

Agricultural policy reforms and WTO commitments on domestic support in Japan

Yoshihisa Godo¹, Daisuke Takahashi²

(1. Meiji Gakuin University, Tokyo 108-8636, Japan; 2. University of Tokyo, Tokyo 113-8657, Japan)

Abstract: The purpose of this paper is to provide a comprehensive review of Japan's agricultural domestic policy since 1995 in the context of the current international negotiations in the WTO Doha Round, which has as one aim further reductions of trade-distorting support among member countries. Apparently, Japan's attitude towards agricultural domestic policy reform is one of compliance with the WTO, which requests member countries to reduce their Aggregate Measure of Support (AMS) through trimming trade-distorting (amber box) support and/or transforming traditional-type agricultural subsidies to decoupled-type ones. Japan reduced its amber box support by nearly 80 percent between 1995 and 2000. This drastic reduction is mainly attributable to Japan's removal of rice from the amber box in 1998. In addition, following the WTO's principle of decoupling, Japan launched an extensive agricultural subsidy reform in 2007. This paper, however, shows the ironical realities of Japanese agricultural policy. Neither a sharp reduction of amber box support nor Japan's 2007 reform necessarily means there will be a reduction of trade-distorting effects. On the contrary, the 2007 reform may in fact stimulate domestic rice production.

Key words: Japan's agricultural support; WTO Doha Round; notification of domestic support; WTO compliance

1. Introduction

Japan's agricultural policy presents a rather arcane aspect to outsiders. In spite of its huge fiscal expenditure for the agricultural sector, Japan's food self-sufficiency ratio continues to decline, in sharp contrast to European and North American countries, where heavy agricultural domestic supports have resulted in excesses of agricultural commodities and a subsequent distortion in international markets. In this sense, Japan's agricultural domestic programs may appear harmless to foreign countries.

Japan's general attitude toward agricultural domestic policy reform is one of compliance with the World Trade Organization (WTO). WTO requests member countries to reduce fiscal expenditures for amber box supports, that is, those alleged to have the most trade-distorting effects. Japan reduced its amber box expenditures by nearly 80 percent between 1995 and 2000. As a result, Japan reduced its current Aggregate Measure of Support (AMS) to as little as 18 percent of its commitment level from the Uruguay Round agreements in 2000. In addition, following WTO's principle of "decoupling," Japan launched an extensive agricultural subsidy reform in 2007.

This seemingly unimpeachable attitude on domestic agricultural policy reform contrasts with a less-flexible attitude on border protections for agricultural commodities. Japan's nominal protection rate for agricultural

Yoshihisa Godo, Ph.D., professor, Meiji Gakuin University; research field: agricultural economics.

Daisuke Takahashi, graduate student, University of Tokyo; research field: agricultural economics.

commodities is one of the highest among developed nations. Japan, which is surrounded by the ocean and poorly endowed with natural resources, relies heavily on trade. Nevertheless, Japan's strong resistance to reductions in border agricultural protection has repeatedly hindered its trade negotiations with other countries. A typical example is the WTO Uruguay Round negotiations. Up until the last minute, Japan lobbied hard to maintain its rice autarky policy, which was an obvious violation of the GATT rules. An inflexible stance on rice imports almost resulted in Japan's failure to join the final agreements.

In consideration of this background, this paper attempts to answer the following four questions: (1) Why has the food self-sufficiency ratio declined in Japan in spite of its heavy agricultural protection? (2) Why is Japan so accommodating to the WTO principle of decoupling? (3) How did the sharp reduction of Japan's amber box supports affect its agricultural production? (4) What subsidies compose Japan's domestic support notifications to the WTO, and how do these subsidies compare to disciplines under the Uruguay Round or a potential Doha Round WTO agreement?

By answering these questions, this paper aims to provide a comprehensive picture of Japan's agricultural policy. The centerpiece of Japan's agricultural political dynamics is the "alchemy" of farmland. In Japan, farmland regulations are often manipulated, bringing such a large amount of easy money to farmland owners that the overwhelming majority of farmers are more concerned with manipulation of farmland regulations than earning profits from farming. This alchemy is a deep-seated problem, and Japanese citizens (including the mass media and academics) are reluctant to question it. As a result, the manipulation of farmland regulations has been treated as a taboo subject for open discussion in Japanese society. This paper aims to defy this taboo and reveal the actual workings of Japanese agricultural policy.

Section 2 describes the overall structure of the political dynamics of Japanese agriculture. Farmland and rice are the two major issues in Japanese agricultural policy and are addressed in sections 3 and 4, respectively. Section 5 discusses an extensive agricultural policy reform implemented in 2007, while Section 6 studies Japan's notifications of domestic support submitted to the WTO. Section 7 concludes the paper.

2. Structure of political dynamics in the Japanese agricultural sector

2.1 Discrepancy between optimal and actual farm sizes

It is useful to quickly review the geographical and ecological characteristics of Japan's farmland before discussing its problems. Although Japan has substantial rainfall, water flows quickly to the ocean due to the mountainous topography. Thus, farmers need a highly sophisticated water control system. Japan's water usage system for paddy fields is unique compared to those of Australasia, North America, and Europe. A paddy field consists of many small plots of land. Water drawn from a floodgate of a river moves through all plots in a farming community in a set order (from upper plots to lower plots), slowly but continuously. Because of this continuous water flow, rice farming in monsoon Asia is free from the continuous cropping hazard (damage from repeated cultivation of the same crop in the same soil) that is the biggest farming problem in Australasia, North America, and Europe.

Since farmers in a Japanese farming community share the same water, inappropriate water usage on one plot profoundly affects farming in other plots on the paddy field plain. Thus, all the members in a farming community must collaborate with each other in the use of farmland and water.

A traditional farming community in Japan consists of about 20 farm households. Each farmer has several tiny

plots of land at different locations in a paddy field plain. The average individual farm size is around 1.0 hectare. Therefore, farm ownership is expressed as a mosaic pattern. This structure is reasonable for traditional small-size farming because each farmer's paddy field plots adjoin different farmers' plots at various parts of the paddy field plain, allowing farmers to routinely observe each other's activities, making collaboration on water and farmland use easier.

However, after the development of labor-saving technology in the postwar period, this traditional farming community structure turned out to be inefficient. Today it is estimated that the optimal farm size is over 15 hectares and that the production cost of rice could be halved if farmland was consolidated into large-size farms.¹

Thus, if the price mechanisms functioned properly in the farmland market, small-size farmers would have been weeded out, and only large-size farmers could have survived. In reality, however, the average farm size has not increased sufficiently to capture this economy of scale. Nearly 70 percent of Japan's farmland is still operated by inefficient tiny-scale farmers whose farms are less than 3.0 hectares.² As of 2005, the average farm size was still around 1.4 hectares. While large-acreage farms that exceed 30 hectares have also emerged, the number is still small.³

Small-size farmers' agricultural productivity is low, so they hardly earn profits from farming. This does not mean, however, that small-size farmers lead indigent lives. On the contrary, the average income of small-size farmers exceeds that of urban workers (see Table 1). This is because small-size farmers usually have stable nonagricultural income opportunities. Small-size farmers earn their living mainly from their off-farm income. In that sense, small-size farmers should be called "well-off salaried workers who own farmland available for side businesses." These side businesses include not only farming but also "alchemy," as they will be described in detail in section 3.

Table 1 Comparison of household income as of 2003

Farm size		Number of farm households (in thousand)	Household income per head (in thousand yen)	Percentage of farm income in total household income
Commercial farm household ^a	Total	1,911	1,693	19
	Below 0.5 ha	436	1,763	4
	0.5-1.0 ha	673	1,786	8
	1.0-1.5 ha	498	1,579	13
	1.5-2.0 ha		1,684	22
	2.0-3.0 ha		1,561	34
	Above 3.0 ha	144	1,678	54
Salaried worker household	1,515

Note: a. Commercial farm households is defined as farm households whose farm size is over 0.3 hectares or whose agricultural revenue is over 0.5 million yen.

Data source: Ministry of Agriculture, Forestry and Fisheries. *Statistical survey on farm management and economy*, various issues; Ministry of Internal Affairs and Communications. *Family income and expenditure survey*, various issues.

2.2 Small-size farmers' political power

¹ See Ministry of Agriculture, Forestry, and Fisheries, 1992.

² This figure is taken from the data for the totaled results for all prefectures except Hokkaido in the 2005 Agricultural Census.

³ The number of farms that exceed 30 hectares is 555. This is less than 0.02% of the total number of farms (2.8 million). These figures are taken from the data for the totaled results for all prefectures except Hokkaido in the 2005 Agricultural Census.

Why do small-size farmers dominate Japanese agriculture while being inferior to large-size farmers in terms of agricultural productivity? The answer to this question lies in the political dynamics of Japanese agriculture. This subsection describes the agricultural political dynamics that prevent the price mechanisms from functioning properly in the farmland market.

Geographically, the amount of flat land is extremely limited in Japan. In particular, high-quality farmland, which consists of flat and well-shaped plots of paddy fields, is very limited. If a farmer wants to enlarge his farm, he must purchase or borrow farmland from other farmers. This means that the development of large-size farming inevitably breaks the structure of traditional small farming communities.

The traditional farming community has several attractive characteristics to politicians. Traditional small-size farmers have cultivated the same land for generations and have strong community ties. The need to share irrigation water leads farmers to cooperate on issues in which they have common interests. These characteristics allow farmers to easily consolidate their support for politicians.

In addition, the number of registered voters per member of the Diet (parliament) is smaller in rural than in urban areas. While this rural-urban disparity was reduced to some degree in the 1994 reform of the electoral system, rural voters still have nearly three times the voting power of their urban counterparts. This disparity has maintained the heavy weight of farmers' votes.

It has therefore been in the interests of politicians to maintain the structure of the traditional small farming community, and to obtain the electoral support of farmers. This has been the primary strategy of the Liberal Democratic Party (LDP), which has ruled the government for almost the entire postwar period.

The collusion between LDP politicians and farming communities also benefits the Japanese Ministry of Agriculture, Forestry, and Fisheries (MAFF). MAFF has been chronically criticized for its extravagant personnel practices and budget.⁴ In order to maintain its staff and budget, MAFF requires the support of LDP politicians.

A natural consequence of pricing mechanisms would be the replacement of small-size farmers by large-size farmers. Such a situation is undesirable for MAFF and rural politicians. Thus, MAFF and these politicians need a special organization to subvert the market mechanism, and this role has been filled by the agricultural cooperatives collectively known as Japan Agriculture (JA). JA not only lobbies politicians and provides services to farmers but also observes and controls members' activities, both directly and indirectly.

JA also functions as a *de facto* subgovernmental body that helps MAFF create and enforce policy. For example, many MAFF subsidies (including low-interest loans) for farmers are distributed through JA. Thus, MAFF does not introduce policies without considering JA's interests.

The political dynamics among small-size farmers, MAFF, politicians, and JA are summarized in Fig. 1. Since this collusion has benefited these parties at a cost to society in general, great care is taken to ensure that their true objectives are concealed. MAFF has always favored small farming communities in policymaking and policy enforcement. While simultaneously stating the promotion of large-scale farming as its "official" objective, MAFF policies tend to be extremely complex and ambiguous. It is thus difficult for consumers (and other outside interests) to be fully informed of those policies' implications and effects. Likewise, JA's structural and operational complexity has been a strategy for camouflaging its real function.

The Agricultural Cooperative Law guarantees farmers freedom in establishing agricultural cooperation, stipulating that there is no obligation for an agricultural cooperation to join the JA system and that farmers are free

⁴ As in 2004, the number of personnel in MAFF was nearly five times that of the Ministry of Economy, Trade, and Industry.

to join or leave agricultural cooperation as they see fit. However, under implicit pressures from MAFF and rural communities, almost all farmers “voluntarily” join JA or “voluntarily” renounce the establishment of other agricultural cooperatives.

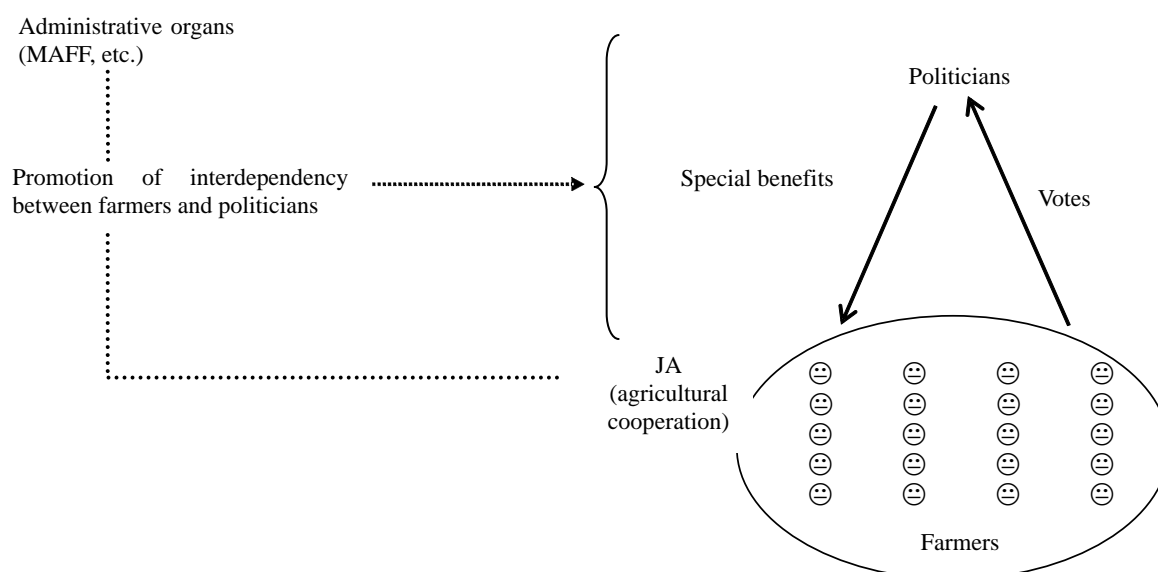


Fig. 1 Political dynamics among farmers, politicians, MAFF and JA

Many JA businesses have enjoyed heavy protection, as well as regulation, by the government. For instance, JA was given a monopolistic position in the collection of rice and the sale of fertilizer.

JA's businesses are not limited to agriculture-related activities, such as operation of joint-use agricultural facilities, joint shipping of agricultural commodities, joint purchasing of agricultural inputs, and the establishment of agricultural machinery centers; JA also provides almost all services in rural life. JA's nonagricultural businesses include financial activities (banking and insurance), supermarkets, ceremony halls, gasoline stations, travel ticketing, and land development, and these have been increasing. Currently, two-thirds of JA officers are devoted to nonagricultural activities.

Among JA's businesses, banking and insurance services are the most profitable. Banking and insurance businesses had been under heavy supervision of the Ministry of Finance (MOF) up until the early 1990s. MOF's various regulations on the financial market prevented weak financial companies from collapsing. This is known as “the convoy system”. Under the convoy system, MOF provided particularly favorable treatments toward JA's financial activities. For example, JA was given more freedom than ordinary commercial banks to set up branch locations, its term-deposit interest rates, and insurance premiums. Because of MOF's favorable treatments, JA enjoyed stable profits from its banking and insurance activities.

JA's farming-support services are convenient for small-size farmers. Although entrepreneurial large-size farmers have made efforts to develop their own supply and distribution channels, traditional small-size farmers, who continue to make up the overwhelming majority of JA, have become more and more dependent on its services. Thus, despite deregulation of the market for farm products and farm inputs in the 1980s and 1990s, JA has maintained its market-dominant position in the supply and distribution of these products and inputs.

Farmers find it difficult to avoid relying on JA services, thanks to the wide scope of its operations. Not only small-size farmers but also large-size farmers join JA and use some of JA's services. Even those who are critical of

JA avoid overt opposition to the organization for fear of retaliation from both the organization and other farmers. For these individuals, the only realistic form of resistance is reducing their reliance on the organization.

3. Farmland alchemy

The largest source of pork barreling for small-size farmers by politicians is the “alchemy” of farmland. This alchemy has been treated as a taboo issue by the Japanese mass media and academia, as it involves deep-seated and often troubling issues. Godo (2007) wrote probably the first paper in English to extensively discuss the alchemy of farmland in Japan. The main assertion of this study can be summarized as follows.

(1) In Japan, “high quality for farming” in practice means “high potential for farmland conversion.” Favorable conditions for modern farming are flatness, abundance of sunlight, conveniently sized blocks of well-shaped plots, a good supply and drainage of water, and good access to roads. However, these five conditions are equally favorable for the conversion of farmland to nonagricultural uses such as shopping centers or public facilities.

(2) Because farmland has various externalities, such as prevention of floods, numerous laws have been written protecting and regulating the use of farmland. Among these, the law concerning the Construction of Agricultural Promotion Areas (LCAPA) is particularly important. The LCAPA authorizes municipal governments to designate the zoning of Exclusively Agricultural Areas (EAAs). Farmers in EAAs are responsible for using farmland for farming purposes only. Abandonment of farmland and conversion to nonagricultural uses are prohibited. Under MAFF’s favorite slogan “increase the food sufficiency rate”, MAFF allocates a large number of farmland improvement investments to EAAs. These investments increase not only agricultural productivity but also the potential for farmland conversion. In addition, farmland in EAAs receives favorable treatments in taxation and allocation of agricultural subsidies.

(3) On the surface, the laws regarding farmland use appear strict. In practice, however, the implementation of those laws is problematic. Farmland-use regulations are often manipulated if the authorities are subject to strong political pressure. A small-size farmer’s “ideal” scenario is that his farmland is initially included in an EAA so that he can enjoy agricultural subsidies and MAFF farmland improvement investments, as well as a reduction in asset taxes. MAFF investments then increase not only agricultural productivity but also the value for nonagricultural land use when conversion is permitted. Thus, when a farmland conversion plan is implemented, the farmer’s land will ideally be excluded from the EAA and the plan quickly approved by the local governor so that the farmer can also enjoy capital gains from his land.

(4) In order to realize this ideal scenario, small-size farmers usually join forces to pressure local authorities and policymakers. Although farmers cannot control critical factors, such as when and how a farmland conversion plan is approved, public construction projects provide the best conditions for land conversion. The public sector usually purchases farmland at a higher price than the private sector, and favorable tax treatment is granted when farmland is sold for public sector use. A large private development, such as a factory site or a shopping center, is the “second-best” scenario, because prices tend to increase for these large-scale developments. As opportunities for public construction projects or large private development plans are limited, politicians are not always able to deliver such desirable opportunities to their farming constituents. However, in the long run, the possibility of securing a desirable land conversion can increase if these politicians continue their lobbying efforts.

(5) An overwhelming majority of farmland owners (i.e., small-size farmers) are more concerned with

deriving capital gains from land conversions than making profits from farming. They prefer to maintain the structure of traditional small farming communities because it is favorable for forming good connections (including informal connections) with government authorities and policymakers.

(6) The ideal scenario also increases the national budget for farmland investments and public construction works, thus benefiting MAFF, which manages rural public construction works. Thus, MAFF welcomes the ideal scenario. MAFF turns blind eye to the manipulation of farmland use regulations. Obviously the ideal scenario contradicts with MAFF's slogan "increase the food sufficiency rate", MAFF needs to hide the realities of farmland use regulations from the eyes of consumers (otherwise, MAFF will face difficulties in maintaining its extravagant fiscal expenditures). To do so, MAFF makes the system of farmland use regulations complexed so that outsiders cannot detect the realities.

(7) Since the ideal scenario is based on extensive collusion between small-size farmers and politicians, the expectation of the ideal scenario increases JA's presence in rural political dynamics. In addition, small-scale farmers who receive proceeds from the sale of farmland usually shift these monies to their JA accounts, producing more profit for JA's banking businesses. Thus, JA also encourages the ideal scenario.

4. Rice policy

4.1 Political importance of rice

Even if small-size farmers do not earn profits from it, they still try to keep farming for two reasons. First, asset taxes are low as long as they keep farming. Second, by keeping their commitment to water usage in the rural community, they can maintain close relationships with other farmers, which in turn is necessary to maintain their solidarity as a voting group.

Simultaneously, however, small-size farmers tend not to devote a great deal of time to farming, because they earn their living mainly from off-farm income. Thus, small-size farmers need a crop that can be grown with minimum labor inputs. In Japan, that crop is rice. Labor-saving technologies (such as agricultural machinery, agricultural chemicals, and irrigation systems) are developed mostly for rice farming. In addition, MAFF provides subsidies for JA's construction of joint-use facilities for rice farming. These facilities help part-time farmers, whose farms are too small to include individual rice milling and storage facilities.

Politicians demonstrate their allegiance to small-size farmers by displaying their efforts to protect rice, thus explaining why Japanese politicians are extremely sensitive to rice policy.

4.2 Government-led rice production cartel

In addition to heavy border protection for rice and various subsidies for rice farming, MAFF supported a special program aiming at supporting rice prices, the across-the-board set-aside program. This program, considering a government-led rice production cartel, was first established in 1970. Every year, MAFF set a target acreage of paddy fields to be diverted from rice planting so as to curtail rice production. The target acreage was allocated among all villages in Japan. All farmers in the villages collaborated to achieve the allocated acreages under JA's guidance and supervision. Around one-third of paddy field was diverted from rice planting. Farmers grew alternative crops, such as wheat, soy, and vegetables, which were less profitable, in the diverted paddy fields. MAFF provided financial support to rice farmers according to the acreage diverted from rice planting; It did not fully compensate for the reduction of rice income at the farm household level. Yet in the aggregate, the cartel effect of the across-the-board set-aside program benefited rice farmers by maintaining high rice prices. Thus, JA's

ability to ensure the support of rice farmers was critically important to enact the across-the-board set-aside program. Under this program, around 20 to 40 percent of paddy field was diverted from rice planting.

From 1970 to 1994, MAFF did not have any written laws for carrying out the set-aside program. Instead of written laws, MAFF's administrative guidance, which had no legal legitimacy, coordinated the set-aside program. The Staple Food Law of 1995 was the first written law that stipulated the set-aside program. The Staple Food Law leaves farmers to make decisions as to whether to participate in the set-aside program. But the law did not make practical changes in the program. Persuaded by MAFF and JA, all the rice farmers joined the set-aside program from 1970 to 2006. But, as it will be discussed below, it became increasingly difficult to convince farmers to do so, and this led to an extensive revision of the set-aside program in the 2007 reform.

4.3 MAFF's intervention in the domestic rice market

For Japanese consumers, rice is the staple food. Although the average household spends only 1 percent of its expenditures on rice, rice is included in every meal. Japanese eat rice steamed, without any spices or condiments. Because of this cooking style, Japanese consumers are sensitive to the quality of rice. Top-quality rice is often considered suitable as a gift, and is sold as such in Japanese department stores, while low-quality rice is used for inexpensive meals.

MAFF has a long history of rice market intervention. Until 1995, the Food Control Law controlled the distribution of rice. According to the Food Control Law, farmers had only two legal ways to sell rice. One was as "government rice," and the other was as "voluntary rice." The former was purchased by MAFF at government-set prices (which differ depending on the shape and weight of the grain). The latter was purchased by JA at market price. In both cases, market channels were strictly controlled under the law.

Farmers then determined how to sell their rice. Generally, high-quality rice was sold as voluntary rice and low-quality rice was sold as government rice. Since MAFF determined the procurement price for government rice before the harvest season, the percentage of government rice tended to increase in bumper years, when the market price sank.

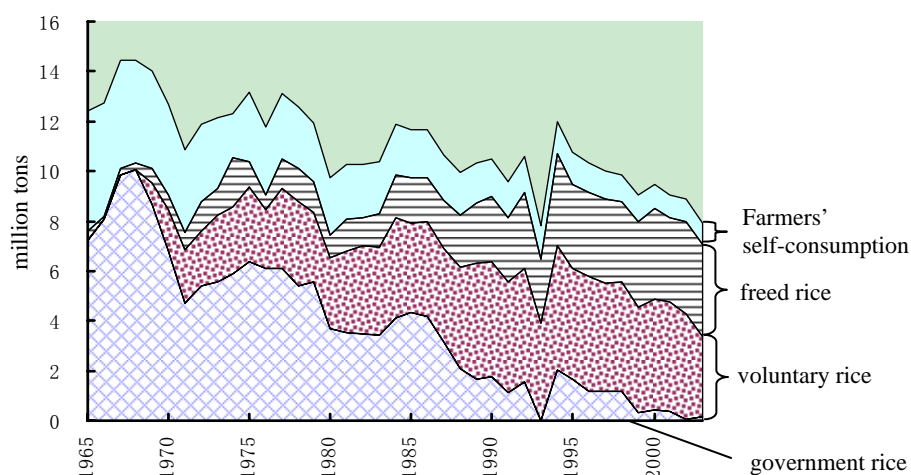


Fig. 2 Total production and distribution of rice, 1965-2003

Data source: MAFF documents.

All rice traders and rice market channels were required to be authorized under the Food Control Law. In practice, however, there was a significant amount of "illegal rice" (so-called freed rice) that circumvented the law.

This is because the legal rice distribution system (as stipulated by the Food Control Law) was too rigid to meet consumers' changing preferences. In particular, top-quality rice sold at higher prices in the illegal rice market. A significant number of farmers and consumers ignored the Food Control Law in favor of illegal rice, and MAFF also turned a blind eye to its purchase and sale.

In 1995, MAFF replaced the Food Control Law with the Staple Food Law, which legalized freed rice. The classifications of government rice, voluntary rice, and freed rice remained until 2005, when MAFF abolished these classifications altogether. While MAFF continued to procure rice for buffer stock, distribution was allowed on a commercial basis without MAFF's administrative interventions.

Fig. 2 shows the volumes of those three types of rice, that is, government, voluntary, and freed rice. As can be seen, government rice had been losing importance in the rice market since the introduction of voluntary rice in 1969. The percentage of government rice went down to less than 20 percent by the end of the 1980s.

5. The 2007 reform

Until the early 1990s, the political ties between politicians, small-size farmers, JA, and MAFF remained strong. However, there was a turning point in Japan's political dynamics in the middle of the 1990s, which was brought on by two factors.

Firstly, JA's the financial services faced an increasingly harsh business climate. MOF implemented financial market liberalization in the mid-1990s, which deprived JA's banking and insurance businesses of various privileges. As JA's banking and insurance businesses had been strongly protected in the financial markets, financial market liberalization profoundly damaged JA's profitability. Secondly, the reform of the lower house election system in 1994 reduced the voting power of JA. In the 1994 election reform, the former multi-seat system was replaced with the single-seat system. Before the 1994 election reform, JA was proud of its crafty techniques of dividing votes to different lawmakers in a single constituency. In the former multi-seat system, LDP needed to have a plural number of politicians elected in a single constituency in order to stay power. Thus, JA's technique of dividing votes was so attractive that LDP signaled its strong allegiance to JA. However, under the new single-seat system, JA's such technique became useless any more. Accordingly, JA's political voice became less influential. In addition, the 1994 election reform allocated less seats to rural areas. This also reduced JA's voting power.

These two factors seriously undermined JA's political power and, accordingly, organizing ability. As a result, each year it became more difficult for JA to persuade all rice farmers to join the across-the-board set-aside program. It was thus only a matter of time before MAFF would be forced to implement a comprehensive revision of its rice policy.

An extensive agricultural policy reform was ultimately launched in 2007. The 2007 MAFF reform can be characterized by two aspects. At first, the set-aside program was completely changed from the former compulsory across-the-board set-aside program to the voluntary set-aside program. This revision left it entirely to individual farmers' discretion whether to participate in the set-aside program in exchange for receiving subsidies or to grow rice freely by giving up subsidies.

Subsidies for the set-aside policy were also revised. The 2007 reform marked the first introduction of direct-payment subsidies on a large scale. Price support subsidies for wheat, barley, potatoes, soybeans, and sugar beets, the five primary farm products grown in paddy fields set aside from rice farming, were replaced by direct-payment subsidies. Some of the new direct-payment subsidies are based on average agricultural production

in the base years 2004-2006, while others are directly linked to agricultural production.

European and North American countries also have direct-payment type subsidies. As in those cases, Japan's recipients must participate in the new set-aside program. This requirement aims to support rice prices for JA, which is still the dominant distributor in the Japanese rice market.

Moreover, Japan's direct-payment subsidies are unique in that there is an additional prerequisite for recipients. These recipients must be core farmers. Core farmers are those designated by the municipal governments as the bearers of local agriculture. More precisely, there are two types of core farmers: individual-type core farmers and group-type core farmers. The former are either individual farm households whose farm size is over 4 hectares. The latter are agricultural farming groups composed of farmers in the same community to form over-20-hectare joint-farming groups. Theoretically, any economic entity is allowed to organize group-type core farmers; in practice, however, only JA does so. This is because the paperwork for group-type core farmers' applications is too complicated for outsiders to compile. (JA's close relationship with MAFF allows JA to easily complete all paperwork.)

Why do new direct-payment subsidies focus only on core farmers? According to its official announcements, MAFF aims to raise agricultural productivity by promoting large-size farming through the concentration of agricultural subsidies in core farmers. However, these announcements should be read with caution. For example, it is unclear whether farming groups organized by JA are actually efficient. JA's farming groups are sometimes nothing more than patchworks of small-size farmers. Without making substantial changes in practice, JA is known to organize small-size farmers into farming groups for the sole purpose of receiving subsidies, to the benefit of both parties. Obviously, this is the case of mistaking the means (creating farming groups) for the ends (receiving subsidies). Even worse is the fact that JA deprives tenant farmland to individual large-size farmers by persuading farmland owners who hitherto loaned farmland to individual large-size farmers to instead join JA's farming groups. This is called deprivation and confounds individual large-size farmers who have actual high productivity.

In sum, the 2007 reform supports JA's efforts to maintain its organizing ability by giving incentives to farmers to participate in farming groups organized by JA. Thus, it is unclear whether the 2007 reform will in fact improve the productivity of Japanese agriculture.

The 2007 reform has another serious problem. While the real effect of this reform will be a major topic of future empirical studies, there are good reasons to believe that it can stimulate agricultural production by contradicting the original purpose of "reform." Clearly, the 2007 reform stimulated rice production because farmers were allowed to depart from the set-aside program. In particular, small-size farmers who hold farmland in expectation of capital gains from farmland conversions, and therefore are unconcerned with farm income, have surged into rice production because rice is the most labor-saving crop. As a result, rice prices declined sharply in 2007. Even for farmers who joined the voluntary set-aside program, the 2007 reform stimulated the production of wheat, barley, potatoes, and sugar beets, because the farmers anticipated a shift in the base year production. Currently, the average production of the three years 2004-2006 is used for direct-payment subsidies. However, farmers expect that the base year will be updated in the near future,⁵ stimulating the production of these four crops in paddy fields set aside from growing rice.

6. Japan's notifications of domestic agricultural support policies

⁵ See Hart and Beghin (2006) for discussion of this effect.

The WTO sets rules for capping and reducing trade-distorting domestic agricultural support. Domestic support policies are divided into three boxes—amber, blue and green, depending on the effects on production and trade. Non-trade-distorting policies are put into the green box and were exempt from reduction commitments. Further exemptions fall into the blue box, including production-limiting policies that base payments on fixed yields and acreage. Japan's first blue box program was introduced in 1998, but government expenditures for the blue box program have remained at an insignificant level thus far. All other trade-distorting support policies are put into the amber box. Developed countries committed to reduce the total value of these policies by 20 percent, as measured by the AMS, during the implementation period. However, product-specific domestic support that does not exceed 5 percent of the total value of production of a basic agricultural product and non-product-specific domestic support that does not exceed 5 percent of the value of the total production are not required to be included in the AMS (These amounts are called de minimis.)

Following this three-box categorization, the Japanese government has submitted its notifications on its domestic agricultural support programs to the WTO for 1995-2005. In addition to these official notifications, this section presents our estimates of Japan's "shadow" notifications for 2006-2007 in order to trace Japan's most recent agricultural policy reforms. Table 2, Table 3 and Table 4 are summaries of the official and shadow notifications.

Table 2 Japan's notifications of domestic support (in billion yen)

	Year	Official 1995	Official 1996	Official 1997	Official 1998	Official 1999	Official 2000	Official 2001	Official 2002	Official 2003	Official 2004	Official 2005	Shadow 2006	Shadow 2007
Green Box	Total	3,169.0	2,818.1	2,651.7	3,001.6	2,685.9	2,595.3	2,546.9	2,275.2	2,086.3	2,098.3	1,916.3	1,875.4	1,895.1
	(a) General service	2,687.8	2,323.5	2,182.2	2,594.2	2,308.3	2,165.7	2,094.5	1,743.3	1,603.6	1,658.9	1,465.4	1,431.3	1,308.2
	(b) Public stockholding for food security purposes	59.9	61.5	67.3	56.6	46.8	46.4	43.3	36.3	31.9	28.2	24.5	24.6	26.9
	(c) Domestic food aid	28.1	27.0	26.4	13.8	9.3	5.4	5.3	4.8	2.5	0.0	3.2	0.0	0.0
	(d) Decoupled income support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.7
	(f) Payments for relief from natural disasters	68.3	65.8	62.0	58.6	57.9	55.5	54.1	53.6	48.3	48.0	49.0	51.5	46.9
	(g) Structural adjustment assistance provided through producer retirement programmes	119.4	98.6	90.9	84.9	85.4	88.3	97.6	162.7	158.1	156.5	155.8	156.0	157.2
	(h) Structural adjustment assistance provided through resource retirement programmes	7.9	0.5	0.5	0.5	0.5	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0
	(i) Structural adjustment assistance provided through investment aids	116.9	107.9	89.5	77.4	54.3	55.2	42.4	31.2	23.5	22.8	19.9	17.0	17.4
	(j) Environmental programmes	80.7	133.3	132.9	115.6	123.4	145.3	176.3	210.2	195.4	167.1	176.7	173.2	219.0
	(k) Regional assistance programmes	0.0	0.0	0.0	0.0	0.0	33.0	33.0	33.0	23.0	16.8	21.8	21.8	21.8
Blue Box		0.0	0.0	0.0	50.2	92.7	92.7	91.1	86.5	68.2	67.8	65.3	70.1	42.4
Amber Box	Price support	3271.3	3125.8	2967.9	641.5	619.6	503.9	389.7	404.0	405.6	403.0	394.7	406.9	373.1
	Domestic payment	248.7	215.5	214.7	177.9	138.8	215.4	289.1	349.1	253.1	228.9	198.6	178.9	133.2
	(Share of price support in total AMS)	93%	94%	94%	84%	83%	71%	58%	55%	63%	66%	67%	74%	79%
	(De minimis)	12.5	11.4	11.7	53.1	10.4	10.8	12.0	23.2	16.9	24.1	41.3	32.9	34.7
Current total AMS		3,507.5	3,329.7	3,170.8	766.5	747.8	708.5	666.7	730.0	641.8	607.8	593.3	552.9	471.6
(Commitment)		4,800.6	4,635.0	4,469.5	4,304.0	4,138.4	3,972.9	3,972.9	3,972.9	3,972.9	3,972.9	3,972.9	3,972.9	3,972.9

Agricultural policy reforms and WTO commitments on domestic support in Japan

Table 3 Japan's green box programs (in billion yen)

Measure type	Name and description of measure with reference to criteria in Annex 2	Official	Official	Official	Official	Official	Official	Official	Official	Official	Official	Official	Shadow	Shadow
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
(a) General services	Research:	84.9	65.3	66.0	87.5	82.1	82.8	89.7	90.5	83.9	85.1	86.8	78.6	74.5
	Plant protection:	10.0	10.1	10.4	10.7	10.4	11.5	11.1	11.0	11.9	11.2	10.9	11.3	12.0
	Animal health control:	6.1	4.7	4.8	8.6	5.3	6.7	6.1	9.1	6.0	6.8	7.1	8.6	9.1
	Extension services:	49.8	49.1	57.0	42.9	40.7	39.8	41.3	40.6	36.5	27.9	24.2	4.9	4.9
	Facilitation of management of agricultural organizations:	77.0	69.9	65.0	70.8	72.8	69.3	64.1	62.6	58.9	57.7	57.8	48.3	47.0
	Compilation of statistical data and information:	6.1	6.1	5.4	5.4	7.2	8.2	8.4	6.4	5.9	6.1	6.5	4.2	3.0
	Promotion of soil conservation and low-input farming:	0.5	0.5	0.5	0.4	0.4	-	-	-	-	-	-	-	-
	Extension and infrastructural services for technological improvement of agricultural production:	50.6	47.0	48.3	71.7	59.0	49.4	37.1	51.5	21.7	16.3	50.2	15.3	14.3
	General services for livestock industry including extension and infrastructure:	101.3	85.0	97.1	123.7	97.6	133.5	189.7	105.0	107.8	93.9	58.5	77.3	68.9
	Programmes for improvement of food marketing, processing and consumption:	21.1	17.1	16.8	19.9	20.3	20.4	17.7	14.8	10.2	10.2	10.2	11.7	7.6
	Inspection and information services for agricultural production materials:	9.6	7.9	8.1	9.5	8.4	9.2	10.0	9.6	3.4	3.4	3.4	1.6	1.6
	Infrastructural services for agricultural sector and rural area:	1,907.9	1,680.8	1,487.7	1,800.7	1,552.4	1,428.4	1,342.4	1,067.6	950.7	909.9	840.0	854.0	800.6
	Disaster rehabilitation services:	111.5	36.4	70.3	92.7	87.2	54.0	30.7	21.6	32.3	112.5	41.6	46.8	8.1
	Infrastructural services for market facilities:	20.1	12.4	10.4	21.4	13.8	9.9	8.3	6.8	5.7	6.0	-	11.6	12.5
	Advisory services for structural improvement:	48.3	53.4	54.9	49.3	51.8	44.8	47.1	51.0	48.6	57.9	34.7	9.6	9.3
	Personnel expenses for the Government officials:	183.0	177.8	179.5	179.0	198.9	197.8	190.8	195.2	220.1	254.0	233.5	247.5	234.8
(b) Public stockholding for food security purposes	Public stockholding:	59.9	61.5	67.3	56.6	46.8	46.4	43.3	36.3	31.9	28.2	24.5	24.6	26.9
(c) Domestic food aid	School lunch programmes:	28.1	27.0	26.4	13.8	9.3	5.4	5.3	4.8	2.5	0.0	3.2	0.0	0.0
(d) Decoupled income support	Cross-commodity income stabilization based on historical acres:	-	-	-	-	-	-	-	-	-	-	-	-	97.7
(f) Payments for relief from natural disasters	Agricultural insurance scheme:	66.4	64.5	61.2	58.1	57.6	55.3	54.0	53.6	48.3	47.8	48.9	51.5	46.9
	Natural disaster relief loans:	1.9	1.3	0.8	0.5	0.3	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0
(g) Structural adjustment assistance provided through producer retirement programmes	Farmers' pension programmes:	117.6	98.4	90.7	84.9	85.4	88.3	97.6	162.7	158.1	156.5	155.8	156.0	157.2

(to be continued)

Agricultural policy reforms and WTO commitments on domestic support in Japan

	Land retirement programmes for citrus production:	1.8	0.2	0.2	-	-	-	-	-	-	-	-	-	-
(h) Structural adjustment assistance provided through resource retirement programmes	Programmes for reduction of number of livestock:	7.9	0.5	0.5	0.5	0.5	0.5	0.4	0.1	0.0	-	-	-	-
(i) Structural adjustment assistance provided through investment aids	Agricultural loans:	116.9	107.9	89.5	77.4	54.3	55.2	42.4	31.2	23.5	22.8	19.9	17.0	17.4
(j) Environmental programmes	Payments for conversion from rice production:	80.7	133.3	132.9	115.6	116.7	136.2	166.7	200.6	185.8	158.8	168.4	166.5	212.4
	Support programme for reduction of environmental burden due to dairy farming:	-	-	-	-	6.7	9.1	9.6	9.6	9.6	8.3	8.3	6.7	6.6
(k) Regional assistance programmes	Direct payment to farmers in the hilly and mountainous areas:	-	-	-	-	-	33.0	33.0	33.0	23.0	16.8	21.8	21.8	21.8
Total		3,169.0	2,818.1	2,651.7	3,001.6	2,685.9	2,595.3	2,546.9	2,275.2	2,086.3	2,098.3	1,916.3	1,875.4	1,895.1

Table 4 Name and description of the green box programs

Measure Type	Name and description of measure with reference to criteria in Annex 2	
(a) General services	Research:	General research, research in connection with environmental programmes, and research programmes relating to particular products.
	Plant protection:	General and product-specific pest and disease control measures.
	Animal health control:	General and product-specific animal health control for livestock and animal medicine inspection.
	Extension services:	Education, extension and advisory services, and programmes for practical application of new technologies.
	Facilitation of management of agricultural organizations:	Facilitation of training and advisory services through agricultural organizations.
	Compilation of statistical data and information:	Compilation and provision of statistical data and information for producers and consumers.
	Promotion of soil conservation and low-input farming:	Extension and advisory services, research programmes for soil conservation and low-input farming.
	Extension and infrastructural services for technological improvement of agricultural production:	Extension and advisory services, research programmes, and infrastructural services for technological improvement of agricultural production.
	General services for livestock industry including extension and infrastructure:	Infrastructural services, extension and advisory services on technologies, and information services for promotion of livestock products.
	Programmes for improvement of food marketing, processing and consumption:	Providing marketing information to consumers, research related to food or agricultural products processing, marketing promotion, and inspection.
	Inspection and information services for agricultural production materials:	Inspection, research, extension and advisory services for agricultural machinery, fertilizers, agricultural chemicals, seeds and seedlings.
	Infrastructural services for agricultural sector and rural area:	Construction of irrigation/drainage facilities and rural roads, land consolidation.
	Disaster rehabilitation services:	Reconstruction of irrigation/drainage facilities and rural roads damaged by natural disasters.
	Infrastructural services for market facilities:	Provision or construction of market facilities.
(b) Public stockholding for food security purposes	Advisory services for structural improvement:	Advisory services for effective farm land utilization.
	Personnel expenses for the Government officials:	Personnel expenses for the Government officials.
(c) Domestic food aid	Public stockholding:	Public stockholding of rice, wheat, barley, soya beans and feedgrains.
	School lunch programmes:	Supply of rice, milk, and fruit juice for school children at subsidized prices.
(d) Decoupled income support	Cross-commodity income stabilization based on historical acres:	Decoupled income support based on historical acres for farmers harvesting soybeans, wheat, barley, sugar cane and potato for starch

(to be continued)

Agricultural policy reforms and WTO commitments on domestic support in Japan

(f) Payments for relief from natural disasters	Agricultural insurance scheme:	Government subsidies on premiums of agricultural insurance.
	Natural disaster relief loans:	Loans for relief of damaged farmers by natural disasters.
(g) Structural adjustment assistance provided through producer retirement programmes	Farmers' pension programmes:	Payments of pension to retired farmers on condition of transfer of the management.
	Land retirement programmes for citrus production:	Payments for land retirement from citrus production to adjust to changes in supply and demand situation caused by trade liberalization.
(h) Structural adjustment assistance provided through resource retirement programmes	Programmes for reduction of number of livestock:	Payments for slaughtering of sow and cow to avoid overproduction of pork and milk.
(i) Structural adjustment assistance provided through investment aids	Agricultural loans:	Interest concessions for government programmed agricultural loans.
(j) Environmental programmes	Payments for conversion from rice production:	Payments for maintaining paddy fields in environmentally good condition through growing any plants other than rice or other appropriate managements.
	Support programme for reduction of environmental burden due to dairy farming:	Payments to dairy farmers who practice appropriate management to tackle environmental problems
(k) Regional assistance programmes	Direct payment to farmers in the hilly and mountainous areas:	Payments for farmers who continue farming activities for at least five years under the community agreements.

6.1 Estimation procedure

The first part of this subsection outlines an estimation procedure for shadow notifications. The details of our estimation and projection procedures for the shadow notifications are available in the appendix of Godo and Takahashi (2008).

We first tried to replicate the 2004 and 2005 data, however, the official documents do not provide any information on data sources and details of calculation. Thus, we had to make a best guess based on the financial statements of the government and relevant extra-governmental organizations. Fortunately, we succeeded in replicating de minimis, AMS, and the amber and blue boxes for 2004 almost completely. Based on this replication process, we prepared shadow notifications for de minimis, AMS, and the blue and amber boxes for 2006 with little difficulty. Estimation for 2007, however, is problematic for two reasons. Firstly, some data on crop production and fiscal expenditures are yet not available. For crop production, which is necessary to calculate AMS, we used the data for 2006 in place of data for 2007. For fiscal expenditures, we used provisional figures of accounts in place of the settlement of accounts. Another and more critical problem in estimation for 2007 is the treatment of the new direct-payment subsidies introduced in the 2007 reform. The Japanese government has not made any official announcements on how the new subsidies should be classified. As mentioned in the previous section, some are base year production-based subsidies that should be in the green box, and some are annual production-based subsidies that should be in the amber box. However, there are “gray zones” in characterizing the new subsidies. We made a best guess based on various governmental documents and prepared data for 2007. However, we admit that the estimates for 2007 are less accurate than those for 2006.

The green box was more difficult to replicate. From the government report on the national budget, we can find items of expenditure that seem to correspond to the components in the official notifications. However, there are gaps between them. For example, “extension and advisory services, research programmes and infrastructural services for technological improvement of agricultural production” in the government report on the national budget seems to correspond to “extension and infrastructural services for technological improvement of agricultural production” in Japan’s official notification. However, the expenditure of the former is 44 percent larger than that of the latter. This is because the former includes the personnel expenses of officers who are not engaged in extension services. In Japan’s official notifications, the Japanese government calculates components of the green box based on data for insiders only. We thus estimated “extension and infrastructural services for

technological improvement of agricultural production” by dividing “extension and advisory services, research programmes, and infrastructural services for technological improvement of agricultural production” by 1.44 (144 percent) for 2006 and 2007. Likewise, we estimated all components of the green box for 2006 and 2007.

6.2 Characteristics of Japan’s green box

Most noticeably, “infrastructural services for the agricultural sector and rural areas” under general services makes up the largest portion of the green box (see Table 3 and Table 4). This expenditure corresponds to MAFF public construction works, such as farmland improvement investments and construction of rural roads. As discussed in section 3, these construction works are the most welcomed program for small-size farmers, who own farmland with the expectation of future capital gain and are unwilling to work long hours at farming.

Traditionally, the Japanese government has used public construction works as an antirecession fiscal policy. This is why expenditure for infrastructural services for agricultural sector and rural area surged in 1998, when the Japanese economy plunged into the worst economic slump since the oil crises of the 1970s. However, in response to increasing criticism of public construction by Japanese citizens, the national budgets for infrastructural services for agricultural sector and rural area have been decreasing since then. In particular, from 2001 to 2005, when Prime Minister Koizumi—who gained popularity by posing as a dauntless reformer, was in power, the budgets for public construction works were severely rolled back.

According to the reduction of expenditures for infrastructural services in agricultural sector and rural area, the total amount of the green box also decreased during this period. “Environmental programmes” increased by 50 billion yen in 2007 in response to the MAFF reforms. However, since infrastructural services for agricultural sector and rural area kept declining, the total amount of the green box did not change much between 2006 and 2007.

“Environmental programme” corresponds to the subsidy for rice set-aside program. Farmers who join the set-aside program receive subsidies according to the acreage of paddy field diverted from rice planting. This acreage-base subsidy program is classified as “environmental programme”. It is unclear whether this program has any effects for protecting environment. In spite of such unclearness, however, WTO accepts this treatment.

6.3 Characteristics of Japan’s amber box

When WTO started in 1995, Japan had amber box programs for rice, soybeans, wheat, barley, sugar, starch, beef and veal, meat of swine, and silk-worm cocoons. From 1995 to 1997, Japan’s amber box had been close to its commitment level.

In 1998, Japan’s amber box decreased significantly because rice was removed from the amber box in that year. Interestingly, there was no corresponding revision in the Staple Food Law, and MAFF continued to procure rice from farmers at administrative prices even after 1998. However, in its 1998 policy guideline, MAFF announced that government rice procurement should be limited to purchase of rice stocks for food security, thus indicating the removal of rice from the amber box. We (as well as an overwhelming majority of Japanese researchers) are skeptical of whether MAFF’s new guideline of 1998 had any practical meaning. In fact, even after 1998, MAFF’s procurement of rice has been occasionally done for the political purpose of supporting rice price. A typical example appeared in 2007. While MAFF’s rice stock was already at a sufficient level for the purpose of food security, MAFF decided to increase rice stock after receiving strong pressure from LDP politicians who wanted to get in favor with farmers⁶. In this case, MAFF’s rice procurement can be seen as a de facto market price

⁶ See page 5 in the morning paper of Nikkei as of October 26th, 2007.

support measure. Thus, there is enough ground for controversy about whether MAFF's rice procurement should be regarded as the green box measure.

In addition, since Japan's rice is protected by prohibitively high tariffs, abandonment of the administrative price may not reduce real protections for rice.⁷

However, we also recognize that MAFF's intervention in the rice market had been getting less and less effective after MAFF introduced voluntary rice in 1969. MAFF's rice procurement (i.e., government rice) had been decreasing throughout these three decades (see Fig. 2). Thus, even though there was not a clear-cut turning-point year (such as 1998), Japan needed to remove rice from the amber box at some time.

In computing the AMS for 1995-1997, Japan used the total production of rice as "eligible production." In the latter half of the 1990s, however, government rice made up less than 5 percent of total rice production. This is why the box shifting of rice did not make any significant increase in the total monetary value of green box in 1998.

Amber box support decreased by 80 billion yen in 2007 in response to MAFF reforms. De minimis made up only a limited portion of the amber box. Thus, there is little difference between AMS and current AMS throughout 1995-2007.

6.4 Characteristics of Japan's blue box

Japan had no blue box program when the Uruguay Round final agreements were concluded. The Rice Farming Income Stabilization Program (RFISP), which was implemented in 1998, was the first blue box program in Japan. RFISP can be seen as a countercyclical program. It stipulates that, if the market rice price falls below the average rice price of the previous three years, MAFF will provide income supports for farmers who join the set-aside program. As described above, almost all the rice farmers "voluntarily" participated in the set-aside program in 1998. RFISP seems inconsistent with the fact that MAFF continued procuring rice at administrative prices (i.e., government rice) even after the enactment of the Staple Food Law. A possible rationalization for RFISP is that with the government rice share only a limited portion of the rice market, the administrative prices do not significantly influence market rice prices. Indeed, an overwhelming majority of rice was distributed as either freed rice or voluntary rice at market prices in the latter half of the 1990s (see Fig. 2). It may not be a coincidence that Japan reported removal of rice from the amber box in the same year RFISP was implemented.

In 2007, RFISP was replaced by the Program for Rice Farming Structural Reform. This new program is scheduled to terminate in 2010.

7. Conclusion

Japan reduced its amber box expenditures to less than 20 percent of the commitment level set in the Uruguay Round agreements and underwent extensive decoupling reform in 2007. These two features may provide an impression of Japan as a model of compliance, at least regarding domestic agricultural policies.

This paper, however, showed two ironic realities of Japanese agricultural policy. Neither a sharp reduction of amber box expenditures nor Japan's 2007 reform, characterized by decoupling, necessarily mean there will be a reduction of trade-distorting effects. On the contrary, the 2007 reform may in fact stimulate domestic rice production.

(to be continued on Page 65)

⁷ See Blandford and Josling (2007) for discussion.