

Research Article

The Construction of the Informatization of Food Consumption Service and Operating Mechanism

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Abstract: This study takes the overview of the informatization of food consumption service as the cutting point, through analyzing the necessity of constructing Chinese informatization of food consumption service, discussing the conception of constructing the informatization of food consumption service. The informatization of food consumption service is directly related to public welfares.

Keywords: Food consumption service, food safety, operating mechanism

INTRODUCTION

Maintaining public food consumption safety needs to seize the key and the most urgent issue of public food consumption. Public food consumption is in urgent need with the scientific guidance of information, but because it is influenced by various objective and subjective factors, the usage of the existing social public food consumption information service is not in place, the valuable information is idle and the required information is in shortage, which not only caused a great waste of resources, but also restricted the promotion speed of public well-beings (Peng *et al.*, 2007).

Food consumption is a basic need for human beings, it refers to the residents of a country or region intake the various dietary from animal food and vegetable food. According to the classification standard of urban household survey made by organization of National Bureau of statistics, food consumption can be divided into food, starch and potato, dry beans and bean products, grease, meat and products, eggs, small commodities, tea, spices, sugar, tobacco and tea, dry and fresh fruits, nuts and nuts seeds and some other kinds (Edward *et al.*, 1961). Among them, the expenditure of food refers that residents buy the staple food or all kinds of food and processed products from food stores, markets, canteens and other places, such as rice, flour, cake, bread, etc. Food consumption is closely related to human survival and development, which is the first and the most basic demand for human beings. Food consumption services, namely, during the process of the public consume food, the personal safety and property safety can be guaranteed.

MATERIALS AND METHODS

The interpretation of informatization of food consumption service: Informatization refers to the new productive force, which takes the intelligent tool as the representative based on the training and development of the computer, moreover, it is a historical process which can contribute itself to the society (Zhou, 2008). A kind of food from farm to table has to go through many links from the production, processing, storage, transportation, sales to many other links, the food supply system tends to be complicated and internationalization. In such a long industry chain, each link has the possibility of polluting food, if it has not used the advanced information management tools, it is not possible to realize the food safety in control during the whole process. The implementation of information management methods can play the role of information tracking and early warning function, which can effectively reduce the risk of food safety to the minimum, or even to zero. Today, the construction of informationization developed rapidly, the Internet is an important channel for people to obtain information. Providing food safety information to consumers through the network, with the features of being fast, convenient and timely updated and other characteristics, which can provide food security network service to the community and will contribute to the development and improvement of the food safety supervision at the present situation (Peigang, 2006). In some degree, it can be said that the informatization of food safety is indispensable part of food safety supervision work. The establishment and perfectness of it can effectively protect the long-term food safety regulatory mechanism.

The necessity of constructing Chinese informatization of food consumption service:

Improving the effectiveness of public food consumption services, eliminating the potential safety problems of public food consumption cannot be without the multi-level, multiple, diversified information services, therefore, we must vigorously strengthen the construction of informatization of food consumption service.

Providing practical information for the public food consumption:

At the present stage, although Chinese informatization of consumption has had a certain foundation and capacity, the level of information using is still low, its repeated construction is very serious, through the construction of informatization of consumption food service, it can timely dredge the channels of information dissemination, coordinate the information resources of the system, which is conducive to the development of more targeted information, effectively improve the degree of sharing food consumption service information effectively, accelerate the spread of food consumption, in a certain extent, it can solve the problem of information demands on public food consumption, which can provide more comprehensive information for the public with practical information (Xue and Gao, 2005).

Providing convenient conditions for public consumption services:

The informatization construction of consumption service can provide convenient conditions for the public consumption of food service, which can improve the service efficiency. On one hand, before providing services to the public for food consumption, the relevant departments can be through the construction of information more accurate to understand the public service, the tendency of food consumption demand, preferring mode, the acceptable service degree of providing the consumer services and so on, so as to reduce the unnecessary waste of resources; on the other hand, after providing certain food consumption services to the public, the relevant departments can make full use of the informatization construction, especially the advantages of the resource, effectively keep track of the public with the degree of service satisfaction, so as to constantly improve and enhance the quality of service and provide more practical, convenient, efficient food consumption services for the public.

Providing modern guarantee for public food safety:

The construction of the informatization of food consumption service is the basis for smoothly developing food consumption to meet the consumer's demand on information service work and public food. At present, domestic food from the price, supply and demand, circulation and consumption environment to the food nutrition, safety standards, food health, food policies and regulations and the release of information, etc, there still existed some problems. In order to

provide food security for public consumption and ensure food security for people, it must carry on the information collection, processing, handling, utilization and feedback with the above mentioned information, so as to ensure the relevant information to be comprehensive, accurate and timely.

It is conducive to purify the food consumption environment:

In the process of promoting informatization construction of food consumption service, in the first place, it is necessary for the public to make themselves realize the necessity and importance of taking participation in the informatization construction of food consumption service, arousing their enthusiasm, guiding them to participate in the informatization construction of food consumption, adhering to the theme of mass participation and being supervised by the masses. Then it should put these information feedback to management and services departments, establish the query and the interactive platform such as: food and nutrition knowledge, food hygiene regulations, food consumption tips, food consumption warning, major food safety incident announcement, food quality sampling check, expert consultation and so on, so that the public can have access to the food consumption information service as convenient and quickly as people get weather information.

The conception of building informatization of food consumption service:

The informatization construction of food consumption service must build information management system for food safety risk, it should use modern information technology to create a platform for all business and operators with self-discipline through the Internet that can achieve resource sharing and collaborative management. Meanwhile, regulatory authorities should supervise on a platform with high efficiency, which also is an interactive platform for government, enterprise and the public, so that it can ultimately realize food industry safety can supervise in standardization, informationization and modernization (Fig. 1).

Constructing the traceability system of food safety:

The core of the construction of food safety traceability system is to accelerate the establishment of food identification code system, through the identification, it can trace the raw material of food, place of origin, production process and other information and so on, then it can form the security system for the continuous information flow of each stage in the food supplying chains. Its essence is the implementation of product safety management for the members of the food industry chain, which is the belt among the members of supplying chains for the implementation of food safety integrated management, moreover, it is the more effective way to guarantee the food safety of the enterprise. Food safety traceability system can record every member, which can fully share and communicate

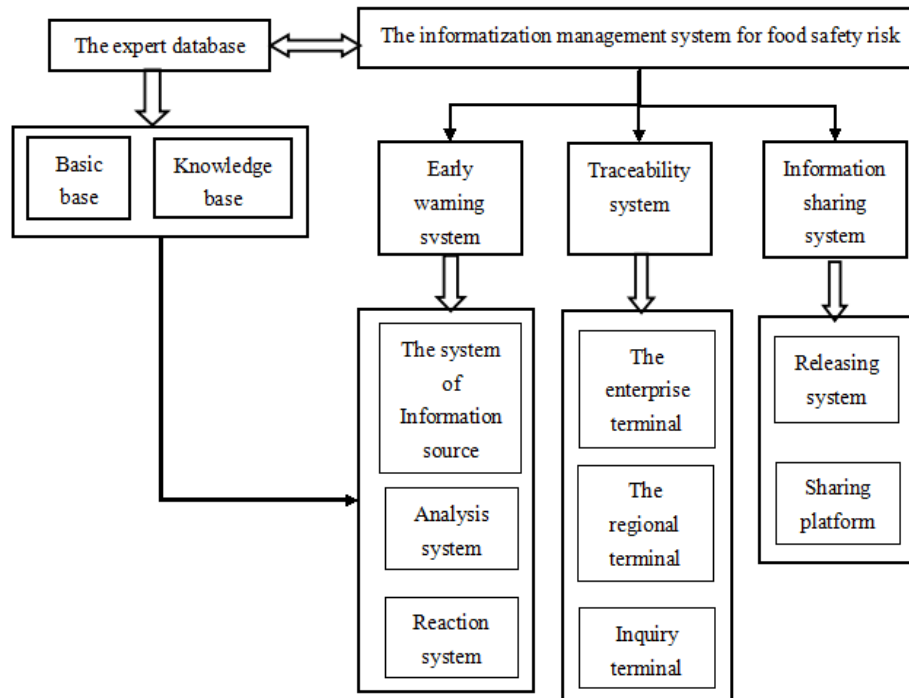


Fig. 1: The architecture of informatization management system for food safety risk

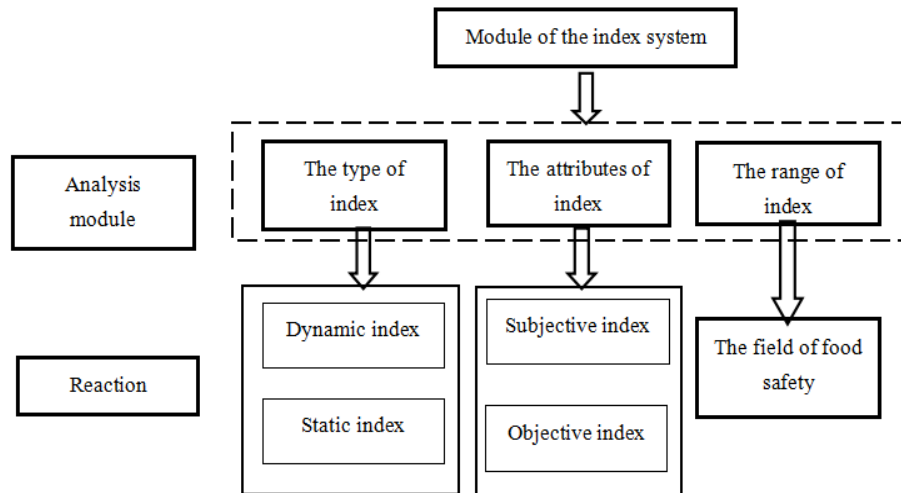


Fig. 2: The architecture of early warning analysis system for safety and risk

with each other in real time with food safety throughout the entire supplying chains. Based on the establishment of the food label code system, food safety traceability system will be composed of four parts, namely, center controlling system, regional controlling system, enterprise terminal management system and customer inquiry system, which can realize the traceability of food industry together.

RESULTS AND DISCUSSION

Constructing early warning system for safety and risk: The early warning system of food safety refers

that the subject of supervision want to have timely discovery, evaluation and treatment of food safety and risk, so that it set up a system to find out signals of the risk and judge the risk of food safety. This system must monitor the source of the food safety risk signals, when the enterprise suffered from the food safety risk, by sending the alarms to prompt the authorities to take actions to reduce the degree of food safety hazards as much as possible.

As the core of the whole early warning system, whether the operation of the warning analysis system is effective will be related to the effect of the early warning of food safety directly. When the food safety

information is outputted to the system of information source, the system of information source can input the related information of food safety into the analysis system of early warning, after the analysis system analyzed the data, what it obtained was the result of food safety (Fig. 2). Therefore, in fact, the essence of early warning system of food safety is a programmed module for processing and evaluation the information of food safety, the evaluation conclusion will act as the information basis and support for the next operation of the response system of early warning.

Constructing the basic database of risk management: Constructing the basic database of risk management, its purpose is to store the basic information of food safety risk management, the essence of the basic base is the base of information storing. As far as the current database for food hazard information in China is concerned, its data cannot meet the needs of the risk management on food safety, which needs to speed up the investigation and find out various risk information that may lead to the risk of food safety, therefore, it should establish statistical data, which should be divided into key risk, minor risk and general risk according to the size of the risk; it can be divided into physical risk, chemical risk and biological risk according to the category of the risk. In addition, it should input various information sources that can cause the risk of food safety, record the basic characteristics of the risk source, hazards, preventive measures, countermeasures and other information in detail. At the same time, it should establish historical event information database for recording the time that the food safety have occurred, accurately record the type of the occurred food safety incidents, the reasons, the forms and the extent of damages, risk source, countermeasures and other information.

CONCLUSION

The informatization construction of food consumption service is a huge and complicated social public project. Maintaining food quality safety must take advantage of the informatization supervision on the food safety. In a long term, because the foundation of Chinese informatization is relatively weak, the system of food safety information management still existed some shortcomings such as: management mechanism is not perfect, the supervision method is not scientific, the regulatory authorities are without coordination, etc. In order to improve and perfect these problems, it still need systematic research on food safety regulation theory, which needs to explore the method of establishing the food safety risk information management system under the background of the informatization, which may need a gradual and long-term process.

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