



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

An Analysis of Factors Influencing Japanese Rice Policies

Rice has traditionally dominated the Japanese agricultural industry because of the quantity produced, area cultivated and number of farm workers employed. In 1987, for example, rice constituted 33 per cent of Japan's total agricultural production and 44 per cent of the agricultural land use and was cultivated by 84 per cent of the 4.4 million farmers in Japan (Yuize, 1987). Rice remains the central issue of the government's agricultural policies. Therefore, the Japanese Government's rice policies provide a good case study for an analysis of the justification of policy choices under economic and non-economic considerations.

This paper seeks to evaluate the rice policies of the Japanese Government in terms of the changing economic and socio-political conditions that have influenced them. Justification for the policies is provided in response to their common criticisms. The future of Japanese rice policies is examined in terms of recent domestic problems and international events. The analysis suggests that although amendments to domestic policy have been introduced, reforms are unlikely to extend to trade policy in the form of liberalisation.

HISTORICAL BACKGROUND

Five phases in the historical development of the rice policies can be identified. In phase one (early 1900s), a 15 per cent ad valorem tariff was introduced (1904). This protected the rice farmers but was mainly used to provide the government with revenue to assist in the Russo-Japanese War (1904-1905) (Ogura, 1979). The tariff was reviewed after the war, causing debates between the protectionists and the supporters of free trade. The protectionist view won, with the establishment of a permanent fixed rate tariff of Y 0.64 per 60 kilograms (kg) in 1906 (Hayami, 1972). Over the next few years the government was faced with increasing pressures from interest groups, whose views varied from the importance of self-sufficiency in rice to cheaper rice for the urban workers. The outcome of this lobbying was a specific duty of Y 1.00 per 60 kg, where the government was given the option to reduce it by Y 0.4 (Hayami, 1972).

The most important event in the second phase (1918 to World War II) was the Rice Riots of 1918. The Rice Riots were caused by a rapid increase in the price of rice coupled with the high costs of living and the drain on the foreign exchange caused by large scale imports. The outcome of the Rice Riots encouraged the government to promote local rice production and to allow duty-free rice to be imported from the Japanese Colonies (Taiwan and Korea), which enhanced Japanese self-sufficiency in rice production. The Rice Law of 1921 was the first major move toward government control, giving them power to adjust the rice supply through control over the purchase, sale, storage and processing of rice, as well as international trade. Self-sufficiency in rice was achieved by the 1930s with the exception of one-sixteenth of the rice demand which was supplied by the Colonies (Anderson and Tyers, 1988). Strict controls on international trade which allowed domestic prices to rise and protected the rice growers from import competition were used to achieve self-sufficiency.

In the third phase (World War II to 1955), agriculture constituted 25 per cent of GDP, employed 50 per cent of the labour force and accounted for more than half of the total household expenditure (ABARE, 1988). The main principles of the policies in this period were to provide staple food supplies; to carry out national land reform and democratise rural society; and to create greater employment opportunities. The first objective led to the Staple Food Control Act of 1942, which gave the government direct control over staple foods in

order "to control food and to carry out the adjustment of supply and demand and prices, also to control distribution in order to secure food for people and to ensure stability in [the] economy" (Egaitsu, 1982). The second policy objective of land reform and the democratisation of the rural society led to the Land Reform Programme of 1946, which eliminated the pre-war landlord-tenant relationship by transferring farm land ownership to the people who actually cultivated it. This encouraged agricultural productivity and made the rural society more democratic. It was achieved by controlling the land holdings per farmer household (a minimum of 0.3 ha and maximum of 3 ha) and the mobility of land rights. During this period, wages were low and the proportion of rice expenditure to total income was high: 13 per cent in 1955 (Hayami, 1986). The government used the rice pricing policy to maintain prices below a critical level to assist consumers, and to minimise the pressure for wage increases. This, in turn, facilitated the economic development of the industrial sector, encouraging the recovery of Japan's economy.

In the fourth phase (1956 to 1975), the Japanese economy not only recovered but also experienced rapid economic growth, where real GDP growth averaged 10 per cent per year (ABARE, 1988). This led to three major economic changes. First, it encouraged differences between the level of production of the agricultural and industrial sectors, where the GDP share of agriculture fell from 17 per cent in 1955 to 4 per cent in 1975 (Hayami, 1986; George and Saxon, 1986). Second, urban incomes increased from Y 102,000 per annum in 1955 to Y 2,268,000 in 1975, while farmers' incomes only changed from Y 256,000 in 1955 to Y 1,146,000 in 1975. The Agricultural Basic Law of 1961 was introduced to assist the farmers' standard of living. This law was more economically orientated than the previous legislation and involved stabilising prices and maintaining farmers' incomes at levels comparable with those of urban workers. The principal instrument used to achieve this was the rice pricing policy. Third, due to the rise in incomes, the proportion of rice expenditure to total household expenditure fell from 13 per cent in 1955 to 3 per cent in 1975 (Hayami, 1986; George and Saxon, 1986). Rice was no longer an important measure of real income and price variations would have little effect on the quantity demanded.

During the fifth phase (1976 to 1987), Japan became the second largest industrial nation. However, Japan was adversely affected by international events, such as repercussions from the oil crisis in 1974, which caused high levels of inflation, followed by a fall in the rate of real GDP growth. Japan was particularly affected by the change in oil price because of its highly industrialised base and resultant reliance on imported fuel. Other economic factors that adversely affected Japan were the appreciation of the yen and the increasing national budget deficit. The less favourable economic environment in this fifth phase, along with the large rice surplus of the late seventies, led to changes in emphasis on pricing within the government's rice support policies. These changes included limiting the increases to the producer price (government purchasing price), while increasing the consumer price (government selling price). The government thus transferred some of the costs of rice support from its budget (tax payer) to the consumer.

THE MAIN RICE POLICIES

The government has controlled the rice industry since the Staple Food Control Act of 1942. Under this law, several policies were introduced to control the production, marketing and pricing of rice. The two most important policy areas concerned trade restrictions and

rice pricing. Three other policies were also introduced: acreage control programmes, export subsidies and discounts on the domestic sales for feed and industrial uses. These were used to control rice production, when it exceeded demand, or to dispose of any surplus.

The first of the main rice policies is rice pricing. In this system, prices are determined annually by the government, and producer and consumer organisations. The two-tier pricing system consists of a producer price (government buying price from farmers) and a consumer price (government selling price to wholesalers). The difference between these two prices is the 'reverse margin' (*guakuzaya*) and is funded by the Domestic Rice Control Account of the Ministry of Agriculture, Forestry and Fisheries (MAFF) budget (George, 1988). According to the Food Control Law, the producer price and the consumer price are to be determined independently. Under the Food Control Act, producer prices "are to be determined for the purpose of securing production of rice by taking into consideration the cost of production, prices and other economic conditions." While the consumer prices "are to be determined for the purpose of stabilising the consumer's budget by taking into consideration the cost of living, prices and other economic conditions" (Egaitso, 1982). The producer price is determined by using the MAFF 'recommended price' and the 'demand price' of the Agricultural Co-operative (Nokyo). The MAFF uses the statistical 'Production Cost and Income Compensation' formula, as well as consulting the Rice Price Advisory Council's report, which includes the opinions of interested parties such as the producers. However, it is the government that makes the final decision on prices (George, 1988).

Second, one of the two basic principles of the Japanese agricultural trade policy is that "some border measures must be maintained for important products so as to secure their stable domestic supply" (Tsubota, 1985). This is particularly applicable to rice as the staple diet and has led the government to introduce trade restrictions, allowing importation of only very small quantities of glutinous rice and cracked non-glutinous rice. Trade controls have also maintained the government's monopolistic control over the domestic market by requiring that all imported rice be sold solely to the Food Agency, thus insulating the domestic economy.

Third, the acreage control programmes were introduced to control the production of rice during periods of excess supply caused by the trend of decreasing demand coupled with increased rice production. Four rice land diversion programmes have been initiated since 1971. The main aim of these programmes was to alleviate the problem of rice surpluses by diverting production from rice to other important crops, such as wheat, barley and soybeans. Grower participation in these programmes has been consistently high despite the fact that the programmes were voluntary. High levels of grower participation were originally facilitated by the Japanese Food Agency's decision to stop purchasing all the rice offered to them and by the provision for payments to be made to farmers who diverted production from rice to other crops.

Under the land diversion programmes, the Japanese Government estimated the land area needed to be taken out of production in order to bring rice supply into line with expected demand. Each prefectural government then allocated the diversion target among local farmers. The success of the programmes in achieving a permanent shift away from rice production is debatable given that in recent years the area of rice planted actually increased. A possible reason for this is that farmers tended to move in and out of rice production in order to take full advantage of the payments offered under the programme. Therefore, the

land diversion payments made to rice growers acted largely as a subsidy to farmers (ABARE, 1988). The current programme, the Paddy Field Farming Establishment Programme (1987-1992), may have had some success in reducing the rice surplus but it has encountered other problems, such as the lack of capability of the land for crops other than rice and the farmers' customs to give the land to their eldest son, to continue 'the farming way of life' (Imamura and Sawa, 1987).

Finally, the export subsidies and domestic discounts for feed and industrial uses were introduced in an attempt to dispose off the excess rice. Although these policies assisted in easing the surplus, problems occurred with the export subsidies during 1979-83 because of the quantity involved. The 3.06 million tonnes (mt) exported comprised a significant proportion of an international trade figure of only 10 mt a year (ABARE, 1988). Traditional rice exporting countries were concerned about the effect on the international market. The United States was particularly concerned, as two-thirds of the Japanese rice was to be imported by Korea and Indonesia, which are traditional US export markets. An agreement between the United States and Japan limited the Japanese rice exports to 1.4 mt over the following four years.

POLICY EVALUATION IN TERMS OF ECONOMIC AND SOCIO-POLITICAL FACTORS

Within the study of policy choice there appears to exist two hypotheses. In the short run, policies may be driven by the socio-political factors of conflicting interest. In the long run, economic factors may have the ultimate impact on both these interests and on policy choice. Policy decisions are not made solely on economic considerations; therefore, it is necessary to include non-economic factors when analysing policy choice.

(a) Key Economic Factors

The demand for rice may be defined as the quantity of rice which the consumer is willing to purchase and which is influenced, in the long run, by factors such as income, price of substitutes, as well as tastes and preferences. It is expected that the price and income elasticities of rice demand would be inelastic. Several studies support this such as Riethmuller and Roe (1986), Tyers and Anderson (1985), and Bale and Greenshields (1978). For these three studies, the price elasticities of demand are very low, indicating that a large change in price would result only in a small change in the level of rice consumed.

The estimated income elasticities are also very low, indicating that demand would not vary with income. There is more variation in the price elasticity values than in the income elasticity values, with Riethmuller and Roe estimating the price elasticity to be -0.27, compared to Bale and Greenshields (-0.12) and Tyers and Anderson (-0.23). This would be expected as rice expenditure is only a small proportion of total income and provides the staple diet. Riethmuller and Roe (1986) also estimated the cross price elasticity with respect to wheat to be -0.07. This estimate is also highly inelastic, indicating that the demand for rice is not responsive to variations in the price of wheat, which may be considered a substitute for rice. In considering demand that is relatively unresponsive to variations in own price, cross price and income, along with wage differences between farmers and urban workers, the rice pricing policy provided an easy method of supporting rice farmers without causing significant adverse effects on consumers.

In terms of the government's budget, problems initially occurred during the late seventies when there was concern over the financial ability of the budget to pay for the rice support policies. The government was forced to reduce the level of expenditure on the rice pricing policy by limiting the rise in the producer price, while increasing the consumer price. The outcome of the change in rice pricing was that the difference between consumer and producer prices fell, from Y 31,466 per kg in 1979 to Y 1,166 per kg in 1986, and resulted in a reduction in the financial costs to the budget of Y 262.7 billion in 1979 to Y 74.6 billion in 1987 (ABARE, 1988). The government successfully reduced budgetary expenditure between 1979 and 1987 by 72 per cent, while only increasing the consumer price by 21 per cent.

(b) The Main Socio-Political Factors

A retired lieutenant general and a former Minister of Agricultural and Commercial Affairs, Tani Tateki, stated: "Independence of food is more urgent than the independence of arms" (Ogura, 1979). Such concern has continued throughout the 1900s and it has been enhanced by historical events, such as post-World War II starvation. In more recent years, concern has been expressed over the reliability of supply from international markets, particularly the United States, on which the Japanese are already very reliant for their agricultural products. The concern is associated with the tight restrictions on the export of soybeans and soybean products, which the United States introduced in 1973, limiting supply to Japan. The United States lifted the restrictions after a short period, but it made the Japanese aware of the potential problems of relying on foreign exporters for their food supply. Media coverage in Japan over the problems the US agricultural sector faces due to soil erosion and decreasing fertility has raised further doubts about the reliability of supply.

Both the consumption and cultivation of rice are significant to the Japanese society historically, culturally and religiously. Although dietary patterns of rice have changed over the years, resulting in a fall in consumption per person, it still accounts for one-third of the caloric intake (Hinode, 1986, p. 7). It is believed that rice cultivation is particularly important to the Japanese social structure, which developed from cultivation practices such as intensive farming, sophisticated water system controls and communal co-operation (Kodansha Ltd., 1985). This observation has been highlighted in comments, such as "The principles developed in rice cultivation are the glue of Japanese society. They pervade our social structure, our culture and our moral code" (Yamaguchi, 1987). Rice farming practices are also important in environmental management, such as preventing floods and soil erosion.

The four interest groups involved in the rice policies are the agricultural sector, including the farmers and co-operatives; consumers, including the manufacturing industries; the Japanese Government and foreign rice exporting countries. These groups are analysed in relation to their concerns over the rice policies as well as their power as an interest group in influencing the government's policy choice.

In response to the changing economic environment, many rice farmers have turned to non-rural work to increase their total income. The number of farmers seeking non-rural employment has increased rapidly since the mid-seventies when many industries moved into rural areas, providing a greater number of employment opportunities. A major incentive for industries to move to rural areas was to capture the benefits of lower rates in the rural

wage. It has even been claimed that "part-time farming has helped to sustain growth, profitability and capital accumulation of secondary and tertiary industries in Japan" (Hillman and Rothenberg, 1988).

Other factors that encouraged farmers to find non-rural work were technical advancements, which enabled the rice paddy fields to operate with less labour, reducing labour hours by 60 per cent (Kenji, 1981). Labour saving investments in rice farming freed farm labour to earn higher returns in off-farm employment. It has been estimated that the costs of production increased 14 times within 25 years. The typical small farms of the rice growers restricted the benefits of achieving economies of scale. Rice farming seems to be rather marginal for most 'farm' families' balance sheets.

Out of the total number of farmers who sell agricultural commodities, 60 per cent are rice farmers, and about 60 per cent of these farms receive more than 80 per cent of sales from rice (George, 1988). Two-thirds of the farmers are dependent on the rice support provided by the government. As an interest group, the farmers exert a powerful influence on the government's policy making. They have achieved this influence because of the large voting power of an estimated 4.8 million farmers, an overweighting of the rural constituencies within the electoral system, and a traditional dependence on the farm vote by the Liberal Democratic Party (LDP), which has been in power since 1955. The farmers' lobbying power has also been enhanced by Nokyo. Nokyo has a membership of 5.6 million farmers and 2.3 million associate non-farmers (George, 1988). Nokyo was established to assist Japanese farmers in achieving economies of scale on small farms, to ensure that the scarce food supplies were distributed fairly during the mid-1940s and fifties and to act as an intermediary between the agricultural producers and the government (George and Saxon, 1986).

The Nokyo Law has enabled the co-operative to diversify into a wide range of activities, such as banking and finance. Its interest in the government's rice policies not only concerns supporting the interests of rural members but also in receiving financial benefits, such as returns from rice marketing and collection. George (1988) estimated the financial benefits received by Nokyo from the rice industry to have been at least Y 110 billion in 1985.

The consumers, who constitute another interest group, have shown marked change to rice policies during the 1900s. Before the sixties, consumers were principally concerned with rice prices, as rice constituted a large proportion of their income. Since the sixties the consumers' interests, which are voiced by 4,325 consumer groups, have become more concerned with the protection of nature and preserving the Japanese culture. The motto of the Japan Consumers Union (Nishoren), "pass down healthy life to our children and grandchildren" (Lufty, 1988), expresses these values.

This change in interest may result from the higher incomes which the Japanese have received since the sixties. Although GDP is a measure of economic welfare, its increase may be related to changes in public values. Financially, the public is no longer restricted to satisfying its basic needs; it is also able to satisfy non-marketable factors, such as the preservation of the Japanese culture or rural environment.

Consumer groups also support the international trade restrictions on the grounds of self-sufficiency, food security and the ecological and aesthetic values of the paddy fields. Two public opinion surveys, carried out by the office of the Prime Minister in 1978 and 1980, supported this. These surveys showed that the preference toward the expansion of

domestic production increased from 67 per cent to 75 per cent (Hillman and Rothenberg, 1988). Another survey by the daily newspaper, *The Asahi Shimbun*, also indicated the consumer preference for Japanese rice, with 70 per cent of the consumers claiming they would prefer to pay higher prices for rice than to have it imported (Lufty, 1988). The preferred rice is the Japonica variety; a short grain, of high glutinous content, with a special texture (Kodansha Ltd., 1985). This type of rice is almost solely consumed in Japan, and is grown only in a few countries.

The manufacturing industries are less supportive of rice policies than are the consumers. The industries believe that assistance should be reduced and protection lowered, to expose rice producers to market mechanisms. This opinion is supported by business organisations, such as Nikkeiren (The Japan Employers' Federation) which have put forward policy documents calling for the freeing of the market (Smith, 1987, p. 24).

The present government, the LDP, has traditionally depended on the rural sector for votes, but it has been seen to be concerned with small businesses and salaried workers as well. Although rice policies may have been less favourable toward the rice farmer under a different government, there appears to be a general agreement among all politicians against the liberalisation of the rice market.

The United States believes Japanese import legislation impedes their rice exports. In 1986, the US Rice Millers Association (RMA) filed a complaint with the US Trade Representative, claiming that Japanese rice trade policies were 'unreasonable' under section 301 of the 1974 Trade Act. The appeal was turned down so as not to antagonise the already sensitive US-Japanese relations (Yamaguchi, 1987). However, an agreement was made between the US and the Japanese Governments that the rice trade policies be referred to the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). In 1988, another petition was filed by the RMA and the Rice Council for Market Development, claiming Japanese trade practices were against the GATT. This does not appear to have achieved any changes in the direction of Japanese trade policies, but has further increased international domestic awareness of its policies. This places further pressure on the government to alter its policies.

EVALUATION OF THE RICE POLICIES

It appears that self-sufficiency in Japan has been achieved by boosting production and by reducing consumption. The rice pricing policy has resulted in higher prices in Japan relative to the international market. The high domestic prices have been a major target for criticism. Three factors should be considered when assessing this argument. First, critics have noted that the Japanese rice prices have been up to ten times greater than the international prices. Although this has occurred in recent years, it is an extreme case. Between 1970 and 1982 the price in Japan, on average, was 2.6 times higher than the international price. However, since 1982 the difference between the Japanese and international prices has widened, mainly as a result of the sharp fall in international rice prices (ABARE, 1988). Prices vary greatly world-wide: Japan had the highest price of US \$ 3.00 per kg and Brasilia the lowest at US \$ 0.55 per kg. The Japanese price was 2.3 times higher than that of Washington, and 1.2 times higher than those of Bern and Stockholm (USDA, 1989, p. 14). The difference in price is likely to continue while world prices remain low, as any drastic changes to Japanese rice prices are likely to affect Japan's economic structure.

Second, other countries also support their producers or have policies which interfere with their consumers' reception of lower international prices.

Third, Japanese consumers appear to be willing to pay higher domestic prices to satisfy their preference for the Japonica variety and to maintain social factors, such as the preservation of the rural way of life. This consumer willingness to pay may, in part, be explained through the social welfare function theory in terms of their financial ability to pay due to high GDP per capita. The social welfare concept involves the aggregation of individual preferences to form a social welfare function which allows for these social, non-marketable values to be incorporated into the analysis of a society's preferences.

The "Japanese market is among the most open of all the markets of the advanced industrialised economies" (Saxonhouse, 1986). However, their trade barriers with respect to agricultural products, and in particular rice, are very restrictive. Critics have argued that protection on the grounds of self-sufficiency and food security no longer holds. They point out that the Japanese agricultural sector is now totally dependent on fuel which Japan obtains from foreign countries; agriculture itself is not self-sufficient. However, the objectives of self-sufficiency and food security originated in the early 1900s, when fuel was not required in agriculture. They have continued throughout history to play a dominant role in governmental policies and Japanese society. The objectives have deep roots in policy formulation and in social importance to the Japanese.

There have been claims that the level of protection is too high, causing adverse effects on rice exporting countries. In relation to international trade, rice trade constituted only 3 to 4 per cent of world production during 1960-70 (Hillman and Rothenberg, 1988). One reason for this low percentage was that self-sufficiency policies occur in most countries where rice is the staple diet.

The level of protection, however, depends on the method used to determine the rate of protection. Using the conventional rate of the ratio of domestic farm products to international farm product prices, Japan has the second highest level of 46.9, but using the aggressive protection rate Japan has the third lowest level of protection of 15.48. Egaitu (1987) used this aggressive protection rate, which included whether a country was a net importer or exporter of agricultural products, to indicate the type of protection that a country used. That is, if it was aggressive or defensive; He believed that Japanese policies were defensive; "Japan is only trying to preserve the bones of its domestic farm sector" (Egaitu, 1987). Exporters such as the European Community and the United States had aggressive policies, where they were more concerned with exporting their agricultural commodities. Regardless of the rate of protection used, an empirical study has shown that the international effects of the Japanese agricultural policies were at least half of that of the European Community (Anderson and Tyers, 1988). Also, the effect that the Japanese policies had on foreign exchange earnings was nearly half of that caused by the policies of the European Community.

According to the International Rice Research Institute (IRRI), Japan is one of the world's major rice producers. In the 1985-87 period, Japanese production averaged 14 mt/year and Japan had the highest yield of all the major rice producers (6.3 t/ha) (IRRI, 1988). However, there are problems in relation to productivity and efficiency in the paddy fields. Hillman and Rothenberg (1988) estimated that the difference between production costs for a small farm (less than 0.3 ha) was 13 per cent greater than those for a large farm (greater than 3.0 ha) in 1960, increasing to 45 per cent in 1985. The government has recognised the problems

in productivity and efficiency. The Agricultural Policy Advisory Council (1979-80) recognised the need for farm land expansion to reduce costs, and the need to move away from encouraging rice production.

Historically, farm land in Japan has been limited by the size and capability of family labour, the capability and suitability of the land and, more recently, the Land Reform Law of 1945 which controlled the size and ownership of farm land. Contentious issues associated with this law have been rectified but other problems remain, such as physical restrictions on farm size. The problems that small farmers face have been enhanced by high land prices. Also, farmers tend to hold on to their land, which they see it as an asset: 'a physical foundation ensuring the continuation of the family' (Imamura and Sawa, 1987). Part-time farmers also see their land as security in times of unemployment in non-farm sectors.

FUTURE OUTLOOK FOR THE RICE POLICIES

In the light of recent events, it appears that the Japanese rice policies are entering a new phase of development. The most significant events over the past few years have been inflation as a result of the oil crisis, the appreciation of the yen, a slower economic growth rate and a large trade surplus. The first three factors have caused financial strain on the Japanese economy, while the last factor has encouraged pressure on the government to increase agricultural imports in an attempt to reduce the trade surplus. The appreciation of the yen caused some export industries to lose their international competitiveness which, along with the slower growth of the economy, has forced some factories and construction companies to close down or retrench workers (Kenji, 1981). This was reflected in the level of unemployment which reached 3 per cent in 1987, an unusually high level for Japan (Imamura and Sawa, 1987).

This reduction in employment opportunities would have most effect on farmers who are seasonal, part-time employees, because they do not have the job security of full-time workers. In fact the number employed in the agricultural sector began to increase in 1986, suggesting that workers are returning to the farm. This may be due to the fact that Japan is now seeing retired industrial workers returning to farming. In that case, there will be a greater dependence on the farms to supply an income and will encourage farmers even more to hold on to their farm land. These changes are likely to put further strain on the government's rice support budget and hinder the policies of increasing productivity and efficiency.

The government has recognised these changing economic conditions. The Agricultural Administrative Council's report in 1986 identified the need for new policy directions, to allow for greater freedom of market mechanisms to guide structural adjustments. The main signs of changes in policy direction were reductions in the increases to producer prices, with a price freeze in 1986 and an actual price reduction in 1987. The government's aim, by reducing farmer assistance, was to force non-viable farmers out of business, thus encouraging gradual structural adjustments in the agricultural sector.

Changes in the socio-political environment include the agricultural lobby power, increasing awareness of the high domestic rice prices and international trade relations. In terms of the changing power of the agricultural sector, the LDP traditionally has depended on the rural sector for majority of its votes, but there is a move toward an urban, middle class, wage-and-salary-earner electorate. There was an indication of this in the 1986 Lower House election, where the greatest gains were in the metropolitan (+16), urban (+13) and

semi-urban (+13) constituencies, as opposed to semi-rural (+7) and rural (+2) constituencies (George, 1988). Such a change would affect the farmers' power to influence the government's policies.

Not only is the future strength of the farmers' lobby power in doubt but the farmers' support of Nokyo and its operations are also being challenged. Some farmers disagreed with Nokyo's acceptance of the producer price cut in 1987, believing that Nokyo no longer supported the farmers' interests. Business groups believe that Nokyo's operations obstruct agricultural reform, particularly by encouraging the continuation of many small farms. The government has also criticised Nokyo's role, believing that it is more concerned with business than with protecting farmers' interests. The increasing awareness of high domestic prices has resulted in pressure from interest groups, particularly the food industry, to reduce prices. This awareness mainly has arisen from petitions filed by the United States, claiming that the Japanese policies are unreasonable. The domestic prices have appeared high relative to international prices because of the appreciation of the yen and the fall in international prices. Such pressure is likely to continue, in the light of the less favourable economic conditions in Japan.

In relation to international trade, the main concern is with the United States, which has filed two petitions since 1986 against Japanese rice trade policies. Although the first claim was rejected and subsequently referred to the current Uruguay Round of the GATT, these petitions have not reduced the trade restrictions. However, they have increased international and domestic awareness of the rice policies, causing pressure to be exerted on the Japanese Government.

CONCLUSION

Based on the key economic and socio-political factors identified from the historical development of Japanese rice policies, this study attempted to justify the establishment of the government's rice policies. The main policies used to achieve the government's objectives involved control over two economic factors; rice prices and trade. The pricing policy provided the Japanese Government with a direct method of assisting consumers during periods of low economic growth and supporting rice growers during rapid economic growth. Trade policy was important to the pricing policy because it insulated the domestic market as well as assisting the socio-political objectives of self-sufficiency and food security.

The study also sought to rationalise the rice policies against the criticisms of high domestic prices and restrictive trade regulations. The principal argument put forward was the consumers' willingness to pay the higher prices, explained through the social welfare theory. In terms of the trade restrictions, the rate of protection is arbitrary, depending on the method used. The aggressive rate of protection actually placed Japan's rate of protection below those of other major trading countries, such as France.

The rice policies achieved their objectives for many years without a significant degree of opposition, but concern has grown regarding their present capability. The main areas of concern were that the policy had led to surplus rice supplies, low levels of productivity and efficiency, high consumer prices and increasing costs to the government's budget. In recognition of these problems, the government is amending the policies by reducing the level of price support, in an attempt to encourage gradual restructuring.

Although the United States appears determined to reduce Japanese trade barriers, the

present Japanese Government and opposition politicians seem to be against trade liberalisation, especially in the near future. However, this is in no way a recommendation for the continuation of protectionist policies. Steady liberalisation coupled with an increase in farmers' entrepreneurial ability, as advocated by Hayami (1988), may indeed be the most beneficial policy for both the Japanese consumers and the major rice exporting nations.

Jane C. Moodie and Fredoun Z. Ahmadi-Esfahani*

Received October 1991.

Revision accepted April 1992.

REFERENCES

- Anderson, K. and Y. Hayami (Eds.) (1986), *The Political Economy of Agricultural Protection: East Asia in International Perspective*, Allen and Unwin, Sydney.
- Anderson, K. and R. Tyers (1988), *Japan's Agricultural Policy in International Perspective*, Research Paper No. 161, Australia-Japan Research Centre, Australian National University, Canberra.
- Australian Bureau of Agricultural and Resource Economics (ABARE) (1988), *Japanese Agricultural Policies: A Time of Change*, Policy Monograph No. 3, Australian Government Publishing Service, Canberra.
- Bale, M.J. and B.L. Greenshields (1978), "Japanese Agricultural Distortions and Their Welfare Value", *American Journal of Agricultural Economics*, Vol. 60, No. 1, February, pp. 59-64.
- Castle, N.; K. Hemmi and S. Killings (1982), *U.S.-Japanese Agricultural Trade Relations, Resources for the Future Inc.*, Washington, D.C.
- Egaitsu, F. (1982), "Japanese Agricultural Policy: Present Problems and Their Historical Background", in N. Castle *et al.* (1982), *op. cit.*, pp. 148-181.
- Egaitsu, F. (1987), "A Plan for Removing Production Quotas", *Japan Echo*, Vol. 14, No. 1, Spring, p. 17.
- George, A. (1988), *Rice Politics in Japan*, Research Paper No. 159, Australia-Japan Research Centre, Australian National University, Canberra.
- George, A. and E. Saxon (1986), "The Politics of Agricultural Protection in Japan", in K. Anderson and Y. Hayami (Eds.) (1986), *op. cit.*, pp. 91-110.
- Hayami, Y. (1972), "Rice Policy in Japan's Economic Development", *American Journal of Agricultural Economics*, Vol. 54, No. 1, February, pp. 19-30.
- Hayami, Y. (1986), "The Roots of Agricultural Protectionism", in K. Anderson and Y. Hayami (Eds.) (1986), *op. cit.*, pp. 31-38.
- Hayami, Y. (1988), *Japanese Agriculture Under Siege*, St. Martin's Press, New York.
- Hillman, J.S. and R.A. Rothenberg (1988), *Agricultural Trade and Protection in Japan*, Gower Publishing Co., Sydney.
- Hinode, E. (1986), "US Row About Japan's Rice Policy is Unjustified", *The Japan Economic Journal*, Vol. 24, November 1.
- Imamura, N. and T. Sawa (1987), "Rice and the Politics of Protectionism", *Japan Echo*, Vol. 14, No. 3, Autumn, pp. 58-61.
- International Rice Research Institute (1988), *IRRI Rice Facts 1988*, Manila, Philippines.
- Kenji, N. (1981), "At Dangerous Crossroads-Japan's Agriculture and Food Security", *Japan Quarterly*, Vol. 28, No. 2, pp. 217-226.
- Kodansha Ltd. (1985), *Kodansha Encyclopedia of Japan*, Tokyo.
- Lufty, C. (1988), "The Docile Charm of the Japanese Consumer", *Far Eastern Economic Review*, November 3, pp. 79-81.
- Moodie, J.C. (1989), *Japanese Rice Policies: Economic and Socio-Political Considerations*, M.Ag. Thesis, University of Sydney, Sydney.
- Ogura, T. (1979), *Can Japanese Agriculture Survive? - A Historical and Comparative Approach*, Agricultural Policy Research Centre, Tokyo.
- Riethmuller, P.C. and T. Roe (1986), "Government Intervention in Commodity Markets: The Case of Japanese Rice and Wheat Policy", *Journal of Policy Modeling*, Vol. 8, No. 3, Fall, pp. 327-349.

* Research Executive, AGB Research Australia and Senior Lecturer, Department of Agricultural Economics, The University of Sydney, Sydney, New South Wales, Australia, respectively
The assistance of Paul Jensen is gratefully acknowledged.

- Saxonhouse, G. (1986), *What's Wrong with Japanese Trade Structure*, Research Paper No. 137, Australia-Japan Research Centre, Australian National University, Canberra.
- Smith, C. (1987), "The Price of Rice", *Far Eastern Economic Review*, November 17.
- Tsubota, K. (1985), "Agricultural Policy in Japan", *Journal of Agricultural Economics*, Vol. 36, No. 3, September, pp. 365-375.
- Tyers, R. and K. Anderson (1985), "Price, Trade and Welfare Effects of Agricultural Protection: The Case of East Asia", *Review of Marketing and Agricultural Economics*, Vol. 53, No. 3, December, pp. 113-140.
- United States Department of Agriculture (USDA) (1989), "1989 Yearbook: Food Beyond the Farm Gate", *National Food Review*, Economic Research Service, Vol. 12, No. 2.
- Yamaguchi, I. (1987), "Don't Push Our Farmers Too far", *Japan Echo*, Vol. 14, No. 1, Spring, pp. 23-26.
- Yuize, Y. (1987), "Decontrol Rice in Two Stages", *Japan Echo*, Vol. 14, No. 1, Spring, pp. 14-16; and Norinsuisansho Takei Johobu, in George (1988), *op. cit.*