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FOOD SAFETY IN CHINA:
REGULATORY REVISIONS AND CONSUMER CONFIDENCE

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Opening Remarks:

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Keynote Address:

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Commissioner for Economic and Trade Affairs in
the United States, Government of Hong Kong
Special Administrative Region

Panel Discussion:

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PROCEEDINGS

MR. LI: So, please be seated. Good morning. My name is Cheng Li, director of the John L. Thornton China Center here at Brookings. Welcome and thank you for attending today's event, Food Safety in China.

Now, this is a topic that has multiple important dimensions and that affects all of us. But it has been examined inadequately, in policy and academic circles, both in China and outside world.

Food-safety issues, of course, not unique to China. There are common challenges to all countries in the world, including the United States. Our objective today, in organizing this discussion, is not to single out China but rather to remind all of us that an increasingly globalized world, China has problems similar to those of all developed and developing countries.

Given this broad context, the focus of discussion on food safety in China is timely and important for at least the three main reasons:

First, in recent years China has experienced many widely publicized food-safety incidents. From contaminated baby formula, candied dumplings, and the fake beef, to contaminated strawberries, gutter oil, and the fake hot pot soup. And it's a very long list, it's quite depressing though.

Understandably, food-safety concerns now have become the second largest public concern in China, following immediately, from the environment pollution as reviewed in a large survey conducted before the National People's Congress meeting last month. Also, there's another survey conducted by Pew Global Attitudes Company. It finds more than 70 percent of Chinese people consider food safety to be a big problem.

Now, second, improving China's food-safety situation has implications far beyond public health. Addressing food-safety concerns will help boost the domestic consumer confidence, which is essential for the country's new, microeconomic agenda to move toward a consumer-oriented economy. Additionally, reducing consumer anxiety over food, which stems from distrust of both regulatory authorities and the food companies, can help reduce the trust deficit in Chinese society.

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And thirdly, in October 2015, China enacted its revised food-safety law, which aims to strengthen the regulation of food companies and enhance oversight along the supply chain. This new law is important. Not only to people in China, not only to international consumers, as food and ingredients from China can be found on supermarket shelves all over the world. But also, to foreign food companies, especially those for whom China is their largest market.

Now, this morning we are so fortunate to have assembled a group of leading experts on various aspects of this broad topic. Brookings visiting scholar Lin Fu will introduce our distinguished experts and the panelist and will moderate the panel discussion. But before that, we are truly honored to have with us Hong Kong commissioner for economic and trade affairs, Clement Leung, to provide the keynote address.

Commissioner Leung is the most senior representative of Hong Kong's Special Administrative Region Government in the United States. Since joining the Hong Kong administrative service in 1987. It's almost 30 years ago, you still look so young. And he has served in a number of senior government positions with responsibilities covering internal security, higher education, trade and public finance. From 2010-2014, he was director of food and environment hygiene, responsible for food safety and delivery of municipal and public hygiene services. He has kindly agreed to share with us his insights about how Hong Kong deals with food-safety issues and his personal observations on the role of regulators, enforcers, and businesses.

Following his remarks, we will have time for some questions. And just one last reminder, please join today's discussion on our Twitter feed, which is @BrookingsChina. Now, please join me in giving a warm welcome to Commissioner Leung. (Applause)

COMMISSIONER LEUNG: Thank you Cheng for your very kind introduction and thank you very much for having me and giving me the opportunity to talk about food safety. That was what I was responsible for before I came to the United States to represent Hong Kong.

First, I would like to talk about -- give you a brief outline on how we tackle food safety in Hong Kong. And second, to share the experience of our cooperation with the authorities in mainland China.

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And third, to give some personal observation on the challenges faced by regulators and businesses.

A bit of background about Hong Kong. We united with China in the year 1997 and become a special administrative region under one country, two systems. Other than defense, foreign affairs, and some matters of constitutional importance, we have a high degree of autonomy to administer Hong Kong. And, of course, we have full autonomy in administering our food-safety laws and programs. For example, we allowed bone-in U.S. beef to be sold in Hong Kong based on our own risk assessment of mad cow disease. That was a decision that I made as director of food safety, irrespective of the policy in mainland China. We do not basically -- we do not grow or produce anything that we eat. Over 90 percent of our food is imported and over 60 percent is from mainland China, including live animals, such as chickens, pig, fish, beef/cattle because, I think, Hong Kong people have this kind of superstition for fleshy salted meat.

There are four main pillars of our system that is legislation and enforcement, risk management and surveillance, risk communication, and international cooperation. Our system is fully rule based. Our laws set out the limits of harmful substances in food, such as preservatives, heavy metal, and pesticides, etc. And all food importers and distributors are required by law to register with government. And all food traders are required to keep proper records of the transactions to enable traceability in case of a food incident. And we have power to issue food-safety orders; to ban, import, or supply, and to impose a mandatory recall of food that poses danger to public health. And all food establishments have to be licensed. And all prepackaged food will have to comply with labeling requirements for ingredients and nutrition information.

We established the Centre for Food Safety in 2006 as the single agency responsible for execution and enforcement. It is a multidisciplinary team comprised of medical, nursing, veterinarians science professionals, chemists, nutritionists, toxicologists, and health inspectors. And offenders are prosecuted and food licenses are liable for cancellation upon conviction.

Our laws are reinforced by an extensive surveillance program. Every day our colleagues will go shopping to collect food samples for compliance testings in our lab. And they cover all food types from

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different parts of the supply chain and retail outlets. On top of regular surveillance, we undertake targeted surveillance of higher-risk food such as sushi, sashimi, oyster, milk, dairy products, etc. We also do periodic, thematic surveillance that covers seasonal food before major Chinese festivals. For examples, Chinese New Year. And every year, we collect and test about 65,000 samples. That is about nine samples per 1000 population. The ratio is one of the highest in the world. And we have a high compliance rate of over 99 percent.

All surveillance of results is released and posted online. So, everybody in Hong Kong can see it. And details of the failed samples are provided, and the party responsible is named. So, it's a name-and-shame kind of scheme. An immediate food alert will be issued if there's a very serious breach.

We also put in place contingency plans to deal with large-scale food incidents, potentially, right. Like the outbreak of avian flu and incidents at nearby nuclear plants. And we conducted regular exercises and drills to make sure we are fully prepared to respond quickly.

Risk communication. Our communication strategy is targeted at all levels, that includes experts, academics, the food trade, and most importantly, the general public. The internet has helped us a lot. Eight-five percent of households have broadband access and mobile penetration in Hong Kong is 240 percent. So, everybody including babies have more than two devices per person. So, you can imagine that we disseminate most of our information through the net, through our website, through Facebook, through apps, through emails, and through SMS notification. And there are about 43,000 account recipients of our food alerts. And we established trade consultation forums and customer liaison groups to hear feedback from people on our programs. And our strategy is to be as open, as transparent, as timely, and as proactive as possible.

International cooperation is needed. Nearly all our food is imported. We need to maintain a very strong relationship with our food-safety authorities in the exporting countries. We basically rely on them to alert us of incidences and emergencies in their countries and to trace whether these problematic batches of food have been exported to Hong Kong. We maintain close liaison with the World Health Organization. Codex that is an international standards body. And OIE, that is the World Organisation for

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Animal Health. And we have also established an expert committee to invite experts from Hong Kong, from overseas, and from mainland China to advise us on international trends and on legislation, so that we can closely follow international trends and best practices. Our cooperation with mainland China is one of the most important aspects of our work. We have a long history working with them, particularly, with our counterparts in Shenzhen and Guangdong Province where we got most of our food.

China has been performing a gatekeeping role for Hong Kong for many decades. They operate a system of registered farms and registered processing plants. Before the suppliers are qualified for export to Hong Kong, they have to go through more stringent inspections. Health certificates are required for live animals and for consignments or have a documentary trail that would enable us to trace the problem if we have an issue or if an incident. And we have a program for Hong Kong inspectors to go to the mainland to visit farms and food facilities, to go through their books and records, and to give suggestions. Visits are scheduled, so there's no surprise visit. And both sides have made it very clear such visits are not law enforcement actions. But they give us a better idea of how well these farms and facilities are working, and it would provide additional information to supplement our own surveillance data.

We have also agreed on the communication channels and protocols for dealing with different scenarios. For example, if a sample of vegetables have exceeded safety standard and fail in our lab tests, the farm will be suspended until it meets all the requirements. And when supply is resumed, there is more stringent sampling and inspections. These arrangements work very well structured and work very smoothly for Hong Kong in most cases. But, of course, something new and something unforeseen will come up from time to time, and one can expect a disagreement between us and the Mainland authorities on how to deal with these situations. But we are always able to find a compromise and to resolve the matter amicably and in a very professional manner. And the cooperation has been very beneficial for Hong Kong. And the food export to Hong Kong is always generally of a higher quality than that available domestically to the extent that there is a saying that it is not just one country two systems, but also one country two pigs. And the better pig always goes to Hong Kong. (Laughter)

That is good for us, but that actually gives them a bit of trouble because there is a lot of public

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criticism in mainland China on why they can achieve a higher standard for food safety to us but not doing the same for the rest of the population.

I would like now to turn to the challenges to regulators. It is very tempting to say that making laws is easier than enforcement, but I will say that making laws is equally difficult. My experience is that regulators are always under pressure to adopt the most stringent standards in drafting laws. And I will argue that we should go for something that can be implemented and that can be complied with. So, don't make perfect the enemy of good. Actually, there is a lot of tradeoff in the process. The public will always like us to be ambitious. But if the standards are too high, will you cause a shortage of supply? Can the private sector conduct lab test at a reasonable cost and within a reasonable timeframe? And do you allow for a grace period and if so, for how long?

So, when we enact legislation for our food in respect to pesticides. We use international standards adopted by Codex as the basis. But we have to settle for lower national standards used by Thailand, for example, and the United States and mainland China for these reasons. And the consultation process took several years. And we have to implement in stages precisely to address constraints of other stakeholders. So, if you get the balance right, you will encourage compliance and respect to the system.

The second challenge, building trust. Trust is about everything in this business. And it actually takes years and even decades for us to build up our reputation and credibility. And one serious incident can knock you out. Regulators are up against a lot of negative forces. For example, you can be the victim of your own success because the more samples you take, you test, the more problems you find. But you got to deal with it. People tend to believe in bad news rather than good news. And people always assume that regulators have something to hide. When there is a crisis, the first questions that I always get at press conferences is when did you first know about it. And then, why has it taken so long for you to tell us. And if somebody got a head of you to find a problem, people will say you should have found out first. And even if you get ahead of everybody else in the world to find a problem, they will say you should have found it earlier. So, it's very difficult, and the handling of serious food-safety incidents

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makes regulators particularly vulnerable. And, typically, you have to respond within limited time and with limited information. And my experience is that you've got to deploy the (power) doctrine in dealing with food safety by deploying overwhelming strike capability during a major food crisis, particularly, if vulnerable groups, like babies, are involved. That is the strategy that we use in dealing with incidents, for example, relating to Fukushima and baby infant formula. And we can have a discussion of that if there's time after the presentation.

Building capacity. As I mentioned, it's a very complex operation. And it involves a very high degree of coordination within the entire government machinery. And if you want to strengthen management in food safety, you will need to build up capacity in this view but also, need to tackle weaknesses in the broader system governance. Such as business ethic, transparency, accountability, coordination of different agencies, making sure that rules and procedures are structured and consistently applied, that the rule of law is respected, and the bureaucracy is merit based and free from corruption, etc.

And, of course, Hong Kong went through our own journey of reform, and the image. For example, the image of a health inspector was notorious before we cleaned up endemic corruption in the 1970's. And it took us more than 30 years to get where we are now. So, the reform process is long and gradual for small city like Hong Kong, and it can be imagined how challenging it would be for a big country like China to do the same.

The role of businesses. A lot of problems and incidents are caused by ignorance and bad ethic in the food industry. The government cannot do it all, and we need to rely on the cooperation of the private sector. In Hong Kong, we are fortunate to have a pretty organized food sector. We have a large number of trade associations and chambers of commerce representing a full spectrum of people doing business in food supply. They help us upgrade the standard of their practitioners and perform some degree of self-regulation. And they are a good source of intelligence on what is happening on the ground. And they can be of great help during food crises.

The focus on food safety presents a lot of business opportunities. And with a more affluent

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population in major Chinese cities, Chinese consumers are ready and willing to spend more on quality and branded foods. And, actually, a number of foreign exporters are covering the Chinese market through Hong Kong. And we also see enterprises in China increasingly interested in looking outside of the country for technology and knowhow, to strengthen their core competencies. And about two years ago, a Henan company listed in the Hong Kong Stock Exchange has acquired Smithfield. Other than just selling the pork to China as a premier product, the deal enabled the company to improve its own operations at home. And, of course, food companies are always the victim of food-safety incidents and regulators should work with them to clean up the act. Particularly, the bigger, the better, and the more reputable ones who have more incentive to do so.

Prospects of reform. So, what is a prospect of China's reform? I think the discussion panel can cover more of that later today, and I would like to offer some of my personal observation. I worked with my counterparts in the mainland for more than three years. And we went through a lot during that period. And I have a lot of respect for them. They are as passionate and as professionally competent as my colleagues in Hong Kong and in other overseas jurisdictions. And they have worked with us to develop a pretty good food-import-control system. They operate very effectively. These factors are already key building blocks for a good safety control system. And so, that is the brightest spot. And, of course, the challenge for them is whether you can scale up these building blocks and apply them to the entire country. There are 1.3 billion people. The size as big as the United States of America, hundreds and thousands of small producers and suppliers, and the economy in transition. And, perhaps, more legacy is systemic issues to deal with. Probably, it would make sense, and it would be easier, to first focus on the bigger cities where you have a more structure supply chain and distribution network to work with before you cascade the reform down to counties and the rural areas. So, we hope one day it can be one country, one pig and everybody in Hong Kong and in mainland China eating the same good quality pig. And with that, I conclude my presentation. Thank you.

MR. LI: Well, can you hear me? Thank you Commissioner for that really very thoughtful, balanced presentation. And, again, just to reconfirm, you know, our view that we simply cannot find a

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better person than you to deliver this keynote speech. And, I have two questions before open to the floor. The first, you mentioned about the middle class and China's urbanization. So, the food-safety issues or scandals will occur quite often, just like any country. But in China, it's extremely sensitive politically to a certain extent. Now, you talk a lot about the risk of communications. There's also talk about transparency, accountability, coordination of government. Now, my question is about when crises occur, what mechanism Hong Kong, you know, has, which could be helpful for Chinese government to deal with the same crisis, to resolve the problem, to not let the problem get completely out of control in different ways, is my first question?

COMMISSIONER LEUNG: Thank you. Actually, when I was in food safety, we have delegations and delegations of people from Beijing, from different provinces and different municipalities coming to Hong Kong to really share experience on how Hong Kong deals with it. And I think that the key message I convey to them is transparency. You have to come very clean. You have to tell people what you know, and you have to come very clean and tell people what you don't know. And as I said, you have to really develop your credibility by being seen as going out of your way to protect the people, to the extent that you, basically, have to drop everything when you have a crisis like infant formula, like Fukushima, whatever. And you deploy everything in your capacity you have to deal with it.

And transparency is important because it's very ironic, if you feed a constant stream of information to people, at the very beginning, people are very excited. And up to a point, people will get saturated. And at the beginning of a crisis, people are all very worried, but when the facts come in, people are likely to be more balanced.

So, you don't need to be too concerned when people get very mad at the beginning or the first two days of the incident. But, of course, you have to demonstrate to them that you have nothing to hide. For example, in Fukushima, we go testing for radiation. People are very concerned about glowing squid or glowing pork affected by radiation. And then, you go out, all of you and test it and release results every 24 hours. And people know that you are doing it and have a good proportion of whether the situation is really that bad.

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So, most of the time, you get a good mix of incidents which are very bad and some are not as bad as you think initially. So, I think transparency, being honest, and being seen as being on top of the issue is the most important way to deal with these incidents.

MR. LI: So, it's said that honesty is the best policy.

COMMISSIONER LEUNG: Yeah. Be honest about what you don't know and what your weakness are.

MR. LI: Sometimes the Chinese ask me what's the second best. (Laughter) The second best. But that was kidding. And the second question. Hong Kong is a globalized city. China also has some gigantic cities. Of course, the major complaint, if I understand correctly, is through domestic companies, you know, the qualities, etc. But, of course, increasingly, as China becomes part of world that the foreign companies, those companies, especially, in the agricultural and food product, they, you know, use China as a huge market. There's a growing concern among Chinese public of discourse about the various issues related with foreign company. Now, do you see the trend the Chinese government, especially in the law, will actually tighten their control of the foreign companies. And my question is, besides that, do you think which area, especially, compared with Hong Kong, which area of Chinese government should probably have more regulation, and which area China should have more opening, more flexibility?

COMMISSIONER LEUNG: Of course, I represent Hong Kong, I cannot speak on behalf of the Chinese government. But looking at it from a distance, I think in respect to food safety, I think, as I just mentioned in my presentation, you've got to work with the private sector. And by private sector, I mean the bigger and the more reputable and the people who have better processes. In this world, in this food safety world, you have no islands of silos because everybody is affected. And so, people will buy ingredients from the world. There are people buying ingredients from the mainland of China. And so, in that respect, I think for regulators, we have to be even handed as to whether it is domestic or foreign, but the distinction should be whether you have a kind of alignment of my objective in providing for good, quality, safe food for the population. And whether you have the technology, and whether you have the

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kind of processes within your company, that will be able to contribute to the process.

MR. LI: Well, let me follow up involving meat, the quality of meat. Do you think which government is has the tough policy rule, you know, Hong Kong or mainland? For export, I mean for import, Hong Kong or to mainland?

COMMISSIONER LEUNG: You mean --

MR. LI: The meat quality that from United States, beef or pork, chicken and etc. And in that regulations. Standards.

COMMISSIONER LEUNG: I think, as I mentioned, the quality of food that we get from the mainland is of very good quality.

MR. LI: No, I'm talking about besides mainland. Just the foreign countries like United States, Europe, or other Asian countries.

COMMISSIONER LEUNG: Okay. As far as I can see, it's always the Europeans that are having very high standards. And when we legislate, for example, people will automatically ask us to follow the highest standards that you can find on the planet, all right? But we know that it is not possible. For example, I mentioned when we legislate for pesticides, I have to adopt lower national standards. People ask why don't you follow the Europeans; they are the most stringent in respect to everything. But I think if I follow that, you will have no access to oranges produced in the US, and it is -- meaning that you have very limited choice. And if I follow European standards, you won't have veggie from China and you won't have dragon fruit from Thailand. So, you have to accept for lower standards.

And, of course, every country, look at the domestic industries, and there's a great variation of standards. For example, you may find lower standards for certain kind of produce in China because of they are not able to meet the kind of higher European standards for example. So, I would say that very broadly, the Europeans are more strict. The US, it varies, depending on what kind of product you are talking about, and for China, they have also different standards. Some of them meet in the national standards, some of them, for example, they have "guobiao" the national standards. Some of them have lower standards.

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But if you look at it, it's really, from a professional point of view, it's basically the same because these safety standards have a lot of margins building into it. I am a generalist, I'm not a scientist. I was told by my doctors, that sometimes, for example, radiation it could be 10 times or 50 times higher. So, it's like building a bridge. So you want bigger pillars, and you just don't want to have the margin that we just cut between saving and safe. So, you have a lot of margins built into standards. And it's -- and if it passed the kind of safety assessment that you have, for example, you don't eat 50 oranges a day, you only eat two or three. So, the lower margin that is implemented in the U.S. is good enough for Hong Kong consumers. So, it's kind of varying standards to answer your question.

MR. LI: Excellent. Excellent. Yeah. Now, we open the floor. And first introduce -- identify yourself and limit the question for one. Yes, please. Thank you.

SPEAKER: Thank you. My name is Zhang Song, and I'm a journalist from Shanghai. And mainland Chinese are looking for one country, one pig. So, in your opinion, what are the main obstacles for mainland Chinese to have access to the same kind of standard, kind of food, which has been exported to Hong Kong. Thank you.

MR. LI: is this Wenhui Daily or what? Okay. Would probably take another one. Yeah, the lady please. Yeah.

MS. HOFFMANN: Yes, I'm Sandy Hoffmann, I'm from USDA economic research service. And I was wondering -- it relates to this. Could you unpack a bit your suggestion that perhaps the way to move forward most effectively is to focus on large cities and then to roll back into the rural areas. And I guess the question I'm having, in my mind, is that it seems to me like that would address processing and establishment hygiene, but many of the problems that we're dealing -- that we read about are based -- are also coming out of the farm and farm-production practices. So, could you just unpack that a bit?

COMMISSIONER LEUNG: Okay. I -- first question about what does it take to get one country, one pig. The issue, of course, and the problem in the mainland is very different from that of Hong Kong, and it is not always fair to compare the two because we are a small city in a big country. And the issue is really the question of how you could scale up the operation that they have for more quality

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producers. And, of course, it's also a -- one issue that we don't have to face, for example, is that we don't have a domestic industry to deal with.

And, of course, agricultural is a very complex issue in the mainland, and we do not have the kind of experience managing that. We do have a small agriculture sector in Hong Kong, but it is very small. And when you talk about food safety, you cannot be completely divorced from your regulation of the agricultural sector, which is a lot of small holdings, small farmers, small farms. A lot of them supply food for themselves, and they will sell a bit of the excess amount to local markets. And it is basically not possible for you to have this fully integrated, complete traceability.

I talk a lot about traceability. So, it's a big challenge. And we can register all our food producers, all our food importers, and all our food suppliers. It may not be feasible for the Mainland to do so within the space of a couple of years. And when I was doing my presentation, I stress about traceability that is how you deal with food incidents. If you don't have a system for traceability, you will have no way for you -- very difficult for you to find the source of the problem. And, of course, civil society. People in trade associations, chamber of commerce to help you locate the problem.

And, of course, I was mentioning about whether it makes sense for you to look at the -- focus on big cities first. I was talking about also, the supply chain. It's always like a detective story. So, you have a crime scene, then you trace back to different layers. And, of course, in big cities, it's easier for you to have this kind of operation for traceability. And, of course, at the end of the day, you will trace back to where the food come from, whether it is imported or whether it is grown locally. And presumably, in big cities, you have bigger supermarkets who are able to source from more reputable, bigger, and more established farming establishment. And, of course, the mainland has been doing a lot in controlling the -- or in regulating the facilities producing food for export to foreign countries. So, these are good -- what I mean is that these are good starting points. And so, you probably want to deal with people that are supplying in scale before we deal with subsistence farmers or the small villages. That's what I mean.

MR. LI: Great. We take a couple more questions for this round. Yes, the young lady in the back.

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SPEAKER: Thank you for your excellent speech. I have a question about -- because of technology develops now, so now in mainland -- not just in mainland China, I mean, mainly in mainland China, the e-commerce becomes so popular and even many food in China now can be sold online. So, would you explain -- do you think this country's e-commerce trend will improve the food-safety problem in China or worsen the food-safety problem in China? Thank you.

MR. LI: Could you identify yourself?

SPEAKER: Yeah, I am a student from the University of Maryland College. I am a graduate student from there. Thank you.

COMMISSIONER LEUNG: Well, yeah. You want to take another one.

MR. LI: One more question. The last chance for Commissioner. (audio cut out)

COMMISSIONER LEUNG: I'm very glad that you raised this question. Actually, the internet has been very disruptive. It's kind of disrupted things like taxis and hotels. And it's going to be a big challenge for food safety as well because, I mention a lot about traceability, it's all these brick and mortar kind of tracing. And it's a big challenge because using the internet, it is very decentralized, and traceability is very difficult. And, actually, we have a lot of problems with people selling food. Particularly, higher-risk food through the internet. For example, like oysters, which is always sort of 50 percent of our food poisoning cases are related to oysters, for example. Dairy. Meat. They advertise that they're selling these Japanese Wagyu A5 beef through the internet, which is half -- 50 percent cheaper. As you know, it's a high risk, and if it is not kept properly and you don't know the origin of it.

So, it is a very challenging topic for food-safety regulators around the world. And we find that, for example, infant formula. We do see people now having what we call parallel exports from -- directly from different countries that do not, for example, comply with labeling. Do not comply with storage and other requirements for high-risk foods. So, this is something that food-safety regulators will have to grapple with. And it -- I'm going to say that from this first initial wave of ecommerce, we see more challenges than opportunities, and it's particularly challenging for high-risk food, that people regard it as a delicacy. Like meats, like sashimi. Like ready-to-eat food and dairy. Like oysters.

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MR. LI: Well, commissioner, your presentation is so comprehensive and clear that really answers so many of our questions. And also, I'm always impressed by civil servants in Hong Kong, you know, your professionalism, your expertise. And certainly, we understand that this is not only one of your expertise, you're also expert on higher education and internal security and how to trade and finance, all for the issues we are very much interested. I hope that you would join us in future event and to share your insights, your experience, lessons, especially. And I want the audience to join me to thank you again, and then we go to the next round of the discussion with a lot of details about law about enforcement and etc. And thank you again. (Applause)

COMMISSIONER LEUNG: Thank you very much for having me.

MS. FU: Hi, I'm Lin Fu, visiting fellow with the John L. Thornton China Center. So, I'd like to thank Commissioner Leung again for a very informative and interesting discussion of how Hong Kong deals with food-safety challenges and for sharing his prospective on how regulators, businesses, and enforcement officials -- the roles they have to play in this issue area.

So, as we move into the panel discussion portion of our event, I'd like to set the stage a bit for our two distinguished panelists. Just a note on a change to our program. Brian Bedard of the Grocery Manufacturers Association Science and Education Foundation, who was supposed to join us this morning, due to a last-minute emergency, could not.

So, as Cheng Li said in the opening remarks, food safety is on ongoing challenge in China, but it's not a unique problem to China. All countries around the world have to deal with food-safety issues. So, problems can occur all along the supply chain. For example, absorption of soil contaminates or illegal additives in the production process or even unethical business practices, like selling fake or expired items. So, Chinese food-safety regulators have to deal with all this and a very and still fragmented food industry, that has many small players.

So China's State Council has already stated that food safety is a major priority for them and for the country and that food producers and local governments will have to meet and enforce health and safety standards, otherwise, they'll be held accountable for violations.

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Now, China's revised food-safety law enacted in October of last year is meant to strengthen these regulations and to enhance oversight all along the supply chain. And, perhaps, most important in this revised law is the tougher consequences for violations of food safety. So, more regulatory requirements will mean that there are additional inspections, and all this will raise the cost of doing business, which will likely increase industry consolidation, which should help make the industry more manageable from a regulatory prospective.

There continues to be frequent reports of food-safety problems in the Chinese media, particularly, online, on the internet. And there's definitely a great consumer demand for product traceability details and information about food safety, food quality. So, we see more and more brands offering product traceability details to their consumers through social media. We see a growth of the domestic organic food industry and community supported agriculture and even white-collar peri-urban farms, which all suggest that there are more consumers willing to pay more to be assured that they're food supply is safe and is of high quality.

So, there's also a great demand for food-safety testing in China. And at the individual consumer level, this is a bit anecdotal, but the interest in Baidu's Kuaisou product is a case in point. So, this is a smart chopstick that would allow consumers to test for the presence of reused cooking oil in their food. And this actually started off as an April Fool's Day joke. One of several videos created by Baidu employees, as they do every year, but there was such great consumer interest in the actual product, that the company decided to go ahead and try to make it. And last I heard, they won a prize at a Cannes Lion festival, and it's still in the works, but they're working on it.

And at the industry level, according to market researcher Markets and Markets, the food-safety testing industry will reach about 790 million U.S. dollars in China by the year 2020. And that's a compounded annual growth rate of 9.9 percent over the next five years. So, there's definitely great interest and need and demand for food-safety testing in China.

So, all this is to say that food-safety concerns remain large in the minds of Chinese consumers and in international consumers as well -- in the minds of international consumers as well by virtue of trade

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and global supply chains. But China is taking steps to improve the situation.

So, here with me today we have two panelists who have two different areas of expertise, and they'll share with us some of their thoughts on the 2015 revised food-safety law in China, implementation challenges, implications for consumers and businesses, and also, lessons that China can learn from the experiences of other countries.

So, I'll introduce the two of them, and after their remarks, we'll have time for a Q&A.

So, to my left is Vivian Hoffmann. She is a research fellow at the International Food Policy Research Institute where she leads key research on food and water safety within the markets trade and institutions division. She is currently investigating how fungal toxins in food affect child growth, the impact of price incentives on farmers' food-safety practices, and consumer response to third-party food-safety labeling. Her research in China includes a study on consumer perceptions of food safety and response to food safety and nutrition messaging.

Chenglin Liu is a law professor and co-director of the LLM Programs at St. Mary's University School of Law in San Antonio, Texas, where he teaches tort law, Chinese law, and law and economics. His research focuses on the interplay between food and drug law and on transnational litigation from a comparative perspective. His scholarly writings have appeared in many journals, including the Stanford Journal of International Law, Cornell International Law Journal, and the University of Pennsylvania Journal of Law and Social Change. His research and views on the regulation of organic food certification have appeared in The Wall Street Journal, Forbes, and CNBC.

So, Professor Liu will start us off.

PROFESSOR LIU: Thank you. My topic is about rethinking outsourcing imported food safely to China. This might be surprise to a lot of people here. Why we outsource? Why to China? And how on earth did this happen, and it did happen, and it's happening now.

So, let's talk about Chinese food we consume here in the United States. I give you some visual slide to understand the impact of imported food in the U.S. market. We're not talking about in Chinese market. In U.S. market. Ninety percent of vitamin C you consume actually from China. And 80 percent

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of the fish tilapia from China. And 49 percent of apple juice including organic apple juice. You have kid's birthday party, you want to have healthy food instead of junky food, you have apple juice. Actually, the chance is 50/50 it's from China. And 50 percent of cod fish. Thirty-one percent of garlic. It used to be 11 percent because more demand for garlic. And the garlic farmers in the U.S. just cannot compete with Chinese farmers. Lower cost, not only the cost for labor but also the lower cost for regulatory costs, testing. We'll talk about testing. Less testing. And 11 percent of frozen spinach that's from China. That's the number that we have in 2013. This number might be more but not available.

Now, we talk about FDA inspection. There's a lot of foods coming to the U.S. market. How much do we inspect? The inspection is shockingly low, it's one percent. This used to be one percent. And you would expect the inspection rate increase. Actually, to the opposite. The purpose of the law, and Chinese law changed in 2015, they changed the law -- food-safety law in China, U.S. also changed its own law in 2011, has made major amendment to the food law, called the Food and Drug Cosmetic Act. The new change entitled Food Safety Modernization Act in 2011. So, after 2011, the inspection rate is even lower than one percent at a port of entry.

So, where did this inspection go? The inspection go to other outside United States. Most of the port-of-entry inspection is window dressing. It's just to inspect the paper. It's not the goods. Actually, we have 3300 port of entry in the United States. How many people employed for inspection? 450 people. You do the math. So, in San Francisco, the inspector has to make decision whether or not to check the shipment in 30 seconds.

So, what to do? And this lead to a disaster. Of course, disaster happened in 2007. The pet food scandal. That's raised awareness of the public in the U.S. So, how come so much volume of Chinese food imported to the U.S. without notice? And we can talk about how this food inspected previously domestically. Before the legal change, the law was enacted 100 years ago. It was called Food and Drug Cosmetic Act and supported by 30 other laws, including criminal law in states. And agencies, not only FDA but also USDA, EPA, CDC, all these agencies work together. It's been proved a very useful, very effective approach to ensure food quality and safety in the United States for domestically produced

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goods. And FDA regulates 80 percent of the food consumed in the U.S. Sometimes it's confusing who regulates what. If you eat pizza and that pizza is regulated by one agency and the box regulated by another agency. Even though there was a confusion, but they work pretty well in 100 years.

In 2011, Food Safety Modernization Act enacted. And at the 2000 election -- the 2011 law was based on Bush Administration approach. Why we talk of Bush Administration? Still relevant. Still relevant. Why? Because the Obama Administration continued the framework set up by the Bush Administration. So, today's regulatory framework for food safety is still defined by Bush Administration. So, we have agreement approach. What is approach? I call it outsourcing. So, you enact agreement -- enter agreement with other countries, and as the commissioner said, we have a capacity building. We build capacity in foreign countries, and we hope -- we hope this country develops the capacity to inspect the food that we eat. So, we -- in my paper I call it outsource FDA function to foreign countries -- to Beijing. Let Beijing do our work. We share the burden, share the information, and we hope the quality and safety issue can be resolved.

We talk about the traditional approach. Before the change, the traditional approach in the United States worked very well for a 100 years, a century. Two approaches: One is outcome-based tools and the other is production-based tools. The outcome-based tools including inspection. The inspection. Physical inspection, search and seizure, criminal sanctions, voluntary recall, and tort litigation. And production-based tools are good manufacturing practice, hazard analysis, and critical-point control.

These work well but weakened in the context of imported food. Why? The inspection reach is low, as you can see. Now, the new law requiring inspection in foreign countries. How many inspectors in China? In 2007, the Chinese government agreed that the U.S. officials from U.S. FDA stationed in Beijing and other cities to inspect the food that being brought to the U.S. market. All total in 2014 -- as of 2014, twenty-six. Twenty-six USDA workers inspect the food that we eat. We mentioned all the vitamin C and vegetables, all we consume and inspected by 26 inspectors. That's just impossible. It would take a superman's capacity to do the job. The inspection: How many inspections they did? In 2010, thirteen inspections. In 2012, ten inspections. Because of culture and language barriers, this inspection is

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sometimes very difficult.

In 2008, there was a crisis in the imported drug, and they tried to inspect the factory that produced the questionable drug. And the inspectors from Beijing went to wrong factory. They went to wrong factory. In 2007, before the agreement, they tried to find the melamine-tainted food. Pet food and where it is produced. The Chinese government delayed their Visa. When they get Visa granted, finally, they got to the site, to Shandong, the facility was bulldozed and deeply plowed. There's no trace of melamine being found. So, after agreement, the inspection increased, but all this inspection is not unannounced. It is with advanced notice. You have to tell when I inspect you. And this is different from domestic food manufacturers. If the FDA inspects domestically -- domestic firms, they have to go there unannounced. If you refuse the inspection, there will be criminal penalty. In extreme, there will be a 100,000 dollar fine plus one year in jail.

For a law, a criminal law in China, there's no provision. We'll say that you refuse FDA -- U.S. FDA inspection, there isn't any penalty. There's no penalty. So, I would say in an op-ed piece recently published, I said, U.S. law in foreign context has no teeth. How can out outsource the regulatory function to somewhere where you have no teeth? So, the inspection and the enforcement of the law, it is just up in the air. And relying on agreement is not approach to go. What to do is just to go -- the safest way to go is a traditional approach. Outcome base and production base the inspection. We trust but verify, that's President Regan's ad, right, that we trust but verify. We have to verify we could do the inspection, so that to make the food safe. Do I have time? Yeah, I'm okay.

Let's talk about the food safety law of 2015. I read the new law. It made a lot of changes and a lot of improvement, but the structure remained the same. Who informed? Who will implement the law? The implement process remains almost the same. You have to rely on the local enforcement agencies to the do the work assigned by the central government. If you do this, there will be local protectionism, that will be a hurdle for the enforcement of a new law. A lot of good provisions in the law. I just talk about a few obstacles for implementation of the new law.

One, as Lin already mentioned, the industry -- the food industry in China is fragmented. One

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million food processors. How can you regulate one million processors? These are mamma and papa shops. If you regulate to the letter, to the law, very stringent regulation, they will put out business, put them out of business. And then you worry about social stability. They're going to petition the government, stage protests. The local government will worry. So, enforce the law is not an easy task. You have some other concerns. For big corporations in the local region, how can you enforce the law to the letter? You just can't because the local leaders, they rely on the taxation, tax revenue from these big corporations. There's a conflict -- building conflicts of interest to regulate. And how can you be tough to your banker? These are the eggs -- the chicken laying eggs. It's very difficult for the regulators to do their job.

If I have a few minutes, I will talk about the litigation process for --- If I may. Okay.

So, that's the obstacles to enforcing the Chinese law. Now, the regulation we have the law inspection rate and how about we sue the distributor. That's very difficult. Let's say we want to sue the tort litigation. You want to sue the manufacturers in the United States. There are three hurdles. One, it is hard to identify because fragmented industry. One million food producers. How can you find the right producer? If you have the shopping malls and have the food purchased and you see made in China. They are identified by made in China but not particular food producer.

Secondly, if you're lucky, identify the food producer. Gathering evidence is difficult. There's no agreement between China and the United States regarding collecting evidence. Taking evidence in China by foreign lawyers can be very risky. It can result in arrest, detention. There's no agreement for collecting evidence.

Thirdly, if you're lucky, you have the evidence against the Chinese companies, and you sue in the U.S. court, and gain judgement. There's no way for you to enforce judgement. This company is a small company and maintain no assets in the United States. And there's no attachable assets in the U.S. You have a judgement award, you're happy, but there is no enforcement, and there's no award being enforced.

How do you enforce -- how do you sue the middleman? China's problem, not your problem in

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this country unless the food brought to this market. So, the middleman is insulated by the state law. You cannot sue the middleman unless you can prove that the manufacturer is bankrupt or the manufacturer is not subject to the jurisdiction in the United States. That's a very difficult hurdle to overcome. So, that's my -- in the end, I want to say that outsourcing the food-safety regulation is an approach is very difficult to realize. Thank you.

MS. HOFFMANN: Okay. So, I don't have a PowerPoint, so I'll just sit and make some comments from an economic perspective. I'm trained as an economist, so that's what I bring to the table here.

China's rapid economic transformation puts it in quite a unique position regarding food safety globally. First of all, much of the country's agricultural sector is extremely fragmented, as you've heard from the previous speakers. So, there are literally millions of family farms. There are hundreds of thousands of small-scale traders that aggregate the produce from those farms and a million processors of food. This is very typical of a developing country, in fact, and at lower levels of development where food-safety control is notoriously difficult. And basically, developing countries account for 98 percent of the health burden of foodborne disease globally. So, you can see this is not an easy situation for China to be in.

Of course, China's aspirations, based on its rapidly rising incomes and exporter -- role as an exporter, make the need for food safety incredibly acute in China, in contrast to, sort of the state of its agricultural sector.

Meanwhile, the markets in China for agricultural inputs and food additives are very developed. So, you can go online and buy all kinds of things that will increase the productivity of your livestock or your vegetables. Very potent pesticides. Not all of them legal. Veterinary drugs. Food additives. All of these can greatly enhance your agricultural productivity and the appearance of your food, but at the same time, potentially compromise its safety.

Also, consolidation, increasingly, in the food processing sector and the retail sector, create new opportunities for cross contamination as food is aggregated, food-safety incidents can be scaled up if

they're based on pathogen contamination.

And finally, consumer awareness and concern in China is probably the highest in the world. So, based on the last 15 years or so of all the food-safety incidents that have occurred and made big headlines in the press as well as rapidly rising incomes, Chinese consumers are demanding more.

Now, one might expect that with all of this heightened consumer demand and a rapidly evolving economy and a retail revolution, some have called the supermarket revolution in China, these problems would work themselves out because, you know, there's a lot of pressure on big manufacturers, food processors, and retailers to really clean up the act. But unfortunately, this is not happening. And at least not on a scale that we need to see, and in fact, this has never happened in any of the industrialized countries. This is a public problem, and the government really needs to take a main role in cleaning up the food-safety problem.

In fact, so, if you just look at the agricultural sector, just as recently as a few years ago, almost all of the fruits and vegetables were still sold through traditional spot markets. And so, the farmer takes their food to the market and sells it, and after that, there's no traceability. There's no way to talk down the farmer if there's a problem with pesticide residue on their crops.

So, this new food-safety law strengthens previous laws, and is an important and necessary step toward greater food safety and consumer confidence in China. From my perspective, probably the most important part of the law but also the most challenging to implement, are new rules about the traceability of raw materials and additives. So, traceability is critical to ensuring food safety for at least three reasons.

First of all, the ability to trace a food-safety incident back to its source allows that offending lot of food to be recalled and protect any other consumers that might be about to consume that food.

Secondly, it allows the underlying problem that caused the incident to be corrected by whichever firm is responsible.

And then, finally, it means that each actor in the supply chain can be held accountable. And this improves everybody's incentives to act as they should with respect to food safety and to be very careful to ensure the food -- the product that they offer is indeed safe.

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The big question, of course, is will this law be feasible to implement? Well, in an economy with millions of farms and hundreds of thousands of traders and a million processors, it will be difficult, clearly. A traceability is not easy to implement in such a system. And we're going to need other mechanisms that help aggregate the produce of all those millions of farmers.

The Chinese government has actually been developing these mechanisms and supporting them over the past 10 years. So, farmers have been brought together in what are called production bases through which they can coordinate both their production of foods and also marketing of those foods to larger retailers. And this then allows traceability because you have this whole collective of farms, many of which have been provided with safe pesticides and guidelines on how those pesticides should be applied. The food is then purchased by a large retailer through a direct-farm relationship, and this allows the retailer to then know that the food has been produced in a safe manner, and they can do some of the spot checking that's necessary to verify that.

Now, this system does appear to be improving food safety, at least on the aspect of pesticide application. However, as of 2012, such schemes were present in only about three percent of the villages where one of these retailers, Walmart, was operating. Our three percent of villages in the counties where Walmart was sourcing from. And even the aggregators that were purchasing from these production bases, generally had to augment their purchases from the spot market as well because they couldn't source enough of the food demanded by Walmart or at the quality that Walmart demanded to satisfy the retailer's needs. And that totally obviates any opportunity for traceability because now you've got this good quality stuff that you know has been grown with the right pesticides and other inputs, and then you've got a bunch of stuff from the spot market, and you have no idea where it came from or what kind of contaminates might be on it.

So, the new model holds some promise, but it will require expansion and likely a significant additional injection of public resources to build the capacity of these small farmers in these aggregated units.

Now, the good news is that China has actually been at least relatively successful at meeting food

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safety and quality requirements of food destined for export. Now, clearly, it's not perfect, but it is much better than they have done for the local market, as the commissioner also highlighted in the, you know, one country, two pigs problem.

So, this phenomenon is actually typical of developing countries, whereby -- in which exported food is always safer than locally consumed food. And, in fact, in China, there's even a duality in the rural market versus the urban market. So, the, you know, it was suggested that perhaps we should start at the cities. To some extent this has already happened. So, the urban consumers are richer and do demand better food quality and better food safety. The regulatory capacity at the urban levels is also much, much higher. Governments have greater capacity. And so, we already have this divide where 70 percent of foodborne illness occurs in rural areas in China. But it also suggests that significant gains in food safety are achievable. So, that's good news, even though it will take some time to get there.

Another question is the efficiency with which this goal can be achieved. So, here, I think there's probably a lot of room for improvement within the current regulatory structure. One approach that has been highly successful in other countries, as diverse as Denmark, the United States, even Kenya, is what's called co-regulation. And this is something that's not taken advantage of, currently, as much as it probably could in China and is perhaps a very -- one of the most promising ways forward.

So co-regulation is defined as regulation strategy that includes the private sector as well as the public sector's participation. And it uses the fact that the private companies have a very strong incentive to protect their reputation and thus ensure the food that they sell is safe. And this is especially true in China where consumer awareness and concern about food safety is so high. So, there are many ways in which the public sector can harness the capacity and energy of the private sector to make food-safety regulation more efficient.

A couple of examples are that companies may be in a better position to give input on what exactly the standards should be. Should it be a process-based standard? Should it be an outcome-based standard? If you give companies input into setting the actual standards without, of course, compromising the safety of consumers, companies can identify which of those standards are going to be achievable to

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them in a cost-effective manner. And if it's the case, you know, if the government comes in and doesn't really understand the production process and sets an unattainable standard, you're either going to cripple companies that are trying to achieve it or just nobody's going to be able to achieve it anyway. So, it's probably much more productive to allow companies time to ramp up to it, maybe modify exactly how it's going to be set, and just allow that process to be more transparent in a two-way communication.

Another way that firms can be involved is to actually do the testing of their own products themselves. So, this can involve testing at the factory gate and also testing at the other side of the factory gate before it goes -- the finished product goes to market. And the public sector can help build capacity of firm's laboratories to test the firm accurately. And, also, do verification testing. So, you want to trust but then verify, right.

And even in a country that is far behind China, in terms of its development, that is Kenya, in Africa, where I've done a lot of work, we see co-regulation beginning to take hold and very successfully. So, the maize milling sector in Kenya deals with a problem of fungal contamination in the raw inputs of maize. So, there's a lot of fungal toxins in the maize in the supply chain in Kenya. So, what the firms are doing now, because they're terrified that the regulator will find contamination and this will get to the press and consumers will stop buying their brand, even Kenyan consumers are concerned about food safety now, they're testing their product. They're testing every batch that goes out. And then regularly, every couple of weeks, there is a third-party lab that's also testing that flour. And if there's a variance between the test results of the company and the test results of the private verifier, then there's a halt on what can be put out by the firm. And, you know, this system works very well to get the companies capacity up and really incentivize them to do a good job of regulating themselves.

So, to sum up, China's new food-safety law is a very important step forward toward proving safer food for the country's consumers, but it's not enough. Both coordination, in particular, the aggregation of production from China's many small farmers and shortening of supply chains with direct-farm purchasing relationships between farm producers and retailers as well as harnessing the private sector through co-regulation, are ways to strengthen the practical impact of this law. Thank you.

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MS. FU: Thank you. So, Chenglin, I have a question for you. You sound rather pessimistic about the revised food-safety law in China and its ability to improve food-safety quality. And you've identified several obstacles that you still see in terms of what you're calling the outsourcing of FDA regulatory power. So -- how -- what would your suggestions be to address these obstacles you've identified?

PROFESSOR LIU: I think the Chinese government should pay attention to the separation of the inspection, and the government should have some independence. Let the inspection -- the inspectors do their work. And, also, less interference with the judicial work. Let the tort system function as a check for the quality control. If a private citizen's right is infringed, they should have a right to sue, not as a wholesale approach -- it's not only the regulation but, also, the litigation and the press. Now, the press, if you talk about food safety nationally, probably, there is some type of restriction from higher up. Talk too much about negative news, so that's a fact. The social stability or people's perception of the food-safety system. I think that transparency, as the commissioner said, if you tell them what you know, what you don't know, that's just a golden rule you can't just go around. And the wholesale approach is better than just, I'm a paternalistic regulator, I can do everything for you. That's not going to work. You have to have all the players come in to be a team, to supervise the food.

MS. FU: And for Vivian, in addition to or aside from co-regulation and firms regulating themselves, which you've mentioned, are there lessons from other countries that you would suggest China look to or consider from what you -- from the research you've done?

MS. HOFFMANN: Well, one thing that China has embraced, at least, you know, in the text of the new law, is that a risk-based approach needs to be adopted, which means that you look at the whole food system, and you identify the areas where, really, the risks to human health are greatest. And you focus your energy on those. Because the food system is too huge and complex for you to be everywhere at full force all the time. and so, targeting efforts to the places where they can really do the most good, I think is an important lesson and one that has been kind of adopted internationally and also by China but can sometimes be a challenge because consumers have their own perceptions of what the

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most dangerous thing in the food supply might be. And often, this is at odds with scientists' perceptions or knowledge.

And so, you know, when you're taking a risk-based approach, you need to work with consumer groups as well and have a dialogue because you don't want consumers -- consumer confidence is also a very important goal of food safety control. And we, you know, we want to ensure that public health is protected but at the same time we want to ensure that consumer confidence is protected.

And so, having that conversation with scientists to understand are, you know, are pesticides the biggest threat? Is bacterial contamination the biggest threat? You know, it's actually these biological contaminants that pose -- impose the largest health burden. But if you talk to any consumer, they're going to tell you that it's pesticides and additives and things that humans have made. So, there's a disjoint there, and that's something, I think, that needs to be taken into account when we're thinking about priority setting.

MS. FU: Great. So, we have time for questions from the audience. (audio cut out) and then we'll work our way back.

SPEAKER: Good morning. My name's Chris Peterson. I'm with the USDA foreign agriculture service and actually working on aflatoxins in Africa, as you mentioned there. This question is for Vivian. You mentioned that 70 percent of the foodborne illness in China is in rural areas. So, my question would be, is that highly correlated with the prevalence of the informal and unregulated markets in rural areas? And second, how do you best see the way forward for policy to protect the safety of food in the informal market? Easy question.

MS. HOFFMANN: Easy question. Yeah. So, this is something that we struggle with a lot in Africa as well because almost all of the food economy there is in the informal sector. And, clearly, the formal sector is a whole lot easier to regulate because there are reputational mechanisms at play that incentivize firms to adhere to food-safety guidelines.

I think at least in Kenya, the way that we've approached it, is to start of working with the big firms and hope that the sort of demand on farmers to adopt better practices can act as a mechanism to pull

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farmers that supply them up in there, you know, in their practices. And that those are the same farmers that are also supplying the informal sector. So, kind of counting on some spillovers to happen. And, also, helping those small farmers aggregate and supply the formal sector will then bring more farmers into the fold because it's just going to be really, really hard to get to that last-mile farmer that's only supplying informally or for subsistence. I don't have a good answer for how to reach that person. Aside from when there's a really acute problem that needs to be addressed from public-health prospective and is a huge priority, then you go to that farmer and give them an intervention. But that's obviously, a very high-cost solution. And so, I think trying to make markets work better for those small producers is the first step and can also help them on multiple dimensions. So, you're going to bring their incomes up if they're supplying to the formal sector, which is going to be paying higher prices, especially, if they're food is meeting standards that are required by some of the bigger retailers.

SPEAKER: Thank you very much. Thanks for very interesting comments and presentations. So, my name is Andrew Roberts. I work at the International Life Sciences Institute Research Foundation. We're just down the road here. And my background is in biotechnology regulation. So, it's a very specific and very different thing. But my question is for Professor Liu. So, in listening to your presentation, I heard a lot of very general commentary on globalization and outsourcing. And you could take some of those things and apply them to a whole range of issues that the world faces. But the reality is globalization is here, we're outsourcing lots of things. I go through U.S. Customs in other countries now. Our own policies are to have reciprocal. We like to inspect things before we sent them to other countries including China. For a lot of very good reasons. So, you know, these -- it's interesting to hear about all of the specific challenges, but we're not going to move to a system, I don't think it's realistic for us to move to a system where we're inspecting a huge percentage of our food imports or where we have lots of physical inspectors on the ground.

So, my question is, in the hope that you'll elaborate on the comments that you responded to the first question you got, you know, what are the recommendations given that this may not be a perfect system, and it is far from perfect? What are the intervention points that you would recommend? How do

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we sort of improve this in the scenario that we're going to have to live with an outsourced food-safety world, not just in China but in other places as well?

PROFESSOR LIU: Thank you for your question. There's not an easy solution. There's no magic solution to this. I think wholesale approach is better than the individual approach. For example, the criminal law at the state level in this country makes it possible for the USDA inspection effective. It is very rarely for the USDA to seek warrant from the court. Why? Because the owners of the facilities cooperate. Very willingly because they know if they don't cooperate, there will be deterrents. There will be a court martial, a U.S. Marshal to arrest on the spot. There is a dangling sword above the head. But in China, if you as a USDA inspector go into the facility, you don't have this sword. The Chinese criminal law will not prescribe any solution or penalty for refusing the inspection from foreign inspectors.

My proposal is a long-term one. So, the country needs to develop a reliable legal system, a rule of law. That's what we call capacity building. With not just the capacity building, how to share the information and how to inspect in its broader spectrum. You have to build the capacity to have an independent judiciary, transparency independent of journalist and the media. So, you have all this pressure that the USDA inspector will rely on so they'll make the improvement. So, there's really real improvement made, not just by changing the provisions of the law and rely on something magic happening. It's not going to happen unless we have a rule of law framework in the system.

MS. FU: A hand back there.

SPEAKER: Hi, Alex Renner with Albright Stonebridge Group. One of the largest concerns for the Xi Administration is food security. Basically, how do they feed 1.3 billion people? And they've sort of looked at increasing food export as a partial or food imports as a partial solution to that. So, with their focus on food safety and rising consumer awareness of food safety, what is the potential for these new food-safety laws to impact or serve as a barrier to food imports to China? Particularly, in the case of Australia or the U.S.

PROFESSOR LIU: The question is the new laws impact on -- you talk about Australia and the U.S. it means import. I try to get your question.

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SPEAKER: Yes, imports to China of foreign food products.

PROFESSOR LIU: Oh, yes. There's a provision on imported food. The distributors -- they're going to be liable for anything that happens. And not like in the U.S., the distributors got insulated from the law. And in China, in that regard, is very tough. If you bring in something that's harmful, you're liable.

MS. FU: One more on this side, and then we'll move to this side.

SPEAKER: Hi, my name is Ben. I work with Eurasia Group. I want to ask about the public protests regarding genetically modified foods, which has gotten a lot of attention recently because of the ChemChina Syngenta deal. And I'm wondering how -- what are the implications of those protests in terms of food-safety regulations in China and, and also, the outlook for agribusiness scaling up?

MS. HOFFMANN: GMOs are addressed in the new food-safety law, I believe.

PROFESSOR LIU: Yes. Yes. It is addressed. The protests, any kind of protests is not good. (Laughter) It's just local government -- it's a bad face for local government officials. If you want to have promotion, retainment, reappointment in the same position, you have to make sure there is no protestors. There's no petitioners going to Beijing and tell something that you're bad. So, they try everything possible to hold back the protests. I understand, the stability for a country of 1.3 billion is a priority. And the food safety -- the central government is genuinely concerned about food safety. Not only for the health of the people but also for stability. If these people go on the street to protest, it's very difficult to deal with. And in the beginning they will talk with you. To go home, we have a solution. And then if you persist, there will be something else come forward. So, the protest is the number one concern of the government. And the government approaches why there's a revision of the food-safety law. Usually the purpose is to keep everybody -- the basic need satisfied. The basic need is food safety. And if your basic need is not met then the protest cannot be avoided. So, it is a way to maintain social stability. And that means there's hope because the central government is so determined to solve this issue, and we can see the hope. And there will be a strong regulation on -- there will be more inspection, and there will be more coordination among agencies, especially, with the law-enforcement agencies. And

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I hope the court will be given the independence to render their judgement, so in connection and compliment the efforts for safeguarding safety of the food.

MS. HOFFMANN: I can jump in on the GMO question. So, the ant-GMO voices in China, it's not a new phenomenon since, I would say, the mid 2000's, there have been a vocal population against genetically modified foods and agricultural biotechnology. But we have to keep in mind, China itself is developing its own -- in its own public research institutes, and it's developing its own GM varieties. And in 2014, there was, you know, a lot of press about how the biosafety certificates for GM rice and corn were not approved, and these were domestically researched and developed varieties. So, there is a group in China of pro-ag-biotech scientist. And they are working on public communication and science education specifically related to ag-biotech in China.

So, yes, definitely, the Syngenta merger has brought this to the fore yet again, but it's always been kind of this issue. And the Chinese government has said that it definitely supports continued research and development of ag-biotech in China, although it will be cautious on commercialization. So, in terms of prospects for that industry and what it means for the general agricultural policy, it's still a part of it, but the Ministry of Agriculture is also simultaneously working on a lot of other projects that would improve, you know, farmer livelihoods and general agricultural trade prospects for the country. Chief among these initiatives kind of a land-use, land-transfer rights program. So, ag-biotech is still part of the picture, but it isn't part of -- a large part, I would say, precisely because of public opposition. Yes, the lady, yep.

SPEAKER: Hi, I'm Lynn Johnson Langer, and I'm a director at the Johns-Hopkins Center for Biotech Education. And in particular, we have a Master of Science and Food Safety Regulation. One of the problems in the U.S. is with our new food-safety regulation laws evolving as we speak, not a lot of people are educated in understanding how to implement these laws, which is why we developed that degree. What do you anticipate the needs for education for the regulators and the manufacturers in China with this new law being so recent, and how are people going to understand exactly what needs to be carried out to be in compliance?

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MS. FU: Perhaps you could both. Yes, go ahead.

PROFESSOR LIU: The -- let's talk about incentive. The incentive to comply with the law. Now, we talk about the Chinese manufacturer complying with U.S. law, that's for imported food. We'll talk about the incentive, whether or not the manufacturer complies with Chinese law. Not much incentive to comply because there is a cost involved. If the manufacturer is unlikely or not willing to comply with the domestic law, and then you can see the difficulties for this manufacturer to comply with the foreign law with much more cost. That's the incentive. And there is another reason that I want to talk about it is the causation issue. And in law causation has a big part. If you eat something that you have diarrhea after your lunch and that you know the causation would be food. Right, the sushi that you ate. But five days later, you have some combination of things, you never know. The food safety is not just measured -- the incident is not measured by the gigantic incident where you see people die from something. The longer effect, the law does not care too much about it and only about who die instantly or injured instantly. For long term, heavy metal, for example, pollutant, for example. These are hard to treat. So, it's a very difficult question to be answered by law.

MS. HOFFMANN: Yes. So, I think the new law does put the onus on the firms that are selling food. They have legal responsibility now. And I don't know how that legal responsibility's actually going to be, you know, foisted on them through litigation, like I -- yeah, that's another question. But they should have an incentive to start complying. Most of them don't have much capacity. And so, I think there's a big role for public capacity building among, especially, the bigger firms, so that they can do testing that's valid.

And in terms of enforcement, you said that the local -- the local governments are responsible for this, they don't have much capacity, especially, in the rural areas, and they don't have much revenue. So, I think this issue that you brought up of this conflict of interest between the big company sitting there in the small county that really needs the revenue getting policed by the county government is going to be a big challenge. And it seems like more than just capacity building is going to be needed.

PROFESSOR LIU: And, also, the big companies and small companies are not

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separated. In the big companies, the source of food is from the small companies. That's how the melamine milk came about. They go to the small farms, they source milk, and have a big (inaudible) that carry to the big, gigantic facility to process. If the source is bad, how can you guarantee the big company's quality? So, it's all related.

MS. HOFFMANN: Now, of course, traceability can help, right? So, once we have a system where eventually if something gets spot tested and they trace it back to this company, the company has good incentives to start complying with the law, just through its reputational affects. So, I think there is some hope there even if the regulatory capacity is somewhat lacking.

MS. FU: Let's move to this side.

SPEAKER: Hi. A fascinating conversation. I really appreciate it. I'm Trace Bailey with Walmart. And so, all of this hits quite close to home. Vivian, I appreciate your comment about the produce example, and it's certainly something that we've lived through and are continuing to work through. I want to -- one point of clarity I want to offer is that, that's to support our markets in China not for import into the US. You know, there's a different regime for those of us that are importing and requirements upon suppliers that they meet high standards and get independent, third-party certification for their facilities and processes, production processes if they're going to import into the US. That leads me to my question, which under FSMA, a new rule has come out on foreign supplier verification acts. So, for entities that want to export to the U.S., be they in China or in other places, they're going to have to meet some really high standards in order to do so. And those firms in China that would have the capacity to do that would be those that are more modern and can reach scale. Do you see a scenario where, maybe I'm leading a little bit here, but you see a scenario where large firms, retailers that are selling in China, are sourcing more from these manufacturers that have certifications under FSMA or the foreign supplier verification rules, and if so, did they drive that food-safety culture more broadly across their supply base? So, it starts as sort of a high bar, but then they push their smaller manufacturers and suppliers to achieve, you know, a greater sort of food-safety culture within their own systems.

MS. HOFFMANN: So, I think that's likely to happen to some extent. And I also think

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there's a limit to which that will completely solve the problem because what we've seen happen in a lot of developing countries, is that you have this parallel system emerge where you have the very modern sector, you know, really being driven to meet international standards by either the high-income local consumers or export markets. And then you have another set of firms that are providing food to the rest of the economy, which is the majority of consumers. And so, you end up with kind of a two-tiered food-safety system within a single country. But, you know, I think it's positive that these larger firms can start to develop their capacity and are being encouraged to do so by some of this new legislation in the US, and that this can be -- it can be a positive force throughout the other firm, the upstream firms that they interact with, most definitely. I just think that we have to cognizant of the limits of that impact.

PROFESSOR LIU: And also, I want to give a little bit of legislative background for the 2011 law, US law. The manufacturing -- Grocery Manufacturing Association lobbied hard for lowering inspection rate because the inspection increased the cost of doing business for groceries. And the 2011 law honored these wishes and makes agreement approach instead of inspection approach as a main string of the regulation. So, the 2011 law changed the dynamic and changed from the traditional inspection approach to cooperation approach, that's the Grocery Association played a big role in it.

MS. FU: We have time for maybe two more questions.

SPEAKER: Good morning. In the commissioner's presentation, he mentioned that it took Hong Kong 30 years to have consumers regain their confidence to the foods that are available to them. So, my question is what's the estimated timeline we're looking at for Chinese consumers to regain their confidence with the foods available to them if there is any timeline we're looking at? Thank you.

MS. HOFFMANN: I think it's long. It's hard to pinpoint, but these things take time.

PROFESSOR LIU: Market regulation, I think, weighs the increase of middle class and their demands for food safety. That is the driving force for improvement. Not just the change of the wording of the law.

MS. FU: And we're seeing some really exciting developments in the private sector to meet this consumer demand to know exactly where their food is coming from. So, you have brands who

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are offering if you scan their barcodes, they can tell you where they sourced their ingredients, things like that. So, because consumers are demanding it, and companies will -- if it's beneficial for them, if they can, you know, charge a higher premium and offer these -- this kind of additional information, that will go a long way toward increasing confidence as well. But as Vivian said, these things take time.

We have one more here or we can move back this way.

SPEAKER: Hi, I'm Meg Kelly. I'm with CSIS China Program. So, China is now the top country for leasing foreign land. And I'm wondering if a Chinese farmer is growing crops for Chinese consumption in, for example, leased land in Russia. Are those imports to China, and who regulates that? What are possible further complications for food safety? Thank you.

MS. HOFFMAN: Yours (Laughter).

PROFESSOR LIU: This is a wonderful question. I have never thought about it. And, yes, there's leased land in Russia, Africa, they develop their own farm. Big companies, corporations, as a benefit, they have their own farm in some area, in the mountain area and provide food specifically for that company, that's as a benefit. And lease the land and bring back to the Chinese market, I think that it will be subject to the Chinese food-safety law that is regulation, subject to the Chinese law. And the complication is this. What fertilizers, what type of fertilizers and materials, farming materials are used? Is it Chinese made? Russian made? That's very difficult to regulate. We talk about the imported food. It's very complex than you think. Do we have EPA, U.S. EPA in China? We don't. Do we have CDC in China? We don't. Do we have USDA in China? No. So, food safety is really a team work coordination among a lot of departments. The globalization, as the previous question asked me about the globalization. The globalization is a good term. But you have to set in the reality. How can we do this? Can we do it? We just cannot chase our dream and every day lower our cost of doing business. And there will be costs. There will be costs. Real costs. They shift the burden to somebody else.

MS. FU: Ah, yes, one more back there.

SPEAKER: Hi, thank you for this conversation today. It's very interesting. My name is Lossie Freeman. I'm with Parnassus Global Agency. Prior to that, I worked at the U.S. Consulate in

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Gong Zhou doing U.S. -- doing consumer product safety when the lead pain in the toy incident occurred. My question is, we've talked a lot about agricultural produce. What about the seafood industry and sort of cosmetics and just an overall environmental question? It seems like that is something that has to be tackled and addressed simultaneous with talking about food-product safety. What are we doing to address? Are there any sort of cohesive programs or policy statements that are going to sort of cover both of those areas? If you're in a contaminated space, it's very difficult to come up with uncontaminated food regardless of any type of regulatory environment. Thank you.

PROFESSOR LIU: Yes, that's a wonderful question again. Seafood, China is the big exporter of seafood, and China is the most polluted in some areas in the world. So, we have to make sure that the seafood is being tested constantly. We have to not only let the Chinese regulators do the job but, also, the distributors in the United States at the big-box stores. They have to do the job. But, of course, that will increase the cost. And we have to educate the consumer. Your expectation should not be every day you have the lower budget and you can do all the things that you wish to do. It's not possible. We create an expectation that we can do everything we can. We can't. We just cannot do it. And the seafood, let me give you anecdotal story, probably, as it's not -- it's what happened. In Bohai, there was an oil spill. You know oil spill in Gulf of Mexico, but you did not know what happened in China. In 2010, there was an oil spill in Bohai. Who caused the oil spill? The American company ConocoPhillips. What's being polluted? Water, of course, water is being polluted. Who sued? Farmers. The fish farmers. The fish farmer claimed that their property was being damaged by the spilled oil. In the beginning, they want to sue in the Chinese court. The court would not take the case. They said due to the fact of social stability and this is a foreign company, this energy is so important, and the court deny their lawsuit. Where did they go? They go to Houston to sue because ConocoPhillips is based in Houston. They sued, and Houston said, "We can't take your case; you are more convenient for them in China." So, this case was kicked back and forth across Pacific Ocean. And the other thing I would mention, the seafood. Why they claim damage? Because all the seafood export to the United States and Europe.

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It's so complicated who polluted? The American company. In what water? In China. And where does this product go? United States. So, it's just convoluted, and there's no easy answer to this question. This is the globalization I want to answer the question. And just we take something for granted, and we never thought about the consequences of globalization.

MS. FU: Great. I think that's all we have time for. Thank you all for joining us. And a big thank you to our panelists (Applause) for joining us today.

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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