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1. Introduction

Japanese agricultural policy is at a crossroads following a change in national government in 2009. In 2007, Japan launched extensive agricultural policy reforms following the guidelines of the WTO, which requests that member countries reduce trade-distorting subsidies. However, the situation changed dramatically two years later when the Liberal Democratic Party (LDP), which had been in power almost entirely since 1955, lost in the general election and was replaced by the Democratic Party of Japan (DPJ). After entering government, the DPJ instigated drastic agricultural policy reforms, including new subsidies that contradicted the revised modularity on agriculture proposed by the WTO in December 2008.

The present paper aims to provide a comprehensive picture of Japan's agriculture in order to explain Japan's changing attitude about trade-distorting agricultural subsidies.

The remainder of this paper is organized as follows. Section 2 describes the political dynamics of the traditional Japanese agriculture sector. Farmland and rice, the two major issues in Japanese agricultural policy, are addressed in Sections 3 and 4, respectively. Sections 5 discusses the agricultural policy reforms that took place in 2007and 2009. Section 6 examines Japan's notifications of domestic support to the WTO and evaluates its projected support in light of the agreement and draft Doha modalities. Section 7 concludes.

2. The Political Dynamics of the Japanese Agricultural Sector

Section 2 begins by briefly reviewing the geographical and ecological characteristics of Japan's farm sector before discussing the policy problems affecting this industry. Although Japan receives substantial rainfall, rainwater flows quickly into the ocean because of the country's mountainous topography. Thus, farmers need a highly sophisticated water control system. As a result, Japan's water usage system for rice paddy fields, which consist of many small plots of land, is unique in the developed world. Water drawn from a floodgate as a part of a river system gradually flows through all the plots of a farming community in a set order (from the upper plots to lower plots). Because this system means that Japanese farmers share the same water sources, inappropriate water usage on one plot profoundly affects farming on the other plots on the same

paddy field plain. Thus, members of a farming community must collaborate to decide on the allocation of farmland and water.

A traditional farming community in Japan consists of approximately 20 households. Each farmer has several tiny plots of land in different locations on a paddy field plain. Therefore, even though the average individual farm size is approximately one hectare, farm ownership is expressed as a mosaic pattern. This structure is suitable for traditional small-scale farming because the manner in which each farmer's paddy field plots adjoin different farmers' plots at various points allows them to routinely observe each other's activities, thereby simplifying collaboration.

In contrast to the above-described traditional set-up, it has been estimated that the optimal farm size is over 15 hectares because of the labor-saving technology introduced since the Second World War, and that the production cost of rice could be halved if farmland was consolidated into such large-sized farms (Ministry of Agriculture, Forestry, and Fisheries, 1992). In reality, however, the average farm size has not increased sufficiently to capture this economy of scale. Almost 70 percent of Japan's farmland remains operated as inefficient-scale farms of less than three hectares and although large-sized farms that exceed 30 hectares have also emerged, the number remains small.

Table 1. *Comparison of household incomes in Japan, 2003*

	Farm size	Number of farm households (in thousand)	Household income per head (in thousand yen)	Percentage of farm income in total household income
Total		1,911	1,693	19
Commercial farm households (a)	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	159	1,561	34
	Above 3.0 ha	144	1,678	54
Salaried worker household	……	……	1,515	……

Sources: Ministry of Agriculture, Forestry and Fisheries, *Statistical Survey on Farm Management and Economy*; Ministry of Internal Affairs and Communications, *Family Income and Expenditure Survey*
Note (a): Commercial farm households are defined as having over 0.3 hectares of farmland or agricultural revenue over 0.5 million yen per annum

The agricultural productivity of small-scale farmers is low and so are the profits they earn from farming. This does not mean, however, that small-scale farmers lead poverty-stricken lives. On the contrary, the average income of small-scale farmers exceeds that of urban workers (Table 1) because they usually have stable non-farming incomes that they depend on to survive. Indeed, many small-scale farmers are affluent salaried workers who own farmland as a side business in order to take advantage of farmland regulations. The overwhelming majority of small-scale farmers prefer to maintain the structure of traditional small farming communities because it is favorable for retaining informal connections with government authorities and policymakers. Thus, inefficient small-scale farmers dominate the Japanese agriculture sector because political dynamics prevent the price mechanisms from functioning properly in the farmland market.

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

As a voting group, the traditional farming community has several characteristics that are attractive to politicians. First, traditional small-scale farmers have cultivated the same land for generations and have strong community ties because of their collaboration with other farmers. Second, farmers' voting rates are usually higher than are those of non-farmers and the number of registered voters per member of the *Diet* (parliament) is smaller in rural than it is in urban areas. Third, urban dwellers in Japan often show sympathy towards farmers, and the Japanese mass media tend to describe farmers as honest and weak people who need special protection from the government. It has therefore been in the interests of politicians to maintain the structure of traditional small-farming communities in order to retain the electoral support of farmers. This has been the primary strategy of the LDP over the past 60 years.

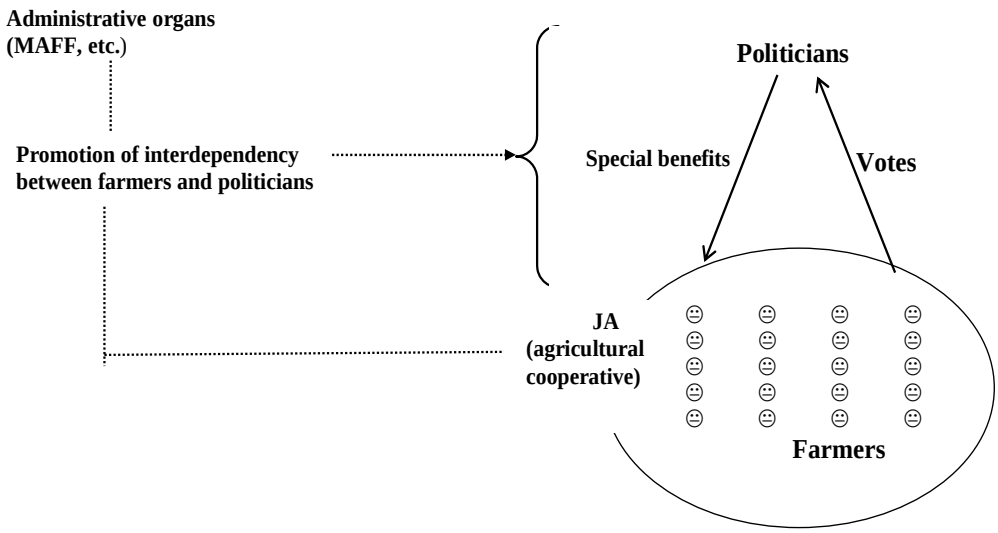
This collusion between LDP politicians and farming communities also benefits the Japanese Ministry of Agriculture, Forestry, and Fisheries (MAFF). The MAFF has been chronically criticized for its extravagant personnel practices and budgets,[1] and in order to maintain its staff and budget it requires the support of LDP politicians. The replacement of

[1] In 2008, the number of personnel in MAFF was nearly five times that in the Ministry of Economy, Trade, and Industry.

small-scale farmers by large-scale farmers is undesirable for the MAFF. Thus, it needs a special organization to impede the market mechanism that would lead to land consolidation, 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. It also functions as a *de facto* sub-governmental body that helps the MAFF create and enforce policy. Furthermore, some of the MAFF's subsidies for farmers (e.g., low-interest loans) are distributed through JA. Thus, the MAFF does not introduce policies without first considering JA's interests. The political dynamics among small-scale farmers, the MAFF, politicians, and JA are summarized in Figure 1.

Even though this mutually beneficial relationship clearly benefits the involved parties, it does not benefit society in general, and thus great care is taken to obscure the informal group's true objectives. Although the MAFF's public objective is to promote large-scale farming, its policies tend to be extremely complex and ambiguous. It is thus difficult for consumers (and other outside interests) to understand their implications and effects. Likewise, JA's structural and operational complexity has been a strategy for camouflaging its real influence.



Source: Authors' conceptualization

Figure 1. Political dynamics among Japan's farmers, politicians, the MAFF, and JA

Agricultural Cooperative Law guarantees farmers the freedom to establish agricultural cooperatives, stipulating that there is no obligation for an agricultural cooperative to join the JA system. Farmers are free to join or leave agricultural cooperatives as they see fit. However, under implicit pressure from the MAFF and rural communities, almost all farmers join JA and renounce the establishment of other agricultural cooperatives. 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 the operation of joint-use agricultural facilities, joint shipping of agricultural commodities, and joint purchasing of agricultural inputs (Godo 2001). It also provides a wealth of services to rural communities including financial services (banking and insurance), supermarkets, ceremony halls, gasoline stations, travel ticketing, and land development, and these activities have been increasing in recent years. Indeed, two-thirds of JA officers are now employed in non-agricultural activities (Godo 2001). Of JA's non-agricultural businesses, banking and insurance services are the most profitable.

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

3. Farming regulations and the conversion of farmland

The largest source of benefits that politicians offer to small-scale farmers comes from the manipulation of farmland regulations (see review by Godo (2007), who raised concerns about its impact on society). In Japan, the five 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 non-agricultural uses for private or public facilities.

Because farmland also has various externalities, such as the prevention of floods, numerous laws protect and regulate its use. Among these, the Law concerning the Construction

of Agricultural Promotion Areas is particularly important because it authorizes municipal governments to designate isolated farming zones termed Exclusively Agricultural Areas (EAAs). Farmers operating in EAAs are responsible for ensuring that farmland is used for farming purposes only. The abandonment of farmland and subsequent conversion to non-agricultural use is prohibited. Thus, the 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 financial treatment in terms of lowered taxation and the increased allocation of agricultural subsidies.

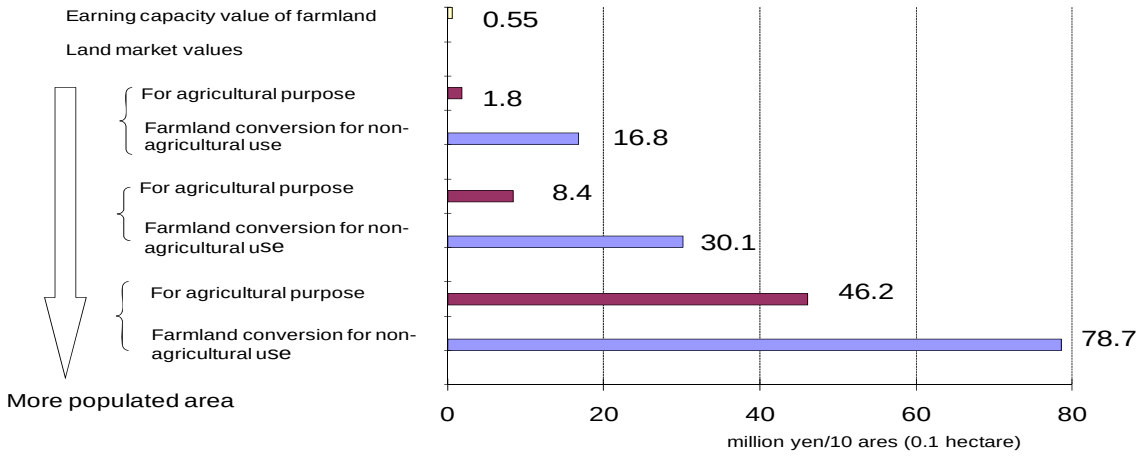
On the surface, the laws regulating farmland use seem to be strict. In practice, however, the implementation of these laws is problematic. Farmland use regulations are often manipulated when the authorities are subject to political pressure. A small-scale farmer's ideal scenario is that his/her farmland is initially included in an EAA so that he/she can enjoy the resulting financial benefits. Then, when a farmland conversion plan is implemented, the farmer's land will ideally be excluded from the EAA and the plan approved so that the farmer can enjoy capital gains.

In order to realize this scenario, small-scale 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 does the private sector, and favorable tax treatment is also 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 such large-scale developments. Because the 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 increases as these politicians continue their lobbying efforts.

The ideal scenario described above also increases the national budget for farmland investments and public construction works, thus benefiting the MAFF, which manages these rural public construction works. Thus, the MAFF welcomes this scenario and subtly ignores the manipulation of farmland use regulations. It is clear that this contradicts the MAFF's publicly stated objective of increasing food self-sufficiency and thus it needs to hide the bending of

farmland use regulations from public scrutiny otherwise it will face difficulties maintaining its extravagant fiscal expenditure. Because the ideal scenario is based on extensive collusion between small-scale farmers and politicians, it increases JA's weight in rural political dynamics. In addition, small-scale farmers usually deposit the proceeds from the sales of farmland into JA accounts, augmenting the profits of its banking businesses. Thus, JA also encourages the ideal scenario.



Source: Godo 2007

Figure 2. Comparison of the prices of paddy fields for agricultural and non-agricultural uses in Japan

According to the data provided by Godo (2007), when farmland is converted into non-agricultural land use its sale price is 30–140 times higher than was its previous earning capacity (Figure 2). Furthermore, even when farmland is sold to another farming operation, its sale price is still up to 80 times higher than was its previous earning capacity. This reflects farmers' levels of expectations of capital gain from farmland conversion.

4. The importance of rice policy to Japan's agricultural sector

As discussed in Section 2, even though small-scale farmers do not earn significant profits from it, they continue farming for two reasons. First, asset taxes remain low as long as they are farming. Second, through their collaboration with other local farmers, they maintain close relationships

with the rural community, which in turn is necessary to maintain their solidarity as a voting group.

However, small-scale farmers cannot afford to devote a great deal of time to farming and thus need a crop that can be grown with the minimum of labor inputs. In Japan, that crop is rice for two main reasons. First, labor-saving technologies (such as agricultural machinery, agricultural chemicals, and irrigation systems) have been developed for rice farming. Second, the MAFF subsidizes JA's construction of joint-use facilities for rice processing. These facilities help part-time farmers, whose farms are too small to justify individual rice milling and storage facilities.

Because Japanese politicians demonstrate their allegiance to small-scale farmers by protecting rice growers, this explains why they are extremely sensitive to rice policy. Rice receives high border protection and various subsidies. The MAFF has long operated a special program, termed the across-the-board land-use diversion program, aimed at supporting rice prices. This program, which is essentially a government-led rice production cartel, was first established in 1970. Every year since its inception, the MAFF has set a target acreage of paddy fields to be diverted from rice planting in order to curtail rice production. This target acreage is then allocated among all villages in Japan. Consequently, all farmers collaborate to achieve the allocated acreages under JA's guidance and supervision.

Approximately one-third of Japan's paddy fields have been diverted from rice planting since the inception of the program in 1970. Instead, rice farmers have started to grow alternative crops, such as wheat, soybeans, and vegetables. Although these crops are less profitable compared with rice, the MAFF provides financial support to soften these profit reductions. This financial assistance does not fully compensate individual farmers for their losses in income; however, the cartel effect of the across-the-board diversion program benefits rice farmers overall by maintaining high rice prices. JA's ability to retain the support of rice farmers is critical for the rice production-control program to continue.

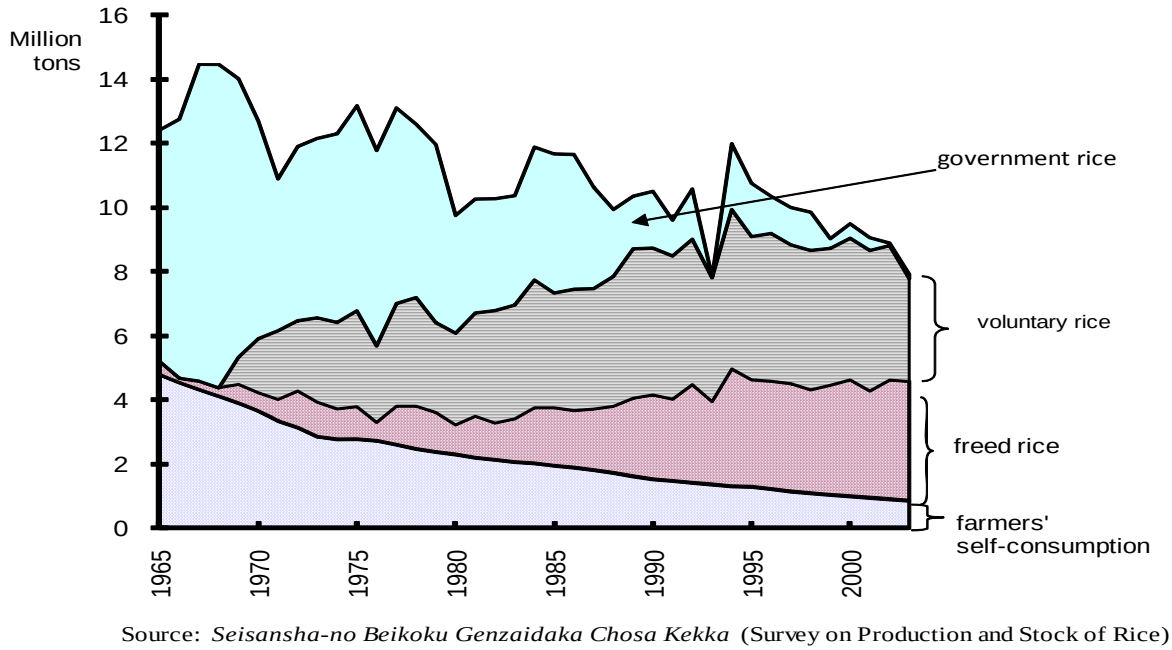
From 1970 to 1994, the MAFF informally carried out this diversion program. Instead of written laws, the MAFF's administrative guidance, which had no formal legal standing, served a coordination role. The Staple Food Law of 1995 was the first written law that stipulated the diversion program.

It is important to note at this point that rice is the staple food for Japanese consumers. Although the average household spends only one percent of its outgoings on rice, it 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.

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, namely as "government rice" or as "voluntary rice." The former was purchased by the MAFF at government-set prices (which differed depending on the shape and weight of the grain), whereas the latter was purchased by JA at the market price. In both cases, market channels were strictly controlled under the law. Generally, high-quality rice was sold by farmers as voluntary rice and low-quality rice was sold as government rice. Since the MAFF determined the procurement price for government rice before the beginning of each harvesting season, the percentage of government rice tended to increase in years of bumper harvests, namely as the market price sank.

Although rice traders and rice market channels needed to be authorized under the Food Control Law, a significant amount of so-called "freed rice" circumvented the law in practice because the official rice distribution network was too rigid to meet consumers' changing preferences. In particular, top-quality rice was often sold at higher prices in illegal rice markets. A significant number of farmers and consumers ignored the Food Control Law in favor of illegal rice, and the MAFF also ignored its purchase and sale.

In 1995, the Staple Food Law legalized freed rice. The three classifications of government rice, voluntary rice, and freed rice remained until 2004 when the MAFF abolished these classifications altogether. Although the MAFF continued to procure rice for buffer stocks, distribution was allowed on a free market basis without the MAFF's administrative interventions. As shown in Figure 3, government rice gradually lost importance in the rice market following the introduction of voluntary rice in 1969 and its share was below 20 percent by the end of the 1980s.



Source: ***Seisansha-no Beikoku Genzaidala Chosa Kekka*** **(Survey on Production and Stock of Rice)**

Figure 3. Japan's total production and distribution of rice, 1965–2003

5. The 2007 reforms and subsequent shift in political power

As discussed in section 2, the political ties between politicians, small-scale farmers, JA, and the MAFF remained strong until the early 1990s. However, the turning point in Japan's political dynamics in the mid-1990s was brought on by two factors.

First, JA's financial services faced an increasingly harsh business climate. Previously, the Ministry of Finance's favorable treatment meant that JA enjoyed stable profits from its banking and insurance ventures. However, the ministry implemented financial market liberalization in the mid-1990s, which deprived JA's banking and insurance businesses of various privileges and reduced its profitability.

Second, the electoral reforms of the lower house in 1994 reduced the voting power of JA. In the former multi-seat system, the LDP needed to have multiple politicians elected in a single constituency in order to stay in power. Thus, JA's technique of dividing votes among different lawmakers was so attractive that the LDP signaled its strong allegiance to JA. However, under the incoming single-seat system, JA's techniques were less effective and its political influence

declined. In addition, the 1994 election reforms allocated fewer seats to rural areas (Mulgan 2000), which further reduced JA's political power.

Because these two factors seriously undermined JA's political influence, each year it became more difficult for it to persuade rice farmers to join the across-the-board diversion program. As a result, the MAFF was forced to implement a comprehensive revision of its rice policy.

Extensive agricultural policy reforms were ultimately announced in 2007, and they were characterized by two key aspects. First, the diversion program was changed into a voluntary program**.** This revision allowed individual farmers to decide whether to participate in the diversion program in exchange for receiving subsidies or to grow rice freely but without subsidies. Second, subsidies for wheat, barley, potatoes, soybeans, and sugar beets, the five primary farm products grown in paddy fields set aside from rice farming, were also replaced by a program offering a new type of direct payments. Some of these direct payments were based on fixed average agricultural production in the base years of 2004–2006, while others were linked to annual agricultural production. The former corresponded to decoupled income support (in the green box) and the latter to non-exempt direct payments (termed aggregate measures of support, or AMS). Thus, the 2007 reforms marked the first introduction of decoupled direct payment subsidies as a policy measure.

Furthermore, these new direct payments could only be received by "core" farmers, namely those farmers designated by the municipal governments as the standard-bearers of local agriculture. More precisely, there are two types of core farmer: individual-type core farmers and group-type core farmers. The former are individual farm households that have farms over four hectares. The latter are agricultural farming groups composed of farmers in the same community who form joint-farming groups that share more than 20 hectares. Thus, in order to qualify to receive these new direct payments, JA consolidated small-scale farmers into agricultural farming groups.

Accordingly, the MAFF now aims to raise agricultural productivity by promoting large-scale farming through the concentration of agricultural subsidies to core farmers. However, these announcements should be read with caution. For example, it is unclear whether the farming groups organized by JA are actually efficient. JA's farming groups are sometimes nothing more than patchworks of small-scale farmers. Indeed, JA is known to organize small-scale farmers

into farming groups without making substantial changes in farming practices for the sole purpose of receiving subsidies, to the benefit of both parties. Obviously, this is the case of mistaking the means (receiving subsidies) for the intended ends (creating efficient farming groups). In addition, JA deprives individual large-scale farmers of tenanted farmland by persuading farmland owners who hitherto leased farmland to individual large-scale farmers to instead join JA's farming groups. This deprivation harms individual large-scale farmers that have higher levels of productivity. In summary, the 2007 reforms ultimately incentivized farmers to participate in farming groups organized by JA. Thus, it is unclear whether they will actually improve the productivity of the Japanese agriculture industry (Honma 2009).

The 2007 reforms have suffered from another serious problem. There are good reasons to believe that they will stimulate agricultural production without efficiency gains, contradicting their original purpose. The 2007 reforms stimulated rice production because farmers were clearly allowed to choose whether or not to participate in the diversion program. In particular, small-scale farmers that continue to hold farmland in the expectation of capital gains from farmland conversions, and thus are unconcerned about their farm incomes, surged into rice production because rice is a labor-saving crop. As a result, rice prices declined sharply in 2007. Even for farmers who joined the voluntary diversion program, the 2007 reforms stimulated the production of wheat, barley, potatoes, soybeans, and sugar beets, because farmers anticipated future shifts in the base years of production that determine the decoupled direct payment subsidies.[2]

Furthermore, in 2007 the MAFF allocated nearly 100 billion yen to decoupled direct payment subsidies and reduced non-exempt subsidies for these five crops. Thus, the 2007 reforms apparently meet the WTO's aim of reducing trade-distorting domestic support.

The lower house election in August 2009 was a dramatic turning point in the reorganization of Japanese politics. In this election, the DPJ recorded a landslide victory over the LDP in part because of the drastic changes in the voting behavior of small-scale farmers. Throughout the election campaign, the DPJ promised to increase farm subsidies, which attracted the votes of small-scale farmers, who had previously formed a solid support base for the LDP.

After taking power, based on its pre-election promises, the DPJ launched a new direct payment program called the Income Compensation Program (ICP). Under the ICP, fixed

[2] See Hart and Beghin (2006) for a discussion of this effect in other contexts.

amounts of money are paid to farmers according to the acreages of their rice land. In addition, the ICP provides compensation to farmers if production costs exceed market prices.

Although the ICP will be applied by agricultural commodity, it was proposed to be offered for rice first in 2010. The government set aside an annual budget of 560 billion yen for the ICP for rice,[3] which represented a huge increase from previous financial assistance in Japan. Nevertheless, the DPJ has planned to increase this budget further and extend the ICP to other major crops such as wheat and soybeans in 2011 and beyond. If such increased expenditure materializes, it will substantially alter the profile of Japan's domestic support.

6. Japan's domestic support notifications

The Japanese government submitted notifications of its domestic agricultural support programs to the WTO for 1995–2009 in October 2011 (Table 2). Green box expenditure declined over time but nonetheless accounted for approximately 75 percent of the total support offered in Japan after its notified current total AMS (CTAMS) dropped sharply in 1998. Japan's CTAMS has traditionally comprised primarily market price support but also non-exempt direct payments.

Japan had no blue box programs when the agreement was concluded and it has subsequently made only minimal use of them. The *Inasaku Shotoku Kiban Kakuho Taisaku* (Rice Farming Income Stabilization Program, RFISP), which was implemented in 1998, was Japan's first blue box program, with an initial expenditure of 50 billion yen. The RFISP is a countercyclical program that stipulates that the MAFF will provide income support for those farmers who joined the riceland diversion program if the market rice price falls below the average rice price of the previous three years. As described above, almost all rice farmers participated in the riceland diversion program in 1998. At that time, the procurements of government rice accounted for only a limited proportion of the rice market, which motivated the addition of the RFISP in conjunction with the diversion of land from rice production. A second blue box program, *Ninai-te Keiei Antei Taisaku* (Business Stabilization Policy for Farm Units with Approved Municipal Management Improvement Plans), was subsequently added in 2004.

[3]The expenditure estimates for the ICP are quoted from www.dpj.or.jp/special/manifesto2009/pdf/manifesto_2009.pdf. Japanese newspapers also expect the budget for the ICP to increase to 1 trillion yen. For example, see "*Kobetsu Shotoku Hosho, Kome, Rainendo Kara* (The Income Compensation Program will start in the 2010 fiscal year)" page 2 in the evening paper of Nikkei, October 14, 2009.

Table 2. *Summary of Japan's domestic support notifications, 1995–2009, billion yen*

	Notifications														
	1995	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Green box	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	1,802.4	1,882.2	1,837.3	1,848.4
Blue box	-	-	-	50.2	92.7	92.7	91.1	86.5	68.2	67.8	65.3	70.1	42.4	32.4	21.8
Current Total AMS	3,507.5	3,329.9	3,170.8	766.5	747.8	708.5	666.7	730.0	641.8	607.8	593.3	571.2	416.9	520.4	564.8
of which, MPS	3,271.3	3,125.8	2,967.9	641.5	619.6	503.9	389.7	404.0	405.6	403.0	394.7	389.9	328.0	390.8	404.3
De minimis (total)	36.6	37.3	36.1	75.5	32.6	31.7	32.1	43.6	35.0	41.1	41.3	37.6	104.9	153.0	173.1
Product specific	12.5	11.4	11.7	53.1	10.4	10.8	12.0	23.2	16.9	24.1	23.2	18.6	22.4	15.3	13.6
Non product specific	24.1	25.9	24.4	22.4	22.2	20.9	20.1	20.4	18.1	17.0	18.1	19.0	82.5	137.7	159.5
Total	**6,713.1**	**6,185.3**	**5,858.6**	**3,893.8**	**3,559.0**	**3,428.2**	**3,336.8**	**3,135.3**	**2,831.3**	**2,815.0**	**2,616.2**	**2,481.3**	**2,446.4**	**2,543.1**	**2,608.1**
Share of total support															
Green box	47%	46%	45%	77%	75%	76%	76%	73%	74%	75%	73%	73%	77%	72%	71%
Blue box	-	-	-	1%	3%	3%	3%	3%	2%	2%	2%	3%	2%	1%	1%
Current Total AMS	52%	54%	54%	20%	21%	21%	20%	23%	23%	22%	23%	23%	17%	20%	22%
De minimis (total)	1%	1%	1%	2%	1%	1%	1%	1%	1%	1%	2%	2%	4%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Value of production	10,434.1	10,248.9	9,831.6	9,944.1	9,418.1	9,122.4	8,881.3	8,929.7	8,856.5	8,713.6	8,511.9	8,290.0	8,466.8	8,690.2	8,263.4
Bound Total AMS	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	3,972.9	3,972.9
CTAMS as share of binding	73%	72%	71%	18%	18%	18%	17%	18%	16%	15%	15%	14%	10%	13%	14%

Source: Japan notifications to WTO

-: zero

Table 3. *Composition of Japan's green box notifications, 1995–2009, billion yen*

	Notifications														
	1995	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
General services	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	1,373.8	1,284.2	1,269.7	1,215.9
of which infrastructure services for agriculture and rural areas	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	784.4	725.8	715.6	643.4
Public stockholding	59.9	61.5	67.3	56.6	46.8	46.4	43.3	36.3	31.9	28.2	24.5	20.9	20.9	24.6	23.7
Domestic food aid	28.1	27	26.4	13.8	9.3	5.4	5.3	4.8	2.5	-	3.2	2.5	2.2	2.2	2.2
Decoupled income support	-	-	-	-	-	-	-	-	-	-	-	-	101.3	102.3	102.3
Income insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disaster relief	68.3	65.8	62	58.6	57.9	55.5	54.1	53.6	48.3	48	49	50.0	49.3	48.9	47.5
Producer retirement	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	129.4	128.9
Resource retirement	7.9	0.5	0.5	0.5	0.5	0.5	0.4	0.1	-	-	-	-	-	-	-
Investment aids	116.9	107.9	89.5	77.4	54.3	55.2	42.4	31.2	23.5	22.8	19.9	7.4	3.5	13.2	13.3
Environmental payments	80.7	133.3	132.9	115.6	123.4	145.3	176.3	210.2	195.4	167.1	176.7	170.0	241.8	225.2	291.5
Regional asistance	-	-	-	-	-	33	33	33	23	16.8	21.8	21.8	21.8	21.8	23.1
Total green box	**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**	**1,802.4**	**1,882.2**	**1,837.3**	**1,848.4**

Source: Japan notifications to WTO

-: zero

Table 4. *Composition of Japan's CTAMS notifications, 1995–2009, billion yen*

	Notifications														
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Product specific															
MPS and EMS	3,271.3	3,125.8	2,967.9	641.5	619.6	503.9	389.7	404.0	405.6	403.0	394.7	389.9	328.0	390.8	404.3
Rice	2,560.7	2,464.5	2,315.3	-	-	-	-	-	-	-	-	-	-	-	-
Barley	23.6	25.2	20.2	14.9	21.1	1.2	0.2	0.1	0.1	-	-	-	-	-	-
Wheat	55.3	59.6	69.3	68.2	69.3	2.8	0.2	-	-	-	-	-	-	-	-
Soya beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar	58.9	49.0	53.8	59.8	54.6	53.4	54.6	53.8	56.4	56.7	54.8	50.3	-	-	-
Milk	114.4	115.1	110.1	107.3	105.8	95.9	-	-	-	-	-	-	-	-	-
Starch	21.6	17.6	20.8	20.4	16.4	15.7	17.7	18.8	16.5	15.5	15.1	13.6	-	-	-
Beef and Veal	122.9	103.0	92.6	90.4	87.7	80.3	67.3	78.7	74.0	74.6	72.9	72.6	75.2	93.2	93.0
Meat of Swine	312.8	291.8	285.8	280.5	264.7	254.6	249.7	252.6	258.6	256.2	251.9	253.4	252.8	297.6	311.3
Silk-Worm Cocoons	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-exempt Direct Payments	236.2	204.1	203.0	124.8	128.4	204.6	277.1	325.9	236.2	204.8	198.5	181.4	88.9	129.6	160.6
Rice (until 1997)	100.8	93.0	82.2	-	-	-	-	-	-	-	-	-	-	-	-
Barley	0.9	0.9	0.9	0.9	0.9	10.2	10.5	10.8	14.0	11.1	10.0	11.1	-	-	-
Wheat	-	-	-	-	-	75.0	81.5	84.9	102.8	94.7	94.6	92.6	-	-	-
Soya beans	1.7	2.6	4.9	6.9	9.8	15.6	18.5	26.6	28.1	27.6	26.4	25.5	1.9	-	-
Sugar	-	-	-	-	-	0.6	0.6	1.2	1.5	2.0	2.5	1.5	24.0	26.4	24.2
Milk	37.4	38.2	39.5	40.6	36.4	34.5	36.0	53.6	30.8	26.9	26.9	28.5	29.5	46.8	26.3
Starch	-	-	-	-	-	-	-	-	-	-	-	-	3.8	3.9	4.3
Beef and Veal	83.5	68.0	73.7	75.1	80.4	67.1	126.1	147.4	57.8	41.1	37.1	21.4	29.0	49.2	101.1
Meat of Swine	10.5	-	-	-	-	-	2.5	-	-	0.3	-	-	0.0	3.3	4.7
Silk-Worm Cocoons	1.4	1.4	1.8	1.3	0.9	1.6	1.4	1.4	1.2	1.1	1.0	0.8	0.7	-	-
Current Total AMS	3,507.5	3,329.7	3,170.8	766.3	747.8	708.5	666.7	730.0	641.8	607.8	593.3	571.2	416.9	520.4	564.8

Source: Japan notifications to WTO

-: zero

Japan has also made only minimal use of product-specific and non-product-specific *de minimis* allowances. Product-specific *de minimis* AMS has been claimed for such commodities as rice (*Kajo Mai Tanki Yushi Shikin Kashitsuke Kin*, a short-term loans program), eggs, fruits, and vegetables. Local governments, in addition to the MAFF, offer price support for vegetables, which is accounted for in the notifications. Non-product-specific AMS has resulted from agricultural insurance subsidies, and this has been within the *de minimis* amount.

Green box

General services, particularly infrastructural services for the agricultural sector and rural areas, comprise the largest proportion of green box expenditure (Table 3). This infrastructure expenditure corresponds to the MAFF's public construction works, such as farmland improvement investments and the construction of rural roads.[4] As discussed above, these construction works are welcomed by small-scale farmers, who have expectations of future capital gains. Because of this expenditure, green box subsidies amount to as much as 30 percent of the value of agricultural production.

Traditionally, the Japanese government has used public construction works as an anti-recession fiscal policy. Expenditure allocated to infrastructural services for the agricultural sector and rural areas surged in 1998 when the Japanese economy plunged into its worst economic slump since the 1970s. In response to the increased criticism of such high levels of public construction by Japanese citizens, the national budgets for infrastructural services for the agricultural sector and rural areas have been decreasing ever since.

Other categories of green box support account for less than one-quarter of the total. Japan provided no decoupled income support or income insurance until 2006 and allocated only a small budget to disaster relief and structural improvements. Interestingly, Japan reports that a share of the support it provides through its agricultural insurance scheme meets the green box criteria for

[4] Among the programs in the national budget contributing to the infrastructure expenditures are *Noson Shinko-hi* (Rural Promotion Expenses), *Fusuigai tou Taisaku-hi* (Natural Disaster Policy), *Nogyo Seisan Kiban Seibi Jigyo tou Shido Kantoku-hi* (Instruction and Management for the Improvement of Production Bases), *Kaigan Jigyo-hi* (Expenses for Coastal Projects), *Nogyo Seisan Kiban Seibi Jigyo-hi* (Expenses for the Activities for the Improvement of Production Bases), *Gyuniku tou Kanze Zaigen Nogyo Seisan Kiban Seibi Jigyo-hi* (Expenses for the Activities for the Improvement of Production Bases financed by Beef Tariffs) *Noson Seibi Jigyo-hi* (Expenses for the Improvement of Rural Areas), *Nochi tou Hozen Kanri Jigyo-hi* (Expenses for Farmland Maintenance), *Norin Gyogyo you Kihatsu-yu Zei Zaigen Migawari Noson Seibi Jigyo-hi* (Expenses for Rural Road Construction financed by Gasoline Tax), *Chiho Noseikyoku Kaigan Jigyo Koji Sho-hi* (Miscellaneous Expenses for the Local Agricultural Office's Coastal Project), and *Chiho Noseikyoku Jisuberi Taisaku Jigyo Koji Sho-hi* (Miscellaneous Expenses for the Local Agricultural Office's Landslide Prevention Project).

payments for the relief of natural disasters, while the rest of the support through that scheme is reported as non-product-specific AMS.

CTAMS

The Japanese government has provided AMS for rice, barley, wheat, soybeans, sugar, starch (potatoes), beef and veal, pork, and silkworm cocoons (Table 4). A sub-governmental body, the Agricultural and Livestock Industries Cooperation (ALIC), has also assisted support programs for sugar, starch, milk, beef and veal, pork, and silkworm cocoons. From 1995 to 1997, Japan's CTAMS was closest to its commitment level, when approximately 70 percent of the budget was utilized.

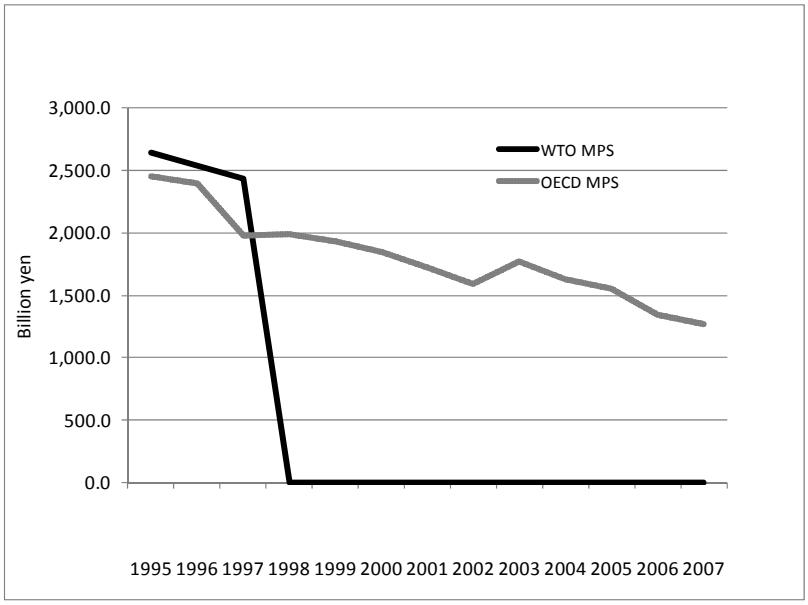
The most noticeable aspect of Japan's CTAMS is that it decreased sharply in 1998 because market price support for rice stopped being calculated and the program that provided non-exempt direct payments to rice producers was eliminated without a corresponding revision in the Staple Food Law. The MAFF continued to purchase rice from farmers after 1998, but it limited its procurement of government rice to rice stocks for food security purposes. The government explained that the administered rice price has been abolished and purchases are now made at market prices (WTO 2001). On this basis, Japan does not calculate a rice MPS as part of its AMS for rice. In computing the rice AMS for 1995–1997, Japan used the total production of rice as eligible production. In the second half of the 1990s, however, government rice comprised less than five percent of total rice distribution.

It is clear that the MAFF's intervention in the rice market became less effective after it introduced voluntary rice in 1969 and that its rice procurement has been decreasing ever since. Thus, even though there was no clear-cut turning point (such as, say, 1998), Japan could be justified in removing the rice MPS from the CTAMS. Because a large rice MPS was part of the base from which Japan's Final Bound Total AMS commitment was derived, removing it created a significant amount of latitude within its CTAMS. In 1998, Japan's announced that its CTAMS had fallen below 20 percent of its commitment.

Nonetheless, the overwhelming majority of Japanese agricultural policy researchers are skeptical about the practical meaning of the MAFF's post-1998 rice policy guidelines. Even since the announcement of these guidelines, the MAFF has still procured rice for the political purpose of supporting its market price. A typical example of this occurred as recently as in 2007. Although the MAFF's rice stock was already at a sufficient level for the purpose of food security,

it decided to further increase rice stocks under strong pressure from LDP politicians who wanted to curry favor with farmers.[5] In this case, the MAFF's rice procurement can be seen as a *de facto* market price support measure. Thus, whether a rice MPS should still be included in the AMS remains a controversial issue.

Moreover, because Japan's rice is defended by prohibitively high tariffs, abandoning the administered price did not reduce its economic protection. Japan's elimination of the MPS from its notifications to the WTO is an extreme example of the imperfect relation between this measurement in the notifications and an economic measurement of its domestic price support. The outcome for the Japanese rice industry is illustrated in Figure 4. The notified MPS dropped to zero in 1998; however, the economic protection of rice remained unchanged. Furthermore, even though the economic price support has shown a downward trend over time, it remained over 1,200 billion yen in 2007.



Sources: WTO notifications and OECD PSE database

Figure 4. Comparison of Japan's market price support for rice production from domestic notifications and from the OECD

[5] For example, see "*Norinsuisansho, Seifu Bichiku-mai Hyakumannton ni Tsumimashi-ni* (Government Stock of Rice will be increased to 1 million tons)" page 5 in the morning paper of Nikkei, October 26, 2007.

Following the abandonment of the rice MPS, approximately two-thirds of the remaining support in CTAMS has consisted of the MPS for other products and one-third has been non-exempt direct payments. The MPS for milk was eliminated in 2001 by abolishing the administered price. Furthermore, the procured quantities of wheat and barley used as eligible production fell so low that these price support programs were also terminated. However, the small direct payments tied to the production of these commodities have continued.[6]

Market price support has continued for sugar, starch, beef and veal, pork, and silkworm cocoons. For sugar and starch, farmers receive a grant from the ALIC in addition to their sales at the administered price. Since the difference between the fixed external reference price and the applied administered price does not capture the full support level, an adjustment is made in computing the notified MPS. For beef and veal, the ALIC sets lower and upper boundary prices, and it buys when the market price falls below the lower boundary price and sells when the market price exceeds the upper boundary price. The eligible production is the total amount of dressed carcass from adult beef cattle, veal calves, and dairy veal calves. Sugar, beef and veal, silkworm cocoons, and soybeans have also continued to receive small amounts of non-exempt direct payments.[7]

The ICP and the December 2008 Doha draft modalities

As discussed above, the ICP announced by the DPJ in 2009 will significantly increase Japan's domestic support. However, the manner in which ICP payments will be reported to the WTO remains uncertain. There have been no initial announcements from the MAFF on how the ICP will be treated in domestic support notifications. Moreover, the ICP for rice requires recipient farmers to participate in the rice diversion program. Thus, if it can be shown to meet the relevant criteria, it can be reported as a blue box policy. However, the ICPs for other crops do not seem to

[6] For wheat and barley, the expenditure includes *Mugisaku Keiei Antei Taisaku* (Wheat and Barley Farming Income Stabilization Programs). For milk, the programs include the MAFF's expenditure on *Shitei Seinyu-sha Dantai Kofukin* (Subsidy to Designated Milk-Producing Organizations) and the ALIC's expenditure on *Kako Genryonyu Seisansha Keiei Antei Taisaku* (Business Stabilization Policy for Manufacturing Milk Producers), *Ekijo Nyuseihin Seisan Kakudai Jigyo* (Liquid Dairy Products Production Promotion Policy), *Rakuno Antei Tokubetsu Taisaku Jigyo* (Business Stabilization Special Policy for Dairy Farming), and *Juyo-ki Seinyu Seisan Suishin Taisaku* (Summertime Milk Production Promotion Policy).

[7] Non-exempt direct payment programs are as follows: for sugar in the national budget *Nogyo Keiei Kiban Kyoka Tokubetsu Taisaku* (Agricultural Management Framework Reinforcement Special Policy); for beef and veal ALIC programs *Nikuyo Koushi Seisansha Hokyukin Seido* (Subsidy Program for Beef Calf Farmers) and *Nikuyogyu Hi-iku Keiei Antei Taisaku* (Business Stabilization Policy); for silkworm cocoons reported by the ALIC *Sanshi-gyo Keiei Antei Taisaku* (Sericulture Business Stabilization Policy); and for soybeans in the national budget *Daizusaku Keiei Antei Taisaku* (Soybean Farming Income Stabilization Program) and the *Kokunai Daizu Seisan Antei Taisaku* (Subsidy Program for Soybean Producers).

meet the blue box criteria and thus these payments may need to be reported as AMS (CTAMS plus *de minimis*).

Japan's potential commitments under the December 2008 Doha draft modalities are shown in Table 6. Japan's base Overall Trade-distorting Domestic Supports OTDS of 5,448 billion yen is the sum of its Final Bound Total AMS under the agreement plus 15 percent of its average value of agricultural production during 1995–2000. Its OTDS ceiling will be reduced by 75 percent to 1,362 billion yen once the new commitments have been fully phased in over five years). This assumes that Japan falls into the middle tier in the modalities for OTDS cuts but requires extra effort because its base OTDS exceeds 40 percent of its value of production in the base period. Final Bound Total AMS will decline by 70 percent to 1,192 billion yen once the new commitments have been fully phased in (Japan is in the top tier for cuts to Final Bound Total AMS). Immediately after implementation, the cap on overall blue box payments will become 2.5 percent of the value of agricultural production during 1995–2000 (245 billion yen) and the *de minimis* thresholds will fall to 2.5 percent of the annual value of production.[8]

Although Japan stood well within the OTDS limit until 2009, the new ICP policy is expected to increase its applied OTDS support significantly to more than 1,500 billion yen. This means that Japan's OTDS would exceed the OTDS limit specified by the Doha draft modalities of December 2008 once they have been fully phased in.[9] With fully funded ICP payments for rice categorized in the blue box, Japan would also exceed its overall blue box limit under the Doha draft modalities.

Another problem is that the proposed levels of the ICP are inconsistent with product-specific AMS and product-specific blue box limits. However, neither the DPJ nor the MAFF has publicly discussed this inconsistency between the ICP and the Doha negotiations. The authors have deep concerns that Japan's ICP could cause serious conflicts in the Doha negotiations. Alternatively, Japan could expand its support in the green box, and member countries of the WTO may place pressure on Japan to replace the ICP with green box measures.

[8] Another major uncertainty is the possibility of a drastic reduction in border protection for agricultural commodities. Lower border protection can require reductions in domestic support, particularly the MPS. Alternatively, if the Japanese government were to conclude an international agreement that reduced border protection for agricultural products, Japanese farmers would press it for compensation programs. This could result in increased fiscal expenditure. However, the effects of lower tariff protection on domestic support are so difficult to predict that we have not incorporated them into the presented analysis.

[9] During the five-year phase in period, allowed OTDS would be greater compared with our projected levels of annual OTDS.

Table 6. *OTDS, CTAMS and blue box limits and the de minimis allowance for Japan under the Doha draft modalities, billion yen and percent*

Final Bound Total AMS		3,972.9
Value of production (average 1995-2000)	9,833.2	
10% value of production		983.3
5% value of production (a)		491.7
Base OTDS		5,447.9
Base OTDS as percent of value of production (1995-2000) (b)		55.4%
Final Bound OTDS (after 75% reduction)		1,362.0
Final Bound Total AMS (after 70% reduction)		1,191.9
Blue box limit (2.5% value of production 1995–2000)		245.8
De minimis		
50% immediate reduction		2.5%

Source: Authors' calculations based on WTO (2008). See Appendix B regarding al notes.

(a) Paragraph 1(c) condition: 5 percent of production value incldued in OTDS if blue box less than that amount

(b) Tests for application of paragraph 4: exceeds 40 percent so additional effort required

7 Summary and conclusions

We began the present paper by highlighting the difference between the scale of agriculture in Japan compared with that in the rest of the developed world. The major distinction is that 70 percent of the farmland in Japan is still contained in inefficient farms of less than three hectares. We also argued that political pressure has precluded the emergence of larger farms that would benefit from scale economies and that the inefficient functioning of the price mechanism in farmland markets is central to this farm size–productivity impasse.

This failure arises from the extensive set of farmland regulations and government investments that subsidize and sustain small-scale farming, enhance its value through infrastructural investment and eventually determine the capital gains associated with converting land to non-agricultural use. The political machinations of these policies mean that politicians court rural voters, which benefits the MAFF and privileges JA cooperatives. Small-scale farmers thus retain possession of farmland not in order to earn farming incomes but in the hope of future capital gains.

Associated with this nexus of farmland policies, rice production has been highly protected and regulated. Japan has had ample room to manage domestic prices under its high border protection by setting administered prices and implementing a rice production control

program through JA. By the early 1990s, however, the *de facto* deregulation of the rice market had occurred and government rice procurement fell to less than one-fifth of production. Although the Staple Food Law liberalized the domestic rice market in 1995, it allowed for the retention of a program for riceland diversion managed by the MAFF and JA.

The regular submission of Japan's domestic support notifications implies that the country is a model of compliance. However, we contrasted Japan's *prima facie* compliance with WTO domestic support disciplines with its less flexible attitude towards border protection, particularly its resistance to opening the domestic rice market. The dominant green box expenditure for Japan is allocated to infrastructure services for the agriculture sector and rural areas, which is tied into the politics of farmland regulation and later conversion of farmland to non-agricultural uses.

In determining its Final Bound Total AMS and in agreeing its notifications of CTAMS for 1995–1997, Japan reported a MPS for rice based on total production despite limited government procurement at that time. This rice MPS dominated Japan's CTAMS in that period, with the notified values exceeding 70 percent of the ceiling. However, in 1998 the MAFF announced that rice procurement would be continued only for food security purposes and it ceased applying a government-set or administered price. Consequently, Japan stopped reporting an MPS for rice in its CTAMS, which fell to just 18 percent of the commitment and has remained at that low level ever since.

This reinterpretation of agricultural policy essentially allowed Japan to exclude itself from any binding constraint on the provision of AMS. Complying with the domestic support notifications proved easy, but the economic protection of rice did not change, and in 1998 Japan even implemented a policy of paying rice farmers that participated in the riceland diversion program. This expenditure was arguably consistent with the objective of guiding countries towards implementing fewer trade-distorting policies. However, because the modification of the notifications for rice created so much latitude, these reforms resulted from pressure from the WTO commitment on domestic support.

In 2007, Japan carried out widespread agricultural policy reforms that were consistent with the decoupling of support encouraged by WTO guidelines. The price support for five of the crops grown on riceland (i.e., wheat, barley, potatoes, soybeans, and sugar beets) was replaced by direct payments. Some of these payments were based on a fixed production base (2004–2006), which will be notified in the green box, whereas others were linked to annual production and

notified as product-specific AMS. However, we are skeptical whether these reforms have lessened production incentives given the existing structure of farmland holdings or whether they will alter the previous political machinations of farmland policies and lead to increased agricultural efficiency in Japan, which would provide a constructive avenue to higher output.

In addition, we highlighted that Japan's new direct payment program will increase its OTDS significantly. The DPJ, which took power in September 2009, announced that the ICP would start for rice first in 2010 and then extend to other agricultural products in 2011. If fully funded as announced, the ICP may conflict with the revised Doha draft modalities. Thus, how to cope with the ICP will be one of the major concerns for the Japanese government in the Doha round negotiations.

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