

Feature 2

The Dilemma of Food Safety in China and Perspectives

Fangfang Tang

A Chinese saying: “The foundation of any country is people, the fundamental issue of people is food.” “People’s food” safety matters fundamentally with the health and life safety of people and the economic development and social harmony. In recent years, with the frequent occurrence of food safety incidents, food safety has become a focus issue of current social discussion. The series work on food safety has illustrated the thinking of “people first” and social harmony. What is the dilemma of food safety in China and what is the way out?

2.1 The Development of Food Safety Issue in China

2.1.1 Definition of Food Safety

What is food safety? According to Wikipedie, food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent food-borne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards. Food can transmit disease from person to person as well as serve as a growth medium for bacteria that can cause food poisoning. WHO defines the food safety issue as a public health issue of hazardous substance in food on human health.

In a narrower sense, food safety includes mainly two categories of issues: one is the nutritious value and quality problem of food itself, such as the unsatisfactory nutritious value in food, expired food and so on; another aspect is the impact of artificially changing the food attributes during production, transportation, storage

Research assistance by ZHA Jianping of Southwestern Jiao Tong University and PAN Bo of Beijing Normal University is acknowledged.

and sale on the damage of health even death, such as excessive pesticide use, food additives etc.

More broadly speaking, food safety implies the following aspects: First, the quantity safety of food, that is, people have access and can afford to purchase the necessary basic food from a quantitative point of view; second, the quality safety of food, that is, people's health and life are not damaged on the basis of consumer demand satisfaction, requesting nutrition coverage, balanced structure and healthy contents; third, the sustainability safety of food, that is, the sustainability of obtaining food on the basis of environmental protection and ecological utilization of resources.

With the deepening reform in China and the rapid economic development, the food safety problem in China has gradually changed from the quantity safety aspect towards the quality safety aspect or sustainability safety perspective. In particular, the food quality issue has become the current focus of food safety problem.

2.1.2 The Development of Food Safety in China

Reform and development in more than 30 years in China has freed people from the "food quota" constraint in the central planning era. Living standard in China has jumped to a much higher level qualitatively. The history of food safety has shifted from grain safety period (1949–1984) and starting period of food safety (1984–2001) towards the development stage of food safety (from 2001 on). However, the fundamental nature of large population with a relative shortage of cultivation land has determined that the quantity safety of food issue will always be a potential risk of China's economic and social development, while the excessive imbalance of wealth distribution has worsened this problem. Tai Zong Emperor in Tang dynasty has mentioned that "food is fundamental for people and agriculture is the basis of governance". Thus, food safety issue in China must be based on the guarantee of sufficient supply of grain and then to improve the quality safety and sustainability safety of food, for the basic rights of people.

In recent years, there occurred a number of sudden food safety events, most of which were due to food quality, thus the current food safety issue is on food quality. For the current work on food safety, quantity safety aspect is still the foundation, while the sustainability safety is the future direction and the focus is on quality safety. With the gradual development of the food safety monitoring and prevention system, the quality safety aspect in China has risen to a much higher level overall. According to the data from health department, the overall food qualification rate has risen from 61.5 % in 1982 to 82.3 % in 1994 and 88.6 % in 2001, among which 13 categories of food products such as grain, alcohol and cans have risen to over 90 % from random samples. In the year 2010, the overall qualification rate of vegetables, cattle and poultry, and aquatic product are 96.8, 99.6 and 96.7 %, respectively. Further, more than 3,800 kinds' manufactured food

of 23 categories has reached qualification rate of 94.6 % through random sample test and the export food has reached 99.8 % qualification rate. Random sampling test has shown that the pollutant, additives, heavy metal and pesticide leftover residuals in food have significantly fallen. Overall, food poison events and the number of people affected have been falling as well.

On the other hand, individual food safety incidents, sometimes at a large scale, have occurred from time to time. For example, the words on media associated with food safety have become familiar terms, such as melamine, hogwash oil, man-made red-date, clenobuterol hydrochloride, ampullaria gigas spix, red-hearted salt duck egg, colorful dumpling, and so on. The overall achievement of food safety progress in China is widely questioned and criticized. For example, health database have revealed 220 public health event reports in 2010, with 7,383 people being poisoned and 184 deaths. Among them, food poison events affecting more than 100 people account for 7. Compared to 2009 data, food poison report and affected people have actually fallen by 18.32 and 32.92 %, respectively, although the death toll has risen by 1.66 %. As the reasons of food poison events, microbiological food poison reports and affected people account most, for 36.82 and 62.1 %, respectively. This mainly includes two aspects, one is the traditional food pollution problem, such as salmonella, mycotoxin, agricultural pesticide and parasite pollution, another aspect is a series new pollution in food as occurred in the developed countries, such as *Escherichia coli* which has caused serious outbreaks in many provinces in China. Most death tolls are caused by poisonous animal and plants (especially mushrooms), accounting for 60.87 % in total. Compared to 2009, the number of reported microbiological poison events, affected people and the resulted death tolls have reduced by 31.36, 41.83 and 20 %, respectively. The numbers caused by chemical food poison aspect have reduced by 27.27, 38.17 and 27.27 %, respectively. Compared to 2009, the number of reported poisonous animal and plants (especially mushrooms) events, affected people and the resulted death tolls have reduced by 4.94, 9.3 and increased by 20.43 %, respectively, while the number of reported unknown-reason food poison events, affected people and the resulted death tolls have increased by 29.41 and 28.15 %, but reduced by 6, respectively.

In addition, although the application of transgenic farming technology may provide some grain supply safety, the discussion on its further production is debated. Some scholars point out that transgenic plants may threaten the environment, human health and biological diversity protection. Such a large number of negative press related to food safety at the information age have deeply hurt the already-sensitive nerves of people. According to the “2010–2011 Consumer Food Safety Confidence Report”, close to 70 % people who were surveyed do not feel a sense of safety concerning the food safety situation in China, among them over half (52.3 %) feel psychologically “rather uncomfortable”, while 15.6 % “especially unsafe”. It is worth noting that food safety legislation system, technology regulation and technical testing have made significant progress in China recent years. It shows the complexity of food supply channel and market in China, implying that it is not easy to accomplish food safety by a single jump in China.

Therefore, Chinese government must step by step and stage by stage improve the effectiveness of legislation system, perfection of technology regulations and the operationalization of testing technologies, to further build the food safety guarantee network and system.

2.2 The Profound Impact of Food Safety Events in China

The negative impact of frequent food safety events has exceeded industrial accidents on the life, health and financial assets in the aspect of direct harm. First, the frequent food safety events have shadowed the development of food industry in China. In 201, the food industry in China has accounted for 5.3 trillion RMB Yuan, about 9.1 % of total industry output in China. It is estimated that this figure will reach 12–14 trillion RMB Yuan by 2015, a pillar industry for stimulating domestic consumption, increasing employment and economic growth. However, food safety is the presumption of virtuous-cycle development of the food industry. Unfortunately, the sequence of food safety events makes such a picture of development worrisome. Melamine has not only destroyed the “San Lu (Three Deers)” company, but also badly hurt other domestic dairy product brands. Clenbuterol hydrochloride has trapped the “Shuang Hui” sausage company until now, while hogwash oil etc., has seriously bothered the public about what they can eat. The impact on Chinese food industry and restaurants industry and their development perspective is unknown yet, but less promising.

Second, the series of food safety events have gradually evolved into a serious crisis of social moral and credibility system. As Chinese Premier WEN Jiabao pointed out, “the poisonous milk powder, clenbuterol hydrochloride, hogwash oil, colorful dumplings and other incidents have sufficiently shown how badly the lack of honesty and lowering moral integrity have become”. All the historical evidence has demonstrated that the rising-up of a country is not only in the creation and accumulation of material wealth but even more importantly the construction and improvement of an advanced culture system. Only through constructing a set of advanced and influential advanced culture systems, the soft power of China can be improved in the international community. From the viewpoint of new institutional economics, the lack of social credibility and the degrading moral integrity system can further increase social transaction costs and hurdle the deepening political and economic reforms, which is not beneficial for a sustainable development of healthy economy and hazardous for social stability and harmony.

Finally, frequent food safety events can provide an excuse for the developed economies to create “green barrier” in international trade, unfavorable for the Chinese trade development. In the recent years, some developed economies have gradually given up the so-called “hard barriers” (such as tariffs) but to use more subtle “soft barriers”, including technical, green and safety barriers in environmental protection standards, animal and plant health quarantine and so on. Such

barriers will disadvantage the export position of China in international and hurt the Chinese economic development.

2.3 Reasons of Frequent Food Safety Events in China

There are superficial reasons and also deep reasons among the inducing factors. Viewed from the surface, frequent food safety events can be attributed to the ineffectiveness of government regulation, unclear responsibility and duty system, incomplete legislation framework, unclear technology standards, low level of testing techniques, and the degrading morality of some businesspeople, etc. However, if pressed hard, one can notice that such frequency of food safety events comes from not only randomness but also causality. Briefly speaking, we summarize the inducing factors of underlining reasons as following:

First, the imbalance of economic development between cities and countryside and among various regions, and peasants and farmers of some regions have lower income and their income revenues and channels are limited with limited income increase. Since the reform and open-door policy in place, Chinese economy has grown by 9.8 % annually on average between 1979 and 2007, and 11.2 % during the 11th *Five-Year Plan* period. Income per capita in China has increased by 11 times during past 30 years. However, one must note the increasing imbalance between various regions as well, for example, the absolute gap of income per capita between the eastern areas and western areas has increased from 3308.45 RMB Yuan in 1994 to 16002.7 RMB Yuan in 2006, almost 4.8 times, while the absolute numbers and ratios are still widening. The ratio of average income between urban and rural residents has increased from 2.52:1 in 1998 to 3.31:1 in 2008. Some peasants and farmers can only depend on limited quantity of land or cattle to maintain low standard of living thus are easy to be lured by the illegal middlemen and producers in the downstream markets. For instance, according to an investigation by “March 15 Consumer Association”, the cost of adding clenobuterol hydrochloride in the hog farming process may be only a few Yuan, but the hog sold can increase dozens of Yuan for them. That means, 100 hogs can sell for several thousand more Yuan, while ironically the hog without being fed with clenobuterol hydrochloride may have a difficulty in selling to the middlemen. Some farmers may have moral integrity problems, but quite some others may well be pressed to take such legal risk for their desire to improve their living standard, because this may well be the only reliable income channel, unfortunately.

Second, the food production industry is not well developed in China yet, with various participating enterprises at different quality levels. The raw material procurement, processing and sale channels within the food production industry are quite complex. Take the example of the grain processing enterprise, the grain procurement channels are complicated and chaotic, most from small-scaled and scattered farmers, grain processing chains are long and sale channels are messy with even some selling points without licenses in some regions. The resulting

consequence is low quality in management and products. This is a typical feature of Chinese food production enterprises, most being small in scale and many in the regions between urban and rural. Such features have resulted enormous difficulties in the monitoring efforts by government regulatory bodies, thus the difficulty in food safety guarantee.

Third, consumer perception in food safety is weak and a biased consumption culture. Chinese “eating” culture has a long tradition and people enjoy talking about the art of eating. However, one question is whether the traditional Chinese way of eating is safe? Take the example of recent poisonous eggplants, poisonous ginger, “fitness” hog and so on, the illegal methods of adding chemicals to make the vegetables look tender and bright have exactly captured the misunderstanding of Chinese consumers’ perception on food safety. Such poisonous food can make its way to the dinner tables in Chinese households from selling points without even licenses. Some Chinese consumers prefer lean pork to the extent of unreasonable demand, which certainly induces the middlemen to request leaner meat from farmers thus the farmers may well have every incentive to add clenbuterol hydrochloride in the hope of probably producing only lean meat. With the economic growth and wealth accumulation, some Chinese consumers blindly pursue “nutrition” in their perspective, resulting typically in exotic types of food demand and sometimes even strange combination of food sources. All these factors contribute to the potential danger of food safety events.

Forth, in the current Chinese governance structure with GDP-oriented and local taxation need, it is well too easy to form a local trade protection by local governments in favor of local enterprises. This factor is seriously hurdling the proper monitoring of large-scale food production enterprises’ food safety issue. Because some large-scale food production enterprises contribute significantly to the local taxation for the local public finance, local governments can easily protect these companies for own interests of local economy. During some food safety events, local governments doubtfully hid certain truth and created certain frictions for proper and prompt handling of such issues. In China, there is not yet sufficient independence and authority by the food safety regulatory institutions for proper monitoring, thus some large-scale food production enterprises can operate with potential risks for a long time until they become the sources of sudden food safety events.

2.4 Suggestions for the Food Safety Issues in China

Based on the analysis of food safety problems in China, we suggest the following 6 points for the construction of an effective food safety network:

First, promote a more balanced development between cities and rural areas to increase the income levels of peasants and farmers and to widen their channels of generating revenues and incomes thus to enhance the resistance capability of peasants and farmers in sources for food safety incentives.

Second, enhance the monitoring and regulatory check on the food production industry in China, from raw material procurement, production and sale channels. The only way to lower monitoring and regulatory difficulty is to encourage scale-of-economy operation and market order in China, thus to enhance food safety monitoring effectiveness.

Third, enhance the publicity of food safety issues to improve the knowledge system of Chinese consumers. Consumers are the terminals of food chain, and also the victims of food safety events. We must actively promote the relevant knowledge of food safety to enhance the capability of consumers to distinguish and prevent hazardous food and their cooperation in food safety monitoring.

Forth, link food safety and local government officials' performance evaluation, and ensure the independence and authority of food monitoring and testing institutions. In this way, local governments can be motivated more effectively and local trade protection can be somehow mitigated.

Fifth, enhance the legislation system building and implementation, improve food safety standard and testing techniques. We must combine Chinese local conditions and learning from more advanced experiences in other countries for further capacity building in Chinese food safety legal system, safety standard and testing techniques.

Sixth, build early-warning mechanism in food safety systems to increase the handling capability in sudden food safety events. The most important mechanism is to prevent the problems, and the early-warning mechanism is inherently important. An effective mechanism of such kind can prevent food safety events from spreading thus to minimize the consequences. Meanwhile, a proactive approach and effective handling of such issues can mitigate the complex emotional reactions from people therefore to promote the public image of the relevant government bodies for a more harmonious society.