# The economics and politics of
# administered protection:

## *An analysis of the Japanese safeguard system for agricultural goods*[*]

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**Abstract**

This paper models the lobbying activity concerning a safeguard measure and applies it to the empirical analysis to see if the monitoring system on a safeguard measure is administered along with the WTO agreement or affected by political factors. The model analysis describes that there exists a potential mechanism that a rise in imports induces a political activity by producers. The empirical analysis shows that the monitoring system on a safeguard measure is not so neutral to the WTO conditions and it is more or less influenced by the political factors.

# 1  Introduction

On 23 April 2001, Japan initiated provisional safeguard measures on Welsh onions, *Shiitake* mushrooms, and *Tatami* rushes, according to the WTO rule. This was the first case in the sense that Japan took a general safeguard measure[1] and thereby tariff quotas[2] were imposed on them. Also, the government expressed its willingness to carry out the structural adjustment policy to raise the international competitiveness of these domestic farms. Following the enactment, on 22 June, China who was the largest supplier of the subject goods took a retaliatory measure. It was a 100 percent special duty on cars, cellular phones, air-conditioners and some other imports from Japan. At the end of the year, 21 December, both countries reached an agreement where Japan agreed not to initiate its definitive safeguard measure, while China agreed to remove the special duties. Consequently, a possible worst scenario was avoided. Behind this recent trade dispute between China and Japan, there is a rapid increase in agricultural imports in Japan. It is due to trade liberalization of agricultural goods after the Uruguay round, development-imports promoted by Japanese trading houses, the following quality improvement, the improved infrastructures of seaport in the countries concerned and so on.

Taking account of these situations surrounding agricultural trades, the Ministry of Agriculture, Forestry and Fisheries (MAFF) prepared a monitoring system on particular goods, which enabled it to collect any information necessary for the safeguard measure to be taken. The demand for a safeguard is also growing. Many reports on the initiation of safeguard measures are handed in from local authorities to the national government. The number of reports from local governments and municipalities are 35 (31) and 1329 (1369) for the year of 2000 (2001), respectively[3]. And, possibly, the long-standing recession in Japan may lead to the increase of the industries lobbying for protection by safeguard. Takacs (1981) used the number of requests for a safeguard to International

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[1]The general safeguard measure is the one based on GATT Article XIX and WTO safeguard agreement, while the provisional safeguard measure is a special case of the general safeguard measure. See Section 2.1. Also, special safeguard measures based on The WTO Agreement on agriculture and The WTO Agreement on Textiles and Clothing are basically beyond the scope of this paper. See Jackson (1997) for issues relating to a safeguard measure.

[2]Tariff quota is a policy to allow imports subject to current tariff rates within a quota and restrict imports subject to the national tariff rates (created by the Cabinet Order) over the quota. Quotas on each subject goods are determined based on three-year period average imports. See Abbott and Paarlberg (1998).

[3]Those numbers are counted upon the number of reports and petitions under the Local Autonomy Law Article 99 and 125, respectively.

Trade Committee as an explanatory variable to show the degree of protectionism and examined with a regression analysis under what conditions protectionism rises. What is noted is that the number of requests increases when the real GNP becomes lower, when the unemployment rate gets higher, when the balance of trade gets worse or when the import penetration ratio becomes higher[4]. Thus, not only by the changing circumstance, but also by the additional alternative to use safeguard measure, the trade policy of Japan, particular in agriculture, is now facing a new situation[5].

The safeguard measure protects the domestic producers from the losses caused by a sharp rise in its competing imports. Then, it provides an opportunity to reduce adjustment costs and makes easier the structural adjustment to be followed[6]. Some say that a safeguard measure acts as a safety valve for unpredictable situations and it is therefore necessary to maintain and improve the process of trade liberalization[7]. On the other hand, the safeguard measure increases the price of the subject goods, resulting in the lower consumer surplus. Then, it is necessary to evaluate the cost and benefit of the safeguard measure in view of a society as a whole and, with its assessment, we should consider whether it should be done or not.

Nevertheless, little attention has been paid to such considerations, because politicians often exert their influences[8]. For a country to take a safeguard measure, the procedures are specified under the GATT/WTO rules and the country must follow them rigorously. But, partly because politicians have an incentive for what they will get in service, i.e., a political support and partly because they are in a position to press the bureaucracies or the administrative agency on such matters, a safeguard measure is often under a political influence.

As is often noted, this point is endemic to the administered protection including an anti-dumping measure as well as a safeguard measure. Finger, Hall and Nelson (1982), Moore (1992a)

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[4]In fact, the towel is a good of this point, though the special safeguard is to be applied. On 9 October 2002, the Ministry of Economy, Trade and Industry (METI) made a negative decision about the safeguard measure on imported towels and said that it did not take the measure concerned and that further investigations for another six months are needed to see the change in its import.

[5]See the METI (2002).

[6]In the preamble, Article V, VII, and XII of the WTO Agreement on Safeguards, a structural adjustment is mentioned.

[7]See Bhala and Kennedy (1998) and, theoretically, Rosendorff and Milner (2001).

[8]See Kimura (2001).

and Hanson and Prusa (1997) empirically examined the determinants in the initiation of anti-dumping tariffs in the United States and showed that political factors as well as some rule-based factors are essential in its approval. In a similar vein, Tharakan (1991) and Eymann and Schknecht (1993) applied to EC cases and got the similar results[9].

Our objective in this paper is to empirically examine whether political factors play a key role in the current Japanese safeguard implementation system of agricultural goods[10]. There are few literatures for the Japanese administered protection, because the Japanese government had not used it so often. A safeguard measure should be utilized under the certain rules for the sake of the national economy as a whole and should not be utilized for the sake of pressure groups as a small percentage of its population. So, it is meaningful to examine whether the current Japanese safeguard implementation system of agricultural goods is neutral in terms of WTO rules or actually strongly-influenced by domestic political factors.

This paper is organized as follows. Section 2 describes a safeguard measure and sets out the model. We argue that there is a mechanism that a rise in imports induces a political activity by producers. This result is applied to an empirical analysis in Section 3 and therein we show that the monitoring system on a safeguard measure is not so neutral to the WTO conditions and it is more or less influenced by the political factors, in particular, the member of the Committee of the Agriculture, Forestry and Fisheries (CAFF). Section 4 concludes.

## 2 Safeguard Measure

### 2.1 Rules

A safeguard measure is a policy measure which allows a country to temporarily suspend its obligations as the member state of the WTO and thereby a tariff increase and a quantitative restriction are permitted to the country in the world trading system. The purpose of the safeguard measure is to reduce the economic and social costs in the structural adjustment of domestic industries, which is typically triggered by changes in terms of a comparative advantage, and make the structural

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[9] Also, Moore (1992b) theoretically analyzes the influence of politicians on the administered protection.

[10] In a broader context, Anderson and Hayami (1986) examined the political economy of agriculture in East Asia including Japan.

adjustment easier.

In WTO, the safeguard measure is specified under the GATT Article XIX and the WTO Agreement on Safeguards, while in Japan this type of a tariff increase is specified under the Customs Tariff Law Article 9 and this type of a quantitative restriction is specified under the Foreign Exchange and Foreign Trade Law and the Import Trade Control Ordinance. Practically, these articles allow a country to increase a tariff or impose a quantitative restriction under some rules. In what follows[11], we describe the "some rules" in implementing a safeguard measure, i.e., the investigation on the subject products, restrictions on applied measures and negotiations with countries having a substantial interest as the exporters of the product concerned.

In the implementation of a safeguard measure, the investigation, which is held by the "competent authorities" of the initiating country, has to show the following points[12];

1. Increase in imports following unforeseen developments,

2. Serious injury caused to the domestic industry producing like or directly competitive products,

3. Causal link between imports and injury.

For the third point, in particular, the WTO Agreement on Safeguards Article 4.2 (a) states that, "the competent authorities shall evaluate … the rate of and amount of the increase in imports of the product concerned in absolute and relative terms, the share of the domestic market taken by increased imports, changes in the level of sales, production, productivity, capacity utilization, profits and losses, and employment." In addition to them, one more condition is put in place in Japan under the Customs Tariff Law Article 9, "if it is deemed urgently necessary to take such measures in the interest of national economy." Also, the country initiating a safeguard measure is required to notify all of its investigations including the initiation, the loss and the implementation of this measure to the WTO[13].

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[11] For the following contents of this subsection, Komuro (2001) is often referred to.
[12] See The WTO Agreement on Safeguards Article 2 and 4 and GATT Article XIX.
[13] See The WTO Agreement on Safeguards Article 3.

It is noteworthy that there is an exceptional case for these conditions; even before the completion of its investigation, a country is allowed to institute a safeguard measure. This is called a provisional safeguard measure and the one used by the Japanese government in April 2001[14].

There are some restrictions when a safeguard measure is applied. For a tariff increase, it shall be within the price under-cutting by imported products as compared with the wholesale price of domestic products and, for a quantitative restriction, it shall be equal to the average quantity level of import during the appropriate three-year period[15]. The duration period shall not exceed four years and, even if it is extended, it shall not exceed eight years[16].

The country to initiate a safeguard measure has to make an opportunity to consult with "the CONTRACTING PARTIES and those contracting parties having a substantial interest as exporters of the product concerned"[17] before taking its action. And, if it fails and the safeguard measure is unilaterally taken, the affected country was free to suspend part of its obligation[18]. However, the affected country is now unable to take any retaliatory measure for the first three years "provided that the safeguard measure has been taken as a result of an absolute increase in imports and that such a measure conforms to the provisions of this Agreement"[19].

By the way, as the WTO Agreement on Safeguards Article 3 indicates, it is the "competent authorities" who investigate. In Japan, they are the ministers of the MOF (ministry of finance), the MAFF, and the METI. Indeed, under several guidelines for an emergency tariff and quota, some bureaucrats from these ministries investigate on the subject product. In the following subsection, we look closely at how players surrounding the safeguard measure are related each other.

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[14]The WTO Agreement on Safeguards Article 6 states, "in critical circumstances where delay would cause damage which it would be difficult to repair, a Member may take a provisional safeguard measure pursuant to a preliminary determination that there is clear evidence that increased imports have caused or are threatening to cause serious injury."

[15]See GATT Article XIX and The WTO Agreement on Safeguards Article 5, respectively.

[16]This is, what is called, a sunset provision. See The WTO Agreement on Safeguards Article 7. Also, for the provisional safeguard measure, Article 6 states that it "shall not exceed 200 days, during which period the pertinent requirements of Article 2 through 7 and 12 shall be met."

[17]See The GATT Article XIX 2.

[18]See The GATT Article XIX 3.

[19]See The WTO Agreement on Safeguards Article 8.

## 2.2 Political Economy of Safeguard Measures

As the last paragraph indicates, the bureaucrats will be the central figure in judging on the application of a safeguard measure because they investigate following the rules. But, it is very unlikely that they are the only figure in the implementation of a safeguard measure. This is the point which the previous literatures on the administered protection have shown. Specifically, some producers will lobby politicians for a safeguard and thus politicians will press the bureaucrats for a safeguard. As a result, the bureaucrats will implement a safeguard with their political discretion and, consequently, producers will gain at the expense of consumers. Let us figure out how they are related in turn.

Look at the relationship between the bureaucrats and politicians. Basically the bureaucrats follow the rules, whatever they are regarding a safeguard, and play a key role in the implementation of a safeguard. However, the bureaucrats are not always free from the political influences of politicians. This is because politicians are in a position to press the bureaucrats. In some cases, politicians are able to take any means such as a budget allocation and a personnel assignment. This is why we think the bureaucrats themselves are subject to political influences.

Next, look at the relationship between the politicians and producers, wherein we find the incentives for politicians to exert their influences. Politicians, to win the coming election, seek for political supports, like cooperation in election and political contribution. Thus, they are willing to press the bureaucrats for safeguard measures for the sake of political supports from producers. This is how a political relationship between them is formed.

Two points are noted on the relationship between politicians and producers. The first point to note is that politicians tend to favor the interest groups consisting of a group of people, instead of individuals. Because they can expect more political support from the interest group, politicians are likely to work for the benefit of such interest groups rather than individuals' benefit. The difference in the expected political supports gets politicians to favor the interest groups. The second point to note is that, among its constituencies, producers are more likely to organize such interest groups rather than consumers. This stems from the fact that there is a particular expense necessary to

organize an interest group and that a safeguard measure leads to the costs to be diffused over the consumers and the gains to be concentrated on the relevant industry. Thus, because organizing an interest group pays for producers, not consumers, producers will be successfully in a better position to lobby[20]. For these two reasons, politicians and producers are in a close political relationship.

Consequently, politicians pressing the bureaucrats tend to promote the trade policy to benefit producers at the expense of consumers. What is emphasized is that the pressure from politicians to the bureaucrats depends directly on the lobbying from producers to politicians. The more petitions from producers, the more pressures from politicians to the bureaucrats. This is potentially a mechanism to make a safeguard measure formed by a political factor.

**Model**

We build a simple model to express the political situation we described so far[21]. The approach we employ is similar to Findlay and Wellisz (1982) in that the probability of a safeguard measure being implemented depends partly on the size of producers' lobbying[22]. We consider under what conditions the size of political activities from the producers to the politicians becomes larger and consequently the implementation of a safeguard measure becomes more influenced by political factors.

Consider a small open economy. Let us suppose there is a sharp rise in the import of a good and serious injury to its competitive domestic producers, due to a drop in the world price and also that the bureaucrats are going to judge whether to implement a safeguard measure as a necessary policy for the entire economy. To clarify essential issues, assume that the policy taken as a safeguard measure is only a quantitative restriction. As we have seen, in principle, the quantitative restrictions for imports is required to follow the strict rules. When a safeguard measure is imposed on a quantity basis, the bureaucrats have to take the WTO rule into account. Let $y^S$ and $y^F$ with $p_W^*$ be the limited import quantity as a result of a safeguard measure and the import quantity

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[20]See Olson (1965).

[21]There are a lot of literatures for how political factors influence a trade policy and this field is known as an endogenous trade protection theory. See Hillman (1989), Rodrik (1995) and Helpman (1997) for a comparative survey on this field. Rodrik classifies into five approaches; (i) the tariff-formation function approach, (ii) the political support function approach, (iii) the median voter approach, (iv) the campaign contributions approach, and (v) the political contributions approach.

[22]See Moore and Suranovis (1992).

with the dropped world price under a free trade, thus $y^S < y^F$. Further, let $\pi(y^S)$ and $\pi(y^F)$ be the profits to domestic producers in each case, where $\pi(y^S) > \pi(y^F)$. That is, we suppose that, the lower the world price, the more the import, and thus the lower the profit, $d\pi/dy^F < 0$.

Also, suppose that whether the safeguard measure is eventually implemented depends on three factors. The first factor is associated with the conditions specified under the WTO Agreement on Safeguards (hereafter, the WTO rule-based conditions). We define $v$ as the parameter reflecting them and assume that, when $v$ increases, the policy is more likely to be implemented. For example, when the import rises rapidly or when domestic producers lose seriously due to the rapid rise in imports, $v$ increase. The second factor, denoted as $c$, reflects the circumstance which is indirectly related to the rise in imports. The factor includes productivity and capacity utilization (see the WTO Agreement on Safeguard Article 4.2 (a).). We simply assume that if $c$ increases, the bureaucrats find it reasonable to institute a safeguard measure. The third factor is associated with the political pressure to the bureaucrats. We define $z$ and $g$ as the level of producers' lobbying to politicians and the level of politicians' pressure to the bureaucrats. We assume that $g = g(z)$ where $dg/dz > 0$ and $d^2g/dz^2 < 0$. Among three of them, to clarify our argument, we consider the first factor and the third factor as the WTO rule-based factor and the political factor, respectively.

Therefore, we have the probability function which shows the possibility of the safeguard measure being implemented as an equation (1);

$$P = P(v(y^F, c), g(z)), \tag{1}$$

where $\partial P/\partial j > 0$, $j = v, g$, $\partial^2 P/\partial g^2 < 0$, and $\partial v/\partial l > 0$, $l = y^F, c$. We assume that the marginal effect of the politicians' pressure on the probability is negative.

While modeling a political activity is a task in itself, we simply assume it is only producers who can organize an interest group to lobby for a safeguard measure. Such political activities need some expense. Then, let $h = h(z)$ and $f$ be the cost associated with political activity and the fixed cost to organize an interest group, where we assume $dh/dz > 0$ and $d^2h/dz^2 > 0$.

Now, let us begin the analysis as a whole. The objective function to producers is shown as an

equation (2);

$$E = P(v(y^F, c), g(z))\pi(y^S) + (1 - P(v(y^F, c), g(z)))\pi(y^F) - h(z) - f. \tag{2}$$

The first order condition for its maximization is given as;

$$\frac{\partial E}{\partial z} = \hat{\pi}\frac{\partial P}{\partial g}\frac{dg}{dz} - \frac{dh}{dz} = 0, \tag{3}$$

where $\hat{\pi} = \pi(y^S) - \pi(y^F)$ and the second order condition is met $(\partial^2 E/\partial z^2 < 0)$. The first term of the equation (3) shows the marginal benefit of political activity, while the second term shows the marginal cost.

Let us examine the cases that the lobbying activity becomes stronger. Obviously, from the equation (3), we have three conditions. When the marginal cost of political activity falls, when the marginal effect of politicians' pressure to the relevant bureaucrats rises, and when the marginal effect of producers' lobbying to politicians rises, the level of producers' lobbying, $z$, increases.

Further, consider the effect of the increase in the current import on the producers' lobbying. By totally differentiating the equation (3) with $y^S$ constant, we have the equation (4);

$$\left.\frac{dz}{dy^F}\right|_{dy^S=0} = -\frac{\hat{\pi}(\partial^2 P/\partial g\partial v)(\partial v/\partial y^F)(dg/dz) - (\partial P/\partial g)(dg/dz)(d\pi/dy^F)}{\partial^2 E/\partial z^2}, \tag{4}$$

As the equation 4 shows, the sign of $dz/dy^F$ depends on the cross-partial derivative of $\partial^2 P/\partial v\partial g$. Pay attention to that $\partial^2 P/\partial v\partial g$ denotes the marginal effect of the WTO rule-based conditions on the marginal effect of politicians' pressure. It means, when the cross-partial derivative is positive, influences exerted by politicians and the WTO rule-based conditions are like complements and when it is negative, they are like substitutes. Thus, when there is a rise in imports and they are like complements, the level of lobbying activity becomes higher. On the other hand, when they are like substitutes, it may be lower. However, even when the sign of $\partial^2 P/\partial v\partial g$ is negative, if the value is too small to ignore, the numerator is positive. Then, in this particular case too, the level of lobbying activity will be higher.

Much emphasis should be placed on that a rise in imports can get producers to lobby for a safeguard. Note that so far we have not thought of how the producers' lobbying activity starts.

Therefore, this result will give a part of the answers. Through this mechanism, when there is a sharp rise in imports, producers are induced to lobby for a safeguard measure.

**Proposition** *When a safeguard is at issue, producers' lobbying to politicians becomes stronger under each condition, (i) when the marginal cost associated with the lobbying activity falls, (ii) when the marginal effect of politicians' pressure to the relevant bureaucrats raises, (iii) when the marginal effect of producers' lobbying to politicians raises, and, in particular, if there is a sharp rise in import, (iv) when influences exerted by politicians and the WTO rule-based conditions are like complements, and (v) when, even if (iv) is not satisfied, the marginal effect of the WTO rule-based conditions on the marginal effect of politicians' pressure is too small.*

## 3 Empirical Analysis

### 3.1 Framework of the empirical analysis

This section sets out an examination on whether there is a capricious use of the safeguard measure caused by political factors in the implementation system of Japan. It is desirable that, like the previous literatures, we collect some explanatory variables for the goods which were investigated for a safeguard and analyze what factors were effective over the implementation of a safeguard measure. However, the scope of our empirical research is inevitably limited because the Japanese government has investigated only six agricultural goods of tomatoes, onions, sweet peppers, Welsh onions, *Shiitake* mushrooms (fresh) and *Tatami* rushes, vis-a-vis a safeguard measure. Then, to overcome the shortcoming, we focused on a recent development in the Japanese safeguard system, the monitoring system on safeguard measures.

The monitoring system on safeguard measure is a system prepared in April 2001 by the MAFF. Its purpose is to collect any information on agricultural and marine products, which is necessary for a safeguard measure to be imposed. Specifically, the system consists of two groups, Level 1 and Level 2. The goods under the former group include garlic, eggplant, *Shiitake* mushroom (dried) and they are investigated under a normal monitoring system. Thus, the data obliged under the WTO Agreement on safeguards are collected quarterly or at a cropping season. And, the goods under the

latter group include a *Welsh* onion, *Shiitake* mushroom (fresh), tomatoes, green-peppers, onions, *wakame* weeds, lumber, eels and they are investigated under the emergent system. In principle, the monthly data are to be collected on these goods.

Given the purpose and the functions of the monitoring system, we employ the monitoring system for the empirical research on the future implementation of the safeguard measure. Our idea is that, because a good under the monitoring system is more likely to be the subject for a safeguard in the near future, the producers have some incentives to get their products listed. Thus, it is naturally justified to use the monitoring system as an alternative setting. Further, to clarify the essential issues, we consider the most typical goods in the monitoring system, vegetables. Then, let us examine why only several vegetables have been chosen as goods possibly protected by safeguard measures, using an empirical method.

In the following empirical analysis, the explanatory variables are divided into two categories, the WTO rule-based conditions and political factors, while the dependent variable is considered to show whether the vegetable is chosen as a monitored good by the MAFF. Such a dependent variable is a qualitative dependent variable which takes either 0 or 1. Define 1 (0) as a good specified (not specified) under the monitoring system. As the variable is discrete, then it is appropriate to use a non-linear probability model. Hereafter, we use a probit analysis[23].

We sampled 22 vegetables of Carrots, Edible Burdocks, Lotus root, Taros, Chinese Cabbages, Welsh Onions, Onions, Eggplants, Tomatoes, Cucumbers, Pumpkins and Squashes, Sweet Peppers, Peas, Soybeans, Kidney Beans, Sweet Corns, Lettuces, Celeries, Cauliflower, Broccoli, *Shiitake* mushrooms (fresh), *Shiitake* mushrooms (dried), and Garlics. Among 32 goods[24], we sampled them out by excluding 10 goods. We excluded six vegetables which show the extreme up and down within 1997 through 2000, one vegetable that the competitive import obviously decreased in the same period, and three vegetables that the product differentiation within the good is widely known. The first group of vegetables reflect the occasional climate and changes in the weather

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[23]See Maddala (1992) and Green (2000).

[24]These are 31 items that the MAFF annually investigates their production and shipment plus a garlic which was chosen under the monitoring system, though not annually investigated.

so that it may be impossible to evaluate the possibility of a safeguard measure. For the second group, even the prerequisite is not satisfied. For the third group of vegetables, each of them generally varies from a high-quality goods to a low-quality goods so that we thought of them as less import-competitive than other vegetables[25].

## 3.2 Explanatory Variables and Expected Signs

In this subsection, we will see each of explanatory variables we use in the probit analysis. As the monitoring system itself is designed for a safeguard measure, it is reasonable to think that, for those goods, all (or most) of the WTO rule-based conditions were met (or likely to be met). We begin with the explanatory variables to represent the WTO rule-based conditions and those of political factors[26].

As an explanatory variable for a rise in imports, we use a ratio of the average imports of 1999 and 2000 over those of 1997 and 1998. Since data on vegetables are largely affected by the occasional climate and the changes in the environment, the averaged data is employed for its adjustment. We use the quantities examined minus the quantities disposed of through customs. Also, in the WTO    Agreement on Safeguards Article IV, the share of the domestic market is one of the factors to be evaluated, but the correlation coefficient between them is so high, i.e., 0.983. Thus, we do not employ it.

As an explanatory variable for an incurred loss, we use the differential between the average sales of 1999 and 2000 and those of 1997 and 1998. We calculate each sale just by the price of the vegetable times the quantity being shipped.

As an explanatory variable for the causal relationship, we use the import competitiveness. In this paper, the import competitiveness is defined as the degree of how import competitive the domestic shipment are in domestic market. Then, the larger this indicator is, the more import-competitive the corresponding good is and thereby, when the import rises sharply, the more loss will be incurred compared with that in a less import-competitive good. We calculate this indicator

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[25] As a result, we took off Japanese radishes, Turnips, Yams, Cabbages, Spinaches, Potatoes (the first group) and Sweet Corn (the second group) and Strawberries, Water Melons Melons (the third group).
[26] See Appendix A for the sources of these data.

by adding 1 to the correlated coefficient between imports and domestic shipment of the monthly transaction in Tokyo wholesale market from 1997 through 2000[27].

We mention two points. By a simple reflection of each variable, we see the expected signs are all positive. And, if all the selected goods under the monitoring system satisfy these indicators only, the system is neutral along with the WTO rules.

On political factors with respect to the level of producers' political activity, no data is virtually available to us. However, as we emphasized, they are much likely to play a key role within the implementation system of safeguard measures and, of course, in the monitoring system. Thus, by any means, we need to see the size of producers' lobbying.

Then, alternatively, we look back on Proposition (hereafter, Prop) in the last section and consider the explanatory variables to reflect the political factors to indicate the level of political activities. On marginal costs (Prop (i)), we are not sure whether it acts as an explanatory variable in that it does not make any difference on each political activity. We do not think the marginal cost for a political activity will be very high to a producer and very low to the other. Thus, we ignore this factor.

On the marginal effect of politicians' pressure to the relevant bureaucrats (Prop (ii)), we consider it increases when the Lower House member from a vegetable producing area belongs to the committee on agricultural policies or already is influential in the governing party, the Liberal Democratic Party (LDP) in Japan[28]. Consequently, we suggest two explanatory variables. The first variable shows that the Lower House member from a vegetable producing area belongs to the Committee on Agriculture, Forestry and Fisheries (CAFF). The second variable shows that the Lower House member of the LDP from a vegetable producing area has been elected more than three times. We calculate the first indicator by computing the number of the CAFF per prefecture times the number of farmers over the number of labors times the ratio of the shipment per vegetable and per prefecture and adding up to more than 50 %, but less than 60 % from the largest prefecture in

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[27]See Appendix B.

[28]Historically as well as at present, the relationship between the agricultural policy and the Liberal Democratic Party is always very close. See Aurelia (2000).

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the production. And, similarly, we have the second variable by substituting the number of the more than three times elected politicians for the number of those who belong to the CAFF. The way of weighting for the CAFF (resp. the more than three times elected politicians) reflects that, as the ratio of production in a prefecture is high and as the labor ratio of agriculture in the prefecture is high, the corresponding Lower House member is more willing to exert its influences on the MAFF (resp. within the LDP) for its own sake. Also, the sum up to more than 50 %, but less than 60 % from the largest prefecture in the production reflects that the Lower members are more interested in vegetables with the high shipment ratio from his/her elected (and the producing) area[29]. And this is how we combine the marginal effect of producers' lobbying to politicians of Prop (iii).

As some reports noted, the safeguard measures on three vegetables in April 2001 might be aimed at the coming-election campaign of the Upper House. Thus, we suggest one variable to show this possibility for the governing party. If the safeguard measure is designed for the election campaign, the governing party becomes more interested in the vegetables whose producing areas have more voters working in agriculture and more electoral districts per prefecture (more single-seat districts). We consider the governing party's pressure to the relevant bureaucrats are marginally higher in vegetables with such features than those without. The third and last explanatory variable is gained by substituting the number of the single-seat districts in the Lower House for the number of those who attend to the CAFF.

Again, by a simple reflection of each political explanatory variable, we see the expected signs are all positive. And, if all the selected goods under the monitoring system satisfy these political explanatory variables only, the system is formed by political factors.

In light of (iv) and (v), one point should be noted. It is the possibility that the rise in imports can induce the political activity of producers. If this is of more importance, the coefficient on imports reflects more than the MAFF's view as a WTO rule-based condition.

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[29]The WTO Agreement on Safeguards Article 4.1.(c) states, "in determining injury or threat thereof, a "domestic industry" shall be understood to mean the producers ⋯ whose collective output of the like or directly competitive products constitutes a major proportion of the total domestic production of those products." In Japan, as Komuro (2001) notes, "the major proportion" is defined as 50 percent.

## 3.3 Probit Estimation

Table 1 shows the probit estimation wherein we select the model 2 by Akaike Information Criterion (AIC)[30], following the estimation with full variables. In the model 2, the losses and the CAFF indicator are 5 % level of significance and the import-competitiveness is 10 % level of significance. These expected signs match the signs gained through the probit analysis. The absolute value for the coefficients of the CAFF indicator are much larger than that of the losses. The MAFF, according to the WTO rules, seems to consider the highly import-competitive vegetables and the vegetables whose producers have been seriously injured as the subject goods for the safeguard measures. More importance, however, should be put on the fact that the Lower House member in the CAFF is likely to exert his/her influence over the selection of the monitored vegetables.

Also, Table 1 has the result of the model 3 only with the WTO rule-based conditions, though the AIC does not select it. In the model 3, all the expected signs match the signs gained through the probit analysis and the losses is the only statistically significant variable. It should be emphasized that the fitness of the model 2 is remarkably improved compared with that of the model 3. We also undertake likelihood ratio test to see if the model 2 differed significantly from the model 3. The likelihood ratio test rejects the hypothesis at the 1 % level of significance. In addition, the model 2 is strongly supported by the likelihood ratio index and Effron's $R^2$. This is because the CAFF indicator makes a substantial influence over the result. Consequently, we make a conclusion that the monitoring system for a safeguard is not so much neutral along with the WTO conditions and the political influence is more or less found.

We know that the rise in imports and the electoral districts indicator in the model 2 are not statistically significant and these estimated signs do not match the expected signs. For the rise in imports, we calculated the two-year average and employed the ratio to ease the impact of the occasional climate. To make assessment more properly, it would be necessary for us to account for all the effect on every vegetable caused by external shock such as occasional climates. However, we have no information what the MAFF will refer to in investigation. And, for the electoral districts,

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[30]Schwartz Bayesian Information Criterion (SBIC) selects the model 2, too.

we tried to have a look at the election campaign of the governing party. To make assessment more properly, it would be necessary for us to account for the governing party's evaluation on how many votes are gained in which electoral district per prefecture. However, we are unable to collect such information. Also, the governing party is not always concerned about only the number of electoral district. For instance, it may pay more attention to the district where the governing party lost in the last election. For these reasons, we may fail to demonstrate our intentions by the two parameters and thus the different signs are shown in the probit analysis.

For sure, further improvement is necessary in many respects. Our research is subject to the limited availability of data and we should make our argument more precisely for the process of the variables, the formulation and the analytical method. However, subject to several limitations, we note that our analysis is still valuable. As we have expected, there is the potential influence of political factors in the monitoring system for a safeguard. Among them, the CAFF is demonstrated as a key factor.

# 4   Conclusion

Generally speaking, the administrative protection, including a safeguard measure, is less influenced by political factors. This is because their decision is subject to the WTO rules and because the bureaucrats, unlike politicians, are not directly influenced by political activities. However, indeed, a safeguard measure is much more influenced by political factors. It is because there are no specifics as to the conditions of the implementation in the rules regarding a safeguard and, thereby, because politicians are in a position to exert their influence on the bureaucrats by any means, seeking for political supports from influential interest groups.

This paper used a model to show the relationship among players surrounding a safeguard measure and empirically examined whether the Japanese safeguard system is influenced by political factors. In the model analysis, special attention should be paid to the implication from Prop (iv) and (v). It states producers' petitions to politicians become stronger if the competitive import sharply increases. Thus, when there is a rise in the competitive imports, the corresponding pro-

ducers tend to lobby for a safeguard to politicians. When facing with such lobbying activities, politicians will press the bureaucrats for a safeguard to gain political supports from producers.

In the empirical analysis, we focused on the monitoring system and examined which factors, the WTO rule-based conditions or the political factors, are of more importance. Our empirical analysis is subject to the limited availability of data and some improvement will be necessary for the process of the variables, the formulation and the assessment method. However, subject to these limitations, we based our analysis on the two groups of factors and argued that the monitoring system for a safeguard is not so much neutral along with the WTO conditions and the political influence is more or less found.

This result may be related to a fact that those who investigate are from the relevant ministries in Japan. By taking account of this point, we can argue that a neutral institution, like the International Trade Commission in the United States, should be established in Japan and more information need to be taken into consideration. But, as empirical studies by Moore (1992a) as well as some other papers show, even such institution is often influenced by political factors on the approval of the anti-dumping. Thus, for the moment, we should carefully attempt to build a system so as to keep away from political factors and evaluate the cost and benefit of a safeguard measure as a society as a whole.

They are what we have seen in this paper, but we have some issues left. In a model analysis, we do not consider the bureaucrats as those who are self-interested and do not think of how the bureaucrats interact among them and how they govern a safeguard measure. Thus, we leave the government structure a black box. Also, in an empirical analysis, we should use more appropriate variable on imports and the one to represent the politicians' pressure to the bureaucrats. On these issues, it is necessary for a further improvement and we have these left for the future.

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**Appendix A : Data Source**

Import (other than Shiitake mushrooms (fresh) and (dried)), *Statistics on Plant Quarantine*, (*Shokubutsu-Keneki-Toukei*), Statistics and Information Department, MAFF.

Import (Shiitake mushrooms (fresh) and (dried)), *foreign trade statistics*, (*Boueki-toukei*), MOF.

Price, *Report of Survey on Vegetables and Fruits Wholesale Markets*, (*Seikabutu-Oroshiuri-shijou-chousa-houkoku*), Statistics and Information Department, MAFF.

Quantities (Shipment), *Statistics on Production and Shipment of Vegetable*, (*Yasai-seisann-shukka-toukei*), for Data of 2000, production comes from "Statistical Survey on Shipment of Vegetables and Fruits and Nuts," Statistics and Information Department, MAFF.

Import Competitiveness, *Annual Report in Tokyo Metropolitan Central Wholesale Market*, (*Tokyo-to-chuuou-orosiuri-shijou-nennpou*), Tokyo Metropolitan Central Wholesale Market.

The Number of Labours, *National Census*, (*Kokuzei-Chousa*), Management and Coordination Agency.

The Number of farmers, *The Number of farmers*, (*Nougyou-shuugyou-jinkou*), Statistics and Information Department, MAFF.

All the political data are from *Handbook of Politics* No. 36, (*seiji-handbook*), The Center for Political and Public Relations Inc, 2000.

**Appendix B : A Note on Import Competitiveness**

Production of agricultural goods, such as vegetables, depends much on the seasonal changes and occasional climate of the producing areas. Then, unlike manufacture goods, there are two features of the agricultural goods; (i) the quantities produced are not easily adjusted and (ii) each goods has a sort of cycles for its shipment. Recognizing these features, we may have to consider the import competitiveness in vegetables in light of the seasonality of domestic production (or shipment) and the timing of import.

Figure 1 (a) and (b) shows the monthly shipment quantities of a pumpkin and a garlic in the Tokyo wholesale market for the domestic shipment and the import, respectively. As Figure 1 (a) shows, on the pumpkin, the cycle of its domestic shipment and its import is almost reversed. It means the pumpkin is not at all import-competitive and the trade obviously leads to the benefits for the consumers so that they are able to consume whenever it is. In contrast, a garlic is very import-competitive. Figure 1 (b) shows the domestic production and the import have a similar cycle.

Our hypothesis is that, the more import-competitive a vegetable is, the more likely it is to be the subject of the safeguard measure since the more import competitive goods shall be more affected by a sharp rise in the import. (Also, similarly, we can expect such reasoning applies to a loss.) In Section 3, we use the correlation coefficient between the domestic goods and the import in the Tokyo wholesale market from 1997 to 2000 as the parameter for the import-competitiveness. To make the parameter positive, we add one to it. Also, while a pumpkin shows the lowest value, a garlic shows the highest.

Table 1: Probit Estimates

| Parameter | Model1 Estimate | Model2 Estimate | Model3 Estimate |
|---|---|---|---|
| Constant | -3.4705 | -3.3635 | -2.6574 |
| | (-0.6419) | (-0.7549) | (-2.2335) |
| | | | |
| Import Competitiveness | 3.6086 | 3.5431 | 1.0578 |
| | (1.2896) | (1.7101) | (1.0562) |
| | | | |
| Losses | 0.0452 | 0.0445 | 0.0117 |
| | (1.4565) | (1.9640) | (2.3757) |
| | | | |
| Import | -0.2905 | -0.2839 | 0.1278 |
| | (-0.4900) | (-0.5067) | (0.3349) |
| | | | |
| Electoral District | -0.3025 | -0.2937 | |
| | (-0.9669) | (-1.5733) | |
| | | | |
| More than three times elected politicians | 0.0070 | | |
| | (0.0354) | | |
| | | | |
| The CAFF | 1.24881 | 1.2246 | |
| | (1.3503) | (2.0184) | |
| | | | |
| LL | -4.5315 | -4.5321 | -9.5021 |
| SBIC | 15.3502 | 13.8053 | 15.6842 |
| AIC | 11.5315 | 10.5321 | 13.5021 |
| | | | |
| Likelihood ratio index | 0.6858 | 0.6857 | 0.3411 |
| Effron's $R^2$ | 0.7125 | 0.7135 | 0.4172 |

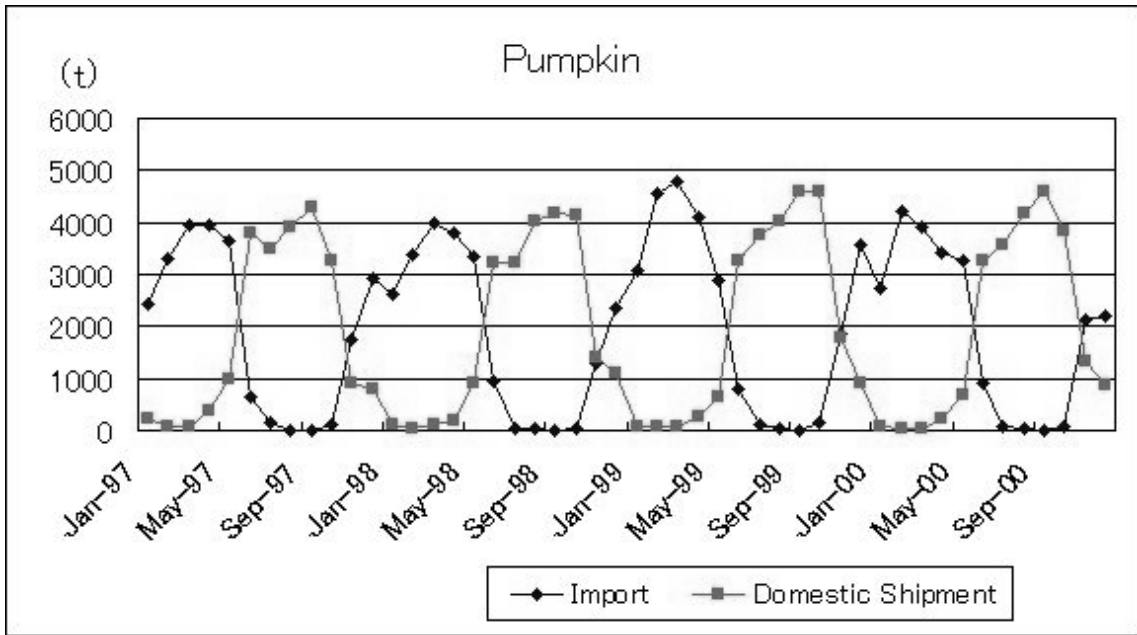Note: $t$-statistics is in parentheses.

Figure 1(a)



Figure 1(b)