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HOW MUCH DOES IT HURT?

The Impact of Agricultural Trade Policies on Developing Countries

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August 2003

INTRODUCTION

As world attention was absorbed by the war in Iraq last March, another international battle raged on, little noticed. Nations from all across the globe were deadlocked in an acrimo-

nious conflict over trade in the world's most precious commodity - food. Agricultural trade pits wealthy countries against poor countries and influential farmers' lobbies against consumers and taxpayers. March 31 was the deadline for World Trade Organization (WTO) members to reach an agreement on a framework for the agricultural trade negotiations, currently one of the most critical and delicate topics in the effort to advance progress in opening up the global marketplace.

These negotiations touch the lives of people from Iowa to Australia, and all the industrialized world's farmers in between. Above and beyond, the fates of hundreds of millions of small-scale farmers and poor consumers in developing countries struggling to survive on a dollar or two of income a day hang in the balance.

While international attention was diverted towards Iraq, the talks failed and the deadline was missed. Now with the war over, the world's eyes are

looking towards the WTO ministerial meeting in Cancun, Mexico from September 10 to 14. Reforming agricultural trade will be front and center on the meeting's agenda.

Total support to agriculture in OECD countries amounted to US\$311 billion in 2001, or about US\$850 million per day, dwarfing the amount those same countries give in development assistance. However, these statistics obscure the real-life human impact of trade-distorting measures, which can be seen by visiting small farms in Africa, Asia and Latin America.

Harrison Amukoyi's farm is perched on a hillside in western Kenya. On less than two acres of land, he raises several crops and a dairy cow. To sell milk, Harrison and his neighbors must compete with industrialized countries that dump their subsidized milk on local markets, depressing prices for Kenyan farmers. This unfair contest appears in countless guises throughout the developing world, intensifying conditions of poverty.

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Harrison Amukoyi on his farm in Kenya.

QUANTIFYING THE HARM

While it has been known for some time that the combination of domestic support, market protection and export subsidies by industrialized countries has depressed world prices and reduced market opportunities for developing countries, there have always been debates regarding the extent of the harm.

Using a large computer model of the world economy, IFPRI developed a new estimate of the immediate damage to the economies of the world's poor countries by simulating the elimination of the current policies by industrialized countries. According to their study, protectionism and subsidies by industrialized nations cost developing countries about US\$24 billion annually in lost agricultural and agro-industrial income. This is a lower-bound estimate that does not count all the dynamic and spill-over effects from lost agricultural income.

Trade-distorting measures also displace more than US\$40 billion of net agricul-

tural exports per year from developing countries. Elimination of protectionism and subsidies of the industrialized world's agriculture would triple developing countries' net agricultural trade.

The research also quantifies the impact by region on agricultural and agro-industrial incomes. Latin America and the Caribbean lose about US\$8.3 billion in annual income from agriculture, developing countries in Asia lose some US\$6.6 billion, and sub-Saharan Africa, close to US\$2 billion. These are substantial sums for cash-strapped economies to forgo year after year.

The absolute dollar amounts of lost income are greater for Latin America and the Caribbean. Agriculture is less important, however, as a percentage of GDP for Latin American countries, and a smaller percentage of their populations live in rural areas compared to other developing country regions. Sub-Saharan Africa and South Asia fall on the other end of the spectrum, with large

rural populations and greater dependence on agricultural income.

Sub-Saharan Africa suffers a displacement of agricultural and agroindustrial production that amounts to about 3.4 percent of total income in those sectors, compared to 3 percent for Latin America and the Caribbean, and 1.7 percent for the developing countries of Asia.

To supplement the global and regional data, the study measures the impact on individual countries, as well. China, Brazil, Argentina, Thailand, and India suffer the largest losses in absolute value due to agricultural policies in industrialized countries, ranging from US\$1.1 billion in India to about US\$2.3 billion in China. However, in percentage terms, smaller countries in South America, Central America, and the Caribbean, as well as several countries in sub-Saharan Africa, are the most affected, with losses of about 10-15 percent of total agricultural and agroindustrial incomes.

Potential Impact of Changes In Agricultural Trade Policies in Industrialized Countries on Developing Countries

Developing Country Net Agricultural Trade

(Exports Minus Imports, in Billions of Dollars)

REGION	1997 Net Trade Levels	Changes in Agricultural Trade Policies By				% Increase
		US only	EU only	Japan, Korea only	All Industrialized Countries	
Sub-Saharan Africa	\$7.4	\$8.1	\$9.6	\$7.6	\$10.7	45%
Asia	\$12.3	\$15.6	\$15.6	\$15.7	\$22.8	85%
Latin America and the Caribbean	\$31.7	\$37.1	\$39.3	\$32.5	\$46.4	47%
Other Developing Countries**	(\$31.0)***	(\$29.4)	(\$21.9)	(\$30.1)	(\$19.1)	38%
All Developing Countries	\$20.4	\$31.4	\$42.6	\$25.7	\$60.8	198%

Annual Changes in Incomes Going to Primary Agriculture and Agroindustrial Production

(Increase in Million Dollars)

REGION	Changes in Agricultural Trade Policies By			
	US only	EU only	Japan, Korea only	All Industrialized Countries*
Sub-Saharan Africa	\$455	\$1,290	\$150	\$1,945
Asia	\$2,186	\$2,099	\$2,346	\$6,624
Latin America and the Caribbean	\$2,896	\$4,480	\$607	\$8,258
Other Developing Countries**	\$1,148	\$5,069	\$339	\$6,659
All Developing Countries	\$6,684	\$12,936	\$3,442	\$23,486

**Simulations for the EU, US, and Japan (and Korea) consider each one of those countries/regions only, one at a time. Simulations for all industrialized countries include those three countries/regions at the same time, plus others, such as Canada and Australia. Because of the complexities of agricultural trade and countries' trading practices, the effects of liberalization will change depending on which markets are being liberalized. Consequently, individual scenarios depicted in the model simulations should not necessarily add up to the total when all industrialized countries liberalize their markets. The simulations consider the full elimination of protection, trade-distorting domestic subsidies, and export subsidies.*

***Other Developing Countries includes transition economies.*

**** Indicates negative*

SENDING RIPPLES THROUGH THE ECONOMY

While IFPRI's research reflects the immediate impact of trade-distorting measures, the long-term dynamic effects on the economies of developing countries are more difficult to measure. The damage done to farmers ripples throughout the economy, in a process known to economists as "multiplier effects," as the impact of lost income and fewer jobs spills over into other sectors. Since the economies of most developing countries are highly dependent on agriculture, these dynamic and spill-over effects are particularly pronounced.

In fact, several studies have shown that an agricultural-led growth strategy may produce greater multiplier effects for the rest of the economy than other alternatives in the world's poorest countries. Increased profits from agriculture encourage expanded economic activity, causing dynamic effects in four areas.

EMPLOYMENT

As farmers increase production, jobs are created either on the farm or in related activities, such as trading, transporting food, and equipment manufacturing. When farmers and people working in farm-related activities have more money to spend in other parts of the economy, jobs are created in non-farm and non-rural sectors as well.

LAND

Increased profits from agriculture encourage farmers to convert avail-

able land into agriculture, further increasing development in this sector.

CAPITAL

Farming attracts additional investment, augmenting growth.

TECHNOLOGY

An improved climate for investment leads to advances in technology, which serve to increase productivity.

Accounting for these effects in economic models is difficult due to data limitations. Other researchers have developed simulation models in a similar attempt to quantify the economic impact of trade-distorting measures, but many of the current estimates utilized by government and international organizations do not consider any of these dynamic effects. In particular, most of them have been calculated under the assumption of full employment in

developing countries, which is, of course, not the case. The impact of agricultural growth is much greater if it creates new jobs inside and outside agriculture. If one assumes that an economy has full employment, an important source of multiplier effects will not be reflected in the model. Thus, the results of this exercise will substantially underestimate the true impact of eliminating subsidies and protectionism.

IFPRI's most recent modeling provides a better picture by factoring in the multiplier effect in developing countries from additional employment and a small effect from technology. Due to data limitations, the model does not consider additional expansion of land and capital. For that reason, it is likely that the full effect of trade-distorting policies by industrialized countries may be more damaging than these estimates suggest.

This study used an economic model of the world economy to simulate changes in trade policies. The model comprises 40 developing countries and country groups (including the transition economies) and five industrialized countries or regions (the United States, the European Union, Japan/Korea, Australia/New Zealand, and other developed countries). The model considers domestic production, consumption, real income and GDP within each country/region, and international trade flows across countries/regions. It also includes 18 economic sectors -- 17 agricultural and processed food commodities or commodity groups, with all remaining

non-agricultural activities aggregated in a single sector.

The economic data used for the model is derived from the database of the Global Trade Analysis Project (GTAP) of the Center for Global Trade Analysis at Purdue University. The information is from 1997, the most current data available.

For more information on the model, please see the forthcoming IFPRI Discussion Paper "Tell Me Where It Hurts, An' I'll Tell You Who to Call: Industrialized Countries' Agricultural Policies and Developing Countries" by Xinshen Diao, Eugenio Diaz-Bonilla, and Sherman Robinson.

Developing Countries' Dependence on Agriculture

	Latin America and Caribbean	Sub-Saharan Africa	South Asia	East Asia and Pacific	All Developing Countries	Least Developed Countries
Percentage of GDP from Agriculture	7.9	17.9	28.3	15.4	13.2	36.7
Rural population (% of total population)	26.5	68.4	73.2	67.7	60.6	76.4
Agricultural Exports (% of total merchandise trade)	28.3	23.9	17.9	11.7	15.3	35.3

Potential Impact of Industrialized Country Agricultural Trade Liberalization On Developing Countries

	Annual Increase in Incomes Going to Primary Agriculture and Agroindustrial Production		Increase in Net Agricultural Trade	
	<i>Liberalization in All IND countries</i>		<i>(Exports Minus Imports)</i>	
	Million US\$	%	Million US\$	%
China	2265.4	1.5	3664.3	327.3
Indonesia	593.6	1.2	1039.8	93.5
Malaysia	261.3	2.4	440.3	22.3
Philippines	238.1	1.4	394.7	31.0
Thailand	1755.0	11.0	2873.1	57.2
Vietnam	81.9	3.1	205.2	14.3
Bangladesh	43.6	0.6	112.9	16.8
India	1129.4	1.1	1376.1	28.0
Sri Lanka	26.6	0.7	37.0	53.9
Other South Asia	228.7	1.2	336.6	26.3
Mexico	980.6	1.9	1857.0	382.4
Central America/Caribbean	1531.8	9.5	2754.1	78.5
Colombia	339.7	2.2	743.0	27.9
Peru	363.3	3.3	502.2	53.7
Venezuela	100.8	1.1	161.5	16.4
Rest of Andean Pact	212.0	3.8	412.1	17.1
Argentina	1833.0	2.8	2674.0	24.4
Brazil	2258.7	2.5	4262.0	49.5
Chile	240.8	2.6	581.0	20.4
Uruguay	154.5	4.8	298.4	34.5
Rest of South America	242.7	15.9	536.2	166.0
Middle East	1244.6	4.6	1924.9	17.0
Morocco	236.1	3.3	389.4	203.7
Rest of North Africa	736.9	2.3	1224.9	19.1
Botswana	34.2	14.6	49.0	30.4
South Africa & Rest of SACU	459.5	5.1	1065.4	102.2
Malawi	26.7	3.1	55.7	12.5
Mozambique	61.8	5.4	53.9	67.5
Tanzania	87.8	3.1	92.8	25.5
Zambia	50.9	5.1	62.0	103.9
Zimbabwe	79.1	4.7	131.2	12.9
Other Southern Africa	175.2	12.0	418.6	421.1
Uganda	80.6	2.2	48.2	10.6
Rest of sub-Saharan Africa	888.6	2.6	1342.5	32.3

Represents percentage increase in net exports. For example, if a country exports \$100 million and imports \$90 million, the net exports are \$10 million. If its exports increase by \$10 million, that represents only a 10 percent increase in the absolute value of exports, but a 100 percent increase in net exports.

WHO IS TO BLAME?

Of the total amount of agricultural trade displaced by industrialized country policies, EU countries are responsible for more than half. Somewhat less than a third is due to U.S. policies. Japan and other high-income Asian countries cause another 10 percent, with the balance due to other industrialized countries.

Because of regional trade relationships, EU policies have a greater impact on Africa. In fact, if trade-distorting policies were eliminated worldwide, almost 70 percent of the increase in the value of exports for sub-Saharan Africa would come from liberalization in the European Union.

For developing countries in Asia, results are more balanced regionally. Still, liberalization in Japan and Korea would represent one-third of the total value of expanded trade from the elimination of subsidies and protectionism.

For Latin America and the Caribbean, the greatest expansion of exports would come from changes in EU policies (more than 50 percent), followed by the United States (about 35 percent). However, for some Latin American countries such as Colombia and Mexico, more than half of the increase in agricultural exports would be due to liberalizing U.S. and Canadian agriculture.

Proponents of trade-distorting policies in affluent nations argue the principle of "multifunctionality" -- agriculture has additional benefits for society, such as the preservation of rural areas. Therefore, goes the argument, farms must be protected and subsidized. The question is: Whose multifunctionality is advanced, and whose is trampled upon?

In addition to causing real harm to poor farmers in developing countries, these policies hurt taxpayers and consumers in industrialized countries. For example, the U.S. government spent a total of \$3.4 billion in 2001 to subsidize a single commodity -- cotton -- a cost borne directly by taxpayers. The subsidies hurt not only the cotton producers in Africa, but also the wallets of people in the United States.

Unlike farm subsidies, tariffs and other agricultural trade barriers are not financed from national treasuries. However, by reducing the market access of cheaper imports, they increase the amount consumers pay for food. They act, in effect, as a tax on food, garnered by farmers rather than the government. These privately collected "taxes" mostly benefit large-scale producers, at the expense of the food-buying population in industrialized nations, and eliminate production opportunities in developing countries.

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Vegetable market in the Philippines

Why is Rice So Expensive in Japan?

In the second half of the 1990s, between 20 and 29 million tons of rice were traded each year. This may not sound terribly impressive until one considers how little of the total crop this actually represents. Between 1961 and 2000, only 4.5 percent of global production went onto the world market. The crop's regional significance is worth noting, as well: Asia produced 397 million tons of rice in 2001, more than 90 percent of global production. The region is home to 70 percent of the world's poor, people who depend upon rice for much of their diets and income.

Yet rice is also one of the most distorted cereal commodities on the global market. Both wealthy and poor countries use a variety of methods to control their rice imports and exports. Japan charges an over-quota tariff on the import of grains other than wheat-- at a rate of 491 percent in 1999. The European Union uses export subsidies to promote export, and is responsible for 95 percent of global export subsidies on rice. The United States uses credit guarantees for rice farmers and also sends out a sizable portion of its export rice crop as food aid.

Meanwhile, the Indian government did not allow common rice exports until 1994, as a way to ensure domestic food security. In China, rice marketing is under the exclusive control of state grain agencies. As recently as 1999, the private sector was responsible for just four percent of Vietnam's rice exports.

The policies and their effects may vary, but the gulf between rich and poor becomes very clear when looking at nominal protection coefficients (NPCs). These coefficients indicate how policies affect the distance between domestic prices and world prices for a given commodity. An NPC greater than one indicates that the domestic price is higher than the world price. Considering prices from 1998 and 1999, Japan had the highest NPC for rice, at 6.5. By comparison, the United States had an NPC of 1.15, and the EU came in at 1.09. India's NPC was .76, and China's was .67. Because of their policies, prices for rice in Japan are significantly higher than prices on the world market, and higher than domestic prices anywhere else in the world.

WHAT CAN DEVELOPING COUNTRIES DO?

Poor countries cannot afford to lavish subsidies on their farmers, as their wealthier counterparts do. Many developing nations have argued that industrialized countries should first eliminate higher levels of protection and subsidization before they reduce theirs. Insisting on a rigid sequence seems a sure recipe for stalemate.

Nevertheless, developing nations are justified in asking for significant down payments in reducing protectionism and subsidies in industrialized countries. Furthermore, poor countries need longer transition times to implement adequate rural development and poverty alleviation strategies. Being economically vulnerable, they also need simplified and streamlined means to confront unfair trade practices and import surges that may irreparably damage the livelihoods of their small-scale farmers.

That does not mean, however, that increasing agricultural protection in developing countries, as some argue, is the right approach. Just as it does in industrialized countries, developing country protectionism acts as a largely privatized sales tax, raising the cost of food domestically. Landless rural workers, poor urban households, and

many poor, small-scale farmers tend to be net buyers of food, and in many developing countries, poor households spend more than half of their income on food.

Developing countries must change their budget priorities. Most poor nations do not invest enough in agriculture and rural development. Some of the claims that more protection is necessary to shelter small-scale farmers ring hollow if current under-investment in rural development and poverty alleviation continues.

Policies and investments should target low-income farmers and consumers directly. The best approach for developing countries is to eliminate biases against the agricultural sector and maintain a neutral trade policy that reduces protection over time. Using transition periods negotiated by the WTO, they should increase rural

investment in health, education, agricultural research, roads, land reform, access to water, communications, non-farm enterprises, farmers' organizations, and other forms of social capital and political participation for the poor and vulnerable.

None of these policies is legally constrained under the WTO Agreement on Agriculture, but poor countries lack the financial resources. The industrialized countries should step up to the plate and assist in making these critical investments.



Selling food provides income to farmers, traders, and shopkeepers

REFORMING THE POLICIES OF WEALTHY NATIONS

Affluent nations need to overcome their short-sighted reticence in providing development assistance. Not only should they invest more resources, but they should also focus more of the existing aid on agriculture and human development.

Beyond giving aid, industrialized countries should agree to significant reductions in their own protectionism and subsidies. They claim that they are willing, but so far the signs are far from positive. Japan and other industrialized countries with similar protectionist approaches in agriculture

have not presented meaningful negotiating proposals.

With increases in farm subsidies passed into law in 2002, the United States is moving in exactly the wrong direction.

The European Union, in turn, recently agreed to limited reforms. By decoupling payments to farmers from what they actually produce, the agreement reduces the farmers' incentives to overproduce particular commodities - at least in theory. In reality, the reforms will likely have little impact because EU countries may still link farm subsi-

dies to production by up to 25 percent for cereals and up to 40 percent for beef. Furthermore, the EU reforms completely ignore the issue of market access, and does not address export subsidies. In other words, the new agreement covers only one of the three main problems and doesn't even really solve that one.

If the world's governments are to move from the current deadlock, Europe, North America, Japan and Korea must put new proposals on the table. The opportunity to create a fairer trading system is at hand.



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