions leading up to the 1986 Punta del Este meeting. It then briefly details the discussions over agriculture that have occurred during the Uruguay Round, describing the alignment of interests and key negotiating issues. The discussion then focuses more

directly on the special interests of the developing countries, and some of the differences in these interests in various parts of the developing world. Several efforts to quantify the benefits that would result from agricultural trade reform are reported, indicating the magnitude and the differences in these benefits for countries and regions. The elements of a possible compromise in GATT are proposed, together with a description of its key features from the point of view of developing countries. The chapter concludes with a brief discussion of the factors that will affect trade reform in the 1990s, and a summary of the main findings.

2. The Erosion of the Multilateral Trading System in the 1980s

Post-war international economic relations in agriculture may be divided into three broad periods. In the 1950s and 1960s, agricultural development occurred in many parts of the world, driven especially by technological innovations. This set the stage for the 1970s, when agricultural production and trade grew rapidly. This growth was fueled by substantial increases in debt in many developing countries. In part due to the burdens of accumulated debt, the gap between rich and poor countries' growth widened. In the early 1980s, mounting debt and economic recession reduced the demand for traded agricultural commodities, yet national policies, especially in the North, continued to encourage excess production, leading to surplus disposal and falling prices in world markets. These trends affected different countries differently, making broad generalizations subject to numerous exceptions.

Yet by the mid-1980s a consensus had emerged that world agriculture was in disarray, and that the crisis was significantly related to policies which sought to protect farmers in the North from global competition, while

restricting access by poor farmers in the South to lucrative trading opportunities.¹ This consensus was resisted by some of the most important players in the multilateral trading system, notably the European Community (E.C.) whose Common Agricultural Policy (CAP) was blamed for a large measure of global agricultural disequilibrium.² In the United States, a policy of more open trade was pursued selectively, with protectionism continuing in critical areas of agriculture such as sugar, dairy and peanuts, as well as in textiles.

Despite these notable exceptions, the U.S. and developing countries found common cause in the 1980s over general liberalization of agricultural trade, especially in the grains and oilseeds. The reasons for this are relatively straightforward: it is in these sectors that the U.S. (as well as other net exporters such as Canada, Australia, Brazil and Argentina) enjoy their greatest comparative advantages, and the developing countries as a whole are their most important future markets. Far less clear was whether the U.S., E.C. and Japan were prepared to increase levels of market access to developing countries in their most heavily protected sectors, where they enjoyed far fewer advantages. This issue remained particularly difficult for the E.C., whose own production advantages, even in the grains and oilseeds, were substantially less in most areas than in the U.S. and other net exporting regions.

Table 1 shows trends in economic growth, food production and food imports and exports from 1965-1986, based on data assembled by the U.S.

¹K. Anderson and Y. Hayami. The Political Economy of Agricultural Protectionism. London: Allen and Unwin. 1986.

²See Harald von Witzke, C. Ford Runge and Brian Job, (eds.), Policy Coordination in World Agriculture. Kiel: Wissenschaftsverlag Vauk, 1989.

Congressional Budget Office from World Bank and FAO sources.³ After increases in developing country GDP growth per capita of 3.9 percent from 1965-80, this growth fell by -0.5 percent from 1980-85. The worst declines were in the Middle East and Africa, followed by Latin America. In Asia, growth continued to increase by 3.1 percent from 1980-85, slowing in the U.S. and Canada from 2.0 percent from 1965-80 to 1.5 percent from 1980-85. In Western Europe, the decline was from 3.0 percent from 1960-80 to 1.2 percent from 1980-85. Growth in food production slowed by half in developing countries (excluding China) from 1975-81 to 1981-86, or from 0.6 to 0.3 percent, although total calories supplied increased marginally.

As per capita GDP fell, so did the demand for developed countries' exports. Developing country food imports, a key variable explaining world trade frictions, plummeted from a growth rate of 9.4 percent from 1975-81 to 0.9 percent from 1981-86, while growth in developing country food exports also fell, from 6.2 percent in 1975-81 to 0.7 percent in 1981-86. In the North, the agricultural export growth rates of the United States and Canada reflected those import declines, falling from a positive rate of 7.8 percent from 1975-81 to a negative 7.3 percent from 1981-86. In partial contrast, the continuing disposal of E.C. surpluses in world markets led Western Europe's export growth to decline only from 6.9 percent to 4.8 percent over the same period.

These data reveal the broad outlines of trends leading to the negotiating table in GATT: falling per capita incomes and falling food imports in developing countries; declining overall growth in the economies

³Congress of the United States, Congressional Budget Office. Agricultural Progress in the Third World and its Effect on U.S. Farm Exports, May, 1989, p. 20.

Table 1. FOOD PRODUCTION, CONSUMPTION, AND TRADE GROWTH RATES (Average annual growth rates in percent and calories)

Region ^a	GDP per Capita		Food Production per Capita		Calories Supplied per Capita ^b		Food Imports		Food Exports	
	1965- 1980	1980- 1985	1975- 1981	1981- 1986	1969- 1971	1983 1985	1975- 1981	1981- 1986	1975- 1981	1981- 1986
Developing										
(Less China)	3.9	-0.5	0.6	0.3	2,173	2,364	9.4	0.9	6.2	0.7
(With China)	3.9	1.0	0.9	1.4	2,113	2,424	10.3	0.0	5.2	2.2
Selected Countries										
Latin America	4.0	-1.9	1.0	-0.5	2,517	2,700	11.9	-4.5	6.4	-0.9
Asia	3.9	3.1	1.1	1.0	2,059	2,239	2.3	3.0	7.7	5.3
Middle East	3.9	-3.4	0.4	-0.1	2,397	2,957	14.4	2.5	14.4	-0.5
Africa	3.6	-2.2	-1.8	-0.1	2,103	2,129	10.4	1.6	-1.9	-0.4
Centrally Planned										
China	4.2	8.6	1.8	4.4	1,974	2,564	16.5	-5.8	-2.8	15.6
USSR/Eastern Europe	n.a.	n.a.	-0.5	2.9	3,332	3,410	11.5	-7.5	0.0	-0.2
Developed	2.8	1.7	1.4	0.1	3,231	3,356	2.0	1.6	7.5	-1.6
United States/ Canada	2.0	1.5	1.9	-0.9	3,456	3,632	3.8	3.2	7.8	-7.3
Western Europe	3.0	1.2	1.3	1.2	3,261	3,379	1.2	1.0	6.9	4.8
World	n.a.	n.a.	0.6	0.8	2,449	2,666	6.3	-0.4	6.4	-0.6

SOURCES: Congressional Budget Office, from Food and Agriculture Organization of the United Nations, FAO Production Yearbook 1986 and FAO Trade Yearbook 1986; World Bank, World Development Report 1987.

NOTE: n.a. - not available.

^aRegional definitions follow standard FAO groupings. China includes other Asian centrally planned economies. Asia excludes China, other Asian centrally planned economies, and Japan, as well as Middle Eastern Asian countries. The Middle East includes Egypt, Libya, and Sudan, and excludes Israel. Africa excludes South Africa, Egypt, Libya, and Sudan. Developed countries include South Africa and Israel. FAO and World Bank country group definitions can differ slightly.

^bCalories supplied is a proxy for per capita consumption. It equals domestic food production plus food imports minus food exports, with a correction for livestock feed use. Calories supplied per capita represents the quantity of food reaching households, all of which may not be consumed because of various losses of edible food and nutrients in the household.

of developed countries; and declining agricultural exports from North America, especially relative to the European Community. These trends were manifest in increasing trade frictions which seemed to require multilateral solutions.

The deterioration of the multilateral trading system in the 1980s can also be demonstrated by a variety of measures of protection, to which many countries resorted as markets shrank. Tyers and Anderson calculated individual commodity price series for each major country to determine nominal rates of protection (the percentage by which producer prices in agriculture plus marketing margins exceeded border prices). They estimated that the average nominal rate of protection for grain, livestock and sugar was 21 percent in 1965-74. By 1975-83, the figure was 28 percent, or one quarter higher. These increases were concentrated in the E.C.-10 (an increase from 38 to 51 percent from 1965-74 to 1975-83), the European Free Trade Area (EFTA) (an increase from 62 to 89 percent) and in Japan (from 110 to 160 percent).⁴

The consequences of increased protection levels during the 1980s were demonstrable. Because countries in the North insulated their farmers from global market conditions, maintaining high internal prices relative to world prices, they tended to overproduce. When overproduction was dumped into world markets at subsidy, as under the export subsidies of the E.C. (and the retaliatory response of the U.S., the Export Enhancement Program [EEP]) the result was to destabilize and lower prices further. As demand weakened in developing countries due to the burdens of accumulated debts,

⁴R. Tyers and K. Anderson, "Liberalizing OECD Agricultural Policies in the Uruguay Round: Effects on Trade and Welfare." Journal of Agricultural Economics 39(May, 1988), pp. 201-202.

world market prices went even lower, which further exacerbated the debt-repayment ability of countries, such as Argentina and Brazil, primarily dependent on agricultural exports for foreign exchange.

Loans made to developing countries in the 1970s and early 1980s were predicated on expectations of continuing inflation, allowing dollar-denominated liabilities to depreciate in real value. When the opposite occurred due to the deflationary policies of the U.S. Federal Reserve Bank and a rise in the value of the dollar from 1979-85, the loans increased in real value, as did the real interest levels necessary to finance them. Developing countries' combined debt in 1987 totaled over \$950 billion, of which \$380 billion was concentrated in Latin America.⁵ While middle-income oil producing countries accounted for a substantial portion of the total, over two-thirds of the debt in 1984 was held by major importers of agricultural commodities. Most of these countries held more than 40 percent of their debt in short-term and private loans highly subject to interest rate swings.

After the boom-lending years of the 1970s, credit tightened in the 1980s, and a major source of finance for expanded agricultural imports dissipated. By the mid-1980s, hard currency earnings in developing countries were going primarily to service existing debt, making aggressive sales of agricultural products, often at below the cost of production, one of the only means of financial survival. Per capita incomes suffered accordingly, falling as much as 50 percent in some debt-ridden developing countries in the two years from 1981-83. In those countries where

⁵General Accounting Office, Factors Influencing Trends in World Agricultural Production and Trade, January, 1989. GAO/RCED-89-1.

agricultural export expansion has been possible, notably in Asia, the impacts of debt service were softened, but world market conditions continued to suffer.

This vicious circle, in addition to reducing the terms of trade for many developing countries, also raised the costs of export subsidies in the U.S. and European Community. It was the internal cost of these subsidies in the North (which reached \$26 billion in the U.S. in 1987) that ultimately led the U.S. and the E.C. to agree to initiate negotiations at Punta del Este in December, 1986. After a near deadlock over agriculture, the E.C. agreed at Punta to open talks under the auspices of the GATT to last four years, concluding in December 1990.

3. The Uruguay Round of GATT and the Developing Countries' Interests

Agriculture thus emerged as a key issue in the political economy of international trade in the 1980s largely in the context of the Uruguay Round of the GATT.⁶ Because agricultural trade disputes cannot be divorced from domestic farm programs, many foreign trade officials and others in the diplomatic community were forced in the 1980s to confront complex issues of agricultural policy for the first time. As then Italian foreign minister Giulio Andreotti lamented during a 1988 debate over European Community agricultural spending, "I sit there talking about soybeans, and I don't even know what the miserable things look like."

In developing countries, of course, agriculture remained the central mode of production. But the problems of Third World agricultural development alone would have been insufficient to bring agriculture to the

⁶This section draws on Carlisle Ford Runge, "The Assault on Agricultural Protectionism." Foreign Affairs (Fall, 1988): 133-50.

center of the multilateral trade negotiations.

During the 1970s, when the costs of farm programs were low and foreign markets for surpluses were growing, attention to agricultural trade distortions lagged in capitols and international economic fora in the North. But in the mid-1980s, budget costs, shrinking foreign demand, and unsold surpluses threatened a global agricultural trade war. The result was increasing international attention to the problems of agriculture.

Prior to the Uruguay Round, largely at the insistence of the United States, the European Community, and Japan, agriculture was treated under GATT as a special case, immune from the principles of trade liberalization that have otherwise guided the General Agreement. So special was the case of agriculture that it largely escaped the discipline of the basic principles on which the GATT is founded. These are (1) nondiscrimination and reciprocity in trade; (2) protection through measures that are "transparent," in the sense that they can be easily measured and monitored; (3) the establishment of "bound" levels of protection through negotiation; and (4) notification, consultation and arbitration in the even of disputes.

Despite attempts to bring agriculture under GATT rules in the Kennedy Round (1963-67) and the Tokyo Round (1973-79) of negotiations, it would not be an exaggeration to say that since World War II, trade in agriculture became more discriminatory, less transparent, less bound, and less subject to multilateral consultation and negotiation. Although the basic principles of nondiscrimination and reciprocity expressed in Articles I and II of the GATT were intended to apply to agricultural and nonagricultural trade alike, agriculture largely escaped from the prohibitions against quantitative import and export restrictions under Article XI, and against

export subsidies under Article XVI. In addition to general exceptions granted to agriculture under these GATT articles, the United States demanded and received special treatment under a 1955 waiver that allows quantitative import restrictions on products affected by domestic price supports. Without this waiver, it would be impossible to reconcile United States obligations to nondiscrimination with domestic agricultural support measures that require import fees and quotas for commodities such as sugar.

Before the Dillon Round (1960-61) of negotiations, support for formation of the CAP, largely on national security grounds, made it seem advisable to grant Europe the right to replace national tariffs with common border measures, including variable levies on imports to help shore up domestic prices in what was then a large net importing region of the world. With continued economic expansion and increasingly generous farm subsidies, however, Europe emerged in the 1970s as an agricultural exporter, and export subsidies were used to dispose of its mounting surpluses, reducing U.S. exporters' share of world markets.

In addition to the barriers to market access developed by the U.S. and E.C., Japan also evolved a complex set of customs duties, import quotas, and other border measures, combined with direct government payments to producers and a wide array of other domestic subsidies, designed especially to protect its most politically sensitive commodity: rice.

Together, the agricultural protectionism of the U.S., E.C. and Japan put each of these major capitalist economies in the difficult position of seeking to enlarge the scope and level of world trade, while continually pleading that their agricultural producers could not sustain greater trade liberalization. Even the few agricultural measures that were bound under

GATT, such as the guaranteed access of soybeans and corn gluten feed shipments to Europe (the "zero duty binding"), were under steady attack by E.C. interests seeking additional barriers to access. The consultation and dispute settlement process in GATT was too weak to successfully solve many trade disputes, leading parties to revert to bilateral retaliation when not satisfied with the system of GATT panels established for the purpose. The most notable examples of these bilateral disputes in recent years have been in agriculture.

As battles over agricultural trade barriers raged in the North, the conditions of agriculture in the South slowly deteriorated, partly because of reduced global trading opportunities, and partly due to domestic policies that penalized farmers by lowering the effective price of food in response to political pressures in urban areas.

The role of the South in GATT was problematic. What had begun in 1947 as a 22 country "rich man's club" encompassed 108 negotiating parties by 1990, the bulk of which were developing countries. Yet the interests and concerns of developing countries in GATT differed widely, and their resources were stretched to the limit as they tried to stay abreast of complex and interlinked negotiating areas. In part in response to the perceived needs of developing countries, the Tokyo Round of GATT talks had created important provisions under GATT that provided for "special and differential treatment" for developing countries, allowing them to seek remedies for balance of payments difficulties and safeguards to protect programs of economic development. A variety of separate "codes" were also

amended to the GATT articles, pertaining to subsidies and countervailing measures and other issues involving nontariff barriers to trade.⁷ On the whole, however, the developing countries have had difficulty achieving their objectives in GATT. Given the increasing number of contracting parties, the heterogeneity of countries' interests makes it difficult for a well-defined developing country agenda to emerge, and the relative influence of the rich OECD countries continues to loom large.⁸

Even so, the Uruguay Round was launched with a focus on agriculture in part because of the strong interests of the developing countries in gaining market access to the North. Despite a variety of special trade concessions granting access, such as the E.C.'s Lomé Convention, in reality many competitively priced imports from the South were locked out of Northern markets by tariff and nontariff barriers. In addition to market access, some developing countries also stood to gain from reductions in the export subsidy wars conducted between the E.C. and U.S. especially in the grains. This interest led to a coalition of countries, the so-called Cairns Group, composed of agricultural exporters with both developed and developing country members.⁹ The Cairns Group provided critical support for

⁷See Bela Balassa, "The Tokyo Round and the Developing Countries," World Bank Staff Working Paper No. 370, February, 1980; and Ria Kemper, "The Tokyo Round: Results and Implications for Developing Countries," World Bank Staff Working Paper No. 372, February, 1980.

⁸See C. Ford Runge, "International Public Goods, Export Subsidies and the Harmonization of Environmental Regulations." Staff paper P90-77, Center for International Food and Agricultural Policy, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, U.S.A., December 1990.

⁹The Cairns Group includes Argentina, Australia, Brazil, Canada, Chile, Columbia, Fiji, Hungary, Indonesia, Malaysia, the Philippines, Thailand, and Uruguay.

liberalizing agricultural trade respecting both export subsidies and market access issues throughout the Uruguay Round. Both the Cairns Group and U.S. took aim in particular at reducing the distortions caused by export subsidies paid under E.C.'s Common Agricultural Policy.

The negotiating positions of the parties in the Uruguay Round evolved and changed over the period 1986-91, but until early 1991, little compromise was achieved, especially between the principal antagonists: the U.S. and E.C.. This North/North division was the primary schism in the four year negotiation. The second was a North/South division which was partially overcome through the negotiating efforts of the Cairns Group. A third, South/South division was also apparent throughout, reflecting the diversity of developing country interests.

The North/North division arose from the opposed positions of the U.S. and E.C. These positions created the illusion of a "zero-sum-game," in which the gain of the E.C. was the loss of the U.S., and vice versa.¹⁰ An important reason for this view lay in the faulty premises under which both the U.S. and E.C. conducted much of the Uruguay Round.

The premises which fostered the illusion that the US and E.C. were locked in a zero-sum-game were largely the creations of domestic politics on both sides of the Atlantic. In the U.S. the premise was that world

¹⁰C. Ford Runge, "Illusion and Reality in International Agricultural Trade Negotiations," a paper presented to a conference on "The World Field Crops Economy: Scope and Limits of Liberalization of Agricultural Policies," Paris, France, December 4, 1990. Reprinted as Department of Agricultural and Applied Economics Staff Paper P90-67, University of Minnesota.

trade in agriculture must eventually be free and that to demand anything less than the total elimination of all trade-distorting policies would be to surrender the high ground of the negotiation. This premise caused the U.S. to insist until past the midpoint of the round that unless "elimination" entered the language of agreement in agriculture, there would not be one.

After the December, 1988 mid-term review meeting in Montreal broke up over the "elimination" issue, an agreement to pursue "substantial progressive reductions" in agricultural support was reached in April, 1989 in Geneva. Prime ministers meeting at the Houston Summit in July, 1990, reaffirmed a more flexible framework for negotiation built around the "de Zeeuw text." This framework, authored by the then-chairman of the Negotiating Group on Agriculture, appeared in late June, 1990. The text outlined a possible agreement to reform market access through "tariffication" of nontariff barriers, the reduction of export subsidies and the restraint of domestic support. The de Zeeuw text incorporated the idea that agricultural supports could be categorized into "red light," "green light" and "yellow light" policies, with differential schedules for change over time, and provided for interpretations of what must and must not be eliminated and over what period of time.

By October, 1990, the U.S. had stepped back from "elimination," calling instead for 90 percent reductions in border measures such as export subsidies and 75 percent reductions in domestic agricultural supports. While clearly intended to signal a willingness to negotiate, by this point little time remained before the final scheduled meeting in December, 1990, to fully explore how such reductions might be achieved.

In contrast to the U.S., European negotiating strategy was premised until very recently on the conviction that the Common Agricultural Policy was the centerpiece of community, and to weaken it would be to tear at the fabric of both the solidarity of the Community and the rural culture of Europe. This premise was questionable, in at least three ways. First, the increasing economic and social integration of Europe appeared to be progressing rapidly, with or without the CAP. In part, this was a result of monetary union and the provisions of the Single European Act.¹¹ This integration and harmonization, especially in terms of monetary union, did not depend on the CAP for its energy or inertia. Indeed, the CAP kept many farm assets and much capital from migrating to its highest and best uses in various parts of the Community by capitalizing its benefits into land and asset values in situ, discouraging off-farm migration of labor, and institutionalizing exchange rate adjustments for community price policies.

Second, the CAP proved to be a far greater source of community discord than solidarity, especially in the 1980s. Its budgetary demands on scarce E.C. resources are well known. The very fact that the agriculture ministers could seldom agree amongst themselves on price policies or GATT positions suggested that the CAP stood in the way of many gains from both internal and external trade reforms. These obstacles were particularly apparent in connection with exchange rates, and the tension between a European Monetary System, on the one hand, and the monetary compensatory amounts (MCA's) used to adjust CAP prices for exchange rates on the other. As the Community became more integrated, the CAP declined in importance.

¹¹See Michael Calingaert, "The 1992 Challenge from Europe: Development of the European Community's Internal Market," National Planning Association No. 237, Washington, D.C. 1988.

Third, the role of the CAP in preserving traditional rural culture was highly debatable. Large European farmers representing 20 percent of the total reaped 80 percent of the benefits of the CAP. The inequity of benefits distribution was also apparent between the countries of the Community, where the poorest countries were not always the main beneficiaries of the CAP.¹²

In part because of the unwillingness of the E.C. to concede the need for CAP reform, the Brussels ministerial meeting in December, 1990, was unable to bridge the North/North division. Late in the week-long negotiating session, however, a compromise proposal emerged authored by the new chairman of the Agriculture Negotiating Group, Swedish Agriculture Minister Mats Hellstrom. The compromise was based on 30 percent reductions in three areas: export subsidies, market access, and internal measures of support. When the E.C., joined by South Korea and Japan, rejected the compromise, the negotiation was adjourned, leaving not only agriculture but 14 other negotiating areas in limbo.

In January, 1991, the E.C. Commission brought forward in Brussels a new internal reform package based on reduced payments to large producers, with benefits targeted to smaller farmers, environmental improvements in disadvantaged areas, and progressive reductions in internal support. It is doubtful that the new proposal (which has not led to agreement in the EC-12 over either market access or export subsidy changes) can retrieve the GATT talks before the March 1 deadline set by the U.S. Congress in the form of

¹²Ulrich Koester, "The Redistributive Effects of the Common Agricultural Policy, European Review of Agricultural Economics 4(1977): 321-345. See also, Alan Buckwell, et al., The Costs of the Common Agricultural Policy, London, Croom-Helm, 1982.

"fast track negotiating authority."¹³ If this deadline is extended, however, there remains a possibility that a compromise will emerge during 1991-92 similar to that proposed by Hellstrom. The elements of such an agreement are discussed in Section 5 below.

The second division characterizing the Uruguay Round was a North/South one. As noted above, the primary issues (within agriculture) were market access and, for developing countries that were net exporters, export subsidies. Because developing countries were being asked to accept terms in other areas of the Uruguay Round that were politically and economically difficult (e.g., textiles, services, intellectual property) they felt strongly as a group that major market access gains were needed in agriculture as compensation. Brazil's statement to the GATT contracting parties in 1989 was typical,¹⁴ emphasizing that development assistance

¹³"Fast-track" authority for trade agreements dates to 1974. U.S. law provides that, if the procedural requirements of the statute are met, the Congress will give "fast-track" treatment to legislation proposed by the President, which implements multilateral or bilateral trade agreements. The two key elements are: (1) time-limited consideration in Congress of the President's implementing legislation; and (2) no amendments permitted to the legislation. With the fast-track authority in place, once the President submits legislation implementing a trade agreement, to reject a portion of the legislation, one must vote against the entire package.

Current law gives the President fast-track authority for trade agreements through March 1, 1991 only. Congressionally-mandated private sector advisory committees must submit formal reports outlining their views on the agreements. A two-year extension of the fast-track authority is possible if the President so requests by March 1, 1991. The statute also provides a procedure, itself on the "fast-track," for one house of congress to disapprove the extension request between March 1 and June 1, 1991. The President must also consult with the private sector advisors in order to show sufficient progress to warrant an extension.

¹⁴"Special and Differential Treatment: Brazilian Statement," General Agreement on Tariffs and Trade, Geneva, Switzerland, 1989.

measures should not be considered eligible for reduction under a more general program of trade reforms. Special and differential treatment for developing countries should include extended periods to implement reforms, together with fewer cuts in tariffs and non-tariff measures and quantitative restrictions. Higher internal supports should be tolerated than in developed countries, and special attention should be paid to discrimination faced by developing countries in the area of sanitary and phytosanitary measures.¹⁵

Yet between the developing countries, a variety of differences also existed, creating South/South fissures that made it difficult for them to negotiate as a bloc. Evidence of these differences emerged relatively early in the Round, when a Food Importing Group (FIGs) was formed in GATT to differentiate the needs of these countries from the main agricultural exporting countries, most of whom had joined the Cairns Group. In a proposal spelling out the position of the net-importers, the FIGs countries called on the other contracting parties in GATT to "alleviate the burden of increased prices on the import bill and balance of payments situation of net food importing developing countries," and to "enhance the capacity of these countries to increase agricultural production."¹⁶

¹⁵See C. Ford Runge, "Trade Protectionism and Environmental Regulations: The New Nontariff Barriers," Northwestern Journal of International Law and Business, Northwestern University School of Law, 11(1), Fall 1990.

¹⁶"Ways to Take Account of the Negative effects of the Agriculture Reform Process on Net Food Importing Developing Countries by Group W/74," in conjunction with MTN. GNG/NG5/W/74. Submitted to the Negotiating Group on Agriculture, General Agreement on Tariffs and Trade, Geneva, Switzerland, October 25, 1989.

Specifically, the proposal cited a variety of studies showing major losses to food importers from trade policy reform due to increased prices (these estimates are discussed in section 4). Given such losses, the FIGs argued for compensation in the form of concessional food sales, export credits and grants, improved market access, increased food aid, and reduced levels of debt servicing.

The main South/South difference in GATT occurred in large part between food importers and food exporters. This issue was linked in turn to debt servicing questions. Lower world commodities prices due to export subsidy competition between the U.S. and E.C. were a primary reason for debt-servicing problems in net exporting countries such as Argentina and Brazil, but the situation of the net importing countries was opposite. Because alleviation of export subsidies and internal reforms in the North were expected to raise world prices, the food bill of net importers would increase, making debt service even more difficult. As the FIGs statements argued:

The rise in import prices of food will exacerbate the debt servicing problems of net food importing developing countries and therefore we propose that international financial organizations should take the increase in import prices of food fully into account in negotiating structural adjustment programs; specifically these programs should be made more flexible.¹⁷

The overall interest of developing countries in GATT thus had two main axes: North/South and South/South. From a North/South perspective,

¹⁷Ibid., p. 3.

developing countries have argued in GATT for increased market access to the industrialized countries, whether they were net food importers or exporters. But along the South/South axis, the critical issue of debt servicing divided those countries that would gain from rising international commodities prices (net exporters) from those that would lose (net importers). This South/South division turned critically on the estimated impacts of the trade reform process on prices and net welfare. It is to these estimates to which we now turn.

4. The Evidence of Benefits from Trade Reform

Numerous academic and government studies have estimated the size and distribution of benefits that would result from agricultural trade reform. These estimates confront the many problems of econometric modelling, and should be interpreted with caution.¹⁸ Tyers, one of the principal

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- ¹⁸The leading studies cited by the FIGs group as of 1989 were
- (a) OECD, National Policies and Agricultural Trade, Paris, May 1987. This study presents several scenarios. The scenario selected here assumes a 10 percent across-the-board reduction in support from 1979-81 levels: the results have been multiplied by 10 to yield approximate price changes consistent with the "full liberalization" assumptions of the other studies reported here.
 - (b) Vernon O. Roningen, Dixit, P. M. and Seeley, R., Agricultural Outlook for the Year 2000: Some Alternatives, mimeo 1988. The results are derived from the SWOPSIM model of the Economic Research Service of USDA. The price changes simulate the effect of free trade in OECD countries in year 2000 compared with a reference scenario in which policies are held at their 1984/85 levels.
 - (c) International Agricultural Trade Research Consortium (IATRC), Assessing the Benefits of Trade Liberalization, summary of symposium, Annapolis, Maryland, August 1988. The reported scenario simulates the effects of elimination of existing agricultural policies of OECD countries, using 1986 as the base period.
 - (d) Tyers, R. and Anderson, K., Liberalising OECD agricultural policies in the Uruguay Round: effects on trade and welfare, J. of Agricultural Economics, May 1988.
 - (e) Parikh, K. S., Fischer, G., Fronhberg, K., and Gulbrandsen, O., Towards Free Trade in Agriculture. International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, 1986.

academic economists involved, has criticized the models for failing to capture important dynamic issues including retaliation and behavior under risks, and for their tendency to treat agriculture as a small and separable sector, justifying "partial equilibrium" estimates of gains and losses. In addition, the models tend to aggregate many commodities as if they were homogenous products.

While possibly justified when modelling OECD grain markets, these assumptions are far less appropriate for developing countries. Tyers notes:

The perception that developing countries as a group would be net losers from any reform in the industrial market economies (as suggested, for example, in Tyers 1989) has not only increased the reticence of developing countries to support reforms in the OECD, it has also had institutional consequences in that a formal negotiating alliance has developed between net-food-importing developing countries. Yet a more detailed examination which takes account of intersectoral and macroeconomic effects suggests that a clear majority of developing countries could benefit from such reforms (Anderson and Tyers, 1990) (emphasis added).¹⁹

¹⁹Rod Tyers, "Searching Under the Light: The Neglect of General Equilibrium, Dynamics and Risk in the Analysis of Food Trade Reforms." A lecture presented to the Center for International Food and Agricultural Policy, February 22, 1990, reprinted as Staff Paper P90-66, Department of Agricultural and Applied Economics, University of Minnesota, October, 1990. R. Tyers, "Developing Country Interests in Agricultural Trade Reform," Agricultural Economics 3(1989): 169-86. K. Anderson and R. Tyers, "How Developing Countries Could Gain from Food Trade Liberalisation in the Uruguay Round." Chapter 2 in I. Goldin and O. Knudsen (eds.), Agricultural Trade Liberalization: Implications for Developing Countries, Paris, OECD. 1990.

It is useful to review briefly some of these estimates, beginning with the recent work of Anderson and Tyers.²⁰ Utilizing stochastic multicommodity, partial equilibrium models of world food markets, they show that "virtually all developing countries could benefit from global liberalization of food markets and that the vast majority of the world's poor would be better off."²¹ This differs from their earlier findings and those of other authors, which predicted major losses, especially to net food importing developing countries, if global prices rose following liberalization. What accounts for this difference in view? The result turns critically on how realistically the reform process is described.

Four elements are introduced in the Anderson and Tyers work that provides greater realism. First, while it is generally acknowledged that rising world prices of agricultural commodities would cause unambiguous improvements in the terms of trade in food exporting countries; it is less often emphasized that some net food importing countries would expand production, and become net exporters over time. Second, this production expansion is likely to be driven by induced innovations in developing countries' technology and institutions, following the dynamic pattern predicted by Hayami and Ruttan.²² By shifting domestic supplies out, welfare gains can exceed the losses resulting from worsened terms of

²⁰K. Anderson and R. Tyers, "Welfare Gains to Developing Countries from Food Trade Liberalization Following the Uruguay Round," Department of Economics and Centre for International Economic Studies, University of Adelaide, Adelaide, Australia, July, 1990.

²¹Ibid., p. 3.

²²Y. Hayami and V. W. Ruttan, Agricultural Development: An International Perspective, Baltimore, MD: The Johns Hopkins Press Ltd., 1985.

trade. Third, if developing countries which have insulated consumers by subsidizing domestic food prices, encouraging import-dependency, instead allowed world price increases to be reflected domestically, the elimination of these distortion could more than offset the losses due to worsening terms of trade. This effect is amplified if induced innovations generate the above-mentioned supply response and increased exports. Fourth, even if a country remained a net food importer and had no domestic food subsidies, if it protected its non-food sector (e.g., through overvalued exchange rates) then eliminating these non-food distortions would raise the relative price of food, with the same effects possible as in the first three cases above.

In short, by acknowledging that increased output, induced innovations leading to higher productivity, and distortions in existing food and non-food sectors characterize the dynamic process of adjustment to trade reform, a different picture emerges of its impacts on food importing countries. Negative impacts are not certain a priori, and must be determined empirically.

Empirical estimates of these impacts were made for two scenarios: complete liberalization in just the North; and liberalization in both North and South. In both cases, productivity increases were first held constant, then allowed to respond to increased prices.²³ Food markets included in the model were grains, meats, dairy products and sugar, accounting for about half of world food trade. The estimates for 1990 show what would have occurred in equilibrium if distortions in the North or in both North

²³Anderson and Tyers, 1990, pp. 11-25. These productivity increases amount to an outward shift in aggregate food supply.

and South were eliminated. The effects of subsidized food imports in developing countries were captured by lowering the relative internal food price consistent with the 1988 calculations of Krueger, Schiff and Valdes.²⁴

Table 2, row 1 shows that if the North liberalized alone, international food prices would have risen in 1985 dollars by 24 percent compared to the reference level. Net economic welfare in developing countries increases by \$11 billion. If productivity growth is induced in response to these price increases, prices rise by 26 percent and net economic welfare in developing countries increases by \$17 billion. If both the North and South liberalize, the effect on world food prices is a negligible -1 percent, since the actions have offsetting effects. But welfare increases in developing countries are \$28 billion assuming no productivity response, and \$33 billion with it, about twice the level that occurs if the North liberalizes alone.

²⁴A. O. Krueger, M. Schiff and A. Valdes, "Measuring the Impact of Sector-specific and Economy-wide Policies on Agricultural Incentives in LDCs." World Bank Economic Review 2:2 (September, 1988): 255-72.

Table 2. Effects on International Food Prices and Economic Welfare of Liberalizing Food Markets, 1990.

	International food price change (%)	Change in net economic welfare (1985 US\$ billion per year)		
		Industrial Countries	Developing Countries	Global Total
<hr/>				
<u>North:</u>				
Liberalization of industrial country food policies with:				
- exogenous productivity growth	24	40	11	50
- price-responsive prod. growth	26	47	17	62
<u>North/South:</u>				
Liberalization of policies affecting food markets in industrial and developing countries with:				
- exogenous productivity growth	-1	62	28	90
- price-responsive prod. growth	-1	73	33	106

Note: Economic welfare changes here apply only to agents in the food sector, as measured by equivalent variations in income of consumers and changes in producer surplus, in net government revenue from the food sector and in net profits from food stock holding. The global total includes the (small) effect on net economic welfare of Eastern Europe and the USSR.

Source: Anderson and Tyers, 1990, p. 22.

Table 3. Effects of Completely Liberalizing Food Markets on Foreign Exchange Earnings and Economic Welfare in Individual Developing Countries Assuming Price-Responsive Productivity Growth, 1990.

(1985 US\$ billion per year)

	North: Reform in industrial countries only			North/South: Reform in industrial and developing countries		
	Change in net foreign exchange earnings from food trade	Change in farmers' welfare	Change in net economic welfare	Change in net foreign exchange earnings from food trade	Change in farmers' welfare	Change in net economic welfare
Bangladesh	0.2	0.7	-0.2	0.1	0.5	0.1
China	6.3	6.1	2.9	37.0	29.4	12.9
India	5.8	5.7	1.3	3.3	1.6	1.1
Indonesia	1.8	1.3	0.4	-1.3	-1.1	0.9
Korea, Rep.	0.0	0.4	-0.9	-6.8	-6.8	6.5
Pakistan	1.9	1.1	0.3	3.9	3.5	0.4
Philippines	0.1	0.1	0.0	0.3	-0.2	-0.1
Taiwan	0.1	0.4	-0.2	-1.7	-1.8	0.4
Thailand	1.0	0.6	0.5	-0.5	0.3	-0.2
Other Asia	<u>1.8</u>	<u>1.4</u>	<u>0.5</u>	<u>15.3</u>	<u>7.5</u>	<u>1.7</u>
SUB-TOTAL, Asia	20.0	17.8	4.6	49.0	32.9	23.7
Argentina	7.7	1.9	5.4	13.8	11.3	5.1
Brazil	7.9	3.8	2.9	7.8	5.8	0.8
Mexico	2.8	1.0	1.2	5.1	3.1	0.9
Other Latin America	<u>6.4</u>	<u>2.3</u>	<u>3.2</u>	<u>8.6</u>	<u>7.4</u>	<u>0.8</u>
SUB-TOTAL, Latin America	24.8	9.0	12.7	35.3	27.6	7.6
Egypt	0.0	0.2	-0.3	0.1	0.3	0.4
Nigeria	1.2	0.4	0.6	1.3	0.8	0.2
South Africa	1.1	1.3	-0.7	-1.2	-0.5	-0.2
Other Sub-Saharan Africa	3.9	1.3	2.0	12.2	7.5	2.3
Other North Africa plus Middle East	<u>0.0</u>	<u>1.5</u>	<u>-2.3</u>	<u>0.8</u>	<u>1.3</u>	<u>-0.6</u>
SUB-TOTAL, Africa+M.East	6.2	4.7	-0.7	13.2	9.4	2.1
TOTAL, Dev. Countries	51.0	31.5	16.6	97.5	69.9	33.4
TOTAL, Indust. Countries	<u>-78.5</u>	<u>-87.0</u>	<u>46.5</u>	<u>-134.2</u>	<u>-160.9</u>	<u>73.3</u>
WORLD TOTAL	-20.8	-44.4	62.2	-35.2	-87.5	106.4

Note: Net welfare includes the effects on food consumers, taxpayers and food stockholders as well as food producers. Effects on expenditures to administer and to lobby for and against food policies, not included above, would add to the net welfare gains from reform. The world total includes effects on Eastern Europe and the USSR.

Source: Anderson and Tyers, 1990, p. 23.

Table 4. Effects of Removing Policy Distortions to Food Markets in Industrial and Developing Countries on the Instability of International Food Markets Prices.

	Wheat	Coarse grain	Rice	Beef and sheepmeat	Pork and poultry	Dairy products	Sugar	Weighted Average
<u>International Price Instability</u>								
Reference coefficient of variation	0.58	0.53	0.38	0.24	0.08	0.26	0.36	0.34
Coefficient of variation in the absence of policy distortions in:								
All industrial countries	0.33	0.47	0.28	0.07	0.08	0.11	0.25	0.23
All industrial and developing countries	0.15	0.23	0.09	0.04	0.05	0.06	0.07	0.11

Note: The coefficient of variation is the standard deviation divided by the mean value for 100 repeated simulations with random supply shocks.

Source: Anderson and Tyers, 1990, p. 24.

The effect of these gains for different countries is detailed in the first three columns of Table 3. The welfare gains of North-only reform are widely distributed, although some developing countries still experience overall losses. These are either relatively wealthy countries (Korea, South Africa, Taiwan and the Middle East) specialized in manufacturing and petroleum, or countries that are very heavily food-import dependent (Bangladesh and Egypt). However, no developing country is projected to face an increased food import bill.

When a North/South liberalization is undertaken, shown in the last three columns of Table 3, even fewer developing countries lose. In the South, farmers are the main beneficiaries. These policy changes not only improve net welfare, they also reduce real income inequality by raising the prices received by farmers and rural laborers.

A final dimension of these changes is shown in Table 4, which estimates the impacts of liberalization on the stability of international agricultural prices. When either the North or South insulate their producers from international prices, they in effect "export" domestic price instability into the international economy. This has been described as a form of "free riding," in which the international public good of price stability is eroded through protection by either producers or consumers.²⁵ Anderson and Tyers calculated that if the North liberalized, variation in international prices would be reduced by about one-third (from a coefficient of 0.34 to 0.23) and that if a North/South liberalization

²⁵C. Ford Runge, "International Public Goods, Export Subsidies and the Harmonization of Environmental Regulations." Staff paper P90-77, Center for International Food and Agricultural Policy, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, U.S.A., December 1990.

occurred, by about two-thirds (from 0.34 to 0.11).

The implications of Anderson and Tyers' estimates are worth brief development. First, they suggest that the losses due to trade liberalization predicted by net food importers such as the FIGs group are probably overestimates of the negative welfare impacts of declining terms of trade. Conversely, earlier estimates of gains from trade policy reform, such as Tyers and Anderson's 1988 study, are probably underestimates. Second, the results raise questions over claims in favor of exemptions for distortionary policies in developing countries based on special and differential treatment, since eliminating (downward) distortions of food prices in the South actually increases the welfare gains of liberalization in a joint North/South action. Third, the price stabilization effects of trade policy reform suggest the somewhat unorthodox view that liberalization may be a better mechanism to achieve such stability than international commodity agreements, which have often been justified as stabilization programs.

The Anderson and Tyers study also undermines arguments by apologists for the international price-depressing (and destabilizing) effects of the E.C.'s Common Agricultural Policy, who have asserted that such effects are beneficial to importing countries. The estimated negative effects of food policies on the economic welfare of developing countries is so large (as much as \$17 billion in 1985 dollars) "as to effectively erode about half of the official development assistance received by developing countries from the OECD."²⁶

²⁶Anderson and Tyers, 1990, p. 16.

Finally, the results have implications for the impact of liberalization in Eastern Europe, where agricultural exports are likely to be an important source of foreign exchange earnings in new democracies. Both Eastern Europe and the rest of the developing world would benefit from trade liberalization as least as much as from expanded development assistance.

A criticism applicable to Anderson and Tyers model, as well as numerous other studies of trade reform, is that they estimate the impact of complete liberalization rather than more incremental reforms. This "first best" outcome is probably unrealistic. A recent study conducted for the United Nations Conference on Trade and Development (UNCTAD) by the World Institute for Development Economics Research of the U.N. University in Helsinki attempted to estimate the impacts of less-than-full reforms.²⁷

The UNCTAD study estimated the impact on developing countries of four different types of trade reform undertaken by the North (Australia, Canada, the E.C., Japan and the United States). Crop coverage included both cereals (wheat, maize, rice, sorghum), meat (beef and veal), sugar, oilseeds and oils, coffee and coffee products, cocoa, tea, tobacco and cotton. While this commodity coverage is larger than in the Anderson-Tyers study, the methods employed are comparative static and partial equilibrium. Thus, the estimates are likely to overstate damages to net importers. However, the advantage of the UNCTAD model is that it allows comparison of different types of trade reform.

²⁷UNCTAD, "Agricultural Trade Liberalization in the Uruguay Round: Implications for Developing Countries." UNDP/UNCTAD Projects of Technical Assistance to Developing Countries for Multilateral Trade Negotiations. UNCTAD/ITP/48. New York, 1990.

Four types of trade reform were modeled, using 1984-86 as a base.

These were:

- (1) Complete liberalization, including the elimination of all producer and consumer subsidies, all tariffs and quotas, as well as internal taxes on tropical products.
- (2) Reductions in producers price support by 20 percent.
- (3) Elimination of export subsidies.
- (4) An increase in imports by 10 percent in five markets for tropical and other developing country products, either through increases in quota or reductions in tariffs.

Apart from scenario (1), which corresponds to an unlikely "first best" outcome, the remaining options correspond closely to the elements of the Hellstrom compromise proposal discussed above. Reform scenario (2), producer price support reductions of 20 percent, is less than the 30 percent internal support cuts proposed by Hellstrom (which were calculated on a 1990 base), but still provides an indication of the effects such cuts would have on developing countries. Reform (3), elimination of export subsidies, is greater than the 30 percent proposed by Hellstrom, and corresponds to the Cairns Group's proposals, reflecting the interests of net exporting developing countries. Reform (4), increases in market access of 10 percent, is less than called for by Hellstrom, but is still the most important reform from the point of view of both net exporting and importing developing countries.

The estimates reported below examine each of the above reforms in isolation. In reality, if a package of GATT reforms is ultimately agreed to, it will be a blend of these actions, in all likelihood some combination

of (2), (3) and (4). Even so, the UNCTAD study results allow the relative importance of the reform package components to be studied in greater detail.

Table 5 shows the impact of the four reforms on world prices for the commodities included in the study. Rice prices rise dramatically under reform scenarios (1) and (2), while reform (3), export subsidy elimination, has its greatest impact on wheat, beef and rice. For tropical products, the greatest increases in price occur under reform scenario (4), confirming the importance of even 10 percent increases in market access.

Table 6 shows the regional results reported in the UNCTAD study, indicating the gains and losses in foreign exchange and welfare resulting from the price increases estimated in Table 5. It bears emphasis that unlike the Anderson and Tyers study, no dynamic adjustments in production or induced shifts from imports to exports due to price increases are allowed for. Even so, the only developing region with net foreign exchange losses is Africa under either reform scenario (1) or (2). Under both complete liberalization and 20 percent reductions in support, all other regions of the South are net foreign exchange gainers. Welfare changes remain positive for Latin America and the Caribbean, but turn negative for Africa, Asia and the Pacific. Reform scenario (3) gives the same qualitative results. Reform scenario (4) is again the most clearly beneficial, resulting in the largest gains in foreign exchange and welfare for all developing countries. Table 7 shows detailed results for the countries in the UNCTAD study.

Table 5. Estimated Change in World Prices of Agricultural Products
(Including Tropical Products) Under Alternative Liberalization
Scenarios

(Increase in per cent)				
Product	SCENARIO			
	(1) Complete liberalization	(2) 20 percent reduction in producer support price	(3) Export subsidy	(4) 10 percent increase in imports
Wheat	20.4	7.5	12.2	1.1
Maize	15.1	4.8	0.1	3.9
Rice	42.6	18.3	8.5	2.2
Sorghum	12.4	1.9	0.0	2.4
Soya beans	3.6	0.0	0.0	2.5
Soyabean oil	1.9	0.1	0.0	0.0
Beef and veal	12.5	13.0	11.1	1.6
Sugar	26.5	10.6	0.9	4.3
Cotton	0.1	0.9	0.0	9.1
Groundnut	0.1	1.5	0.0	5.1
Groundnut oil	2.8	0.6	9.0	3.9
Copra	0.0	0.0	0.0	20.1
Palm oil	0.4	0.0	0.0	1.6
Tea	2.9	0.5	0.0	8.3
Coffee:				
Green	4.4	0.4	0.0	29.9
Roasted	7.5	0.0	0.0	38.7
Extracts	7.8	1.4	0.0	1.3
Cocoa:				
Beans	0.1	0.0	0.0	19.7
Butter	2.8	0.5	0.0	9.1
Powder	5.2	0.8	0.0	4.2
Chocolate, nes.	9.0	1.8	0.0	1.0
Tobacco:				
Leaves	2.6	0.3	0.0	12.3
Cigarettes	0.2	0.1	0.0	0.0
Cigars	3.2	0.8	0.0	0.1
N.e.s.	0.1	0.2	0.0	0.6

Source: UNCTAD, 1990, p. xvi.

Table 6. ESTIMATED FOREIGN EXCHANGE AND WELFARE IMPACT ON DEVELOPING COUNTRIES UNDER DIFFERENT SCENARIOS: SUMMARY BY REGION.

(Millions of 1985-1987 dollars)

(1) Complete liberalization (PSE and CSE reduced to zero; and tariffs, quotas and internal taxes eliminated on tropical products)

Region	Selected agricultural products		Selected tropical products		All selected products	
	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change
Africa	-699	-953	219	143	-480	-810
Latin America & Caribbean	984	224	562	445	1,546	669
Asia & Pacific	428	-483	141	77	589	-406
TOTAL	713	-1,212	922	665	1,635	-547

(2) Reduction of producer price support (by 20 percent)

Region	Selected agricultural products		Selected tropical products		All selected products	
	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change
Africa	-280	-402	32	21	-248	-381
Latin America & Caribbean	456	152	71	31	527	203
Asia & Pacific	145	-225	18	1	163	-224
TOTAL	321	-473	121	73	447	-402

Source: UNCTAD, 1990, p. xvii.

Table 6. (continued)

(Millions of 1985-1987 dollars)

(3) Elimination of export subsidies

Region	Selected agricultural products		Selected tropical products		All selected products	
	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change
Africa	-256	-359	0	0	-256	-359
Latin America & Caribbean	262	37	0	0	262	37
Asia & Pacific	-89	-332	0	0	-89	-332
TOTAL	-83	-654	0	0	-83	-654

(4) Increase in imports by 10 percent

Region	Selected agricultural products		Selected tropical products		All selected products	
	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change	For.ex. earnings	Welfare change
Africa	-43	-67	1,926	1,337	1,881	1,270
Latin America & Caribbean	192	87	3,446	2,769	3,638	2,856
Asia & Pacific	-19	-60	872	477	891	417
TOTAL	166	-40	6,244	4,583	6,410	4,543

Source: UNCTAD, 1990, p. xvii.

Table 7. MAJOR GAINERS AND LOSERS^a IN EACH COUNTRY GROUP (ALL SELECTED PRODUCTS)

(Millions of dollars)

Country group/ Country	(1) Complete liberalization in producer support price		(2) 20 percent reduction elimination		(3) Export subsidy in imports		(4) 10 percent increase	
	Revenue	Welfare	Revenue	Welfare	Revenue	Welfare	Revenue	Welfare ^b
POLICY COUNTRIES								
Australia	967	678	1,037	348	1,103	305	98	
Canada	730	476	866	144	1,051	231	-158	
EEC	-5,141	1,430	-2,246	455	-3,507	1,301	-3,912	
Japan	-2,819	1,345	-503	559	-208	198	-1,135	
United States	4,411	2,829	294	849	704	6,161	-769	
OTHER DEVELOPED MARKET ECONOMIES								
Austria	36	6	21	8	23	11	-40	34
Finland	2	-12	5	0	4	0	-48	-33
New Zealand	104	59	107	66	91	57	43	-4
Norway	-16	-27	-2	-6	-2	-4	-44	-30
Sweden	32	2	19	7	23	12	-29	-90
Switzerland	3	-24	-2	-11	-4	-9	-35	-78
EASTERN EUROPE								
Czechoslovakia	14	-20	13	-5	-13	0	-43	-62
German Dem. Rep.	-10	-36	2	-20	1	-14	-58	-32
Poland	-44	-103	-17	-42	-27	-30	-40	-67
USSR	-42	-1,049	-169	-436	-166	-402	-31	-210
CENTRAL AMERICA AND MEXICO								
El Salvador	24	17	3	1	-1	-2	176	141
Costa Rica	35	23	13	8	8	2	155	118
Guatemala	36	28	11	8	4	5	183	138
Honduras	23	16	10	7	6	3	94	72
Nicaragua	13	9	8	8	4	2	66	44
Mexico	-8	-76	-11	-22	-5	14	331	251
CARIBBEAN								
Cuba	128	68	47	22	-9	-20	62	45
Dom. Republic	43	24	15	10	1	-1	73	55

^aCountries for which welfare changes by more than \$50 million under one of the four scenarios.

^bWelfare calculations were not made for the policy countries under the scenario of a 10 percent increase in imports, since this cannot be done without specifying how the increase in imports is to be brought about.

Source: UNCTAD, 1990, p. xxii.

Table 7. (continued) (Millions of dollars)

Country group/ Country	(1) Complete liberalization in producer support price		(2) 20 percent reduction elimination		(3) Export subsidy in imports		(4) 10 percent increase	
	Revenue	Welfare	Revenue	Welfare	Revenue	Welfare	Revenue	Welfare ^b
SOUTH AMERICA								
Argentina	670	438	259	171	231	149	118	66
Brazil	431	219	114	16	6	-43	1,521	1,125
Colombia	102	86	17	12	2	-3	597	546
Ecuador	10	3	0	-2	-2	-4	93	32
Peru	0	-29	-6	-16	-9	-13	65	36
Uruguay	90	39	68	47	54	37	6	3
Venezuela	-31	-59	-12	-23	-9	-16	8	1
SUB-SAHARAN AFRICA								
Cameroon	15	10	1	0	-1	2	165	131
Cote d'Ivoire	41	6	-3	-13	-3	-12	239	408
Ethiopia	3	1	-1	-2	-3	-4	62	61
Ghana	-4	-8	-3	-4	-2	-3	99	80
Kenya	27	15	2	0	-2	-2	194	117
Madagascar	-7	-16	-6	-8	-3	-4	62	48
Malawi	-73	-80	-21	-34	-2	-3		
Nigeria	-87	-119	-39	-34	-29	-39	78	57
Uganda	33	19	3	1	0	0	252	132
United Rep. of Panzara	1	-4	-2	-3	-2	-2	64	60
	3	-4	-2	-4	-3	-4	-82	64
Zaire	24	16	6	3	2	1	83	65
Zimbabwe								
NORTH AFRICA								
Algiers	-01	-113	-33	-43	-37	-44	82	-93
Egypt	-172	-236	-69	-105	-82	-123	-16	-32
Morocco	-54	-68	-20	-25	-25	-32	-19	-24
WEST ASIA								
Iran (Islam Rep. of)	-84	-167	-41	-81	-45	-63	-11	-19
	-85	-135	-41	-69	-41	-59	-13	-24
Iraq	-76	-107	-37	-50	-20	-31	-24	-31
South Arabia								
SOUTH-EAST ASIA								
Bangladesh	-26	-32	-12	-22	-16	-26	3	-4
India	96	21	37	9	1	-18	194	138
Indonesia	0	-61	-18	-41	-18	-34	381	266
Malaysia	-13	-69	-13	-33	-8	-18	258	31
Myanmar	109	73	44	31	20	14	6	4
Pakistan	99	88	41	18	16	44	18	
Philippines	61	20	21	4	-3	-11	52	33
Papua New Guinea	0	-3	-2	-5	-2	-3	66	53
Rep. of Korea	-96	-199	-44	-88	-29	-37	-37	-77
Thailand	688	478	267	188	100	70	87	18

^aCountries for which welfare changes by more than \$50 million under one of the four scenarios.

^bWelfare calculations were not made for the policy countries under the scenario of a 10 percent increase in imports, since this cannot be done without specifying how the increase in imports is to be brought about.

Source: UNCTAD, 1990, p. xxii.

The overall results of the UNCTAD study reinforce the conclusion that market access is by far the most important element of the negotiations for developing countries. Taken in isolation, any of the scenarios (1), (2) or (3) provide fewer benefits than (4): 10 percent increases in market access. Indeed, (1), (2) and (3) actually impose substantial losses on some parts of the developing world. It is possible to interpret the UNCTAD results to suggest that (a) complete liberalization is probably not in the interest of the developing countries, and (b) without major increases in market access, preferably greater than 10 percent and closer to the 30 percent figure in the Hellstrom compromise, a reform package including elements of (2), (3) and (4) will not be clearly advantageous to the South. If major market access gains are achieved, however, they are likely to be so substantial as to outweigh other disadvantages.

A third major study, undertaken recently by the U.S. Department of Agriculture,²⁸ offers another perspective on the impacts of trade reform. Based on the U.S.D.A. Static World Policy Simulation Model (SWOPSIM), containing 36 regions and 22 commodities, the study reconfirms the price increasing effects of liberalization, but is both less realistic and less detailed than the previous two models. The study excludes important tropical products included in the UNCTAD work: coffee, cocoa, and some vegetables and fruits. The model is static and partial equilibrium in nature. Output increases due to increased prices following liberalization are modeled as movements along the supply curve, rather than as dynamic

²⁸B. Krissoff, J. Sullivan, J. Wainio and B. Johnston. "Agricultural Trade Liberalization and Developing Countries." Economic Research Service. U.S. Department of Agriculture. Staff Report No. AGES 9042, Washington, D.C. May 1990.

outward shifts, in the manner of Anderson and Tyers. Using 1986 as a base year, the model estimates what would have happened if trade distortions were eliminated and all other variables remained the same. Three scenarios are examined:

- (1) The North fully liberalizes, while developing countries maintain their own policies so as to insulate themselves from one half of the price increases that result. A \$1.00 increase in world prices thus affects them by only \$0.50.
- (2) The North fully liberalizes, and no insulation occurs in the developing countries, so that they fully absorb the price increases resulting from liberalization. Hence a \$1.00 increase in world prices increases prices in developing countries by the same amount.
- (3) A full North/South liberalization, in which all farm programs are eliminated in both developed and developing economies.

Thus, scenario (3) corresponds to a "first best" (and unrealistic) full liberalization exercise. Scenarios (1) and (2) are similar to those examined by Anderson and Tyers, although dynamic production shifts are given comparatively less leeway in the SWOPSIM model. Table 8 shows the price effects by commodity for all three simulations. Table 9 provides summary data on supply and demand shifts, net trade, and welfare changes by country for each of the three scenarios. Table 8 shows world price increases of 21 percent under the first scenario, and 16 percent under the second and third scenarios. Overall, the regional impacts on net welfare, shown in Table 9, vary widely by region, regardless of the scenario.

Table 8. World Price Changes in Each Simulation.

Commodity	(1)	(2)	(3)
	<u>Percent</u>		
Beef	19	16	11
Pork	14	12	11
Mutton and lamb	31	25	21
Poultry meat	18	16	16
Poultry eggs	6	5	4
Dairy milk	0	0	0
Dairy butter	99	84	85
Dairy cheese	43	37	38
Dairy products	88	81	81
Wheat	37	27	20
Corn	29	22	23
Coarse grains	22	16	15
Rice	19	11	15
Soybeans	-2	-2	-3
Soymeal	-4	-3	-5
Soyoil	5	4	8
Other oilseeds	12	8	8
Other meals	-1	1	2
Other oils	9	7	14
Cotton	12	8	4
Sugar	48	29	40
Tobacco	4	3	3
Average	21	16	16

Source: USDA, 1990, p. 13.

Table 9. Industrial Market Liberalization, Scenario (1).

Area	Change in--		Change in--			
	Supply quantity	Demand quantity	Net trade	Producer surplus	Consumer surplus	Net welfare
	-- <u>Percent</u> --		----- <u>\$ Million</u> -----			
United States	-1.5	-1.2	2,832	-15,974	-4,645	8,822
Canada	-2.1	-.4	703	-1,275	150	2,609
European Community	-5.6	2.8	-9,213	-23,466	21,510	12,059
Other Western Europe	-16.3	-1.1	-1,909	-7,146	2,184	1,293
Japan	-30.4	9.4	-6,212	-22,011	23,575	4,985
Australia	6.2	-3.6	3,151	1,543	-1,546	1,109
New Zealand	12.0	2.2	2,478	1,745	-837	1,354
South Africa	3.0	-1.6	442	503	-485	87
Eastern Europe	.7	-.4	1,738	2,378	-2,374	789
Soviet Union	.4	-.4	-588	3,507	-3,912	-1,790
China	.7	-.3	1,133	3,476	-3,570	-73
Mexico	2.6	-2.0	520	1,111	-1,304	-133
Central America/Caribbean	3.3	-1.6	664	496	-306	432
Brazil	1.9	-1.5	913	1,691	-1,943	-292
Argentina	3.2	-2.0	1,730	995	-851	656
Chile	2.1	-1.7	25	60	-67	-9
Venezuela	2.2	-1.1	91	229	-259	-39
Other Latin America	2.6	-1.8	334	632	-684	-69
Nigeria	2.5	-1.7	12	146	-220	-62
Kenya	4.5	-2.7	28	54	-57	-4
Other Sub-Saharan Africa	1.7	-1.5	264	666	-715	-47
Egypt	1.5	-1.6	-314	511	-801	-529
Middle East/North Africa-- oil producers	2.6	-1.8	-1,971	649	-1,759	-2,291
Middle East/North Africa--other	2.0	-.8	56	870	-1,032	-265
India	2.2	-2.2	2,647	4,486	-4,662	332
Pakistan	4.2	-1.9	498	528	-500	109
Bangladesh	4.4	-2.6	232	333	-359	-40
Indonesia	2.0	-1.5	302	755	-775	-84
Thailand	3.0	-.9	534	409	-245	334
Malayasia	.9	-1.3	157	100	-93	63
Philippines	1.5	-1.3	196	312	-322	10
South Korea	1.0	-.9	-254	281	-485	-439
Taiwan	1.1	-1.1	-52	212	-374	-254
Other East Asia	1.7	-1.6	-251	27	-171	-293
Other Asia	1.9	-1.2	211	705	-788	-117
Rest of world	.2	-5.8	-1,126	109	-817	-1,445
Developing country total	2.2	-1.8	5,445	16,367	-19,590	-4,476

Source: USDA, 1990, p. 44.

Table 9. Industrial Market Liberalization, Scenario (2).

Area	Change in--		Change in--			
	Supply quantity	Demand quantity	Net trade	Producer surplus	Consumer surplus	Net welfare
	-- Percent --		----- \$ Million -----			
United States	-2.5	-.7	191	-18,745	-1,768	8,928
Canada	-3.0	.3	154	-1,847	596	2,483
European Community	-6.3	3.3	-10,899	-26,986	25,571	12,600
Other Western Europe	-17.2	-.8	-2,058	-7,527	2,669	1,397
Japan	-31.5	9.9	-5,884	-22,295	24,598	5,724
Australia	4.2	-3.2	2,295	1,095	-1,369	838
New Zealand	9.9	1.9	2,041	1,457	-754	1,148
South Africa	5.0	-2.7	597	853	-802	19
Eastern Europe	.6	-.3	1,489	1,996	-1,978	691
Soviet Union	.3	-.3	-395	2,856	-3,164	-1,373
China	.5	-.3	879	2,563	-2,634	-69
Mexico	4.4	-3.2	1,110	1,868	-2,170	-59
Central America/Caribbean	4.6	-2.3	550	711	-461	250
Brazil	3.2	-2.2	1,580	2,769	-3,111	-431
Argentina	5.4	-3.2	2,334	1,727	-1,420	532
Chile	3.2	-2.5	45	93	-100	-7
Venezuela	3.9	-1.7	207	404	-431	-22
Other Latin America	4.2	-2.9	625	1,048	-1,107	-59
Nigeria	3.6	-2.3	87	214	-313	-28
Kenya	6.9	-3.9	47	83	-86	-3
Other Sub-Saharan Africa	2.5	-2.0	399	971	-1,033	-61
Egypt	2.4	-2.5	-44	847	-1,304	-442
Middle East/North Africa-- oil producers	4.3	-2.9	-1,144	1,084	-3,048	-1,964
Middle East/North Africa--other	3.1	-1.2	301	1,386	-1,606	-220
India	3.2	-3.1	3,696	6,964	-6,931	335
Pakistan	6.0	-2.6	608	784	-734	50
Bangladesh	5.3	-3.2	295	405	-445	-40
Indonesia	2.5	-1.9	390	961	-984	-105
Thailand	4.1	-1.3	458	546	-323	195
Malayasia	1.1	-1.7	151	144	-128	12
Philippines	2.2	-1.9	254	454	-466	-27
South Korea	1.5	-1.3	-94	408	-713	-385
Taiwan	1.9	-1.6	68	329	-575	-273
Other East Asia	3.1	-2.5	-145	47	-272	-225
Other Asia	2.4	-1.4	314	907	-1,019	-112
Rest of world	.3	-9.4	-502	218	-1,382	-1,164
Developing country total	3.3	-2.6	11,591	25,374	-30,160	-4,251

Source: USDA, 1990, p. 45.

Table 9. Industrial Market Liberalization, Scenario (3).

Area	Change in--		Change in--			
	Supply quantity	Demand quantity	Net trade	Producer surplus	Consumer surplus	Net welfare
	-- Percent --		----- \$ Million -----			
United States	-3.0	-.5	-1,207	-19,886	-771	8,784
Canada	-3.3	.7	-103	-2,047	721	2,409
European Community	-6.6	3.4	-11,196	-27,288	26,126	12,853
Other Western Europe	-17.4	-.6	-2,099	-7,564	2,707	1,397
Japan	-31.1	10.1	-5,810	-22,103	24,414	5,732
Australia	3.6	-2.9	1,954	985	-1,329	768
New Zealand	9.4	2.0	1,921	1,426	-750	1,122
South Africa	1.5	-2.0	368	228	-623	152
Eastern Europe	.6	-.3	1,493	1,924	-1,892	729
Soviet Union	.3	-.3	-461	2,649	-2,947	-1,341
China	.5	-.3	856	2,587	-2,656	-76
Mexico	2.2	-5.0	1,843	2,298	-3,337	505
Central America/Caribbean	5.3	-2.4	740	860	-465	394
Brazil	-1.7	-2.0	1,062	-1,008	-2,930	406
Argentina	9.8	-6.6	4,601	3,626	-2,744	637
Chile	2.8	-2.5	40	87	-95	-9
Venezuela	9.7	4.1	457	158	393	400
Other Latin America	3.7	-2.7	555	983	-1,052	-69
Nigeria	4.1	-3.2	137	263	-543	24
Kenya	7.0	-4.1	45	89	-95	-6
Other Sub-Saharan Africa	3.3	-1.6	416	1,090	-1,138	-48
Egypt	-6.1	-1.4	-84	313	-1,201	-181
Middle East/North Africa-- oil producers	3.9	-2.8	-1,212	989	-2,975	-1,986
Middle East/North Africa--other	2.9	-.9	220	1,229	-1,454	-225
India	2.2	-2.5	4,246	7,420	-4,139	1,746
Pakistan	16.6	-2.2	1,323	1,702	-827	317
Bangladesh	7.0	-4.1	417	549	-573	-24
Indonesia	-.1	2.2	-157	-38	895	119
Thailand	.6	-.4	443	158	-235	346
Malayasia	-3.3	-.4	328	425	38	130
Philippines	-.8	.7	71	-30	127	67
South Korea	-19.4	18.9	-954	-3,423	7,084	1,490
Taiwan	-1.8	3.3	-115	-268	530	-58
Other East Asia	3.1	-2.4	-139	46	-263	-217
Other Asia	3.3	-1.8	464	1,153	-1,232	-79
Rest of world	.2	-8.8	-463	226	-1,309	-1,083
Developing country total	1.3	-1.1	14,283	18,896	-17,538	2,597

Source: USDA, 1990, p. 46.

The main conclusions are that it is clearly in the developing countries' interest to participate in the process of trade reform, if the industrial countries pursue such a course. Second, it would appear that Latin America will benefit most as region from joint North/South liberalization (consistent with the UNCTAD study) and that developing countries as a whole will benefit more than they will lose, at least from scenario (3). Since this scenario is the least realistic, however, it is notable that if the North liberalizes and the South does not, it suffers a net loss in welfare whether it allows higher prices to be partially [scenario (1)] or fully [scenario (2)] transmitted.

What general conclusions can be extracted from these estimates of the impact on developing countries of trade policy reform? While interpretations may differ, four general conclusions emerge from the estimates above. First, although the process of trade reform is likely to be incremental, to the extent that developing countries participate in reforming their own food sectors in tandem with countries of the North, their benefits will substantially exceed a situation in which they attempt to insulate their economies from this process. Indeed, attempts to do so may actually cause the South to lose both foreign exchange and welfare benefits as world prices rise. Second, of the three key elements of the negotiation in GATT: export subsidies, internal support and market access, the greater the gains that can be achieved in the market access area, the more benefits will accrue to the South. Third, the negative effects to net food importing countries attributed to rising food prices after trade

reform are probably overstated. If Anderson and Tyers' findings are valid, the majority of food importers may actually gain in welfare terms, if these price signals are transmitted and food production expands. Finally, and ironically, the emphasis that many developing countries have placed on special and differential treatment, if used to justify the continued insulation of their agriculture from world market signals, may actually deny them many of the benefits of liberalization.

5. The Elements of an Agricultural Compromise

Given the opportunities for developing countries in the Uruguay Round, what kind of compromise is likely, and how could benefits to the South be maximized? In general, it would appear that the Hellstrom compromise proposal will serve as a general basis for further discussions. Whether 30 percent will be the exact amount of change agreed to in each of the three areas of export subsidies, internal supports and market access is unlikely. Questions also remain concerning the role of "tariffication" -- converting quotas and other non-tariff barrier to tariffs -- as a means of assuring market access. Moreover, there is general displeasure with the proposed base year of 1990, suggesting that the U.S.-proposed base of 1986-88 might be chosen instead.

On balance, the interests of developing countries appear best served by these three elements in the negotiation, in descending order of priority.

(1) Maximum gains in access to industrial country markets, particularly in key commodities such as sugar, tropical products and fruits and vegetables. Here the sanitary and phytosanitary discussion will also prove critical, since health, safety and environmental standards appear to

be the next major growth area for nontariff barriers to developing country imports (see Section 6). If a true 30 percent increase in market access were guaranteed on a base of 1986-88, it would constitute a major victory for developing countries in the Uruguay Round.

(2) Maximum reductions in export subsidies. The gains to exporting developing countries such as Argentina and Brazil from a cessation of North/North export subsidy wars would be substantial. Coupled with (1) above, any negative terms-of-trade effects from increased prices in food importing countries could be largely offset by expanding export opportunities. If a 30 percent reduction in export subsidies were chosen on a 1986-88 base, it would provide substantial benefits to agricultural exporters, although even greater cuts, of 40 or 50 percent, would be preferable.

(3) Appropriate policy adjustments allowing transmission of increased prices to developing country domestic markets. While selective and continuing application of special and differential treatment will continue to be necessary in most developing countries, in order to share in the benefits of liberalization the South must be prepared to pass along the gains from higher food prices to farmers, creating incentives for expanded output and, ultimately, lower levels of import dependency. Special and differential treatment, or foreign exchange and balance of payments problems associated with debt service, can become excuses for inaction in domestic policy. The critique that asserts liberalization as a cause of growing gaps between the industrial North and agrarian South can be self-fulfilling: by insulating developing country economies from global markets, adjustments are put off that, once made, can allow the South to

share in opportunities for growth.

This does not imply that expanded development aid, debt relief, and other measures of technical and development assistance do not complement the process of trade reform. Indeed, to the extent that these measures help to stimulate the dynamic production response associated with higher food prices, they are a very significant part of the achievement of maximum benefits from trade reform.

If a compromise proposal in agriculture is achieved, it must of course be linked to agreements in other critical areas such as tropical products, services, intellectual property and textiles. However, the better the bargain achieved in agriculture, the easier it will be to finalize agreements in these other areas. The final outcome of the Uruguay Round will not likely occur until later in 1991, and perhaps even 1992. If it includes the above elements in agriculture, it can provide a basis for renewed growth in developing country economies.

6. Prospects for the 1990s

The condition of agriculture in the developing countries in the 1990s will depend critically on three interrelated factors that have formed the basis for much of the discussion above. The first is the willingness and capacity of developing countries to invest in their own agricultural sectors and to accelerate the process of domestic policy reforms giving farmers positive incentives to produce. These investments include both direct expenditures on price and incomes policies reversing implicit and explicit taxation of agriculture, as well as indirect expenditures committed to longer term projects of research, education and training. Whereas many studies of agricultural development focus on constraints to

growth in the South, and the consequent need for outside actions to alleviate them, the primary mechanism of agricultural development is the internal commitment to invest in both technology and human capital.

Naturally, the means to these ends involve scarce resources, not readily available to many developing countries. Thus, the second factor determining agricultural prospects will be the willingness of the industrial economies of the North to provide relief from much of the debt imposed on developing countries during the 1970s and 1980s, and access to greater development assistance. The sooner this debt can be written down, or off, the sooner developing economies will rebound to levels of growth consistent with increasing imports from exporters in the North. Development assistance will not be readily available until budget deficits in the North are squarely faced. Thus, both the private and the public sector in the industrial economies must confront the failures of previous debt-finance.

This effort is unlikely to succeed without concerted international efforts to coordinate the actions of the multilateral agencies, specifically the International Monetary Fund, World Bank and the GATT. In the postwar period, these three institutions were envisioned as a three-legged basis for economic and financial stability. It was the unwillingness of the U.S. Congress to endorse the larger International Trade Organization (ITO) which led to the weaker rules of the GATT.²⁹

Today the U.S. and other OECD countries must, as a matter of

²⁹See John H. Jackson, World Trade and the Law of GATT (A Legal Analysis of the General Agreement on Tariffs and Trade), Indianapolis: The Bobbs-Merrill Co., Inc., 1969; and John H. Jackson, The World Trading System: Law and Policy of International Economic Relations, Cambridge: The MIT Press, 1989.

enlightened self-interest, be prepared to reinvigorate the role of multilateral institutions if coordinated debt relief is to accompany the broadening of international trade rules, complemented by development assistance targeted to expanded agricultural productivity. In the Uruguay Round, some progress in this direction has occurred in the Functioning of the GATT System (FOGS) negotiations, which have structured new collaborative relationships between the IMF, World Bank and GATT. But national governments need to bolster these agreements, and relate them to the multilateral activities of the U.N. and its agencies. And since the FOGS is only one of 15 negotiating areas, all of which must reach agreement for a final package, achieving these gains depends in turn on resolving disputes over agriculture and the other "problem areas" of the Uruguay Round.

The third factor determining the condition of agriculture in the 1990s is the one which the Uruguay Round itself has some power to affect: the level of prices in world markets, and the access which developing countries have to markets in the North. As suggested by the empirical studies examined above, market access and reductions in subsidized export competition will create the demand conditions necessary for farmers to respond by raising the productivity of developing country agriculture. Between these forces of demand and supply, international debt relief and development assistance will serve to provide the necessary liquidity to assure an exchange.

Yet these three factors will be difficult to bring into play, in part because any one of them depends on the others for success. If developing countries open their economies and reduce their distortions, without debt

relief, development assistance, and market access, little will be achieved. If debt relief and development assistance are unrelated to internal reforms and expanded market opportunities, the dynamic growth opportunities they create are likely to be unrealized. If market access is granted, but production does not respond to increased demands due to continuing distortions that tax farmers and subsidize consumers, or debt-service that bleeds economies of investment capacity, then it will be an opportunity wasted. Thus the factors on which expanded agricultural growth depends cannot occur singly, but must occur jointly.

Even if they do, there are reasons to expect that protectionism will reappear in other guises to frustrate efforts by developing countries to gain access to markets in the North. In the 1990s, perhaps the most important is the growing use of environmental, health and safety (EHS) standards in developed countries as nontariff trade barriers. This problem is not new, but presents itself with new force in the 1990s. In part this is because of the growing constituency favoring "eco-protectionism," a group fearful of food contaminated by chemical residues, meat tainted by hormones, and products manufactured in any manner defined as "environmentally unsound." While the sanitary and phytosanitary negotiations in GATT have considered a subset of these issues, notably the food and kindred products covered by FAO's Codex Alimentarius, the issues extend beyond food and agriculture to include almost any traded goods affected by EHS standards.³⁰

³⁰See C. Ford Runge, "Trade Protectionism and Environmental Regulations: The New Nontariff Barriers," Northwestern Journal of International Law and Business, Northwestern University School of Law, 11(1): 47-61, Spring 1990.

Because EHS standards have a growing national constituency, they are especially attractive candidates for disguised protectionism. International distinctions in the tolerable level of environmental risks are created because the weight attached to environmental standards tends to vary with the income levels of different countries. Incentives are created to move restricted product and processes into areas of lax regulation, notably developing countries, while denying import access to countries that may not subscribe to the regulatory policies of the developed countries. Without multilateral action, environmental standards become sources of trade tension.

Indeed, there has been longstanding recognition of the possibility for conflicts between national environmental policy and more liberal international trade. The GATT articles explicitly recognize the possibility that domestic health, safety, and environmental policies might override general attempts to lower trade barriers.³¹ GATT Article XI headed "General Elimination of Quantitative Restrictions," states in paragraph (1):

No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.

³¹Jackson, op. cit., note 29.

Yet Article XX, headed "General Exceptions," provides

...nothing in the Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

...(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption; provided that such measures:

...are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.

A similar set of exceptions is applied to health related measures under Article XX(b). GATT law emphasizes that any restrictions imposed on foreign practices for environmental or health reasons must also reflect a domestic commitment, so that the exception cannot be misused as a disguised form of protection.

The Tokyo Round of Multilateral Trade Negotiations promulgated a "Standards Code" that has tried (also largely without success) to grapple with the balance between health, safety, and environmental standards and trade liberalization.³² This 1979 code supplemented the GATT rules that require "national treatment" (no less favorable to importers than to domestic parties) and prohibit the "nullification or impairment" of trade concessions through the back-door device of nontariff barriers.³³ One

³²Code of Conduct for Preventing Technical Barriers to Trade, GATT, Multilateral Trade Negotiations, Doc. MTN/NTM/W1192/Rev. 5, cited in Rubin and Graham, 1982.

³³Jackson, op. cit., note 29.

purpose of the Code was to prevent any product, technical, health, safety or environmental standard from creating "unnecessary obstacles to international trade."³⁴

Despite an additional decade of discussions, including substantial attention to both technical standards and nontariff barriers in the Uruguay Round, it is still unclear when and where such standards constitute an "unnecessary obstacle to international trade." If anything, the temptation to use environmental and health standards to deny access to home markets is stronger now than in the 1980s. As the European Community moves towards its goal of market integration in 1992, it will have strong incentives to create common regulations for internal purposes, but to impose restrictions vis-a-vis the rest of the world. A similar propensity may occur as a result of harmonization under the United States/Canada free trade agreement. However, even if national standards can be harmonized there is every reason to expect subnational jurisdictions to utilize various health and environmental standards to protect certain markets.

Underlying the development of these trade tensions are fundamental differences in the views of developed and developing countries concerning the appropriate level and extent of environmental health and safety regulation. Differences in the domestic policy response to these problems are well represented in the food systems of the North and South. In the developed countries of North America and Western Europe, the "food problem" arises not from too little food and land in production, but generally too much. As predicted by Engels' Law, the incomes of developed countries have

³⁴S. J. Rubin and T. R. Graham (eds.). Environment and Trade. Totowa, NJ: Allanheld, Osmun Publishers, 1982, p. 8.

increased, and the share of this income spent on food has fallen in proportion to other goods and services. This characteristic makes food an "inferior good" in economics jargon. In contrast, environmental quality and health concerns have grown in importance with increasing income levels. They are what economists call "superior goods," in the sense that they play a larger role in the national budget as national incomes increase.³⁵

In low-income developing countries, while the share of national resources devoted to food and agriculture remains large, environmental quality and occupational health risks are widely perceived as concerns of the rich. Even if environmental and health risks are acknowledged, the income levels of most developing countries do not permit a structure of environmental regulation comparable to that in the North. This two-tiered structure of international environmental regulation, with stricter regulatory regimes in developed countries paired with lax or non-existent regulations in developing countries, increases the North-South flow of environmental risks. A kind of "environmental arbitrage" results, in which profits are gained by exploiting the differential in regulations. This environmental arbitrage results from conscious policy choices that reveal differences in the value attached to environmental quality by rich and poor countries. As these paths of institutional innovation increasingly diverge, so will the differential impact of environmental constraints on producers in the North and competitors in the South such as Argentina and

³⁵C. Ford Runge, "Induced Agricultural Innovation and Environmental Quality: The Case of Groundwater Regulation," Land Economics (1987): 249-58.

Brazil.³⁶

The competitiveness implications of these trends are not lost on Northern producers. They have been quick to see the trade relevance of environmental and health standards. Growing consumer concerns with the health and environmental impacts of agriculture create a natural (and much larger) constituency for nontariff barriers to trade, justified in the name of health and safety. As between countries in the North, obvious differences in values also exist, although the regulatory gap is less yawning.

Given the tension separating North and South, and the lesser differences between countries in the North, it would appear that a single set of standards is unlikely to be successful. The Subsidies Code adopted during the Tokyo Round is at least a necessary starting point, but some mechanism must be found to accommodate differences in national priorities linked to levels of economic development and cultural factors.

In view of differences in levels of economic development and national priorities, it is clear that standards cannot be wholly uniform. Jeffrey James, in The Economics of New Technology in Developing Countries,³⁷ suggests that despite valid arguments for improved health and environmental regulations in the South, "it does not follow from this that countries of the Third World should adopt either the same number or the same level of

³⁶C. Ford Runge, James P. Houck, Daniel W. Halback, "Implications of Environmental Regulations for Competitiveness in Agricultural Trade," Chapter 4 in John D. Sutton (ed.), Agricultural Trade and Natural Resources: Discovering the Critical Linkages, Boulder and London: Lynne Rienner Publishers, 1988.

³⁷J. James, The Economics of New Technology in Developing Countries, (Stewart and James, eds.), 1982.

standards as developed countries." James suggests what may be called intermediate standards, "in the same sense and for the same basic reason as that which underlies the widespread advocacy of intermediate technology in the Third World." This does not imply a "downgrading" of developed country regulations, but an "upgrading" of developing countries' norms, together with the recognition that the social costs of regulation are relative to national income.

Unfortunately, despite recent attempts to deal with these issues in forums such as GATT, the linkages from environmental regulation to international trade have not been clearly recognized. The Food and Agriculture Organization of the United Nations has worked to develop comprehensive rules affecting food and agriculture in the Codex Alimentarius.³⁸ A special technical working group at the GATT Secretariat in Geneva is attempting to use this code as the basis for harmonizing member countries' regulations. But there are no agreed-upon standards except for a few items, and none are regarded as binding in law. With the exception of the beleaguered GATT working group, the issue has not been given priority by international institutions.

Beyond environmental considerations are shorter term problems of trade distortion and market access. These distortions threaten more liberal international trade in ways that are damaging to both developed and developing country interests. In addition to the development of carefully reasoned legal arguments determining when environmental and health standards are in fact trade barriers, an international accord on

³⁸Food and Agriculture Organization, "Introducing Codex Alimentarius," FAO/WHO Food Standards Program, Rome, 1987.

environmental and health regulations would be appropriate. Similar in nature to the 1988 Montreal Protocol agreed to by 40 nations to reduce emissions shown harmful to the ozone layer, its purpose would be to call for the rights, duties, and liabilities that define national regulations on environment and health which can then be brought more nearly into accord. In the absence of such an agreement, groups within nations will continue to advocate the use of regulations as disguised protectionism, or loosening standards of environmental quality in the name of greater competitiveness.

7. Summary and Conclusions

This chapter has surveyed the developments in agricultural trade leading to the Uruguay Round of Multilateral Trade Negotiations. It has analyzed the potential impact of the trade talks, and has considered some important future issues in agricultural trade. The Uruguay round has been the most ambitious effort since the establishment of GATT in 1947 to confront the distortions in world agriculture. This effort was driven by a constellation of forces in the 1980s which together caused agriculture to become too important to ignore. These included mounting debt and economic recession, leading to falling demand in developing countries for developed country exports, and consequent attempts in the North to dump unsalable surpluses into international markets at subsidized prices. In the South, falling GDP per capita reduced imports and was reflected in declining exports to industrial economies in the North. As global economic activity slowed, the U.S., E.C. and Japan continued to protect and subsidize their agricultural sectors, leading to substantial increases in rates of protection between 1965 and 1983. This protection insulated farmers in the North from the consequences of excess production, and "exported"

instability as well as lowered prices in international markets. This instability and price reduction penalized developing countries, who were even less able to pay accumulated debts. But the gap between supported domestic prices in the North and depressed world prices also raised the costs of developed country policies, which reached all time highs in the mid-1980s. These costs were the primary reason that the North came to the bargaining table in GATT.

The Uruguay Round was initiated in December, 1986, with a major focus on agricultural trade reform. Previous attempts to discipline agricultural trade in the Kennedy Round (1963-67) and Tokyo Round (1973-79) had met with very limited success. The Tokyo Round had established a variety of codes that were amended to the GATT articles, and special and differential treatment for developing countries was given full expression as part of GATT law. But real progress in bringing agriculture under GATT rules and disciplines had yet to be made.

During four years of negotiations, the primary differences in the Uruguay round continued between the U.S. and E.C., although the Cairns Group sided in large part with the U.S. at least concerning E.C. export subsidies. However, the U.S. was also guilty of such subsidies, as well as barriers to market access for developing country imports. Three main divisions thus characterized the negotiation. The first was a North/North schism, primarily between the U.S. and E.C. The second was a North/South divide, largely over market access and export subsidies. The third was a South/South division, defined by differences in the interests of net agricultural exporters (who were largely members of or allied with the Cairns Group) and net agricultural importers (represented by the Food

Importing Group - FIGs).

The South/South divide was linked in turn to debt servicing questions. For net exporters, higher world prices following liberalization would assist in debt repayment. But for net importers, the opposite was true. As prices rose, it appeared to further weaken the capacity of food importers to service their debts by raising their foreign exchange obligations for the purchase of food. This view was supported by a variety of early quantitative studies of the impacts of trade liberalization.

Yet later studies began to question this reasoning. While almost all modeling efforts examining the impacts of trade reform concluded that world prices would rise, with positive effects on net food exporters, the consequences for net importers were less clear a priori. If rising prices triggered increased output through a process of induced technical and institutional change, imports would fall, leading some countries to switch from being net importers to net exporters. If such outward shifts in supply were matched by domestic policies that allowed world price increases to be fully transmitted to farmers, the incentives to raise output would be reinforced. Under these (more realistic) conditions, the positive foreign exchange and welfare impacts of liberalization are likely to reduce and in many cases overcome the negative terms of trade effects of increased prices.

This is ultimately an empirical issue. Anderson and Tyers provide estimates of these effects which reinforce the argument that losses to food importers following liberalization are probably overestimates. Their 1990 results also raise questions over the wisdom of using special and differential treatment to continue justifying policies that insulate

developing country consumers from food price increases. They also imply that liberalization would better serve global commodity price stabilization than continued reliance on commodity agreements. Finally, the Anderson and Tyers study undermines arguments that the price depressing (and destabilizing) effects of the E.C.'s Common Agricultural Policy are actually beneficial to food importers.

A second empirical study was conducted in 1990 by the World Institute for Development Economics Research for UNCTAD. This study allowed measurement of the separate impacts on developing countries of 20 percent reductions in internal supports, export subsidy removal, and 10 percent increases in market access. This study also considered the impacts of complete liberalization, although changes are likely to be incremental. The results indicate that market access gains are by far the most significant from the point of view of developing countries, and that if substantial, they would tend to dominate any losses resulting from other parts of a final negotiated package.

A third study, undertaken by the U.S. Department of Agriculture, reconfirms the price increasing effects of liberalization. Three scenarios are analyzed. The first involves full liberalization by the industrialized North, but only partial (50 percent) transmission of price increases to the developing countries of the South. The second involves full liberalization in the North, and complete transmission of price increases to the South. The third involves full North/South liberalization. The study reconfirms that price increases will benefit developing countries in total, and that these benefits will be maximized if the South liberalizes in tandem with the North.

Overall, the three studies suggest that although the process of trade reform is likely to be incremental, it is better that North and South liberalize jointly rather than separately. Second, of the three elements likely to form a final package in agriculture: export subsidies, internal support and market access, it is the third which emerges as of overriding importance to developing countries. Third, the negative effects to net food importing countries due to price increases following trade reform are probably overstated. Fourth, an emphasis or special and differential treatment should not be used to justify continued insulation of developing countries from price increases, or it will deny them many of the resulting benefits.

Given these results, the elements of an agricultural compromise in GATT must include specific attention to three main factors. The first and most important is maximum gains in access to industrial country markets, including assurances in the sanitary and phytosanitary negotiations that environment, health and safety standards will not become barriers to trade. The second is maximum reductions in export subsidies, allowing net exporters to increase their foreign exchange earnings. The third is appropriate policy adjustments allowing transmission of increased world prices to developing country farmers, creating incentives to expand output.

Prospects for agricultural trade in the 1990s will depend on whether both developed and developing countries can muster the will to undertake three types of reform. First, developing countries must be prepared to invest in their own farmers' agricultural development, both directly in terms of price and income supports, and indirectly in terms of research, extension and training. Second, developed countries need to help make

these investments affordable by reducing the debt load of the South, as well as confronting their own debts and deficits. Third is the Uruguay Round, and the package of reforms outlined above, which can expand market areas and export opportunities for the South, creating new demands for increased production.

Yet even if these reforms are taken, threats to the international trading system in agriculture will remain. Perhaps the most important, in the years following the Uruguay Round, will be environmental, health, and safety standards functioning as disguised barriers to trade. Only concerted efforts by the multilateral agencies of the U.N., the GATT and national governments will prevent these from becoming the nontariff barriers of choice in the 1990s.