

Choi, Sukbong; Choi, Jae Chul

Article

Uncertainty of food safety in South Korea: An analysis of the imported food items from China

Global Business & Finance Review (GBFR)

Provided in Cooperation with:

People & Global Business Association (P&GBA), Seoul

Suggested Citation: Choi, Sukbong; Choi, Jae Chul (2018) : Uncertainty of food safety in South Korea: An analysis of the imported food items from China, Global Business & Finance Review (GBFR), ISSN 2384-1648, People & Global Business Association (P&GBA), Seoul, Vol. 23, Iss. 3, pp. 38-48, <https://doi.org/10.17549/gbfr.2018.23.3.38>

This Version is available at:

<https://hdl.handle.net/10419/224408>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc/4.0/>



Uncertainty of Food Safety in South Korea: An Analysis of the Imported Food Items from China

Suk Bong Choi^a, Jae Chul Choi^b

^aCollege of Global Business Korea University, Sejong City, Republic of Korea

^bCentral Policy Academy, Chungju-si, Chungcheongbuk-do, Republic of Korea

ABSTRACT

We develop the model predicting consumer uncertainty about the imported food safety through the technological and behavioral lenses. The paper draws on multiple on-sight observations, interviews with representatives (experts, authorities and consumers) and review of prior literatures on food safety which depicts the sources of consumers' uncertainty of the safety issues. We found that the technological capability and the intended behavior of the supplier influence the consumer's *factual* and *perceptual* uncertainty. Our study contributes to food safety management and consumer behavior literatures by identifying the pivotal role of the technological capability and the intended behavior of the supplier for building the consumer's factual and perceptual uncertainty of food safety.

Keywords: food safety management, consumer behavior, imported food from China, Perceptual and actual uncertainty

1. Introduction

Food security is one of the important and critical challenges for the entire population of seven billion people in the world (Anderson et al., 2014; Lin, 2014; Verger and Boobis, 2013). Food safety is a critical factor in the global food security (Lin, 2014). Food safety is a specific problem for consumers, organizations and nations.

Food safety is more important to countries that import food to meet national requirements. South Korea imports a great proportion of its essential food

from abroad. Henceforth referred to Korea, it is the 13th largest economy in the world and has a unique set of characteristics with respect to food safety issues. According to a Canadian Government Report (Canadian Government, 2011), South Korea imports 70% of its food consumption requirements. Its domestic supply is decreasing; demand for fish and sea food products is increasing. Its seafood trade deficit stood at \$1.4 billion in 2009. After the United States that exports 29% of total Agri-food to Korea, China is the second largest partner of Korea, providing 12% of its needs. Seafood imports from China are even higher (31%), and China is the largest supplier of Seafood to Korea. China fulfills 98% of the demand for Kimchi in Korea. Since Kimchi is a primary food item for Korean people for nutritional and symbolic-cultural reasons. Kimchi has a long technical and

Received: Aug. 10, 2018; Revised: Sep. 1, 2018; Accepted: Sep. 20, 2018

† Suk Bong Choi

Korea University, 2511 Sejong-ro, Sejong City 30019, Republic of Korea

Tel. +82-44-860-1520 E-mail: sukchoi@korea.ac.kr

cultural history in Korea (Hong et al., 2014; Jung et al., 2014). China has plenty of supply at competitive price. Thus, the business partnership between China and Korea is natural as well as advantageous for both neighboring economies.

However, food safety issue has remained a major obstacle in this international business partnership. Results from a nationwide consumer survey in Korea (Choi, 2004) indicates that safety of the food is the highest (41.5%) concern for the consumer. The quality, taste and appearance of the food in consumers' minds is the second issue (20.6%), which is followed by the concern for price (12.7%) and nutrition (12.3%). Food safety is obviously the most important concern among Korean consumers. Unfortunately, according to a recent survey (ConsumerKorea, 2012), the Korean consumer rates Chinese's imported food safety at 1.5 on the scale of 5. It is lower than any other country: Australia (3.31), EU (3.02), the US (2.92), Chile (2.85), ASEAN (2.19). This issue has history in Korean about Chinese food.

Nevertheless, it is fair to assume that not everything imported from China is unsafe. Korean consumers reduced their meat consumption in 2001 when BSE (Bovine spongiform encephalopathy) broke out in Japan but not in Korea (Jin, 2008). Japan was not an exporter of beef to Korea. This precedent shows that the consumer's reaction to a food hazard event in the media tends to form unfavorable perceptions (Jin and Han, 2014). Then the question begs where the food safety uncertainty of the Korean consumer comes from. In addition to actual food safety incidents, which are rare, why imported food from China is deemed unsafe. We start with the assumption that partially it is factual and partially perceptual phenomenon (Wu and Zhu, 2015). In the latter case, the halo-effect of media scandals may influence directly or indirectly the consumer's perception of the Chinese imported food. In China, food safety scandals have appeared in various places and products (Shan et al., 2013; TheLancet, 2009; Wu and Chen, 2013). These incidents have trickling effects on neighbors because of the media and flow of people. Then it is natural for the Korea consumer to be cognizant of the issues of

food safety observed and reported in China.

Our purpose in this exploratory study is to identify antecedents to the factual and perceptual food safety that is a ubiquitous problem. We focus on the Korean consumer perspective. We attempt to start with a problem-based reasoning. The research question that can help serve this purpose is whether, how and why perceptual or actual uncertainty shapes the consumer's attitude (Burke, 1998). General issues about the food safety in the world and in China are common (Liu, 2010). However, little is known about the Chinese food safety in Korea. Our findings can provide some answers to millions of consumers and travelers between neighbors, organizations on both sides and policy makers at the industrial and national level of economies.

II. Theoretical Framework: Consumer's Uncertainty of Imported Food Safety

We delimit the consumer's perceived uncertainty to two categories: technical and behavioral. The technical dimension also refers to formal and knowledge. Behavioral dimension refers to intended versus unintended actions (Simanjuntak & Musyifah, 2016). The literature on economic and sociological institutional assumptions supports this distinction between technical and behavioral uncertainties (Scott, 2003; Williamson, 1985).

The technical dimension of uncertainty relates to the functional aspect of the technology, product or process. It has quality attributes. In the current context, food item, its contents and related additives (chemical) fall into the technical category of the notion of uncertainty. A process in the supply chain can be a technical issue (Choi, 2018). If the individual or organizational agent unknowingly engages in malpractices as habitual behavior, it is deemed a technical uncertainty. In other words, if the supplier has benevolent intentions but malevolent practices, it alludes to technical (uncertainty capability and skills

of the agent). The agent (individual, organization or nation) may have a good intention but it is unable to meet the desired level of quality and quantity. Thus, technical uncertainty stems from the functional perspectives.

Behavioral uncertainty, on the other hand, alludes to the intention. The agent consciously and deliberately behaves to maximize the potential value from the business. It is a deliberate act. In economic literature, the market for lemon and plum is an example of behavioral uncertainty (Akerlof, 1970). This literature explains that the seller withhold information on the product from the seller for economic gains. This scenario can exit in any exchange. The imported food from China to Korea presents a similar buyer-seller story. Opportunism, in institutional economics, is another way to describe its presence of behavioral (Williamson, 1985). Thus, the question we ask is, to what extent technical and behavioral factors contribute to the consumers' concerns about the food safety, and how the information flow induces overall perception of the food safety.

We start with the notion of institutional pluralism in institutional theory (Greenwood et al., 2011; Reay and Hinings, 2009). According the theory, the agent responds to multiple types of external pressures. These pressures define respective goals (Pache and Santos, 2010). The agent needs to conform to these goals for a better level of legitimacy. Unfortunately, multiple constituents have different demands for the goals. One group demands low cost and high productivity. The agent needs to perform efficiently. Another group requires a certain process for procedural conformance. The agent needs to follow this procedure even if it compromises efficiencies. The conflicting demands on goals attract different responses by the organization to its environment (Greenwood et al., 2011). The institutional theory accommodates these competing goals.

Conflicting means to these pose another source of uncertainty of the consumer (Greenwood et al., 2011; Pache and Santos, 2010). The disagreement can emerge on the means between the agent and the environment (Besharov and Smith, 2014). For

instance, a technical standard used by the supplier may not satisfy the buyer in the transaction. Technical standards may differ between the national institutions of exporters and importers. Even if international institutions conform to certain global logics, there are differences between national regulatory authorities and perception of consumers, forming multiple conflicting logics (Coriat et al., 2006; Smith et al., 2009). For instance, reclaimed cooking oil meets the industrial standard of any country after it is adequately processed through an acceptable method. An importer in Taiwan imported reclaimed cooking oil from Vietnam. The authorities tested its standards, which it passed the required industrial standards. However, the Taiwanese consumer objected to it and it became a scandal disdaining the government.

The underlying reason behind these anomalies is that goals could be rationally acceptable but institutionally they may lack legitimacy. Similarly, the mean could technically conform to the industrial standards, but they can fall short of perceptual mark. Even if technically both standards (the seller and buyer) meet the same level, social and culturally they may differ. Thus, partially, uncertainty about the food safety is likely to be perceptual and partially technical; partially goals, means or both might be contribution to the uncertain. How the Korean consumer perspective reflects on these factors is the question open to the exploratory methodology.

III. Qualitative Method: Multiple On-site Observations

This study is set in the context of cross-border business between China and South Korea in the food sector. To understand the Korean perspective on the safety of food imported from China, we explicate whether the food safety is a factual or perceptual phenomenon. To do so, we gathered qualitative evidence to differentiate the cognitive mechanisms associated with facts and communication discourse in the media,

tales and halo-effects. Therefore, we conducted in-depth, semi-structured interviews with all 58 individuals from four sectors involved with food safety policy and imported food business. These sectors included the government, private company, expert group and general consumer group. We initially selected and contacted about 20 individuals in each sector randomly to ensure a balanced distribution of potential respondents. We also gained initial information on the existence of their experience working in food safety related policy area and with imported food from China. We found that they have been working

in the food safety related areas for several years and had enough experience with dealing and consuming imported Chinese food. We eventually identified 58 individuals who were agreed with participation of the interview out of 80 individuals contacted initially. The response rate was of 72.5% and final composition of interviewees was about 16 public servants from food safety related the government bodies, 16 various levels of managers from private companies, 12 professors and consultants, and 13 general consumers. We confirmed that interviewing various individuals from four sectors produced a sufficient variety of

Table 1. Problem-based qualitative questions

Main	Supplementary	Detailed questions
Q1.	Why do you think Korean consumer is concerned about the food safety that is imported from China?	<ul style="list-style-type: none"> • Your opinion on the issue • Others' opinion on the issue • Chinese opinion on the issue • Media's opinion on the issue • Regulatory opinion on this issue
Q2.	Have you directly or indirectly experience or known a case of food safety issues on the imported items from China?	<ul style="list-style-type: none"> • Food items compared between China and Korea • Non-food items • Yourself observed • Family members or friends informed you • Through public organizations
Q3.	What is the major factor behind food safety issues in Korea about the imported products from China for the human consumption?	<ul style="list-style-type: none"> • Can you share your own experience as consumer? • Can you share your own experience as official? • How do you reflect on any changes in your own views before and after visiting China? • What is the physical versus non-physical difference of Chinese Kimichi? • Is it possible that imported items are technically safe but otherwise, not! Why?
Q4.	Do you think food safety can be improved, and if so, how and why?	<ul style="list-style-type: none"> • Improvement by skills/training • Regulations/restrictions • Monitoring • Controlling the supplier side • Controlling the buyer side
Q5.	Can related Korean authorities contribute to the improvement of the edible products imported from China, if yes, how and why?	<ul style="list-style-type: none"> • Scientific improvement on the Korean side • Scientific implementation on the Korean side • Collaboration in scientific development • Inter-organizational partnership • Korean agencies located in China

participants as they held diverse positions and roles, and had different experience s and expertise within their sectors. Each interview lasted approximately one hour. It covered a standard set of questions (see Table 1), but the participants were encouraged to raise and discuss related topics and opinions without specific format as well. The interviewer employed no audio recording, but used shorthand. The participants were assured that their responses would remain anonymous.

By structuring four basic questions to interview, we increased the clarification of our steps and procedural

requirements. These questions and their answers are aligned towards improving the clarity of the findings and warranting our qualitative approach. The questions are ‘what’ to collect, ‘who’ will be able and willing to provide answers, ‘how’ to obtain answers, and ‘why’ these criteria.

The answer to the ‘what’ question, we identified multiple questions and supplementary questions in Table 1. We used these questions to all respondents. The reason for several questions is twofold. Firstly, the study is an exploratory attempt in which the approach is based on backward reasoning rather than forward

Table 2. Multiple interviews& respondents

No.	Interviewees	Position	Department	Sector	Country
1	Individual	Researcher	Ministry of food & drug	Food & Drug (Public)	Korea, Seoul
2	Individual	Middle Management	Ministry of Agriculture	Agriculture (Public)	=
3	Individual	Manager	Food & beverage	Hospitality, private	=
4	Group of 3	Councilors	General affairs	Diplomatic	Korean in China, Dalian
5	Group of 9	Various enterprises	Various	Enterprises	Korean in China, Dalian
6	Individual	Head of the academy	Multi-task force	Law enforcement	Taiwanese, China/Korea
7	Individual	Senior Police officer	Food Safety	Public Safety (police)	China, Shenyang
8	Individual	Assistant Professor	Public Administration	Education, PhD Korea	China, Dalian
9	Individual	Food inspector	Foreign affairs division	Police/security forces	=
10	Individual	Judge	Legal affairs/courts	Ministry of Justice	=
11	Individual	Inspector	Central Police Agency, Seoul	Public Safety/security	Korea, Seoul
12	Group of 3	Superintendent	Station: Chinese-Korea Diaspora	General safety	=
13	Individual	Director	Overseas Korea Protection	Foreign Affairs	=
14	Individual	Inspector	Intellectual Investigation	Public Safety	=
15	Group of 8	Various	Various (private or public)	Various	Korea, Kyung-ju
16	Individual	Senior Assistant	Parliamentarian	Industry/Trade	Korea, Seoul
17	Individual	Attorney Advisor	Ministry of Foreign Affairs	WTO delegate	Korea, Seoul
18	Individual	CEO	Business Corp.	Imported Food	Korea, Deagu
19	Individual	Professor	WTO/OECD delegate	Economic negotiation	Korea, Seoul
20	Group of 5	Ministries	Various	Agri/Public safety/Excise	Korean in Shanghai
21	Individual	Manager	Export to China	Food/supplements	Korean in China
22	Group of 3	Exchange students	International trade	Education	Korean in Dalian
23	Individual	Data expert	Consulting firm	High technology/Management	Chinese in China
24	Group of 2	Govt. Officials	Agri. & Ocean Ministries	Public	Korean in China

reasoning. This respect, we used problem-based reasons. Secondly, the questions conform to the purpose and framework of the study. Prior literature developed these questions, but it does not dictate them. Therefore, our approach conforms to the purpose.

To answer the ‘who’ question, we used several criteria for the selection of the respondent. The respondent would be able and willing to engage in the interview. The ability aspect refers to knowledge (direct or indirect) of the Chinese food safety in China and Korea. The ideal respondent would be government officials who have a direct experience with the food safety cases or policies. For instance, Korean Food and Drug Administration, Central Police Agency and Diplomatic Personal having served in China met this criterion. The second ideal group of respondents comprises those who have a direct exposure to food in Korea and China. These could be consumers, businesspersons or social travelers. The respondent was also willing to speak at length then and in the future. This way, we dealt with the issue of ‘who’ to ask.

Table 2 shows the main respondents who talked to us about the issue through their direct or indirect experience, as well as their duties and responsibilities.

To the question ‘how’ to gather data, we used unstructured questions in the interviews. The sequence, phrasing and number of questions differed according to the condition. However, the main objective and contents remained identical. The reason for not using structured interviews is twofold. Our questions based

on a clear problem, which alludes to the backward reasons. Therefore, we had a broader scope of issue at hand. This is one aspect. The other aspect is that we used note-taking approach rather than recording procedures. As elaborated in later pages, we verbally described our purpose to the respondent and assured them anonymity. They permitted notes taking but not recording for their concerns for identity and psychological issues (Eisenhardt, 1989; Yin, 1994). We were unable to follow the recording procedure. If we insisted, we feared that it would make them conscious and they might become politically correct and avoid the actual issue. Finally, to the ‘why’ question, we chose these individuals, the answer is in the purpose of the research. The purpose was to understand the Korean perspective. Instead of interviewing individual Korea consumers, which is not a feasible or viable option for our research purpose, we relied on connections to and relations to access the actual issues. Our intention was to access the natural phenomenon rather than appear to be some kind of reporters.

IV. Analysis

Figure 1 shows the integrated model of main predictors of uncertainty about food safety which

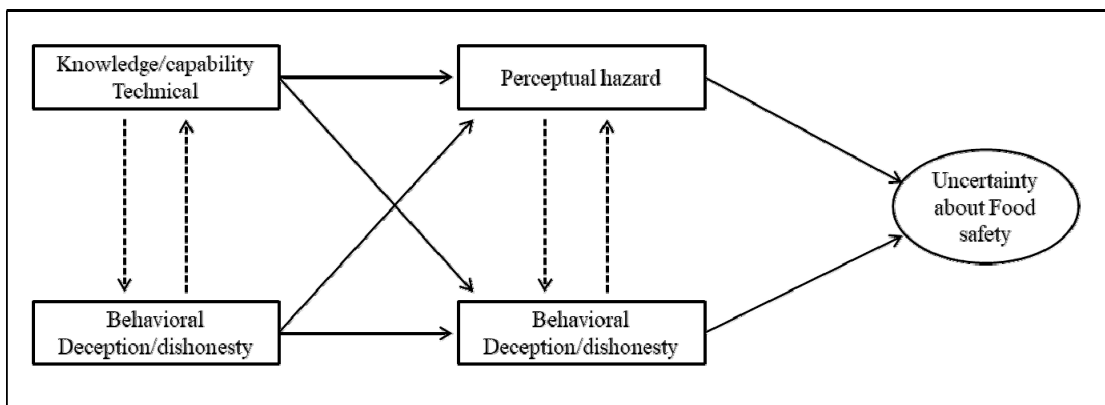


Figure 1. Integrated model of uncertainty about food safety in Korea

is the key results of interviewees' responses.

As we noted in the Figure 1, there are two main predictors of uncertainty of the Korean consumer about the food safety. One predictor is technical and the other is behavioral. The former refers to functional or technological aspect that may influence uncertainty. The technical aspect predicts perceptual influence and actual influence on the uncertainty about food hazard. The supplementary term for capabilities explains technical antecedents. These capabilities refer to the understanding of the supplier in the eyes of the consumer. The consumer in Korea has two ways to evaluate technological capabilities. One alludes to scientific elements such as chemistry and the other alludes to processing capabilities. Both capture knowledge of the supplier, including skills, system and tangible technological devices.

In other words, the Korean perception was that lack of capabilities and skill deficiencies are the main cause of food safety problems. Some of the interviewees indicated that Korean standards were different from those in China. Even if the supplier met those standards, their way of doing was inadequate. Therefore, the problem is of training, skills and education to improve scientific dimension of the Chinese side. Especially, physical, chemical and biological discourse emerged in the talk. Thus, the problem identified was with the production system, not the policy or behavior.

On the opposite side of the technical category, the behavioral predictor of uncertainty influences perceptual and actual uncertainty through deliberate action. The Korean consumer views the Chinese supplier as able but not willing to improve food safety requirements. The supplementary term of behavioral predictor is intentional, resting on the will of the supplier. The supplier's intention may be influenced by economic or social reasons. Thus, the Korean consumer views the Chinese supplier as opportunist and unreliable partner who has a self-serving interest more than consumer's interest in mind.

The input from the interviews shows that, although the Chinese side has adequate capabilities and skills to perform its functions problem to meet standards, it does not do so. This view alludes to intended

problem. The Chinese side is perceived to be focusing on business advantages at the cost of food safety. Efficiencies through cost cutting and expedited activities to fast trace the production system are producing sub-standard products. Therefore, the issue is less of technical but of behavioral concerns. The logic of profit maximization by lowering cost and ignoring quality in the process is leading to food safety concerns. Therefore, behavioral reasons outweigh the technical reasons for contributing to the food safety uncertainty.

Furthermore, we found from the interview that uncertainty in the mind of the Korean consumer has its two distinctive dimensions. One type of uncertainty refers to 'perceptual hazard' which is perceived through indirect sources rather than direct experience. Figure 1c captures this link between uncertainty and its perceptual predictors. An example is needed to explain this perceptual problem. The consumer finds it difficult to have a positive attitude towards a food item that might have met all industrial standards due to three reasons. Firstly, if a food safety scandal breaks in China, such as it happened in the case of melamine in the milk in China (TheLancet, 2009; Xiu and Klein, 2010), other items imported from China are likely to receive negative feedback. Secondly, a scandal of a specific product in another country can influence the Korean consumer's perception. It happened when a cow disease broke out in Japan and Koreans reduced consumption of meat products (Jin, 2008). Thirdly, the Korean consumer's prior knowledge about the food safety can influence to hype up or down the level of uncertainty about the food safety. A media scandal about the food safety has a greater impact on consumers when the consumer has limited prior knowledge about a specific food-related event (Jin and Han, 2014). Moreover, the absence of substitutes between different types of foods also reduces the accurate analysis of actual response of the consumer to uncertainty.

The second type of uncertainty, as the name actual uncertainty that rests on facts, evidences and reliable information sources. The consumer may consume unsafe food directly or knows one who has done so. Moreover, the press release from related authorities,

such as KFDA, on food safety problem is considered a factual phenomenon. It is the real source of food safety. It is plausible to suggest that the consumer may be reluctant to use the same food item for the second time if it is imported from China or it has affiliation with it. This common-sense based inference depicts the Korean consumer's uncertainty for the safety of the imported food through the eyes of the representatives—the interviewees.

These perceptual and actual determinants influence the uncertainty of the Korean consumer of the Chinese imported food. The perceptual predictor represents or forms the attitude of the consumer. The actual predictor represents facts or experiential episodes. The consumer or representatives (experts) of consumers who represent knowledge of food safety in the import from China to Korea are aware of the phenomenon based on facts. In other words, the actual dimension reflects the actual empirical cases experienced by or known to respondents. Thus, these additional concepts outside the circle in the model support to clarify the focal concepts.

Between the technical and behavioral dimensions and between perceptual hazard and actual hazard are two dotted lines; one top-down and the other is bottom-up. The arrows represent a reciprocal influence one another and ultimately increases next outcome variables and which in turn enhance the uncertainty about food safety.

V. Discussion

The research question we posed was what predicts the notion of uncertainty in the minds of the Korean consumer of the food from China. The answer suggests that the Korean consumer's food safety uncertainty rests on two distinctive categories. One is perceptual, and the other is factual. The former type is based on indirect information and context, and the latter is based on direct interaction with the evidence. Both types of uncertainties reflect on technological and

behavioral roles of Chinese producers in the mind of the Korean consumer. These relationships between two predictors and two types of uncertainty are captured in the integrated model in Figure 1.

We found that the consumer in Korea believes that the Chinese side lacks technological capability to deal with food safety concerns. One perception of the consumer is that Chinese side has a less than required standard of scientific skills. Technological capabilities of related organizations are not in par with OECD standards, and Korea is a member of the OECD club of developed economies. Another perception is that, although the science is sufficiently developed in China, Chinese entrepreneurs lack formal training and skills (Soon and Baines, 2012). The lack of skills fails to transform or apply the scientific knowledge to the industry. It is to say that the transformation of science into technology is slow, and the slow transformation is hampering the improvement of the food safety. Technical skills for food safety are necessary to improve standards to an acceptable level (Jongwanich, 2009; Shukla, 2012). Another argument in the literature is that even if technical skills for food safety exist in a setting, there is a risk of misplacement of risks by related entities (Sanlier and Konaklioglu, 2012). Empirical studies show that consumers form their perception based on their understanding of multiple factors (Soon and Baines, 2012; Lee et al., 2016). Technology is one of them (Shan et al., 2013).

Scientific development regarding food safety in China has its limitation. For instance, monitoring and controlling techniques or processing methods for food safety is difficult if not impossible in China (Sun et al., 2013). Attempts have been made in improving regulations and policies to build perceptions and trust in Chinese food sector (Shan et al., 2013). These attempts at the development of policies and regulations have contributed to the positive development. However, the development of the production system in the food chain has been slow. Elsewhere in the world, technological capabilities in food safety have reached an acceptable standard in some contexts (da Cruz and Menasche, 2014). In China, there is limited indication

in favor of some improvements. As a result, Chinese consumers do not fully trust the suitability of the food safety for human consumption in China. Then, it is natural for the Korean consumer to hold a low opinion of the food safety in Korea.

Some of the prior literature points to perceptual uncertainty directly or indirectly because of technological and behavioral outcomes. Firstly, it is commonly believed that there is the lack of proper institutional development to manage food safety issues in China (Sun et al., 2014; TheLancet, 2009). For instance, proper development of the regulatory system in the food safety assessment, especially the enforcement of relevant laws, is lacking in China (Ni and Zeng, 2009). Secondly, the perception of the Korean consumer can form because of the negative consequences of the reported cases in China (Xue and Zhang, 2013). Thirdly, trust in China is very low on food safety, let alone foreign consumers of Chinese food such as in Korea (Chen, 2013). Fourthly, the related media serve the direct and indirect social audience more than the business. The Korean audience may perceive that Chinese media partially discloses such information if it does at all. The trickling effects can be seen in the cautions in Korea (Lee et al., 2012; Sohn and Oh, 2014). Thus, the link between behavioral element and perceived uncertainty of the food safety can morph into a real perception.

Popular as well as scientific literature is sufficient prove of facts that technological capabilities are being developed in China a different level. Some sectors are gaining more attention than other sectors. Food safety side has recently picked up after some scandals about food hazard. Despite some initiatives taken by the government, the sector has not reached the highest safety standards. The proof of that is documented in the Kimchi war (TheEconomist, 2005). Skepticism about food safety remains a challenge for Chinese imported food (Navarro and Autry, 2011).

Behavior also is a source of an actual encounter with a food safety issue. Evidences in leading journals echo facts that China institutional and structural problems with food safety and the solution is not in sight as yet (TheLancet, 2014). In the international

context, eyes are on Chinese food safety in the era of globalization (Liu, 2014). The Korean consumer is the direct stakeholder and audience of this kind of evidence. The Korean institutions, authorities and experts are also a likely source of information on facts with consumers to educate them. The experience of the facts forms into real risk and uncertainty for the consumer. We reckon that there is a potential link between behavioral incidents and personal experience of the consumer with the facts. The fact-based uncertainty of the food safety in Korean becomes real.

Korean consumers have experienced direct incidents about the imported food in the past. Some found a mismatch between labeling and the contents. Others found a mismatch in the packing. For instance, plastic items, hair and other alien objects in the edible products are some of the reported incidents. Lower than expected and required quality of the water used in the processing of the product at the supplier's end is also reported by both Koreans and Chinese experts through their observations and measurements. Literature shows that Chinese consumers are not satisfied with the Chinese food at various places (Ortega et al., 2014). Our observation shows that many Chinese consumers in the city of Dalian prefer to buy food items from Wal-Mart as compared to other Chinese supermarkets. Upon inquiry, they reflect that safety issue is very important. If Chinese respond to the food safety problem in China, then it is plausible that Korea will reflect even more for two reasons.

The interesting question is whether the conflict can be reduced by reducing the gap between the means and goals of the supplier and consumer. According to the model proposed in this study, the answer is affirmative in terms of factual predictors and less so in terms of perceptual predictors. Perceptual predictors stem from habits, information asymmetries, culture and physical distance and many other latent factors. The reduction of those gaps can decrease by educating both sides about each other. They need to understand the differences and the answer why the other side does not or cannot think like them

even though they are aiming to satisfy the other side.

Limitations of the research are obvious. Firstly, the research model is based qualitative and anecdotal evidence. It lacks empirical support based on large scale of samples at this stage. Secondly, it depicts two countries and one sector. The formation and implication of perceptions are cultural and institutional phenomenon. Countries differ in their institutional setting. Thirdly, further development is needed to capture the internal constructs at the micro level.

References

- Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanisms. *Quarterly Journal of Economic*, 84(3), 488-500.
- Anderson, J., Bogart, N., Clarke, A., Nelson, L., Warren, B., & Jespersen, L. (2014). Food safety management in the global food supply chain. *Perspectives in Public Health*, 134(4), 181.
- Besharov, M. L., & Smith, W. K. (2014). Multiple Institutional Logics in Organizations: Explaining Their Varied Nature and Implications. *Academy of Management Review*, 39, 364-381.
- Burke, J. R. (1998). Warning: the imported food you are about to consume may (or may not) be harmful to your health. *The Journal of Contemporary Health Law and Policy*, 15, 183-205.
- Canadian Government (2011). Agri-Food Past, Present and Future Report South Korea. Embassy of Canada to the Republic of Korea, Seoul, South Korea, 1-17.
- Chen, W. P. (2013). The effects of different types of trust on consumer perceptions of food safety An empirical study of consumers in Beijing Municipality, China. *China Agricultural Economic Review*, 5(1), 43-65.
- Choi, J. (2018). Electronic commerce, MCSs change and the improvement of supply-chain performance. *Global Business & Finance Review*, 21(1), 33-45.
- Choi, S. H. (2004). National survey of people's perception on Food safety and it information exchange., Policy report of Department of Agro-food Safety & Crop Protection. National Academy of Agricultural Science Seoul, Korea.
- ConsumerKorea. (2012). Korea Consumer's 2012 perception survey on imported food safety www.consumerskorea.org, Seoul, Korea.
- Coriat, B., Orsi, F., & d'Almeida, C. (2006). TRIPS and the international public health controversies: issues and challenges Industrial and Corporate Change 15, 1033-1062.
- da Cruz, F. T., & Menasche, R. (2014). Tradition and diversity jeopardised by food safety regulations? The Serrano Cheese case, Campos de Cima da Serra region, Brazil. *Food Policy* 45, 116-124.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14, 532-550.
- liuFood, Agriculture Organization of the United, N. (1997). *Reforming FAO: the challenge of world food security*. Food and Agriculture Organization of the United Nations, Rome.
- Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional Complexity and Organizational Responses. *The Academy of Management Annals*, 5, 317-371.
- Hong, Y. F., Kim, H., Kim, H. R., Gim, M. G., & Chung, D. K. (2014). Different Immune Regulatory Potential of *Lactobacillus plantarum* and *Lactobacillus sakei* Isolated from Kimchi. *Journal of Microbiology and Biotechnology*, 24, 1629-1635.
- Jin, H. J. (2008). Changes in South Korean consumers' preferences for meat. *Food Policy*, 33, 74-84.
- Jin, H. J., & Han, D. H. (2014). Interaction between message framing and consumers' prior subjective knowledge regarding food safety issues. *Food Policy*, 44, 95-102.
- Jongwanich, J. (2009). The impact of food safety standards on processed food exports from developing countries *Food Policy*, 34, 447-457.
- Jung, J. Y., Lee, S. H., & Jeon, C. O. (2014). Kimchi microflora: history, current status, and perspectives for industrial kimchi production. *Applied Microbiology and Biotechnology*, 98, 2385-2393.
- Lee, G. I., Lee, H. M., & Lee, C. H. (2012). Food safety issues in industrialization of traditional Korean foods. *Food Control*, 24, 1-5.
- Lee, T. K., Yu, C., xu Dong, X., & Hwang, Y. S. (2016). Marketing Innovation Influences on Market and Customer Related Performances: Evidences of Korean Manufacturing Companies. *Global Business and Finance Review*, 21, 109-127.
- Lin, C. F. (2014). Public-Private Interactions in Global Food Safety Governance. *Food and Drug Law Journal* 69, 143-160.
- Liu, C. L. (2010). The Obstacles of Outsourcing Imported Food Safety to China. *Cornell International Law Journal* 43, 249-305.
- Liu, X.M. (2014). International perspectives on food safety and regulations - a need for harmonized regulations: perspectives in China. *Journal of the Science of Food and Agriculture*, 94, 1928-1931.
- Navarro, P., Autry, G. (2011). *Death by China: Confronting the Dragon - A Global Call to Action*. Prentice Hall, Upper Saddle River, NJ.
- Ni, H. G., Zeng, H. (2009). Law enforcement is key to China's food safety. *Environmental Pollution*, 157,

- 1990-1992.
- Nyambok, E. O., & Kastner, J. J. (2012). United States Import Safety, Environmental Health, and Food Safety Regulation in China. *Journal of Environmental Health*, 74, 28-34.
- Ortega, D. L., Wang, H. H., & Widmar, N. J. O. (2014). Welfare and Market Impacts of Food Safety Measures in China: Results from Urban Consumers' Valuation of Product Attributes. *Journal of Integrative Agriculture*, 13, 1404-1411.
- Pache, A.-C., & Santos, A. (2010). When World Collide: The Internal Dynamics of Organizational Responses to Conflicting Institutional Demands. *Academy of Management Review*, 35, 455-476.
- Reay, T., & Hinings, C. R. (2009). Managing the rivalry of competing institutional logics. *Organization Studies*, 30, 629-659.
- Sanlier, N., & Konaklioglu, E. (2012). Food safety knowledge, attitude and food handling practices of students. *British Food Journal*, 114, 469-480.
- Scott, W. R. (2003). *Organizations: Rational, Natural, and Open Systems*, Fifth ed. Prentice Hall, Upper Saddle River, NJ.
- Shan, L. J., Yang, D., Wang, L., Xu, L. L., & Wang, X. L. (2013). Consumers' safety perception of food safety in china: a case of food additive. *Agro Food Industry HiTech*, 24(5), 28-30.
- Shaw, D. J. (2007). *World food security: A history since 1945*. Palgrave Macmillan, Basingstoke.
- Shukla, M. M. (2012). Food Safety Testing and New Technologies. *American Laboratory*, 44(2), 22-24.
- Simanjuntak, M., & Musyifah, I. (2016). Online shopping behavior on generation Y in Indonesia. *Global Business & Finance Review*, 21(1): 33-45.
- Smith, R. D., Correa, C., & Oh, C. (2009). Trade, TRIPS, and pharmaceuticals. *Lancet*, 373, 684-691.
- Sohn, M. G., & Oh, S. (2014). Global harmonization of food safety regulation from the perspective of Korea and a novel fast automatic product recall system. *Journal of the Science of Food and Agriculture*, 94, 1932-1937.
- Soon, J. M., & Baines, R. N. (2012). Food safety training and evaluation of handwashing intention among fresh produce farm workers. *Food Control*, 23, 437-448.
- Sun, D. Q., Huang, J. K., & Yang, J. (2014). Do China's food safety standards affect agricultural trade? The case of dairy products. *China Agricultural Economic Review*, 6, 21-37.
- Sun, J., Sun, Z., & Chen, X. (2013). Fuzzy Bayesian network research on knowledge reasoning model of food safety control in China. *Journal of Food, Agriculture & Environment*, 11(1), 234-243
- TheEconomist. (2005). *The Kimchi wars: South Korea and China duel over pickled cabbage*. The Economist November.
- TheLancet. (2009). Melamine and food safety in China. *Lancet*, 373, 353.
- TheLancet. (2014). China's food safety: a continuing global problem. *Lancet*, 384, 377.
- Verger, P. J., & Boobis, A. R. (2013). Global food supply. Reevaluate pesticides for food security and safety. *Science*, 341, 717-718.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism*. The Free Press, New York.
- Wu, L., & Zhu, D. (2015). *Food Safety in China: A comprehensive review*. Taylor & Francis, London.
- Wu, Y. N., & Chen, Y. (2013). Food safety in China. *Journal of Epidemiology and Community Health*, 67, 478-479.
- Xiu, C., & Klein, K. K. (2010). Melamine in milk products in China: Examining the factors that led the deliberate use of the contaminant. *Food Policy*, 35, 463-473.
- Xue, J. H., & Zhang, W. J. (2013). Understanding China's food safety problem: An analysis of 2387 incidents of acute foodborne illness. *Food Control*, 30, 311-317.
- Yin, R. K. (1994). *Case Study Research: Design and methods*. Sage Publications, Thousand Oaks, CA.