# Study calls on Chinese government for stronger support of food safety laws and traceability systems

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The study calls for stronger government intervention in China to implement food safety rules, regulations and support. Credit: University of Portsmouth

An international team of researchers, including the University of

Portsmouth, has called for stronger government intervention in China to implement food safety rules, regulations and support.

In recent years, China has seen a number of food safety scandals, such as fake powdered baby milk, vinegar contaminated with antifreeze and watermelons juiced up with growth-stimulating chemicals.

While the Chinese government has brought in a series of food safety laws and regulations, identifying the origin and tracking the history of products including the processing, packaging, storage and transportation continues to be difficult.

Current traceability systems face many challenges due to the scale, diversity and complexity of China's food chain. They don't capture, link and share data effectively and accurately and are often perceived as barriers by food companies because of their high costs and a lack of skilled persons to implement them.

The research team has identified six dimensions as an implementation framework that the Chinese government and food companies can use to help in the successful implementation of food traceability systems. This includes laws, regulations and standards; government support; consumer knowledge and support; effective management and communication; top management and vendor support; and information and system quality.

Professor Mark Xu from the University of Portsmouth and co-author of the study, said: "Traceability in the food sector is particularly important as an effective traceability system can promptly identify, single out and remove unsafe food products from the market.

"We call for stronger government intervention, in particular attention should be paid to harmonizing laws and standards with international laws and standards for food safety and traceability, effective coordinating for

global food risk alerts and recalls, through effective food safety monitoring and quality control systems.

"Information quality is particularly important due to the chain-based nature of traceability systems. Measures need to be taken to ensure information authenticity and accuracy. This could include traceability systems users' training, skills development, compatibility in data collection and communication technologies, and integration of systems at different levels and regions.

"Food companies are also obliged to take social responsibility by fully complying with food safety standards, food safety policies, and implementing procedures and traceability systems.

"The government and food companies at all levels of the supply chain should proactively promote and publicise the benefits of using traceability systems and traceable food products. Willingness to pay for traceable products by consumers will ultimately drive the proliferation and implementation of successful traceability systems."

The research team compiled a list of 27 critical success factors that were relevant to information systems. Following pre-study interviews with managers at four food companies, a further five factors were added. These 32 factors were then tested through factor analysis method using survey data collected from 83 food companies in China.

Professor Xu said: "It's interesting that three dimensions of the framework (laws, regulations and standards; government support; consumer knowledge and support) were related to the environment aspect, which reflects a strong external driving force from government, industry, customers and competitors. Two dimensions (effective management and communication; top management and vendor support) are related to organisational factors but only one is related to a

technological factor (information and system quality).

"This shows that the main obstacle for successful and efficient implementation of traceability in food product chains is organisational, not technical.

"Our findings show the complexity in measuring traceability system success. Food companies are profit driven, whereas the government is mainly concerned with food safety and stability."

Researchers from the University of Portsmouth, the University of Bedfordshire and the China Agricultural University conducted the study, which is published in the journal *The Information Society*.

**More information:** Yanqing Duan et al. A framework for the successful implementation of food traceability systems in China, *The Information Society* (2017). DOI: 10.1080/01972243.2017.1318325

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