

Measuring the Effects of Non-Tariff Barriers in Exchange Rates, Positive List System, and Import Quotas in the International Trade : Cases of Agricultural Imports in Japan

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論文題名 : Measuring the Effects of Non-Tariff Barriers in Exchange Rates, Positive List System, and Import Quotas in the International Trade — Cases of Agricultural Imports in Japan

(国際貿易における為替レート、ポジティブリスト、輸入割当の非関税障壁の影響測定に関する研究 — 日本の農産物輸入を事例として)

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論 文 内 容 の 要 旨

Along with the strong propositions of freer bilateral or multilateral trade advocated by numerous trade organizations, traditional customs tariffs have been reducing or even cutting down in recent years. However, more and more non-tariff barriers to trade (NTBs) are prevailing and attracting attentions from policy makers and academic researchers nowadays. As a matter of fact, there are large amounts of policy measures can be regarded as NTBs which refer to all the measures that can distort the trade excluding tariffs. Although the objectives of implementing NTBs may be different to each other, yet the function of NTBs usually appears like a barrier to trade for blocking the entrance of more trade flows and may worsen the welfare of some groups. Therefore, this dissertation attempts to study the influence of NTBs and quantitatively measure the effects of NTBs on trade flows and welfare based on the analyses of Japanese agricultural imports.

There are actually many categories of NTBs, and in the process of selecting objects as the study issues, two principles are followed. One of the principles is that those NTBs to be discussed in this dissertation are hot and controversial topics in recent years and thus are worthy to do research. Moreover, the other principle is that those NTBs to be analyzed in this study have the impacts particularly on agricultural product trade, and distort the agricultural trade flows. Therefore, three related policies—foreign exchange rate control, positive list system, and import quota are chosen to be studied in this dissertation. In fact, the models constructed in this research can be applied to analyze many kinds of NTBs, and hereinto the three above policy cases are taken into consideration and empirically examined their effects on trade flows and welfare as well as.

The first study issue is focused on China's exchange rate reform measure. China has largely extended its exports to the whole world since it entered into World Trade Organization (WTO) at the end of 2001. In order to protect local industries and weaken the exporting advantages of China, many countries have began to put much pressure on the appreciation of Chinese currency—yuan. In the context of huge hastened pressures from many countries, in July 2005 China decided that Chinese currency yuan would no longer only be pegged to U.S. dollar but move into a managed floating exchange rate regime with reference to a basket of currencies. Chinese yuan has appreciated step by step since then. Meanwhile, the tendency of China's vegetable exports to Japan have experienced from thriving trend to shrinking trend, and the turning corner was around the implementation of exchange rate reform. Although exchange rate had been paid much attention by economists since long time ago, yet nowadays this topic is still popular and moreover, now the study subjects become focusing on exchange rate volatility instead of just exchange rate itself. Therefore, the first study of this dissertation is concerned about exchange rate topic and attempts to examine if the changes

in Chinese yuan have statistically significant relationship with vegetable exports to Japan. Moreover, it tries to determine if exchange rate and its volatility have different degree impacts at different stages or measure the short/long-run effects. The study will empirically examine the total vegetable, fresh and chilled vegetable, and frozen vegetable exports, respectively. Through establishing Vector Autoregressive (VAR) model and analyze the impulse responses of various kinds of vegetable exports to exchange rate and its uncertainty to explore their dynamic relationship. Finally the study judged that the reform of China's exchange rate did distort the vegetable exporting flows to Japan, and can be regarded as a kind of NTBs.

The second study issue is taking Japan's positive list system into consideration. In order to protect the health of people and supply the safe food for consumers, Japan formulated the positive list system and carried out it on the end of May, 2006. The positive list system has directly affected agricultural product especially vegetable exports to Japan, because the system strictly controls the usage of pesticides and chemicals, and makes an extremely rigorous requirement for the residues in agricultural goods. After the implementation of positive list system, in relatively long period of time, China's vegetable exportation to Japan has been given shocks. Through adjusting the vegetable plantation and reducing to depend on pesticides and chemicals, China now is trying to meet the requirements of the system and may recover its vegetable exports gradually in the future. The second study is concerned about Japanese consumer's preference to domestic produced and foreign imported vegetables, and also the elasticity of substitution of those vegetables. The research compared the differences of preference and elasticity of substitution parameters before and after the enforcement of the system. Based on the information, this study attempts to quantitatively measure the effects of Japan's positive list system through calculating the tariff equivalents of the system. Finally, the results implied that the impacts of positive list system were much huger than the traditional tariffs on vegetable exports to Japan. Thus, Japan's positive list system functions as a kind of NTBs.

The third study issue is paying attention to Japan's rice import quota. Japan has limited opened its rice importing market since 1995 through Minimum Access (MA) mechanism. MA consists of Ordinary Minimum Access (OMA) and Simultaneous Buy and Sell (SBS) channels. The third study focuses on SBS policy through which short grain rice is imported and consumed by Japanese consumers. The research is particularly cared about SBS mechanism which is made up of SBS general rice and SBS broken rice, and moreover the edible SBS general rice is paid special attention and studied further. On the basis of the constructed utility function, Japanese consumer's preference to domestic produced and foreign imported rice, and also the elasticity of substitution were empirically estimated. According to the results of those parameters, the effects of SBS rice import quota were evaluated through computing the tariff equivalents of the quota. The results revealed that the intervention of Japan's Ministry of Agriculture, Forestry and Fisheries (MAFF) did distort the rice trade and cause extra costs for rice traders except the mark-up. Based on the calculated tariff equivalents, the consuming prices of the imported SBS general rice can be estimated, which are actually unavailable to collect from the statistics. Finally, the research assumes several scenarios, and under the assumed circumstances examines the changes in consuming prices of the imported rice and Japanese consumer's welfare in the contexts of adjusting the quota volumes.

The above three studies are the most important components of this dissertation. All in all, this dissertation analyzed some trade policies, and quantitatively measured the effects of those non-tariff barriers on agricultural product trade flows and consumer welfare. Based on the empirical examinations, the research offers some beneficial policy implications for the related ministry or groups.