A Perspective

Challenges of Chinese food risk management system in globalizing food supply chain

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Abstract

This paper assesses current conditions of Chinese food safety management system and how policy makers responded to recent incidents of food scares which occurred in China. The paper identifies three aspects of Chinese food safety system which may need to be improved to enhance the system and addresses policy implications for Chinese food safety system. First, administrative structure of Chinese food safety system may need to be consolidated for enhancing efficiency. Second, Chinese consumers' attitude toward food safety system in China was found to be determining factor for future success of sustainable food supply chain in China, and this should be extensively monitored and evaluated to improve risk communication of food in China. Third, international cooperation among major trading partners regarding development of global food supply chain is found to be imminent, as globalization and increased international trade leads to integration of food safety issues of each country. Development of compatible food safety standards and measures is necessary to have coordinated management of food products which are traded across border.

Introduction

Quality and Safety of Food have become critical social issues in China's objective of sustainable economic growth. Zhang (2005) identified two important factors attributing to this recent trend, first with rising level of living standards, Chinese consumers are no longer satisfied with quantity alone, but also they are demanding better quality assurance. However, a series of food scandals in recent years have shocked Chinese consumers and have reduced the level of consumer's confidence in food safety in China; Second, rapid development of international trade in China lead to increased trade of food products and food safety measures and standards of import and export nations become important factor determining efficiency and effectiveness of the global food supply chain. Export products which do not comply with the standards of importing countries have been rejected or dumped in ports and have caused tremendous losses for China.

In the Action Plan on Food Safety published by China's Ministry of Health (MOH) on 14th August 2003, the government classified the following current risks as relevant to food safety in China and regarded them as important issues.

1) Food-induced illnesses remain the supreme danger for public health;
2) New biological and chemical pollutants in food;
3) New food technologies and materials (such as transgenic food) raise new challenges;
4) The capacity for self-management among food producers is weak;
5) Food terrorism;
6) Slow food safety supervision by government organs.(Bian, 2004)

The "tainted milk" scandal which broke out in China in September 2008 heightened the public's concern for food safety standard in China. Chinese brand- Sanlu's powdered milk formula was found to be tainted by industrial chemical melamine, a binding agent used for plastics and glue. This chemical was added to watered-down milk as it mimics protein. The contamination resulted in deaths of four babies and some 54,000 infants who required medical treatment due to development of kidney stones. The infected 3,458 infants were hospitalized in Beijing alone; indeed, a survey of 308,000 households in Beijing indicated that they have removed the contaminated

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milk from the shelves. More surprisingly, Melamine was found not only in Sanlu brand baby formula products, but also in other 53 dairy brands in China. In addition to this incident, a range of goods (including toothpaste and pet food) exported from China to various oversea markets, have been found to contain melamine and other industrial chemicals. This case illustrates that mismanagement of food safety in several local Chinese companies may have substantial impact both in China and in oversea markets. Thus, food safety and risk management became highly publicized domestic issues in China as well as an international issue for sustainable global food supply chain.

China's food safety system may need to improve the following aspects. First, administrative regime may need to be more coordinated and institutionalized to have a better management system. Currently, there is no single administrative agency with the authority to overrule food safety issues in China. Minister of Health (MOH) seems to be the most important agency for food safety management, however, several agencies such as ; MOA, the General Administration of Quality Supervision, Inspection and Quarantine (GAQSIQ), State Administration for Industry and Commence (SAIC), the State Environmental Protection Administration, the Ministry of Commerce (MOC, formerly the Ministry of Foreign Trade and Economic Co-operation), and the State Grain Administration, also have jurisdiction over food issues, and/or supervise food producers. All these agencies set up detailed rules to manage the issues relevant to food safety within the scope of their respective powers. This may create overlapping tasks and inefficiency in the system and their authoritative impact may not be effective.

Second, legal legislative reinforcement may need to be consolidated to be effective in managing food risk in China. The MOH inspects food safety standards in the industry according to the Food Hygiene Law. However the supervisory guideline of the MOH may need to be strengthened to ensure that food processors in China strictly follow the guidelines of food safety standards. Third, internal standards of the administrative agencies should be re-evaluated in order to pursue overall effectiveness of food safety management. Fourth, industrial structure of the food sector causes difficulties in food safety management. There numerous small-sized enterprises in the food sector which are governed by the municipal government. Approximately 350,000 of China's 450,000 registered businesses in food production and processing employ as few as 10 people or less. The extent of municipal government's regulation is not sufficiently expanding accordingly to growth of the food processing sector, while some rural areas are neglected by the municipal government as the farm land is decreasing. This leads to increase in illegal small-sized food processors that operate their production on temporary bases, evading regulatory surveillance. The UN report identified these small enterprises, posing many of the greatest food safety challenges in China.

Reformation in food safety management system in China

Chinese government developed a new regulatory system of food safety in China in order to restore public confidence and to improve defaults in the system upon the outbreak of melamine contamination in infant formula. Chinese government streamlined administrative and regulatory procedures by eliminating half of the overlapping agencies in food safety management. China's Food and Drug Administration (CFDA) has been placed under the Ministry of Health, by consolidating 16 sub-agencies which had the responsibilities of food safety management. Nonetheless, reformation in the system did not result in a smooth transition, according to UN report in 2008.

In 2009, China has enacted a new Food Safety Law which aims to monitor food safety status, manage recalls and information issuance. This legislation entails details on punitive measures for violation, production inspection and certification standards. Under this new legislative structure, the National Food Safety Commission Council was established to coordinate five national level ministries that overlook various stages of food production process. This agency is expected to reinforce food safety standards at every phase of food production process and provide national program of food risk management and risk communication. However, the Food Safety Law does not specify any mandate for the council, and limit the extent of authoritative measures covered by the council.

Chinese consumers' attitude toward food safety in China

Major food scandals in China in recent years have resulted in significant decline of public trust in food safety. Food safety and other food related risk issues are recognized among Chinese consumers as serious public issues (Xiaoyoung, 2005). His study reports that Chinese consumers are much concerned about food safety, particularly with regard to vegetables and dairy products. Chinese consumers were found to be familiar with organic products, but have limited knowledge and awareness of genetically modified

(GM) foods. In recent years, Chinese consumers are accustomed to purchase packaged and labeled food products with information, thus they are becoming more experienced and sophisticated with their choice behavior. Yet, Chinese consumers may have perceived risk in some of food products available in the market due to lack of information. For example, Chinese consumers were reported to have lack of basic understanding on GM foods, and with limited access to information, Chinese urban consumers' acceptance of GM food safety may decline significantly (Peter *et al*., 2006). However, rather than harboring anxiety about food-related pandemics, health system catastrophes, or the demise of traditional pathways, modern Chinese are relishing new and foreign food choices and actively pursuing them, while adopting individual strategies to minimize personal risks such as contamination, adulteration, deception, and victimization (Ann *et al*., 2010).

Policy implications

Developing effective risk management in the food supply chain is important not only in China's context, but also in global context. Liberalization of world trade and cross national harmonization of food sector legislation will affect food safety standards and regulations at the national level. This implies that the current food safety measures in China may need to be revised in evolving global institutional setting. Sustainability of the global food supply chain and food security is highly recognized global issue, thus major trading partners must recognize that coordination of the food supply network among major trading partners may need to be prioritized based on trust and communication among themselves. This may require collaborative development of food safety standards which can be shared among partner countries thereby facilitating information sharing on traded food products. To resolve current food safety issues, China and its trading partners may open international workshops and symposium on regular basis and consolidate their cooperation within international agencies such as ASEAN+3 and G20.

Availability of public information on food safety and risk communication will become increasingly important in this rapidly changing global food supply chain. Crises in food risk management have been attributed to disconnection between the stakeholders involved, as when consumers do not believe risk communications or dispute risk managers' priorities (Krystallis *et al*., 2007). It is imperative that Chinese government may need to have a thorough knowledge of Chinese consumers' attitude toward food safety and food related risks in order to successfully design

the layout of food risk communication in China. The relationship between trust in information source and impact of this information on risk perceptions of Chinese consumers is a complex relationship since what people themselves understand is salient in information provided to them about different hazards; and the view of experts regarding what people should know and understand about a hazard may not chime with what it is that people are really concerned about (Frewer *et al*., 2003). Therefore, it is important to recognize that consumer perception plays a critical role in effective risk communication and building trustful food safety system. In addition, the degree of public tolerance of risk can affect their confidence level in Chinese food risk management system. In building public understanding of risk and management of risk, policy makers need to implement the concept of 'pro-active' risk communication.

Acknowledgements

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