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The Global Food Crisis and China's Enlightenments in Dealing with the Grain Issue

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Abstract: The rising of grain price from 2007 developed into the global food crisis in 2008, which had serious negative influence on world economy. This article holds the idea that food crisis does not only to natural factors, but to the human factors, including

manufacturing biology fuel, insufficiency of agricultural investment, monetary speculation, agricultural subsidy and so on. To solve the food problem can not depend on foreign countries, the sovereign states must macrocontrol grain. The grain import and export must adopt limited free trade policy. Only when the sovereign state expands the investment, takes reasonable measures, guarantees domestic grain supplies, can the food problems be solved.

Key Words: food crisis, biology fuel, subsidy for agricultural produce, reserve of grain, limited free trade policy

I. The global food crisis and the impacts

Since the agricultural revolution in the 80's of last century, agricultural productivity around the globe has been enhanced greatly and the problem of food supply has been basically resolved. With the globalization of world economy the industrial structures of different countries have been upgrading, while the proportion agriculture had taken in economies has been dropping. However, the ancient food problem arose again in 2007 and then developed into one important economic issue that bothers the whole world.

Since 2007, the prices of crops have risen drastically among which wheat prices have gone up for 112%, corns 60% and soy beans 75%. According to statistics released by FAO, the average price index of world food was 157 which has gone up by 23% compared to 2006 and 34% compared to 2005.

The prices of food around the globe have been going up in 2007 and evolved into a world food crisis. According to incomplete statistics, the food crisis has affected as much as half of the world population and more than 20 countries that produce food and 30 countries that suffered from food shortage. 21 food exporting countries took measures to restrict food export and the crisis has led to riots in 12 countries that were severely short of food.

Not only did the crisis affect developing countries severely but also it had some negative influence in developed countries. In April of 2008, Sam's Club under Walmart and Costco, the largest bulk retail store in the U.S, made an unexpected announcement about special measures to restrict the amount of rice that customers were allowed to buy, which is a rare occurrence in America, the biggest food-exporting country in the world. Japan is a country whose self-supply grain only about 35%. In 2007, the Japanese government discovered the total amount of grain budget 230,000,000,000 Japanese Yen (2,370,000,000 US dollars) has exhausted ahead of time two months, so they have to use 55,000,000,000 Japanese Yen of grain backlogs. At the beginning of June 2008, European Union issues an announcement saying that in April, in the European Union the food price rose 7.1% compared to the same period, which is 2 times of inflation rate 3.6% in European Union 27 members. The price of grain rose globally, and the global grain supplies were insufficient, the supply and demand gap enlarged gradually. The global grain stock decreased

successively. In 1986 grain stock might supply the world population to expend more than 130 days, but in 2000 only for 111 days, and in 2007 only for 53 days.

The food crisis in 2008 has brought serious impact to the whole world. First, near half population of the world were faced with threat of hunger. Some countries in southeast Asia took certain measures to deal with the food crisis. In western Africa, as a result of natural condition, the food shortage was quite serious particularly. In the countries such as Cote d'Ivoire, Guinea, Chad and Sierra Leone, the situation were more serious and many people fled from home degenerated into the refugee because of hungry. Next, the food crisis caused the social riots. World Bank President Zoellick warned that food and the energy price surged upward in 33 countries which initiated social agitation at the beginning of April 2008. Haiti famine victims lived on "the filter cake" and its premier is compelled to leave office; Mexico has caused "the tortilla disturbance"; The Philippines sent out "rice police" to maintain the rice market order. In Egypt's capital Cairo, the populace line up to wait for the government to relieve the inexpensive bread. Finally, the food crisis caused some countries to limit grain export, and the global free trade would be threatened inevitably. The trade protectionism possibly gains ground, which will thus have disadvantageous influence to global economic development. In 2007, the global grain output did not have remarkable drop, but the international market supplies were insufficient. The reason lies in increasing consumption of grain and restriction of grain export in some countries. For example, US, Brazil grain consumption have increased, but countries such as India, Kazakhstan, Russia, China as well as Argentina implemented the multiforms of limiting export measures aimed at the different grain crops. Along with the aggravating of grain problem, the trade friction would increase, and the economical political situation is unstabler.

In the long run, the problems initiated by food crisis would appear after a long time. Therefore, the food crisis has become another global question along with the terror attack, the area military conflict.

II. analysis of reasons of global food crisis

The food crisis in 2008 is the result of many factors combined. It is partly because the natural condition, partly because the human factors which caused imbalance of grain supply and demand, for instance insufficient agricultural investment, and expending consumption of grain .

1. poor natural condition resulted in poor agricultural harvest

The grain harvest is easily influenced by natural condition, and recent years' global unusual climate and serious disaster did not favor the crops planting. The global snowy icy

weather at the beginning of 2008 and the drought seriously influenced US and the Australian output which were two big grain exporters. The European wheat production suffered disastrous attack by bad climate. Nepal's harvest was influenced by the drought and the flooding. In India and Pakistan, the unprecedented flood caused over a million people to be refugee, having not enough to eat. Moreover, the global insufficient water supply has also caused difficulty in planting the grain. According to the investigation, 2/3 of the global surface water is used for planting rice, but many countries consumed massive water on expanding industry, which led to insufficient water for rice, affecting the rice output.

2. quite a big part of grain was used to produce the biological fuel

Along with development of automobile and chemical industry, petroleum demand enhances day by day, causing the petroleum price to climb unceasingly. In mid-2008, the price of each barrel of petroleum has achieved nearly 150 US dollars. Therefore, all countries started to seek for the energy alternative, among which the biological fuel is an important choice. In 2005, The US Congress passed to accelerate developing the corn alcohol fuel, and it became popular in many countries. European and American countries imitated, too. In 2006, the American biology fuel output of alcohol is 17,000,000 tons, which consumed about 20% of national corn output, caused the corn demand to increase and the corn price rose 73%. At present, many countries have already worked out the greater medium and long-term biology fuel development project: The US planned to enhance the output of biological fuel to 30,000,000 tons in 2012, to 120,000,000 tons in 2017; Brazil planned to produce the fuel alcohol 30,000,000 tons in 2012, and plans to occupy 20% of the gasoline consumption in 2020; In 2006, the biology energy accounts for 2% of European Union transportation energy, but European Union plans to enhance this proportion to 5.8% in 2010, and 10% in the year 2020. This inevitably urges the grain crops such as corn, the soybean, the vegetable seed and reduces the human grain yield.

3. paying insufficient attention to agriculture and investment in agriculture was not enough

The added value of industry and service industries is by far higher than the agriculture and the agricultural opportunity cost is higher than the industries by far, so for all countries, the best choice is to develop industry and service industry, therefore, along with the economic development, the fund and the labor force invested in agriculture would relatively drop, which will affect the agricultural output. For instance, in China, massive farmers shifted to 2nd and 3rd industries and left farmland uncultivated in the late-1980s. As a result, the grain yield paces back and forth at about 440,000,000 tons, in 2003 only 430,000,000 tons. Next, as a result of the rising price of petrochemicals, the price of product for agriculture rose correspondingly. The price of chemical fertilizer, the

agricultural chemicals rose more sharply than the grain, which influenced farmers' enthusiasm to plant crop.

4. The agricultural subsidy in developed countries affected agricultural competitiveness in developing countries

The agricultural subsidy is a major economic policy in developed country, which has many forms, such as import-export trade subsidy for agricultural product, the subsidy for buying and selling gap, the protective price subsidy, the subsidy for materials for agriculture, interest subsidy for agricultural fund and so on. The different form of subsidy has different influence. The original intention of agricultural subsidy is to enhance the enthusiasm of farmers' planting crops, to expand sale, to make agricultural structure to be more reasonable. But subsidy that used to increase enthusiasm had disadvantageous influence actually in international trade, particularly import-export trade subsidy for agricultural product, which is used to encourage the export by giving the farmers or the traders subsidy. This subsidy weakened agricultural competitiveness of developing countries actually, worsened the terms of trade of developing countries, and finally affected the agricultural production in developing country, reduced the global agricultural output.

For example, in 2002, US Congress passed five-year agricultural bill, which allowed to spend tens of billions of US dollars every year on agricultural subsidy. European Union is also no exceptional. The result of this agricultural subsidy is that US carried on the subsidy to the staple product, causing dropping of food price internationally. Many countries in Asia cannot export grain, and the farmer who planted the crops were influenced, and the great influence also showed on China's export of soy bean.

5. The international finance speculation caused grain price surging upward

Although in 2007, natural disaster caused the grain yield drop in some areas, but global grain production increased. For example, China's grain yield amounted to 501,000,000 tons, the US amounted to 363,000,000 tons, India amounted to 216,000,000 tons, the Brazil 133,000,000 tons, Russia 81,000,000 tons, France 59,000,000 tons, the global grain output increased nearly 5% comparing the preceding year. On the contrary to abundant grain harvest, the price eventually enhanced much. An important reason is that international finance speculation. In 2007, US sub-loan crisis and the dropping interest rate by the Federal Reserve released "hot money" massively, and these speculative capitals attracted a large amount of fund inflow. According to a report by Citibank at the beginning of April 2008, 70,000,000,000 US dollar of additional fund flew in petroleum, metal and the agricultural product market in the first quarter, resulted in the price of agricultural products jumping with the fierce fluctuation. And this price fluctuations aggravated resident's psychological burden, the residents' "psychological burden" aggravated "the grain shortage", urging the grain price to climb. Therefore, the speculation is one of causes that

led to the price of petroleum and grain surging up.

In addition, world population increased and consumption pattern changed, both of which enhanced grain demand and raised the grain price.

In addition, the increase in the number of the world population and the rise in the consumption structure have also increased the demand of food, driving up grain prices.

III. enlightenments of handling the food problem in China

China is a country with a large population, the food problem is a major issue to livelihood of the people. The central government plays an important role on the food and has a strong macro-control. In 2008, global food prices rose nearly 100 percent, but China's agricultural production in 2007 rose 18.5 percent, consumption prices rose 4.8 percent over the previous year, among which food prices rose 12.3 percent. In the first half of 2008, China's consumption price index rose by 7.9, in which food prices contributed 6.64 percentage. In the first three quarters of 2008, China's grain prices rose only 12.3%. It's easy to see that China's grain problem is much better than international situation.

First, China takes agriculture as the fundamental position of the country. Not all countries have attached great importance in the development of agriculture as in industrialization and urbanization. For instance, Russia is a typical country for inadequate supply of agricultural products, especially the fruits, vegetables and livestock production. China emphasized on agriculture. In 1982-1986 and 2004-2008 the "Document No. One" by central authorities were for agriculture. The policy broke through the old system, established the system of farmland contract using by family. As to instability and declining enthusiasm for growing grain, the government introduced some measures to construct modern agriculture, to develop the rural economy, to increase the income of peasants and building a new socialist countryside. The government also emphasizes that the amount of cultivated land nationwide in 2010 and 2020, remaining at 121.2 million hectares (18.18 million acres) and 120,333,300 hectares (18.05 million acres), respectively, ensuring keeping 104 million hectares (15.6 million acres) of basic farmland, improving the quality.

Secondly, the government improved investment in agriculture with the purpose to increase agricultural output. Because the opportunity cost of the agriculture is higher than any other industry in development, the employee will gradually transfer to other industries until its marginal returns equal with other industries.

China is not exceptional. The grain yield started to drop after it amounted to 512,200,000 tons in 1998, in 2003 dropped to 430,000,000 tons. Regarding this, the Chinese government improved the agricultural subsidy each year, in 2008 the central finance budget on "three agriculture" reached as high as 562,500,000,000 Yuan, with the goal not to rise the price of grain or to encourage the export, but to enhance enthusiasm of the farmers in

planting crops, to stabilize agriculture, to guarantee the grain supplies and to stabilize the grain price. From the year 2004, the grain yield increased progressively year by year 2008 to 520,000,000 tons.

Once more, the government established a strict grain reserves system, guaranteeing high self-sufficient supply of grain. At the beginning of 2008, the officials reported national grain reserves are 210,000,000 tons, and afterwards reported the countryside resident's grain reserves was 50,000,000 tons. These grain reserves are guaranty to make grain supply stable. The government of all levels not only spend a large amount of money to establish grain reserving warehouse every year, but also improve grain physical distribution system by building physical distribution infrastructural facilities, constructed 18 mechanized backbone grain storage of which total investment nearly 8,000,000,000 Yuan, built national grain reservoir projects with the World Bank loan to speed grain circulation, which costed central national debt fund more than 340 hundred million Yuan. With four continuous year of agricultural abundant harvest in China, the grain reserves accounted for 35% of the grain consumption in the year, much higher than the UN Food and Agriculture Organization's safety line 17%~18%. The country has more than 1390 national grain reservoir, the total warehouse capacity reaches as high as 295,000,000 tons, which guaranteed both the grain lowest price and the highest price, and enhanced the ability to deal with the food crisis.

IV. Conclusion

China has an old saying, "the food is what matters to the people", so to guarantee food supply is the foundation to keep nation stable. The characteristic of China's measure lies in that main policy emphasized the importance of grain value and through the macrocontrol, the investment and the corresponding trade guaranteed the grain supplies and the rationality of consumption. Therefore the trade of grain should implement limited free trade policy in the international trade, by which gives the developing country certain legitimate protection for agriculture.

The agricultural produce is uncertain, easily influenced by natural condition, and the supply elasticity is small. Therefore, grain policy is very important. From China's practice, we can conclude that the grain problem can't be solved depending upon foreign or the international market, the country itself must guarantee the food supply. The countries where grain price rose more are the countries that can't supply the grain themselves in the food crisis. Therefore self-sufficiency is an urgent matter. The grain problem can only be solved by the country itself, and cannot depend upon the foreign country.

China's way in agriculture may be taken for reference in many aspects. First, to keep a certain amount of cultivated area is essential, developing the new grain field, guaranteeing the

cultivated crops area is important. Along with the industrialization and the urbanization, some country's farming land reduced and this is an bad indicatin.The government should formulate the lowest farming land to guarantee grain supply.

Next, the government should enhances the agricultural investment strategicy. In the industrialization and the urbanization process, the agricultural marginal cost gradually enhances. If the country does not enhance the investment, agricultural planting rimmed dangerously. When government expands the investment to the agriculture,the subsidies should be on infrastructure, agricultural material product, and the goal lies in the expanding output, but not promoting export.

Once more, to deal with the industrial structure correctly is very important. The economic theory has an idea that the higher the industrial structure is, more reasonable it is.Actually, this idea must be on the condition that the food is enough. At present, human survival depends on essential crops, the human needs agriculture, and the second, third industry's product are to enhance people's living standard. Therefore in the development process, we could not eliminate the agriculture, but must guarantee that agricultural produce.

Finally, the countries such as Japan that has no enough agricultural resource can get suffient food through transnational agricultural cooperation,for example, overseas farm colony . In the world, different countries' agricultural resource is different as day and night. For some countries, second industry is developed, but the agricultural produce is less because of resource limited. These countries may cooperate with the countries with abundant agricultural resources such as Russia, Brazil which have 40,000,000 hectare and 200,000,000 hectare land uncultivated.

However, the global grain problem also needs the international society's joint effort.First, we must establish the global food security warning system, to provid grain information, the agricultural condition, the global grain stock situation for all countries to forecast the tendency of grain price promptly. Next, the developed country must take the primary responsibility in solving the grain problem by reducing the export subsidy. Developed country's agricultural subsidy weakened the agricultural competitiveness in developing countries to a certain extent, dropped the enthusiasm of planting crops.Although this might increase the income of developed country in a short time, if the developing country agriculture was serously impacted, it would inevitably affect the residents' income and the purchasing power, and this will eventually affect the economic development in developed countries though international trade system.For a long time it is disadvantageous to the developed countries.