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Agricultural Trade Protectionism in Japan

A Survey

Delbert A. Fitchett

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ABSTRACT

The issue of agricultural protectionism and the distortions to patterns of resource use, incomes and trade flows arising from agricultural trade regimes have in recent years attracted growing attention. In the current Uruguay Round of Multilateral Trade Negotiations under the General Agreement on Tariffs and Trade, agricultural trade regimes have been a topic in the forefront of the deliberations. This paper has been undertaken as a survey of the agricultural trade policies of one of the world's major importers of agricultural commodities.

Drawing on material from a variety of English-language sources, this study weaves together the interrelationships between the domestic agricultural policies and the trade regime for foodstuffs in Japan. The evolution of the sector in the last two decades under the umbrella of these policies is outlined. Quantitative estimates of the economic costs of these policies are reviewed. However, in terms of the impact of these policies on LDC agricultural trading nations, there was found to be little in the way of detailed studies and assessments -- suggesting a priority area for further Bank research. Finally, the lessons of the Japanese experience are especially important in cautioning the LDCs of the dangers of sheltering the agricultural sector from the economically efficient adjustment processes which both accompany and support a sustainable development process.

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CONTENTS

A. Introduction

1. While Japan has experienced impressive economic growth in the postwar period, her comparative advantage in agriculture has rapidly eroded, both overall as well as having shifted between agricultural products. The agricultural trade protectionist measures taken by the government in the past two decades have been intended to delay, attenuate or otherwise cushion the readjustments in rural resource use patterns which -- in the absence of those protectionist policies -- would be dictated by these dramatic shifts in comparative advantage.

2. Japanese farmers have profited nicely from the protectionist policies and other public interventions introduced in order to cushion their "adjustment" to those shifts in domestic and international comparative advantage, while at the same time they have maintained large or even growing quantities of land and capital engaged in agricultural production activities. Most likely, a broad array of suppliers, processors, parastatals and bureaucrats/program administrators, enjoying considerable rents from the present program arrangements and with a vested interest in maintaining these arrangements, has blossomed in the course of the past several decades. Finally, despite the markedly high levels of agricultural trade protection the authorities have imposed, Japan has inexorably moved to become one of the largest importers of agricultural commodities in the world.

3. Paradoxically, the result of highly protective farm trade policies in this environment has been for a relatively large proportion of "farmers" to become only marginally engaged in farming as a source of income. They have transferred most of their labor over to non-agricultural occupations, thus resulting in only some 14% of Japanese farmers currently being classified as full-time. On almost three- quarters of Japanese farms, non-farm incomes account for over 50% of total farm household incomes; in 1985, non-farm activities accounted for some 85% of the average farmer household income. This outcome has been reinforced by obstacles to market processes which could otherwise serve to transfer land from one farm operator to another, i.e., land tenure/reform regulations dating from the early post-war period which effectively retard the process of consolidation/enlargement of farm operating units which could permit adequate labor returns to full-time farming by a smaller number of farmers. A market-implemented land transfer/amalgamation process may now be further complicated by very high prices of agricultural land, as the existing levels of trade protectionism and associated programs of farm product price/income maintenance biased towards small-scale part-time farming have become capitalized into farmland values. However, rather than being underemployed on the minifundia resulting from these obstacles to efficient adjustment, the rapid expansion in off-farm labor demand has permitted "farmers" (and especially their offspring) to easily obtain remunerative off-farm employment in the period of rapid growth.

4. The raison d'être of these various domestic agricultural policy and trade regime interventions on the part of the Japanese authorities are most commonly cited as being:

(a) Food security or, occasionally, self-sufficiency in staple foods;

(b) Rural-urban income parity; and

(c) Smoothing the sectoral adjustment process, primarily by means of increasing agricultural productivity in order to counteract the erosion of comparative advantage, as well as promoting the necessary reshuffling in patterns of resource use.

Our primary focus in this survey paper will be on the policies relating agricultural food products, setting to one side as worthy of detailed separate treatment those agricultural raw materials which are not foodstuffs. We will seek to refrain from making value judgements as regards the objectives of the various policies and interventions reviewed; however, we will present some evidence on the likely efficiency of the arrangements, their cost-effectiveness and some of the trade-offs which their implementation may have involved.

5. While the domestic farm policies underpinning the situation sketched out in the previous paragraphs present, per se, an intriguing topic for study and assessment, such is not our primary objective here. Rather, the principal motivation for this review lies in four factors:

(a) Japan is one of the largest importers of food and nonfood agricultural commodities in the world today;

(b) Japan's domestic agricultural policies are intimately articulated with her trade regime for these products;

(c) These policies and the associated trade regime, firstly, have serious impacts on international agricultural commodity markets and, secondly, impede the access of LDCs to expand their exports of these commodities to the Japanese market; and

(d) The Ministerial Declaration on the occasion of the launching of the Uruguay Round of Multilateral Trade Negotiations assigned a high priority to achieving greater liberalization in agricultural trade and to bring measures affecting import access and export competition under strengthened GATT rules and disciplines.

6. This survey paper seeks to weave together from a variety of English-language sources the evidence as to the magnitude and range of protection provided to the agricultural sector of Japan. A brief historical sketch will recall the early pressures for such policies, although the real focus of our review will be the post-1960 period. We will discuss some of the evidence as to the manner in which patterns of factor use, output and factor income have evolved over this most recent quarter-century of progressively rising barriers

to trade in farm products. A sketch of the variety of forms of market intervention utilized and the institutional arrangements mobilized by the Government in its efforts to achieve its sectoral policy goals, drawn from several recent studies, will then be presented.

7. Following this background, we will present some quantitative assessments of the distortions in domestic resource use arising from the intricate combination of trade regime and domestic policy measures; this will include some discussion of both sectoral and macroeconomic impacts on the domestic economy. Furthermore, we will review some of the literature which seeks to identify a variety of ways in which these policies have warped agricultural trade flows and trading patterns. (With few exceptions, the studies so far encountered have included little explicit appreciation of the LDC interests which may have been affected by these policies; this remains an area for much more work to be carried out.) Because our review is limited to work in English, it is very likely that we have not been able to cover an apparently increasing volume of literature by Japanese social scientists and other commentators on specific proposals which are now coming forward in Japan on the issues of efficient sectoral adjustment and agricultural trade liberalization.

B. The Pre-World War II Manifestations of Agricultural Protectionism

8. In the development literature of two to three decades ago, Japan was marshalled as an exemplary practitioner of a rapid process of structural change, largely initially based on the efficient extraction of an agricultural "surplus". (Ohkawa and Rosovsky, 1960.) Actually, it was about at the beginning of this century, when the country shifted from a net export position to one of becoming increasingly dependent on rice imports, that farming groups and their supporters began to lobby forcefully for rice import controls. The opposite views were strongly espoused by those manufacturing and commercial groups whose activities were sensitive to upward pressures on wage goods -- the primary staple being rice. Paralleling the outcome of such debates on the European Continent only a few years previously -- rather than the successful repeal of the Corn Laws in Britain earlier in the nineteenth century -- a tariff was imposed on rice imports in 1904.

9. Despite relative success in remaining self-sufficient in the early years of this century, temporary rice shortages in 1918 led to sharp increases in the price of this basic foodstuff and rice riots broke out in a number of urban areas. In response, the authorities redoubled their pursuit of "imperial self-sufficiency". These efforts comprised substantial public expenditures in research, education and rural infrastructure in both the homeland and the colonies (Korea and Taiwan), lightened agricultural taxation, and the introduction of both tariffs and quantitative restrictions on rice imports from outside the empire in order to drive a wedge -- apparently relatively modest until the breakdown in the 1930s of the international trading system -- between domestic and external rice prices. To a small extent, achieving this rice self-sufficiency goal was probably further assisted by a modest downward trend in per capita rice consumption in the inter-war period as per capita disposable incomes were compressed. By the end

of the 1930s, 18% of Japan's rice consumption was supplied from the colonies (Anderson, 1983).

10. By current standards the growth of agricultural output over this period was quite modest, as demonstrated by the following data (Yamada and Hayami, 1985):

Period	Annual average growth rate of Agricultural production
1876-1904	1.5%
1904-1918	2.4%
1918-1938	0.9%

Average GDP growth rates hovered around a little over 3% per annum over this same period (Anderson, 1983). Of course, the economy was concurrently passing through a period of structural change of monumental proportions, as demonstrated by the following data (ibid.):

	Period			
	1880	1900	1920	1939
Share of agriculture (%) in:				
GDP	38	29	22	15
Labor force	74	60	51	42
Exports	63	30	23	18
Ratio of agricultural imports to agricultural exports	0.7	3.9	8.4	7.7

Thus the will'o the wisp of agricultural self-sufficiency appears to have effectively already eluded the policy makers almost a century ago, while per capita incomes were still quite modest by current standards.

C. Patterns of Postwar Agricultural Growth and Protectionism

11. It is generally accepted that by the middle of the decade of the sixties the Japanese economy was fully recovered from the devastation of World War II. Agricultural output growth was substantial in the postwar period. (The evolution of some of the main statistical indicators relating to the sector is summarized in Table 1.) Food rationing had been discontinued by the end of the fifties. This rapid expansion was encouraged by a panoply of government agencies, domestic market interventions and a policy of maintaining a growing price wedge between border and domestic prices. This approach embraced not merely the staple cereal, rice, but also was extended to favor producers of wheat, barley, soybeans, sugar, fish, beef, pork, poultry and dairy products. A traditional interest in "food security" -- which bordered

on a quest for self-sufficiency -- became linked with the Government's concern to assure its support from a conservative rural base, in large part deriving from the small-scale land-owning peasantry established by the post-war land reform program. A continued imbalance in the distribution of parliamentary representation in favor of rural areas has encouraged the ruling Liberal Democratic Party to be responsive to rural pressure groups and their associated interests (George and Saxon, 1986).

12. While the origins of the postwar Government's food self-sufficiency concerns are traced back to the wartime food control laws (1942), it is the Agricultural Basic Law of 1961 which codifies the income parity objectives sought by the authorities. Through its provisions, the agricultural price and trade regimes have been managed in pursuit of income distribution goals and to retard the transfer of human and land resources out of the agricultural sector. This is not to suggest that patterns of resource use have been static over these two decades. While Agricultural GDP has fallen back from the peaks reached in the mid-1970s, it remains above the figures for the 1960s. The total cultivated area (Table 2) has been moving inexorably downward; it now stands at barely two-thirds of the figure of the early 1960s. More dramatic is the striking drop in the intensity of land use, i.e., the decline of double-cropping, by almost a third over these years. This falling intensity of farmland use seems to be totally at odds with the popular view of Japan as a land-scarce economy. The paradox is even greater when one considers the high level of investment in irrigation works, land improvements and on farm machinery (Table 3) in the postwar period. On the other hand, this behavior by farmers to use land less intensively is most likely a perfectly rational response to the panoply of government support programs and the rising opportunity costs of labor in the countryside (Kuroda, 1982).

13. Although total agricultural output has grown over the last two and one-half decades, only a modest amount of the increase has been under the rubric of field crops (Table 4). The Government's attempts to control rice production and avoid the further accumulation of expensive stocks -- owing to the remarkably attractive incentives provided for that crop -- have led it to give generous price incentives and subsidies to encourage the planting of other field crops during the past decade, e.g., wheat and soybeans, under the Paddy Field Reorientation Program. Vegetables and fruit have expanded, although in recent years the authorities have encouraged phasing down the production of some citrus varieties. The recovery of pulses production in the mid-1980s may largely owe to the soybean incentives mentioned above. Growth has been relatively faster in the livestock subsector, especially as regards pigmeat and broilers. Beef and dairy producers have flourished behind remarkably high import barriers -- with embarrassing production surpluses for the latter. Livestock subsector products are on the whole characterized by a relatively higher income elasticity of demand, and a major input -- feedgrains -- are freely imported.

D. Farm Income Trends

14. But it is primarily the authorities' success in promoting rapid growth of the non-agricultural economy that has underwritten the anomalies of the agricultural sector. During the 1950s, output per worker in the

Table 1 : JAPAN - Structural Indicators of Japanese Agriculture
1965-85

Item	1965	1970	1975	1980	1985
Total labor force (000)	47,870	51,530	58,230	56,500	59,630
Agricultural labor force (000) a/	10,460	8,420	6,180	5,320	4,640
Agricultural labor force as percent of total labor force	22	16	11	9	8
Number of farm households (000)	5,665	5,402	4,953	4,661	4,376
Cultivated area (000 ha)	6,004	5,796	5,572	5,461	5,379
Agricultural Share of GDP (%)	10	6	4	4	3

a/ Includes forestry and fishery employment.

Sources: MAFF, Statistical Yearbook, various years.
Statistics Bureau, Japan Statistical Yearbook, various years.
OECD, National Accounts: Detailed Tables, various years.

Table 2: JAPAN - Total Area Cultivated and Principal Crops, 1960-85
(000 has.)

Year	Total Area Cultivated	Rice	Wheat, Barley, Oats and Rye	Pulses	Vegetables	Fruits & Nuts	Industrial Crops	Forage Crops and Green Manure	Cropping Intensity
1960	8,129	3,308	1,520	642	615	254	447	506	133.9
1961	8,071	3,301	1,424	623	633	274	449	536	132.6
1962	7,999	3,285	1,340	604	655	292	437	576	131.5
1963	7,813	3,272	1,225	552	684	311	403	586	128.9
1964	7,619	3,264	1,056	530	684	333	390	597	126.1
1965	7,430	3,255	961	485	692	356	365	611	123.8
1966	7,312	3,254	864	479	706	374	343	629	121.9
1967	7,112	3,263	765	422	691	393	326	642	119.8
1968	6,979	3,280	680	375	695	406	295	674	118.3
1969	6,809	3,274	604	339	682	413	280	698	116.4
1970	6,311	2,923	483	338	688	416	257	736	108.9
1971	6,001	2,695	360	336	689	422	247	801	104.5
1972	5,812	2,640	260	316	676	428	242	816	102.3
1973	5,663	2,620	176	294	652	431	238	842	100.3
1974	5,752	2,724	177	285	642	435	239	861	102.4
1975	5,755	2,764	181	257	632	430	242	872	103.3
1976	5,730	2,779	179	238	626	423	240	884	103.5
1977	5,707	2,757	172	232	630	415	249	906	102.9
1978	5,656	2,548	219	256	641	412	256	980	102.9
1979	5,662	2,497	271	254	636	410	258	1,002	103.4
1980	5,636	2,377	319	261	644	408	262	1,034	103.2
1981	5,600	2,278	352	265	647	404	269	1,057	102.9
1982	5,590	2,257	355	276	647	400	258	1,071	103.0
1983	5,598	2,273	358	277	644	396	261	1,070	103.5
1984	5,601	2,315	353	264	645	392	263	1,055	103.8
1985	5,580	2,342	350	250	639	387	256	1,049	103.7

Notes: "Total" includes potatoes, mulberries and miscellaneous cereals.
"Cropping intensity" refers to the cropped area divided by the physical area.

Source: Statistics Bureau, Japan Statistical Yearbook, and MAFF, Statistical Yearbook, various years.

Table 3: JAPAN: Stock of Farm Implements, 1965-1985
(000)

Year	Tractors and Power Cultivators	Pest Control Machines	Rice Planters	Reapers, Binders, Combines and Threshers	Cereal Dryers
1965	2,156	701	n.a.	n.a.	n.a.
1970	3,452	2,178	32	45	1,229
1975	3,927	2,607	740	1,671	1,497
1980	4,223	2,139	1,746	2,503	1,524
1985	4,433	2,151	1,993	2,868	1,473

Source: MAFF, Statistical Yearbook, various issues.

Table 4: JAPAN - Indices of Production of Major Agricultural Commodities, 1960-85
(1980=100)

Year	Total Agriculture	Total Field Crops	Rice	Wheat & Barley	Pulses	Vegetables	Fruits	Industrial Crops	Total Livestock	Beef Cattle	Raw Milk	Pigs	Broilers	Eggs
1960	76.3	105.0	129.3	328.4	292.0	66.1	46.7	88.1	25.8	58.0	29.0	16.0	2.9	30.0
1961	78.2	102.5	124.9	313.7	284.1	64.7	47.7	93.2	33.2	65.3	32.5	23.5	10.5	40.6
1962	81.9	105.4	131.3	278.1	239.9	69.7	48.3	97.0	38.2	65.6	37.5	29.7	9.2	46.2
1963	80.2	101.0	129.3	98.9	242.7	74.3	49.6	93.3	40.1	76.5	42.5	27.6	12.5	48.2
1964	84.2	103.9	126.7	213.6	176.8	73.4	55.0	116.3	45.5	90.1	46.5	30.1	17.4	56.4
1965	85.4	103.8	125.2	227.3	201.6	76.4	57.1	110.4	48.2	72.4	49.6	37.2	19.8	58.8
1966	88.6	107.3	128.5	194.9	172.3	83.2	66.7	112.3	51.2	52.7	52.5	49.6	28.0	58.9
1967	96.5	117.4	146.0	185.6	203.2	86.2	68.7	118.5	55.2	52.5	54.9	50.9	32.3	68.2
1968	99.5	120.6	145.9	197.9	174.6	93.2	82.3	114.5	57.6	56.0	61.9	47.9	36.0	72.4
1969	98.1	114.8	141.1	150.3	155.9	91.3	75.4	106.4	64.4	66.3	69.4	48.4	47.6	81.7
1970	95.9	107.9	128.1	98.7	165.5	90.9	82.5	97.3	70.8	70.8	73.3	59.3	52.0	87.7
1971	91.8	103.9	110.2	92.4	134.4	95.7	81.1	97.8	73.8	71.6	74.4	65,2	54.7	91.3
1972	97.4	107.7	119.6	59.7	179.6	97.4	95.8	100.5	76.6	84.1	76.2	66.3	63.6	90.9
1973	97.8	108.1	122.2	41.4	159.5	95.1	98.0	103.3	76.6	66.1	75.8	71.6	69.3	91.0
1974	98.0	107.9	123.7	46.6	151.3	93.0	97.5	98.4	78.4	71.4	75.1	75.8	71.5	90.2
1975	101.3	112.6	132.6	47.3	120.0	94.0	101.3	100.6	79.7	93.1	76.6	71.2	72.3	89.6
1976	97.8	106.3	119.9	43.4	108.9	96.1	97.1	104.3	81.3	78.4	81.2	73.7	80.2	93.1
1977	105.5	114.8	132.6	45.0	121.8	99.1	104.2	106.4	88.3	91.2	88.5	82.6	88.2	94.1
1978	106.7	113.4	127.9	71.6	129.9	100.6	98.7	110.3	93.4	100.4	94.4	89.7	94.2	98.2
1979	107.3	119.0	121.4	98.6	125.3	102.2	106.4	104.2	98.6	97.4	99.6	97.9	98.3	99.5
1980	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	101.6	102.9	106.0	99.5	111.2	101.8	94.5	97.9	99.1	104.0	101.7	93.5	99.5	99.9
1982	103.7	104.7	105.4	117.7	136.0	102.7	102.2	99.9	102.1	109.3	104.1	96.4	103.1	102.7
1983	104.3	104.8	107.6	111.3	110.9	99.9	105.5	98.2	104.2	111.7	108.7	96.0	108.1	104.4
1984	109.4	111.4	121.6	119.7	148.9	102.1	90.4	99.1	106.8	116.8	110.2	97.3	113.7	106.2
1985	110.4	111.1	120.5	131.3	135.1	101.3	96.6	93.6	111.1	125.7	114.0	104.4	116.2	107.3

Sources: Statistics Bureau, Japan Statistical Yearbook, various years.
MAFF, Statistical Yearbook, various years.

manufacturing sector rose at an annual rate of 11.2%; almost three times the (still respectable) 4.4% rate in agriculture. (Of course, the growth of manufacturing labor productivity was accompanied by an expansion of manufacturing employment; the growth of farm labor productivity essentially reflected the decline in that sector's employment.) There ensued widening disparities in factor returns and family incomes between rural and urban inhabitants during that decade -- despite the growing importance of off-farm employment for rural families. Thus by 1965, an agricultural worker's productivity had fallen to only 16% of that of an industrial blue-collar worker. (Hillman and Rothenberg, 1985.) Concerned that the lagging incomes in farming threatened not merely the prosperity but the very survival of the small-farmer class created in the aftermath of the postwar reforms, the authorities sought to ensure an agricultural price and trade regime which would permit rural households to achieve and maintain some sort of parity with urban wage workers.

15. Despite the constraints within which the authorities have pursued sectoral income and production objectives, the record of Japan's domestic agricultural policies over the last twenty years can hardly be termed one of success. The persistent shortfall of agricultural sector productivity growth, relative to average performance for the economy, has continued to aggravate the pressures for an increasingly protectionist trade regime in order to enhance farmer incomes in pursuit of this income parity goal. (This problem is not unique to Japan, but rather appears to have dogged the agricultural policies of most of the developed market economies.) Thus, while overall productivity grew at an annual rate of 1.12% during 1960-79, productivity in the agricultural sector fell by -0.78% p.a. (Jorgensen, et. al., 1987). So long as relative sectoral productivity levels are diverging rather than converging, maintaining factor incomes in agriculture at a parity with the rest of the economy -- without adequately adjusting patterns of factor use -- will be progressively more costly and possibly involve even more distortionary trade policies.

16. Certainly, the income parity objective of the postwar farm policies appears to have been achieved; during the triennium 1984-6, average farm household incomes exceeded average blue-collar household incomes by some 30%. However, this was mainly a result of the increasing importance of non-farm employment for farm households. With only 15% of the average farm family's net income arising from agricultural activities, one might wonder if much of the complex panoply of trade protectionist policies and institutions intended to redress urban-rural income disparities fails to be at all cost-effective -- or has even become relatively irrelevant. On the other hand, as we shall see below, the transfers and inefficiencies introduced into the system by these policies have involved high economic costs, both domestically and to present/potential foreign suppliers of agricultural commodities.

17. The data in Table 5 demonstrate the "adjustment" process that has taken place over the last twenty years. Since the 1960s, off-farm earnings of farm families have grown substantially; in 1965 they already represented about one-half of total farm household incomes (the approximate situation in the U.S. and the EC at the present) while by 1985 they made up 85% of farm household earnings. As shown in Table 6, this change has paralleled a halving of the number of full time farms over these two decades -- to only 14 % of the

total -- and an even sharper decline (by almost two-thirds) in the number of part-time farms (i.e., Class A in the table) earning over one-half of household income from farming activities.

18. The predominance of a large number of "farms" accounting for a small share of sectoral output -- and for which on-farm earnings are a relatively minor consideration -- is clearly depicted by the following data on the size distribution of holdings of cultivated land in 1986 (MAFF, 1986):

Farm size (ha.)	Number of farms	Share of aggregate net farm income (%)	Farm income as a % of household income
less than 0.5	1,748,000	5	2
0.5 - 1.0	1,193,380	17	10
1.0 - 1.5	599,840	19	23
1.5 - 2.0	309,390	17	56
2.0 - 2.5	165,940		
2.5 - 3.0	84,670		
3.0 - 5.0	101,510	42	59
more than 5.0	20,110		

Part-time farming, on relatively small-scale operations (Table 7) has undeniably come to dominate the rural landscape, and has become the core of the problem of economically efficient adjustment to achieve a viable farming sector.

19. The relatively small role of full-time farming in the generation of sectoral income is demonstrated by the following data for 1985 (MAFF, 1986):

Farm Households Type	Number	---- Net Income (000 Yen) --- Agri-culture	Non-Agri-culture	Other (Dekasegi, etc.)	Total	% of Net Ag. Income
Full time	626,143	2,519.9	349.3	1,619.6	4,488.8	28
Part-time, mainly farm income	775,308	4,214.1	2,144.4	1,130.3	7,398.8	47
Part-time, mainly non-farm income	2,974,562	494.7	5,587.5	1,384.0	7,466.2	25
National Average		1,065.5	4,437.0	1,413.4	6,915.9	

Table 5: JAPAN - Average Farm Household Income
(000 yen)

Year	Total	On-farm	Off-farm	% Originating Off-farm
1965	835.1	365.2	469.9	56
1966	948.1	413.3	534.8	56
1967	1135.1	510.1	625.0	55
1968	1248.4	527.0	721.4	58
1969	1398.9	529.3	869.6	62
1970	1591.9	508.0	1083.9	68
1971	1775.6	469.6	1306.0	74
1972	2145.5	585.2	1560.3	73
1973	2415.5	742.0	1673.5	69
1974	3400.3	923.0	2477.3	73
1975	3960.7	1146.0	2814.7	71
1976	4279.4	1155.6	3123.8	73
1977	4671.1	1172.9	3498.2	75
1978	5020.2	1196.5	3823.7	76
1979	5230.5	1126.7	4193.8	80
1980	5593.8	952.3	4641.5	83
1981	5920.2	967.8	4952.4	84
1982	6218.5	951.5	5267.0	85
1983	6474.9	989.6	5485.3	85
1984	6749.9	1065.3	5684.6	84
1985	6915.9	1065.5	5850.4	85

Note: "Off-farm" income includes "Dekasegi," presents, gifts, annuities and others.

Source: MAFF, Statistical Yearbook, various years.

Table 6: JAPAN - Farm Type

Year	Total	Full time	Part time	
		(000 farms)	Class A	Class B
1965	5,665	1,219	2,081	2,365
1970	5,401	844	1,814	2,743
1975	4,953	616	1,259	3,036
1980	4,661	623	1,002	3,025
1985	4,376	626 (2,869)	775 (6,269)	2,975 (6,082)

Notes: 1985 figures in parenthesis are per household incomes (000 yen) for each farm household type.
Part time Class A farmers earn more than half of their total income from farming. Class B farmers earn less than half of their total income from farming.

Source: MAFF, Statistical Yearbook, various years.

Table 7: JAPAN - International Comparison of Scales of Agricultural Operation
(hectares)

Country	Land per agricultural worker		Land per farm household	
	Agricultural land	Arable land	Agricultural land	Arable land
France	16	9	28	15
W. Germany	8	5	15	9
Italy	6	3	9	4
U.K.	28	10	70	26
U.S.	103	45	158	69
Japan	1	1	1	1

Note: Arable land includes both cultivated land and land under perennial plants. Agricultural land includes arable land and permanent pastures.

Source: Y. Hayami (1982)

We note that the small number of full time farmers have a relatively low overall average income (4,488,800 Yen), so apparently they may not have been the primary beneficiaries of protectionist agricultural trade measures. Secondly, a very large number of part-time farmers earn some 494,700 Yen -- a very small share (7%) of total net income -- from their farming activities, but (as we see in the final column) account for one quarter of the total net income generated in agriculture. Full time farmers receive 25% of the net income generated in agriculture and the other part-time farming group accounts for 47%.

20. As a rice self-sufficiency policy has been a longstanding centerpiece of public interventions, there may be some interest in looking more closely at the importance of rice production in farm income in 1985 (MAFF, 1986):

Farm Households		Gross Agricultural Income (000 Yen)			Group's Share in Gross Income
Type	Number	Rice	Total	%	from Rice (%)
Full time	626,143	1,152.6	6,694.8	17	16
Part-time, mainly farm income	775,308	2,319.9	9,006.4	26	32
Part-time, mainly non-farm income	2,974,562	810.7	1,5441.1	53	52
Total	4,376,013	956.4	2,896.8	33	100

For full time farmers, rice accounts for only 17% of their gross agricultural income. On the other hand, we see in the final column above that slightly more than half (52%) of the sector's income from rice farming accrues to the group of farmers with the highest incomes (part-time, with mainly non-farm earnings) who (as we noted in the previous paragraph) actually receive only 7% of their total net income from farming. The rice sales of this group represents about one-half of their gross farm earnings; thus if they were to totally cease rice production, their total net income might fall by about 3.5%. Thus the Government's rice self-sufficiency program seems to have operated so as to concentrate much of the rice production among small-scale, part-time, high-cost producers for whom rice production income is almost inconsequential. Such anomalies suggest considerable opportunities (and benefits) exist for efficient adjustment to a liberalized agricultural trading environment in the rice area.

E. The Array of Agricultural Trade Distorting Measures Mobilized by the Authorities

21. The adjustments in the patterns of resource use and the evolution of factor returns outlined in the preceding section have been carried out over these two decades in an economic environment which appears to have been progressively disarticulated from external market forces. One clear guide

post in this regard is provided by deviations of domestic producer prices from international market prices, as measured by the nominal protection coefficient (NPC). For the period 1980-82, the following calculations for nominal rates of protection are provided by Anderson and Tyers (1987):

Commodity	Japan	EC-10	EFTA
Rice	235	40	0
Wheat	290	40	65
Coarse grains	330	40	55
Beef and lamb	180	25	130
Pork and chicken	50	25	40
Dairy products	190	75	145
Sugar	200	50	55
Weighted average	133	55	90

Earlier, Tyers and Anderson (1986) had estimated an average rate of protection of 16% for these same crops in the U.S.

22. Another source reports that over the period 1960/64 to 1980/82, the weighted average level of the NPC for seven principal farm commodities in Japan rose from 68% to 151% (Anderson, 1983). The intense effort to provide generous support for agricultural prices and incomes is also remarkably transparent in the movement of the intersectoral terms of trade in Japan; during the last two decades internal relative prices have moved in a manner quite contrary to the behavior of such terms of trade on international markets. For example, in Table 8 we reproduce for the years under discussion here (1965-1986) the trend in the price index for internationally traded food commodities, deflated by the index of manufacturing unit value-added, both as reported by the IBRD's Commodity Division. The generally downward trend is manifest. Similarly, for the United States we present the index of prices received by farmers divided by the overall producers' price index; again the market signals were for farmers to either increase factor productivity in order to maintain farm incomes or otherwise migrate to other occupations. On the other hand, in Japan the index of prices received by farmers relative to the wholesale price index for all finished goods shows a clear upward trend. This purposeful intersectoral distortion in the pattern of incentives -- by the manipulation of the domestic terms of trade in favor of the agricultural sector -- has swamped the negative income effects which would otherwise arise from the lower than economy-wide average increases in farm factor productivity.

23. In the paragraphs which follow in this section we will sketch the myriad of principal public sector interventions which have been marshalled to insert a broad wedge between domestic and international markets for farm commodities. A complex system comprising a variety of policy instruments and implementing institutions is marshalled by the Government to achieve its agricultural price and income goals. The listing in Table 9, by commodity, of the broad coverage and variety of measures to support commodity prices and farmer incomes gives some idea of the complexity of this system. Line agencies of the Government are assisted by parastatal enterprises (e.g., in

Table 8: JAPAN - Comparison of Relative Price Movements: International, Japan and U.S.A.

Year	International Food Prices / MUV	Japan Farmers' Prices / All Final Goods (wholesale)	U.S.A. Farmers' Prices / All Finished Goods (wholesale)
1965	100.00	100.00	100.00
1966	91.52	104.79	104.04
1967	90.82	111.94	97.47
1968	89.77	112.81	96.54
1969	88.36	118.37	98.09
1970	90.30	117.48	96.40
1971	81.25	120.34	96.64
1972	81.25	126.20	104.34
1973	108.65	134.13	135.79
1974	123.23	123.48	126.16
1975	90.21	135.78	109.54
1976	103.03	141.60	105.96
1977	125.17	137.94	97.54
1978	97.41	147.63	104.04
1979	93.46	143.18	107.46
1980	91.26	126.10	96.14
1981	79.32	127.85	91.30
1982	71.15	122.90	83.97
1983	78.00	128.43	83.89
1984	83.80	129.33	86.45
1985	72.90	130.81	77.24
1986	65.53	143.32	75.27

Sources: IBRD: Outlook for Commodity Prices.
Japan: Japan Statistical Yearbook, Monthly Statistics of Japan.
U.S.A.: Economic Report of the President, 1987.

Table 9: JAPAN: Outline of the Major Price Policies

Commodity	Type of Price Support	Major Characteristics	Regulating Law	Year Commenced	Govt. Expenditure (1984) bill. Yen	Related Trade Measures	Statutory Body
1. Rice	State control	Govt. regulated marketing of all commercial based rice. Govt. decides its purchasing and selling prices for Government, marketing rice.	Food Control Law	1942	503	State trading	Food Agency of the Govt.
2. Wheat & Barley	Minimum guaranteed price	Govt. guarantees unlimited purchase at given prices.	Food Control Law	1942 (1952)	25	State trading	Food Agency of the Govt.
3. Beef & Pork	Stabilization within a price band	Market prices are maintained within the stabilization price band through the market intervention of the stautory body (LIPC)	Law concerning price stabilization of Livestock products	1961 (Pork) 1975 (Beef)	0	Import quotas	Livestock Industry Promotion Corp. (LIPC)
4. Manufacturing Milk (Milk Products)	Deficiency payment and market intervention for the products	Difference between guaranteed priced to producers and estimated cost price for manufacturers (standard trading price) is paid by Govt. Prices of milk products are maintained at given prices through the market intervention of LIPC.	Temporary Law on Deficiency Payment to manufacturing Milk Producers	1966	46	State trading (Skimmed Milk powder, butter, etc.) IQ (Milk, Cream, Processed cheese)	LIPC
5. Soybeans & Rapeseed	Deficiency payment	When market price falls below the target price, the deficiency is paid the Govt.	Temporary Law for Susidising Producers of Soybeans and Rapeseed	1961	22	Duty free	MAFF
6. Sugarbeet & cane	Minimum guaranteed price for producers and stabilization of imported raw sugar price within a price band	A statutory body (SSPSC) purchases domestic sugar at given supported prices and sells it at the market price equivalent. Loss generatd is offset by the Govt. subsidiens and levies from iports sugar. Import price of raw sugar is related through the various measures by SSPSC.	Suagar Price Stabilization Law	1965	34	Specific duty Domestic variable levy	Sugar and silk Price Stabilization Corp. (SSPSC)
7. Vegetables	Price stabilization Fund	Funds assisted by the Govt. compensate for part of losses caused by the price fall below given levels	Vegetable Prodution & Marketing Stabilization Law	1966	10	Stabilization	Vegetable Supply Fund (VSSF)
8. a) Beef calves	Price stabilization Fund	Funds assisted by the Govt. compensate for part of losses caused by the price fall below given levels	--	1970	5	Specific duty	LIPC
b) Fruits for processing	Price stabilization Fund	Funds assisted by the Govt. compensate for part of losses caused by the price fall below given levels.	--	1972	1	Import Quota for some products	--
c) Eggs	Price stabilization Fund (Deficiency Payment)	Funds assisted by the Govt. compensate for part of losses caused by the price fall below given levels.	--	1975	1	Specific duty for eggs without shells	Egg Price Stabilization Fund
d) Formula feed	Price stabilization Fund	Funds assisted by the Govt. compensate for part of losses caused by the price fall below given levels.	--	1975	4	--	Formula Feed Supply Stabilization Organization

Source: OECD (1987b).

the livestock and sugar areas) and the central association of farm cooperatives (Nokyo) in implementing these policies. Participation of private traders -- for both domestic and export/import commerce -- is typically subject to strict licensing procedures and administrative guidance.

24. The oldest standing intervention is that relating to rice self-sufficiency. For this crop the Government's Food Agency sets the price(s), licences all domestic traders and handles all foreign commerce in this product. Producer prices are set on a "cost-plus" basis, to achieve certain farm income goals. Despite having to repeatedly grapple with supply imbalances and the accumulation of excessive stocks, the Government has pushed producers' prices inexorably higher; the annual price-setting process has become a highly politicized exercise. In the past, production quotas were established and assigned to rice farmers, while, as a further measure, annual cropland diversion payments have been made to encourage shifting land use priority crops, e.g., wheat, soya bean, forages and towards other some fruits and vegetables.

25. In 1987, for the first time, the authorities actually reduced the producers' price for rice by about 6%. Rather than a move towards greater trade liberalization, this price reduction is more likely an effort to reduce the fiscal burden of the rice policy and hopefully discourage the further accumulation of expensive rice stocks in the Government's hands.1/ Recent reductions in production costs -- especially of inputs based on imported materials -- would perhaps justify further output price reductions. Nevertheless, as the downward trend in rice consumption over the past two decades continues -- it has fallen about one-third, from 112 kg. per capita in 1965 to 75 kg. per capita in 1985 --adjustment issues will continue to plague the operation of the rice support program.

26. The marketing of wheat, somewhat more than 80% of which is imported, is also closely controlled -- when not directly handled -- by the Food Agency. Consumption of this grain has slowly trended upward over the last two decades, although it is still about one-fifth of the U.S. figure. Domestic supplies declined up to the middle of the seventies and then recovered under the impetus of favorable government fixed prices -- about $1,179/mt in 1986 -- and generous incentive payments under the paddy land diversion program. Contrary to the budgetary drain represented by the rice support program, the continued low prices for wheat imports have permitted the authorities to make handsome profits to cover the negative spread between the higher price at which they purchase locally-produced wheat and the lower price at which all wheat is sold domestically.

1/ Normally, the stockholding target is about 1.5 million metric tons, or some 16% of food rice demand (ERS, USDA, 1987). In view of the stock accumulation in the mid-1980s, achieving this target in 1987 would have required rice production to fall about 10% from its 1986 level. Previous moves to export excessive stock accumulations on remarkably subsidized terms were widely protested internationally.

27. Under the aegis of the Livestock Industry Promotion Corporation (LIPC), milk production has expanded rapidly during the past two decades -- almost tripling -- and the average dairy herd, at 22 head, has even surpassed that figure for the EEC (16 head). Growth of milk production has been such that domestic fluid milk consumption demands are fully met and over a third of domestic output is channelled into lower value manufacturing uses. Support to producers of manufacturing milk is implemented by the LIPC by means of deficiency payments (according to pre-established guaranteed prices) to dairymen who sell manufacturing milk, market intervention and stocking by the LIPC to maintain manufactured milk product prices within a predetermined band, and a LIPC monopoly on the import of major manufactured milk products.

28. While beef consumption in Japan is relatively low (ca. 6 kg. per capita), it has grown rapidly over recent years. The LIPC administers the Government's price support system, based on the concept of a "price stabilization band" for domestic beef supplies. It seeks to maintain prices within this band through its own intervention in absorbing into or releasing from its stocks domestic beef and through its tendering for the import of beef which it then markets. Stringent import quotas are carefully administered in order to support these internal price targets. The LIPC is also charged with managing a "beef-calf price stabilization scheme" which provides deficiency payments to calf producers when market prices fall below target prices.

29. The LIPC also oversees the price stabilization program for pigmeat. For this purpose, it relies primarily on variable import levies rather than direct market intervention with domestic supplies or direct control over imports (although it still issues import licenses to qualified traders). Finally, the LIPC also participates in a program to stabilize the prices received by domestic egg producers, via deficiency payments when egg prices fall below target levels. It may be that consumers of poultry products have benefited from the authorities' relatively "benign neglect" of the hencoop: the wholesale price of dressed broilers in Tokyo is about only one-sixth that of domestically produced dressed beef -- in the U.S. the relationship is about one-half. (Pigmeat is also apparently relatively cheap, in comparison to beef.)

30. The Japan Silk and Sugar Price Stabilization Corporation (JSSPSC) operates a price maintenance program for domestic producers of beet and cane sugar. About one quarter of the domestic demand for sugar is met from domestic cane and beet sources, while the remainder is imported in raw form and refined locally. The JSSPSC runs a complicated program based on a series of paper transactions; e.g., it purchases the product refined from domestic sources and then sells it back to the same refineries, usually at a lower price. Licensed raw sugar importers also sell their imports to the JSSPSC and then buy them back at a higher price. The "success" of this program is demonstrated by the more than doubling of sugar beet production and tripling of sugar cane production in the last two decades. Concurrently, the floor price to these natural sweeteners has so encouraged the rapid expansion of high fructose corn syrup production that it too has been brought under the

Table 10: JAPAN - Administrative Prices of Major Agricultural Products

	Unit	1970	1975	1979	1980	1981	1982	1983	1984	1985	1986	1987
1. Rice (husked) Govt. purchase price	60kg	8,272	15,570	17,279	17,674	17,756	17,951	18,266	18,668	18,668	18,668	17,557
2. Wheat Govt. purchase price	60kg	3,431	6,129	9,923	10,794	11,047	11,047	11,092	11,092	11,092	10,963	10,426
3. Barley Govt. purchase price	50kg	2,507	4,477	7,513	8,083	8,328	8,328	8,366	8,366	8,366	8,229	7,793
4. Sugar Beet Lowest producer price	mt	7,760	12,140	17,990	19,380	19,920	20,180	20,260	20,260	20,260	20,010	n.a.
5. Sugar Cane Lowest producer price	mt	6,570	12,340	18,250	19,720	20,310	20,580	20,650	20,770	20,880	20,810	n.a.
6. Soybeans Standard price	60kg	5,010	9,672	15,638	16,780	17,210	17,210	17,210	17,210	17,210	16,925	n.a.
7. Manufacturing Milk Guarantee price	1kg	43.75	80.29	88.87	88.87	88.87	89.37	90.07	90.07	90.07	87.57	82.75
8. Butter Stabilization indicative price	1kg	647	999	1,253	1,253	1,253	1,253	1,302	1,302	1,276	n.a.	n.a.
9. Skimmed Milk Stabilization indicative price	1kg	388	462	501	501	501	507	526	526	541	n.a.	n.a.
10. Japanese Beef Standard stabilization price	1kg	--	1,143	1,303	1,357	1,399	1,400	1,400	1,400	1,400	1,400	1,370
11. Other Beef Standard stabilization price	1kg	--	930	1,061	1,105	1,118	1,120	1,120	1,120	1,120	1,090	1,020
12. Pigmeat Standard stabilization price	1kg	345	556	601	588	600	600	600	600	600	540	455

Source: OECD (1987b), MAFF, "Statistical yearbook of MAFF", various years; Japan Economic Institute, Report 44a(1987).

JSSPSC purchase/resale regime in order to offset the profitability of this sugar substitute. 1/

31. Characteristically, short shrift is given in discussions of agricultural trade policy to fishery activities. This is certainly not the appropriate approach in Japan. Annual per capita consumption of fish in the early 1980's was some 75 kg. (live weight basis), compared to about 19 kg. in the United States and the EC. Furthermore, fish accounts for one-half of the proteins and about one-quarter of the fat intake from animal sources -- all figures far higher (by perhaps a factor of ten) than those for the U.S. and the EC. It is interesting to note that, after increasing by about one-half between 1965 and 1975, total tonnage landed domestically grew only some 10% in the subsequent decade. This is primarily owing to the reduction of landed fish (pelagic species) caught in the EEZ (Economic Exclusion Zone, i.e., within the 200 mile limit) of other countries. Thus the principal increases in the catch in recent years have been from high seas fisheries. After approximately doubling during the earlier decade, in the period since 1975 imports of fish products have grown a further 50%. Employment in the fisheries sector declined by about one-fifth in the 1965 - 1975 period, and since has moved down a further 5% or so. Fisheries employment amounts to about 430,000 persons -- about one tenth the figure for farming and exhibiting the same downward trend.

32. Protection is provided to the national fleet -- and the processing industry -- through both tariffs and quotas. Moreover, aid (e.g., subsidized credit, rehabilitation assistance) is provided to the operators of the coastal fleet, which includes a number of small-scale enterprises. In addition to the import quotas on fish, there appear to be tight constraints with respects to the landing rights of foreign fishing vessels -- apparently not an uncommon protective device among countries wishing to protect their fishing fleets (Balassa, 1987). One apparent result of these protectionist measures has been for the retail price index for fish and shellfish to increase about 15% more than the overall consumer price index for food over the years 1975 - 1985.

33. With respect to a number of other agricultural products, the description of a variety of more or less complex marketing arrangements for edible oils, fruits, vegetables, animal feedstuffs, etc., by which-- through "price stabilization bands," deficiency payments, marketing orders, licensing, tariff quotas, etc. -- the authorities seek to insulate domestic producers from external commodity price movements could go on at length. We will forego such an exercise here. 2/ By now it should be abundantly clear that for the majority of agricultural commodities, the Government operates a tightly articulated system of domestic marketing policies and related border measures which have served to cushion the producers and processors of farm commodities from international market conditions. While these policies have been largely couched in the terminology of "food security" and "structural adjustment" or

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1/ The silk-related activities of the JSSPSC have declined substantially, as now less than 2% of Japanese farm households are engaged in sericulture.

2/ A more detailed presentation may be consulted in OECD, 1987b.

"raising the levels of farm technology", they have largely served to evade or retard the resource use/income adjustments that might otherwise be signaled on these commodity markets. In the next section we turn to reviewing some estimates of the economic costs of these policies; subsequently, we will try to assess their impact on current or potential LDC traders with Japan.

F. Estimating the Domestic Costs of the Current Array of Agricultural Trade-distorting Measures

34. In the growing literature surrounding the question of Japanese agricultural trade protectionism, there have been a number of attempts to give a quantitative dimension to the magnitude or costs of the extant regime. Often this has focussed on the calculation of nominal protection coefficients, e.g., as presented above in paragraph 21. Most recently, the OECD has carried out an ambitious study of national agricultural policies and their trade impacts (OECD, 1987b). In that endeavor, the study team has utilized the concept of the Producers' Subsidy Equivalent (PSE) as a measure of the magnitude of the distortion introduced by domestic and border policies which tend to insert a wedge between domestic and international commodity markets. The PSE is considered to be a measure of the financial transfer necessary to leave the commodity producer's revenues unchanged were the trade-distorting measure terminated, caeteris paribus. The concept shares the shortcomings typical of static partial equilibrium measures and assumes the "small-country" case of international trade theory. Nevertheless, it provides an indication of relative levels of assistance and a rough estimate of the magnitude of the distortions we are dealing with. 1/ (An analogous measure, the Consumers' Subsidy Equivalent (CSE), is a measure of the burden imposed on consumers by policies which distort domestic prices from their border equivalents.)

35. By way of background, it is interesting to look at a few of the overall results of the OECD study in order to place the Japanese regime within a broader context. Thus in Table 11 we present for the OECD countries studied their respective figures on overall protection and the levels of protection for several product groups during the base period of the study (1979-81). With the exception of pigmeat, the levels of protection afforded to Japanese producers are consistently above the OECD average for each commodity group; the overall average PSE of 59% is the highest of any country studied. Table 12 presents the distribution of the costs of these policies between taxpayers (passed on to farmers as budgetary outlays) and consumers (born in the form of higher food prices). It appears that, rather than using relatively more transparent budgetary means (i.e., taxing and spending) to transfer financial support to farm producers, Japan, along with the EC and Austria, prefers to pass the costs of farm support programs on to consumers through higher food prices.

1/ However, the PSE technique does not capture inefficiencies in the food distribution chain which may arise as a result of the farm policies and may also be passed on to the consumer in the form of higher prices.

Table 11: JAPAN - Producer Subsidy Equivalents by Commodity and Country
(Average 1979-81)
(percentages)

	Japan	USA	Canada	EEC/a	Australia	New Zealand	Nordic/b	Mediter-ranean/c	Austria	OECD/d
Dairy	83.3	48.2	66.5	68.8	20.8	18.0	70.8	68.4	77.9	63.5
Wheat	95.8	17.2	17.6	28.1/e	3.4	-8.2	56.6	10.7	21.1/f	21.5
Coarse Grains	107.1	13.1	13.3	27.9	2.9	5.3	54.7	14.8	19.5	19.0
Beef & Veal	54.9	9.5	13.1	52.7	4.0	12.5	61.6	17.6	42.9	30.0
Pigmeat	14.0	6.2	14.5	21.7	2.7	7.4	23.5	16.7	32.2	16.5
Poultrymeat	20.5	6.3	25.7	16.4	2.5	4.7	43.4	19.4	28.4	14.0
Sugar	48.4	17.1	12.5	25.0	-5.0	..	33.4	39.7	39.4	26.6
Rice	68.8	5.4	..	13.6	14.4	..	..	41.9	..	61.0
Sheepmeat	..	..	..	45.0	3.1	18.2	63.5	14.8	..	28.5
Wool	..	..	..	..	3.9	16.3	0.0	26.9	..	9.4
Soybeans	108.1	6.9	..	36.2	..	..	..	21.9	..	9.0
Average, All Above Commodities	59.4	16.0	23.9	42.8	4.7	15.5	56.1	26.1	42.8	32.1

.. Not calculated.
Minus sign indicates a tax on producers.
Different combinations of commodities are included under the headings coarse grains and dairy for different countries.

/a EEC-10.
/b Finland, Iceland, Norway, Sweden, Switzerland.
/c Portugal, Spain, Turkey.
/d Based on national currencies converted to US dollars at prevailing exchange rates.
/e Common and durum wheat.
/f Wheat and rye.

Data concerning percentage PSEs correspond to the average of the years 1979-81. They might be different for more recent years as a result of the evolution in policies and markets which have occurred since then and which have been significant in certain countries.

Source: OECD (1987).

Table 12: JAPAN - Financing of Agricultural Policy: Relative Magnitude of Financial Contributions Made by Taxpayers and Consumers (Average 1979-1981)

	Taxpayers Billion ECU (1)	Consumers Billion ECU (2)	% 2/(1+2)
Japan	10.2	16.7	62
United States	19.4	7.0	27
Canada	1.6	0.9	36
Australia	0.5	0.2	40
New Zealand	0.2	0.0	0
Austria	0.5	0.9	64
EEC	21.1	35.8	63

Source: OECD (1987).

Table 13: JAPAN - Summary of Results
Producer Subsidy Equivalents

		UNITS	AVERAGE 1979-81	1982	1983	1984	1985	AVERAGE 1982-85
Wheat	TOTAL PSE	¥Bil	118.9	144.2	145.2	141.0	174.0	151.1
	UNIT PSE	¥ '000/T.	198.2	206.0	207.4	201.5	193.3	201.4
	PERCENTAGE PSE	%	92.1	95.0	95.3	95.6	95.2	95.3
Coarse Grains	TOTAL PSE	¥Bil	77.0	78.5	76.7	75.9	73.3	76.1
	UNIT PSE	¥ '000/T.	192.5	196.2	191.8	189.9	183.2	190.3
	PERCENTAGE PSE	%	97.6	97.1	95.4	96.1	95.4	96.0
Rice	TOTAL PSE	¥Bil	2363.3	2582.0	2736.3	3187.6	3286.8	2948.2
	UNIT PSE	¥ '000/T.	220.9	250.7	263.1	267.9	280.9	266.2
	PERCENTAGE PSE	%	68.5	76.2	79.2	80.5	84.5	80.2
Soybeans	TOTAL PSE	¥Bil	48.2	52.4	46.7	49.7	50.8	49.9
	UNIT PSE	¥ '000/T.	241.0	262.0	233.5	248.5	254.0	249.5
	PERCENTAGE PSE	%	81.8	86.7	75.9	84.7	89.0	84.0
Sugar	TOTAL PSE	¥Bil	97.4	161.3	152.9	176.9	172.4	165.9
	UNIT PSE	¥ '000/T.	139.1	206.1	191.1	196.6	191.6	195.1
	PERCENTAGE PSE	%	49.3	72.1	65.4	70.7	70.0	69.6
Milk	TOTAL PSE	¥Bil	518.8	463.8	536.5	565.0	595.6	540.2
	UNIT PSE	¥ '000/T.	79.8	67.2	75.6	78.5	80.5	75.6
	PERCENTAGE PSE	%	78.6	66.8	74.3	77.5	80.2	74.8
Beef and Veal	TOTAL PSE	¥Bil	333.1	298.9	232.2	366.0	394.0	345.5
	UNIT PSE	¥ '000/T.	774.7	621.4	652.9	682.8	709.9	668.7
	PERCENTAGE PSE	%	52.2	42.8	44.8	46.8	47.3	45.5
Pigmeat	TOTAL PSE	¥Bil	134.6	21.6	103.3	82.8	15.9	55.9
	UNIT PSE	¥ '000/T.	93.9	15.1	72.3	58.1	10.4	38.5
	PERCENTAGE PSE	%	16.7	2.4	11.6	9.4	2.1	6.5
Poultry	TOTAL PSE	¥Bil	80.2	81.5	83.3	79.9	79.0	80.9
	UNIT PSE	¥'000/T.	71.9	68.8	67.2	61.0	58.0	63.5
	PERCENTAGE PSE	%	19.5	18.5	18.4	16.8	17.2	17.7
Eggs	TOTAL PSE	¥Bil	111.5	106.7	95.6	103.0	99.6	101.2
	UNIT PSE	¥'000/T.	55.7	51.6	45.7	48.0	46.1	47.8
	PERCENTAGE PSE	%	19.2	19.2	18.7	19.1	17.7	18.7
All Crops	TOTAL PSE	¥Bil	2704.8	3018.4	3157.8	3631.2	3757.8	3391.2
	UNIT PSE							
	PERCENTAGE PSE	%	69.1	77.3	79.3	80.7	84.4	80.5
All Livestock	TOTAL PSE	¥Bil	1177.9	972.5	1141.9	1196.7	1184.1	1123.8
	UNIT PSE							
	PERCENTAGE PSE	%	38.1	29.5	34.7	35.1	35.3	33.6
All Products	TOTAL PSE	¥Bil	3882.7	3990.9	4299.7	4827.9	4941.4	4514.9
	UNIT PSE							
	PERCENTAGE PSE	%	55.4	55.4	59.1	61.1	63.3	59.8

n.a. not available
n.c. not calculated
Source: OECD Working Papers. (These figures represent an update of the data presented in Table 11 (1979-81) and are preliminary for 1982-85)

36. The OECD periodically updates its calculations of member country PSEs; the estimates for the period 1982-85 are presented in Table 13. There it appears that the annual average resource transfers to agricultural producers have been 4,515 billion yen (on the order of US$19 billion, using an average exchange rate of 240 yen to the US$) during these years. The 1982-85 average rose about 20% above that for the 1979-81 period. The principal increase in transfers has been to crop rather than livestock products. In fact, it appears that the approximate $2.6 billion increase in annual average resource transfers to farmers, compared to the annual average for the 1979-81 period, stemmed almost entirely from the rice self-sufficiency policy. (This is not meant to imply the the annual average support of $4.7 billion to milk and beef producers is inconsequential.)

37. As there was a small yet perceptible downward trend during these years in the the Government's budgetary expenditures on agriculture (about 13% between 1982 and 1985), the burden of these resource transfers were apparently being increasingly shifted onto consumers through higher food prices. As we see in Table 14, direct payments to producers (e.g., deficiency payments in case of soybeans, or rice acreage diversion payments) are a relatively small element in the transfer process. 1/ Price supports, e.g., the operation of the governmental marketing agencies and price stabilization programs, are the principal instrument of intervention. The figure for "Market Price Support" in Table 14 includes a relatively modest sum of 356 billion yen for import duties. These duties, together with the direct payments, represent the most transparent elements in the protection system; much of the remaining 80% or so of the panoply of protection and resource transfers are sheltered behind complex bureaucratic processes.

38. The consumer burdens, as measured by the CSE for the period 1982- 85, are reported in the cited study as follows:

Commodity	Consumer Subsidy Equivalent	
	%	U.S.$ Mn. per annum
Rice	- 68	- 9,299
Wheat	- 38	- 740
Coarse Grains	- 7	- 185
Sugar	- 46	- 994
Dairy Products	- 33	- 1,661
Beef	- 37	- 1,649
Pork	- 4	- 184
Poultry	- 16	- 308
All Products	- 38	- 15,420

The negative signs signify consumer taxation.

1/ Table 15 provides a more detailed breakdown of the elements in each general category of support in the PSE calculations.

Table 14: JAPAN - Annual Average Producer Policy Transfers 1982-85
(Billions of Yen)

Product	Type of Subsidy					
	Direct Payment	Market Price Support	Input Cost Redution	General Services	Other	Total Transfer
Rice	277.0	2,385.2	68.7	217.2	0.1	2,948.2
Wheat	20.1	106.6	8.7	15.8	--	151.1
Coarse grains (barley)	8.2	55.7	4.2	8.1	--	76.1
Soybeans	46.8	--	0.6	2.5		49.9
Sugar	2.2	150.4	2.2	11.1	--	165.9
Beet	1.7	81.5	1.3	6.5	--	91.0
Cane	0.5	68.9	1.0	4.6	--	74.9
Milk	46.6	404.9	19.3	69.5	--	540.2
Fluid	--	272.9	14.0	50.4	--	337.3
Manufacturing uses	46.6	132.0	5.3	19.1	--	202.9
Beef and veal	--	283.2	9.6	52.8	--	345.5
Pigmeat	--	37.8	4.0	14.1	--	55.9
Poultry	--	73.0	0.8	7.2	--	80.9
Eggs	1.7	89.4	0.9	9.3	--	101.2
TOTAL	402.6	3586.2	119.1	407.6	0.1	4514.9

Note: Totals may be affected by rounding off.

Source: OECD (1987 Working Papers)

Table 15: PSE Classification by Type of Measure

1. Market Price support

-two-price systems
-price premiums
-import quotas/voluntary export restraints
-tariffs/import levies
-export refunds/credits
-home consumption schemes
-supply management (prodution/acreage quotas)
-monopoly organizations (marketing boads, import control organizations)

2. Direct Income Support

-direct payments (disaster, deficiency, headage/acreage, direct storage payments, etc.)
-embargo compensation
-levies paid by producers (negative support)

3. Indirect Income Support

-capital grants
-concessional credit (interest subsidies)
-input subsidies (fuel, fertilizer, transport, etc.
-insurance
-storage

4. Other Support

-research, advisory, training
-inspection
-rationalization and structures
-processing and marketing
-transport concessions
-taxation concessions
-provincial/State measures

Source: OECD (1987).

39. A separate study (Anderson and Tyers, 1987) makes the following comparison of the welfare costs (1985 US$) of the Japanese, EC-12 and EFTA agricultural trade protectionism regimes:

	Domestic Costs			Domestic Producer Benefit	Net Domestic Cost $ Per Capita	Net Domestic Cost % GNP
	Consumers	Taxpayers	Total			
	(1985 U.S. $Bn)					
Japan	49.0	-7.2	41.8	20.1	170	1.2
EC-12	61.8	5.3	67.1	54.1	40	0.3
EFTA	12.7	2.1	14.8	12.1	90	0.5

It bears noting that the per capita cost of the Japanese policies are some four times the per capita costs of the European Community's much belabored CAP. However, the inefficiencies in the Japanese system of support and protection are such that producers receive less than half of the total transfers from consumers, the remainder representing a "deadweight" welfare loss. The estimated more than 1% of annual GNP which these policies cost does not include the expenses of administering these programs or the economic costs of the lobbying (rent-seeking) activities of those parties interested in maintaining such policies. On the basis of the foregoing discussion, it should come as no surprise that in 1984 -- despite relatively lower per capita caloric and protein intakes -- the Japanese allocated 20% of their personal consumption expenditures to the purchase of food, compared to 18% in France and Germany, 15% in the Netherlands and the United Kingdom, 13% in Canada and 11% in the United States (Korb, 1987).

G. Trade Distorting Effects of Japan's Agricultural Policies

40. As Table 16 demonstrates, the food self-sufficiency objective has -- with the notable exception of rice -- consistently eluded Japan over the last thirty years. Even the relatively high figure for meats is illusory, as it does not reflect the almost complete reliance of meat production on imported feedgrains. 1/ The trends in major commodity imports appear in Table 17, while Table 18 shows the growing deficit in agricultural trade in recent years. Other OECD countries are the major suppliers of agricultural products to Japan; the LDCs have maintained a relatively level share (Table 19).

41. The record for imports of food and non-food agricultural commodities, as well as total merchandise imports, from various country groupings is reproduced in Table 20. The lower income LDCs are shown to account for a relatively small share of Japan's imports of these commodities. Almost half of these are marine products. While marine products are also important for the middle income LDCs, timber, fruits and vegetables and tropical beverages

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1/ On an "original calorie" basis, i.e., adjusting food consumption for imports of intermediate inputs, e.g., feedgrains, the present level of food self-sufficiency is in the 40%-50% range (Ogura, 1985).

Table 16: JAPAN - Domestic Supply, Consumption, and Importation of Foods, and Self-sufficiency Rates, 1955-85

Food	Year	Domestic production (1)	Foreign trade Import (2)	Foreign trade Export (3)	Changes in inventory (4)	Domestically available supply (1)+(2)-(3)-(4) (5)	Self sufficiency rate (percent) (6)
Total cereals	1955	16,686	4,603	7	+2,274	19,008	88
	1960	17,101	4,500	48	+873	20,680	83
	1965	15,208	10,410	88	+848	24,682	62
	1970	13,858	15,803	835	-415	28,989	48
	1975	13,693	19,422	36	+1,513	31,566	43
	1980 c/	12,949	23,303	872	+398	26,882	35
	1985	12,941	27,709	--	+1,571	38,446	35
Rice	1955	12,385	1,290	--	+2,400	11,275	110
	1960	12,858	219	--	+459	12,618	102
	1965	12,409	1,052	--	+468	12,993	96
	1970	12,689	15	785	-281	11,948	106
	1975	13,165	29	--	+1,228	11,964	110
	1980	9,751	27	754	-108	11,209	87
	1985	11,662	30	--	+810	10,849	107
Wheat	1955	1,468	2,238	6	+82	3,618	41
	1960	1,531	2,660	47	+179	3,965	39
	1965	1,287	3,532	88	+100	4,631	28
	1970	478	4,621	46	-159	5,207	9
	1975	241	5,715	34	+44	5,578	4
	1980	583	5,564	5	+61	6,054	10
	1985	874	5,194	--	-33	6,101	14
Barley	1955	1,148	681	1	-35	1,863	62
	1960	1,206	30	1	+70	1,165	104
	1965	721	912	--	-38	1,271	57
	1970	418	1,072	1	+15	1,474	28
	1975	174	2,117	--	+141	2,150	8
	1980	332	2,087	--	+67	2,522	13
	1985	340	2,072	--	-6	2,417	14
Other cereals a/	1955	425	394	--	+11	808	53
	1960	411	1,591	--	+46	1,956	21
	1965	278	5,314	--	+222	5,370	5
	1970	122	10,095	1	+67	10,149	1
	1975	66	11,561	--	-47	11,829	1
	1980	35	17,379	--	+381	17,133	0
	1985	2	14,449	--	+455	13,996	0
Soybeans	1955	507	767	--	+39	1,235	41
	1960	418	1,081	--	-18	1,517	28
	1965	230	1,847	--	+47	2,030	11
	1970	126	3,244	--	+89	3,281	4
	1975	126	3,344	--	-42	3,502	4
	1980 c/	192	4,132	--	-28	4,332	4
	1985	228	4,910	--	+120	5,018	5
Meats b/	1955	356	1	0	0	357	100
	1960	376	6	0	0	382	98
	1965	1,016	118	34	0	1,100	92
	1970	1,626	220	15	0	1,831	89
	1975	2,056	728	3	+79	2,702	76
	1980 c/	2,977	791	3	+15	3,750	79
	1985	3,497	851	3	+25	4,320	81
Beef	1955	135	1	0	0	136	99
	1960	141	6	0	0	147	96
	1965	190	11	0	0	201	95
	1970	265	33	0	0	298	89
	1975	327	91	0	+11	407	80
	1980 c/	400	189	0	+5	584	68
	1985	556	225	--	+7	774	72

Note: Inventory changes not shown.
Sources: Kuroda (1982), MAFF, Statistical Yearbook, various years.
a/ Only maize after 1975.
b/ Includes whale meat.
c/ 1979.

Table 17: JAPAN - Imports of Major Agricultural Commodities by Value
(US$ Million)

	1970	1975	1979	1980	1981	1982	1983
Agricultural Fish and Food Trade	3,194	10,349	16,611	16,849	18,247	16,576	17,117
1. Cereals	1,049	3,271	3,719	4,426	4,990	3,960	4,191
Wheat	318	1,117	1,090	1,229	1,273	1,120	1,126
Barley	42	256	203	246	311	204	208
Maize	407	1,138	1,486	2,009	2,459	1,830	2,119
2. Oilseeds	542	1,359	1,842	1,880	2,018	1,726	1,952
Soybeans	366	942	1,272	1,310	1,396	1,156	1,375
3. Vegetables & Fruits	309	624	1,356	1,387	1,678	1,608	1,613
4. Sugar	346	1,809	894	1,424	918	627	542
Raw sugar	283	1,680	708	1,224	730	474	393
5. Foodstuffs for Animals	136	180	485	586	509	404	548
6. Dairy Products	35	119	206	231	248	279	224
Skimmed Milk Powder	-	-	71	83	95	99	81
Cheese	21	70	123	135	139	148	127
7. Meat and Meat Preparations	145	661	1,712	1,523	1,927	1,711	1,772
Beef and Veal	22	75	406	436	399	387	445
Pigmeat	21	308	513	408	717	542	645
Chickenmeat	8	27	113	113	169	163	153
8. Fish	262	1,198	3,957	3,026	3,653	3,918	3,884
9. Beverages & Tobacco	91	447	733	712	792	830	845
10. Other	279	681	2,601	1,654	1,514	1,513	1,546

Note: Total food imports including SITC 0+1+22+4.

Source: OECD (1987b).

Table 18: JAPAN - Balance of Agricultural Trade

(Mill. US$)

Year	Exports	Imports	Net Trade
1970	673	3,194	-2,521
1971	724	3,585	-2,861
1972	693	4,353	-3,660
1973	874	7,214	-6,340
1974	935	9,666	-8,731
1975	809	10,349	-9,540
1976	938	10,778	-9,840
1977	944	11,835	-10,891
1978	1,167	13,250	-12,083
1979	1,323	16,611	-15,288
1980	1,704	16,849	-15,145
1981	1,837	18,247	-16,410
1982	1,492	16,576	-15,084
1983	1,508	17,117	-15,608

Note: Exports and Imports of Food Products including SITC 0+1+22+4.

Source: OECD (1987b).

Table 19: JAPAN: Source of Agricultural Imports

(%)

	1970	1975	1979	1980	1981	1982	1983
Imports from:							
OECD	58.5	58.3	61.3	63.8	66.1	62.0	61.7
U.S.	37.4	32.9	34.5	38.9	41.1	37.4	38.7
Canada	6.9	8.8	8.0	7.2	8.2	8.7	8.1
Australia	7.7	9.1	9.3	9.2	7.7	7.1	6.0
New Zealand	1.8	1.3	1.6	1.4	1.8	1.8	1.9
E.C.	3.5	4.3	5.3	4.9	5.2	4.6	4.0
Other OECD	1.2	1.9	2.6	2.2	2.1	2.4	3.0
CPEs	8.0	6.9	5.4	5.4	5.1	5.6	6.0
LDCs	30.9	30.8	31.4	27.8	26.7	29.4	30.8

Source: OECD (1987b).

Table 20: JAPAN - Food and Agriculture Imports by Country Grouping, 1976-1986
($ billion)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Food											
Low Income LDCs	779.8	908.4	976.5	1272.2	1143.3	1338.4	132.8	1359.1	1566.9	1787.0	2172.8
Middle Income LDCs	3242.7	3821.2	3891.3	4878.9	4646.9	4571.1	4739.0	4978.6	5207.5	5238.3	7454.4
All LDCs	4022.5	4729.6	4867.8	6151.2	5790.2	5909.5	6061.8	6337.7	6774.4	7025.3	9627.3
Developed Countries	6782.4	7142.3	8381.7	10459.9	11059.0	12337.4	10514.3	10778.8	11834.2	10726.3	11371.7
TOTAL	10804.9	11871.9	13249.5	16611.1	16849.2	18246.9	16576.1	17116.5	18608.6	17751.6	20999.0
Non-food Agriculture											
Low Income LDCs	349.8	393.1	509.5	632.3	649.9	538.6	498.9	565.1	635.7	751.6	744.4
Middle Income LDCs	1782.7	1980.9	3065.6	5115.6	4806.0	3614.8	3458.2	3188.7	3452.6	2989.4	2900.1
ALL LDCs	2132.5	2374.0	3575.1	5747.9	5455.9	4153.4	3957.1	3753.8	4088.3	3741.0	3644.5
Developed Countries	4847.6	5235.2	4912.0	7058.4	7517.4	5969.6	5771.0	5266.6	5788.1	5264.6	5843.6
TOTAL	6980.1	7609.2	8487.1	12806.3	12973.3	10123.0	9728.1	9020.4	9876.4	9005.6	9488.1
All Food and Agriculture											
Low Income LDCs	1129.6	1301.5	1486.0	1904.6	1793.2	1877.0	1821.7	1924.2	2202.6	2538.6	2917.2
Middle Income LDCs	5025.4	5802.1	6956.9	994.5	9452.9	8185.9	8197.2	8167.3	8660.1	8227.7	10354.6
ALL LDCs	6155.0	7103.6	8442.9	11899.1	11246.1	10062.9	10018.9	10091.5	10862.7	10766.3	13271.8
Developed Countries	11630.0	12377.5	13293.7	17518.3	18576.4	18307.0	16285.3	16045.4	17622.3	15990.9	17215.3
TOTAL	17785.0	19481.1	21736.6	29417.4	29822.5	28369.9	26304.2	26136.9	28485.0	26757.2	30487.1
All Merchandise Imports											
Low Income LDCs	3011.5	3362.5	3839.8	5355.6	6646.6	7535.9	7551.6	7285.0	8208.0	8904.1	8223.8
Middle Income LDCs	19693.2	21802.6	25909.6	37812.6	46909.4	43775.4	40751.1	403304.5	44172.2	42776.0	40619.9
All LDCS	22704.7	25165.1	29749.4	43168.2	53556.0	51311.3	48302.7	47589.5	52381.0	51680.1	48843.7
Developed Countries	42094.3	45643.6	49593.6	67504.0	86971.7	91978.4	83628.5	78803.6	84122.0	77858.6	77564.1
TOTAL	64799.0	70808.7	79343.0	110672.2	140527.7	143289.7	131931.2	126393.1	136503.0	129538.7	126407.8

Notes: Food = SITC Revision 2, Commodity Codes 0 + 1 + 22 + 44
Non-food Agriculture = SITC Revision 2, Commodity Codes 2 - 22 - 27 - 28
Low Income LDCs = 44 countries, including Low Income Centrally Planned LDCs
Middle Income LDCs = 81 countries, including Middle Income Centrally Planned LDCs
Developed Countries comprise the remaining trading partners

Source: U.N. Trade Data System (Geneva)

also bulk large for this latter group of countries. Nevertheless, the developed countries remain the principal supplier of food and agricultural commodities to Japan. While the relative importance of one commodity group or another varies as import prices fluctuate, these developed countries are especially important suppliers of cereals, timber, marine products, meats and oil seeds. These trade patterns are the result of the use of several supply strategies, although not necessarily in the following order of importance:

(a) Least expensive source of supply;

(b) Stability and reliability of supply;

(c) Diversification of sources of supply; and

(d) Other considerations of a geo-political or a geo-economic nature, including a broader range of trading and investment relationships.

Explicit promotion of LDC trade expansion does not seem to have been a priority consideration; rather negotiations over import access, loosening of quota restrictions, etc., seems to have primarily been on a bilateral basis.

42. On the face of it, agricultural commodities entering Japan from either LDC or developed country suppliers normally face low tariffs, or none at all, with the exceptions we earlier pointed out. In Table 21 we present the results as regards the average tariffs actually assessed a recent year (1983), as well as what the applicable MFN (most favored nation) rates would be once the Tokyo Round agreements were fully implemented (scheduled for 1987). The final two columns in that Table report the maximum tariff rates at the two digit level for the categories in question, both before and after implementing those Tokyo Round MTN concessions. While there appears to be a clear tendency for the average tariff levels to decrease over time on the items that are imported, maximum tariff levels on some items will continue to be high even after the completion of the Tokyo Round reductions.

43. However, it is in the area of non-tariff barriers (NTBs) that some of the greatest obstacles persist. The use of quotas has not been limited to the well-known cases of beef and citrus products; other products include:

Fresh milk and cream
Milk and cream, preserved
Cheese and curd
Dried leguminous vegetables (shelled)
Cereal flours
Starch
Various meat preparations
Various sweeteners
Assorted fruit juices and preparations
Tomato sauces

44. In many instances, these quotas have been accompanied by unbound tariffs. Furthermore, there appears to be an abundance of standards with respect to packaging, labelling and health or phyto-sanitary regulations which

Table 21: JAPAN - MFN Tariff Rates on Food and Agricultural Imports, Before and After Implementation of the Tokyo Round Concessions
(%)

CCCN	Category	Average Tariff Before	Average Tariff After	Maximum Tariff Before	Maximum Tariff After
01	Live animals	0	0	0	0
02	Meat and edible offals	10.3	5.4	25.0	16.0
03	Fish, crusteceans and molluscs	6.2	4.7	15.0	12.0
04	Dairy products, eggs, etc.	31.0	31.8	45.0	45.0
05	Products of animal origin, n.e.s.	0.4	0.4	5.0	5.0
06	Flowers, trees and bushes	1.5	0	5.0	0
07	Vegetables, roots and tubers	8.2	7.7	15.0	10.0
08	Fruits	14.4	10.4	30.0	30.0
09	Coffee, tea, spices	8.4	5.6	35.0	20.0
10	Cereals	2.4	1.3	15.0	7.0
11	Milling industry products	22.1	16.8	25.0	20.0
12	Oilseeds, etc.	2.3	1.3	8.9	5.0
13	Lacs, resin, etc.	2.0	1.8	27.5	27.5
14	Vegetable plaiting materials	0.6	0.6	5.0	5.0
15	Animal and vegetable fats and oils, etc.	5.6	4.5	18.3	15.6
16	Meat and fish preparations	16.4	14.4	25.0	25.0
17	Sugar and confectionery	40.9	35.8	118.5	59.3
18	Cocoa and its preparations	21.4	18.9	35.0	35.0
19	Preparations of cereals, flours or starch	28.2	26.3	40.0	37.0
20	Preparations of vegatables, fruit, etc.	22.5	20.5	35.0	35.0
21	Misc. edible preparations	25.1	19.2	35.0	35.0
22	Beverages, etc.	64.9	39.6	270.3	108.0
23	Food industry residues and wastes; animal fodder	2.0	1.9	15.0	15.0

Note: Simple (unweighted) average.

Source: Trade Data Base

-- intentionally or not -- serve to hamper the access of some foreign suppliers to the Japanese market. Finally, there is the process of "administrative guidance" through which the authorities "jawbone" those involved in trade. The Ministry of Agriculture, Forestries and Fisheries is reportedly a frequent user of this technique (Balassa, 1987). Several ASEAN exporters to the Japanese market have complained about the stringent health and other product standards for fruit and seafood imports, while others have noted that the import regulations governing agricultural commodities seem to be changed with considerable frequency (DeRosa, 1987). However, despite the steadfast opposition of some domestic groups to liberalization in these product areas, the Japanese Government has recently accepted the report of a GATT dispute panel -- convoked at the request of the United States -- as regards the import quotas on a number of these items. Consequently, quotas will be lifted on Japanese imports of processed beef and pork, canned pineapples, tomato juice, catsup and tomato sauce, fruit puree and paste, processed cheese, grape sugar and other processed foods; quotas would be retained on starch and powdered and condensed skim milk.

45. In view of the important role that nontariff barriers appear to play in the agricultural trade regime, summary data in Table 22 on the incidence of NTBs for a number of broad product groups confirms our earlier discussions. Of the fifteen SITC two-digit product groups listed there, for twelve of them the various types of NTBs cover virtually all imports. The first category of measures, fiscal charges, is of importance only for sweeteners. Prohibitions and quotas appear to play an important role in the imports of dairy products and eggs, beverages and tobacco. These are primarily owing to a state or single agency monopoly for imports. Import licensing is especially important for fish. However, it is in the area of technical requirements that one observes almost universal NTB coverage. In all cases these technical requirements relate to health and safety regulations, although these are backed up by marking and packing requirements for imports of dairy products and eggs and (to a lesser extent) coffee, tea, cocoa and spices. In these circumstances, it would seem very likely that the ultimate tariff equivalent of these various measures would be very high for the products in question, as evidenced by the CSE results cited above. 1/

46. In a recent paper, Tyers and Anderson (1986) have set out to quantify some of the effects of agricultural trade liberalization for a series of countries and trading blocs, using data from the early 1980s as a baseline. One scenario they examine covers the grain, livestock and sugar (GLS) trade regimes of various developed countries, with the following results in the case of unilateral Japanese liberalization:

1/ About a decade ago, several authors (Cline, et. al., 1978) undertook a quantitative assessment of the impact of some of the tariff and non-tariff barriers then in force in Japan, using data from the early 1970's.

Table 22: JAPAN: Type of NonTariff Barrier and Percentage of the Value of Agricultural Imports Covered

SITC	and Product Group Title	1984 Value of Trade (US$ million)	Total Coverage	Fiscal Measures: Import Specific Charges	Fiscal Measures: Product-Specific Charges	Volume Restraining Measures: Prohibitions	Volume Restraining Measures: Quotas	Import Authorizations: Non-Automatic	Import Authorizations: Automatic	Health and Safety Regulations
01	Meat and Preparations	1,897.1	38.2	13.4	-	-	9.3	4.7	-	38.2
02	Dairy Products and Birds' Eggs	227.7	100.0	19.6	-	38.5	73.1	-	-	100.0
03	Fish and Preparations	4,096.2	100.0	-	-	-	16.0	100.0	-	100.0
04	Cereals and Preparations	4,743.3	100.0	17.8	-	30.1	30.2	-	-	100.0
05	Vegetables and Fruit	1,827.9	100.0	23.7	-	-	13.9	2.9	-	100.0
06	Sugar and Preparation, Honey	449.4	100.0	74.3	-	-	0.1	-	-	100.0
07	Coffee, Tea, Cocoa, Spices	1,128.8	100.0	-	-	-	-	0.2	-	95.2
08	Animal Feedstuffs	539.9	99.8	6.0	-	-	-	24.0	-	99.8
09	Miscellaneous Edible Products	240.4	100.0	-	-	0.5	18.8	19.0	-	100.0
11	Beverages	299.6	100.0	-	67.5	-	-	-	-	100.0
12	Tobacco and Tobacco Products	536.1	80.0	-	80.0	-	-	-	-	80.0
22	Oilseeds	2,209.6	100.0	-	-	3.3	-	-	-	100.0
41	Animal Oils and Fats	65.3	98.1	-	-	-	12.1	-	-	98.1
42	Fixed Vegetable Oils and Fats	255.5	100.0	-	-	-	-	-	-	100.0
43	Processed Animal and Vegetable Oils	51.6	3.16	-	-	-	-	-	-	31.6

Notes: While the data refer to NTBs in force in 1986, trade figures and % coverage are from 1984.
Row details may sum to more than the "Total" because of double coverage of some NTBs.

Source: IECIT Calculations using the UNCTAD Data Base on Trade Measures.

Commodity	Recent Levels (000 mt) (1980-1982) Production	Net Imports	Estimated Liberalization Impact % Change in Domestic Production	000 mt Change in Net Imports
Wheat	637	5,500	-30	-960
Coarse grains	367	19,346	-29	-6,090
Rice	10,093	-421	-44	+6,280
Ruminant meat	463	179	-60	+2,960
Nonruminant meat	2,568	30[illegible]	-10	-120
Dairy products	6,651	1,501	-41	+14,300
Sugar	3,072	2,653	-42	+470

The increases in trade flows are especially large in the cases of rice, ruminant meat (beef and sheep), and dairy products, as the country currently has total or at least a relatively large degree of (relatively expensive) self-sufficiency in these products. There also are large increases in the consumption of these last two commodities accompanying the liberalization process. There is a more modest increase in sugar imports, while the notable drop in the imports of coarse grains owes to the significant reduction in domestic production of ruminant meat. While some of the LDCs, including a number in the Pacific Basin -- e.g., China, Thailand, Philippines, Taiwan, Indonesia -- are important producers of sugar, rice, poultry, pork, etc., and whose imports would likely substantially increase in the case of Japanese liberalization, there remains much to be studied.

47. In such modelling exercises it is typically found that a simultaneous multilateral liberalization by all developed economies would reduce the extent of an individual country's respective adjustment. However, in their 1986 study, the authors indicate that in the case of Japan this would only meaningfully apply to dairy products, whose production would only fall by about 31%, instead of the approximate 41% calculated in the "unilateral liberalization case" they present in the cited work. For the remaining commodities the extent of the adjustments in this alternative (multilateral adjustment) scenario would be of approximately the same magnitude as those reported above.

48. Changes in trade flows under such a scenario would be accompanied by some firming up of internationally traded product prices, primarily ruminant meat and dairy products, as well as a reduction of the variability (i.e., coefficient of variation) of those prices and coarse grain prices on world commodity markets (Anderson and Tyers, 1987). More specific identification of likely sources of supply for the expanded trade flows (e.g., if LDCs were to benefit significantly from opening up of the Japanese market), is much more hazardous to project. This would strongly depend, inter alia, on likely supply side constraints in potential LDC suppliers and the extent to which improved market incentives were passed on to LDC producers by their respective governments. This "pass through" process has been far from automatic in the past, and deserves attention in order that potential LDC exporters can rapidly respond to the opportunities which would arise from a possible future relaxation of Japanese agricultural trade barriers.

49. As an example of the potential impact on LDC farm exporters, Anderson and Tyers (1987) estimate the welfare costs to Thai farmers from the current Japanese agricultural trade regime for grains, livestock and sugar at $270 million per year, or about 4% of net farm income. Losses of foreign exchange earnings were estimated at $320 million. More broadly, the authors estimate that the Japanese trade regime is very important in augmenting international price variability in coarse grains and ruminant meat; volumes traded internationally are significantly lowered by the Japanese policies for ruminant meat, poultry, pigmeat, dairy products and, to a lesser extent, rice. LDC net exports of rice are estimated to be reduced some 1.8 million tons by the Japanese trade regime, while their net exports of coarse grains have been reduced by 2 million tons and net exports of dairy products by 2.4 million tons. These volumes represent about US$ 3 billion per year in foregone foreign exchange for the affected LDCs, while the production efficiency losses in these countries should be serious. 1/

H. Final Observations

50. The perverse movements in market signals arising from the domestic farm policy and agricultural trade policy interventions outlined above have most likely actually hampered and even discouraged the efficient structural transformation of the Japanese economy in line with the comparative advantages which would be revealed through a more transparent articulation of domestic market signals with those on international commodity and product markets. Resources have been frozen or even "sucked into" maintaining or expanding farm output. Furthermore, legal and institutional constraints have combined with the signals arising from the trade regime and fiscal incentives so as to discourage an adequate movement towards the consolidation and enlargement of operating units essential to permit producers -- especially of extensive field crops, dairying and bovine meat products -- to achieve adequate scale economies. In the absence of such reasonable scale economies, unitary production costs remain excessive compared to the landed prices of imports. Paradoxically, we observe a clear trend towards a decreasing intensity of farmland use during the last two decades. Finally, with the authorities' attempts to administratively manage an increasingly complex agricultural sector, we might expect significant economic costs arising from a wide variety of rent-seeking activities on the part of producers, processors, suppliers, traders, bureacrats and assorted hangers-on.

51. High levels of protection are afforded to marginal producers, while the rents accruing to relatively efficient producers become capitalized into land values. These capitalized rents effectively close out to younger farmers

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1/ The distribution of the gains and losses from agricultural trade policy liberalization may be uneven. In the World Bank's 1986 World Development Report it was estimated that unilateral Developed Country agricultural trade liberalization would incur costs for both the LDCs and the CPEs (Centrally Planned Economies), while multilateral liberalization by both the Developed Countries and the LDCs would be beneficial to both groups, but at the expense of the CPEs.

the opportunity to rent or buy agricultural land -- a phenomenon reflected in the apparent progressive aging of the farming population (Kuroda, 1982). At the same time, present landowners are loath to dispose of an asset (land) which has shown such a penchant for appreciation -- as demonstrated in the data on farmland price increases in Table 23 -- in the absence of substitute assets with which to replace it in their portfolio.

52. Through the impact of taxation policy, there have been created additional obstacles to the efficient allocation of farmland to alternative, higher-value uses, even in densely populated areas. Thus in the Tokyo Region (including the prefectures of Chiba, Saitama and Kanagawa), 60,032 hectares -- 19% of the total area -- are classified as farmland (Hanayama, 1986). (This is slightly more than twice the area in parks and woodlands.) The principal taxes impacting on land use decisions appear to be the land tax, capital gains tax and inheritance tax. The land tax has traditionally given considerable preferential treatment to farmland, e.g., in one suburban ward of Tokyo its average assessment is only one-thousandth that of the average for housing land (ibid.) A move in the early 1980s to end these distortions has been hemmed in by numerous exceptions. Secondly, through uncertainty arising from the authorities' apparent vacillation on the treatment of capital gains from sales of farmland, it appears that land transfers may have been suppressed. Thirdly, stiff inheritance taxation has discouraged offsprings from liquidating inherited farmland, and rather they have sought to maintain it in its sheltered tax status. Finally, farmland ownership may provide a convenient tax shelter -- legal or otherwise -- for income earned outside farming, as well as on the farm. Quite naturally, a vociferous lobby has formed in defense of these various arrangements, in the face of growing intense questioning of the past favorable tax treatment of farmland, as it is increasingly recognized that the highly protectionist agricultural trade regime and these fiscal measures mutually reinforce each other in contributing to the high cost of urban housing.

53. Additional economic costs arise in the broader macroeconomic context where such policies are pursued. While there do not appear to have yet been any detailed examinations of the Japanese experience from this perspective, work carried out on the EC's Common Agricultural Policy (Stoeckel, 1985) and Korea (Anderson and Warr, 1987) may be suggestive in this regard. These studies indicate that the very large transfers from taxpayers and consumers have primarily benefitted the agricultural and agri-processing sectors. Under the shelter of these policies, excessive resources have been consequently maintained in or even attracted into economically low return activities therein. The resulting distorted patterns of resource use have provided a convenient raison d'etre for the continuation of highly protective trade barriers.

54. It might appear that, fortunately for the domestic relatively small share of GDP generated in the agricultural sector probably limits the magnitude of the economic costs deriving from such protectionist policies. However, once one embraces the broader range of agricultural and agri-business activities (including suppliers, processing, marketing, etc.) which are benefiting from such pervasive protectionism, something in the neighborhood of 12%-15% of GDP may be originating in activities which are encouraged or underwritten by the agricultural trade policies sketched above. On this

Table 23: JAPAN- Sale Prices of Farm Land, 1965-84
(thousands of yen)

Year	Sales price of Paddy land For farming (/ha.)	Residential uses (/ha.)	Wholesale Price Index
1965	2,040		100
1970	3,280	84,700	111
1975	6,270	226,874	174
1980	9,280	366,024	230
1984	11,300	508,198	231

Source: Statistics Bureau, Japan Statistical Yearbook, various years.

scale, the marked distortions in resource use associated with such high levels of protection -- and the ensuing overvaluation of the real exchange rate -- could represent a not insignificant tax on exports. 1/ The imbalance in returns between the agricultural and the other traded goods or service sectors -- along with the unnecessarily costly wage goods originating in the agricultural sector -- would tend to depress the performance of these other sectors, unless adequately offset by, e.g., subsidies to these other tradeable sectors, a concerted effort to purposefully attempt to undervalue the exchange rate (discouraging imports and encouraging the exports of these otherwise disadvantaged sectors), etc. Such encouragements to the expansion of those otherwise disadvantaged sectors would be especially important to prevent rising unemployment, since the growth of farming output -- and ancillary activities -- might tend to be of a capital intensive/labor substituting nature.

55. Of course, we are merely speculating on the nature of a highly complex process; the true nature and the full richness of the economic relationships we suggest here could only be captured -- and most likely even then in only a sketchy form -- through an intricate modelling exercise. The political economy dimensions of the process would be even more difficult to come to grips with. The full impact of the package of domestic/border measures which comprise the Japanese agricultural policy and related trade regimes on both the domestic economy and her trading partners is broader than one might at first glance imagine. Nevertheless, one has the impression that these issues are being more actively studied and debated in academic and political fora in recent years and that one can most likely expect some meaningful movement in a positive direction on these issues in the next several years.

56. It certainly seems to be the case that alternative approaches to achieving its sectoral policy goals could be devised which would imply lower costs for the domestic economy, an adjustment in patterns of sectoral resource use and production in line with Japan's evolving comparative advantage in agriculture, and at the same time be less divisive as regards the country's relations with foreign agricultural suppliers and other trading partners. At the same time, however, the authorities will undoubtedly have to be responsive to the constellation of domestic political forces and economic interests on the various sides of the agricultural trade liberalization issues. For example, increasing pressures may arise from those groups actively involved in exports of manufactured goods and services, who are concerned that their access to overseas markets may be constricted by foreign reactions to Japan's agricultural protectionism. On the other hand, there does not appear to have as yet arisen a vociferous consumers' lobby calling for lower food costs.

57. With a greater disposition on the part of the authorities to move forward in the area of agricultural trade liberalization, opportunities to assist the LDCs in increasing their exports could be intensified. To a large

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1/ Not at all surprisingly, a liberalized agricultural trade policy would contribute to enhancing Japan's competitive abilities in non-farm export markets.

extent these could be concentrated in the commercial practices area, e.g., identifying export product opportunities, targeting specific markets or market segments, product tailoring, establishing appropriate relationships with key wholesale and retail outlets, trade communications and finance, and related follow-up. The Bank might also consider looking at the following questions:

(a) Product areas where NTBs appear to be especially detrimental to LDC export expansion;

(b) Supply side constraints (arising from both hardware shortfalls and policy distortions) which could impede rapid LDC response to improved trading opportunities;

(c) Policies in potential supplier countries which might prohibit or discourage foreign investment in agricultural and agro-processing activities for the Japanese market; and

(d) The adjustment process, including supportive policies, for the domestic agricultural sector in Japan.

There may be some accumulated experiences on attempts -- both still-born and successful -- in penetrating the Japanese market, joint supply undertakings, etc., which merit careful review and analysis. The intention should be to undertake collaborative studies with the appropriate Japanese academic/research institutions and to engage the local intellectual community in the review and assessment of the policies in question. Some issues should also be addressed by qualified researchers in the Pacific Basin and East Asian LDCs. The approach should also incorporate an appreciation of the domestic political and economic considerations which might constrain movement on these policies in both Japan and the potential supplier countries.

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