

# Evaluating the “Monitoring Space” in Food Safety Regulation: A Comparison Between China and the United Kingdom

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## ABSTRACT

Monitoring is a central, but largely neglected aspect of contemporary regulation. This article takes food safety regulation as a case study. It compares the process of monitoring in China to that in the United Kingdom (UK). By deploying the concept of “monitoring space,” this article discusses two parameters. Firstly, a variety of actors have regulatory capacity and share the monitoring space. Secondly, these actors often cooperate with each other, rather than being isolated. The structure of the monitoring space in China contrasts sharply with that in the UK. Government actors, news media, and the public occupy most of the monitoring space in China. But independent third-party certification bodies play an important role outside of the government in the UK. This article concludes that the two parameters of the monitoring space are crucial to effective monitoring. It is necessary for each country to maintain their monitoring space according to its own regulatory context.

*Keywords:* monitoring, plurality, cooperation, regulation, food safety

## Evaluación del «espacio de monitoreo» en la regulación de seguridad alimentaria: Una comparación entre China y el Reino Unido

### RESUMEN

El monitoreo es un aspecto central, pero en gran medida descuidado de la regulación contemporánea. Este artículo toma la regulación de seguridad alimentaria como un caso de estudio. Compara el proceso de monitoreo en China con el del Reino Unido (Reino Unido). Al implementar el concepto de «espacio de monitoreo»,

este artículo analiza dos parámetros. En primer lugar, una variedad de actores tienen capacidad reguladora y comparten el espacio de monitoreo. En segundo lugar, estos actores a menudo cooperan entre sí, en lugar de estar aislados. La estructura del espacio de monitoreo en China contrasta fuertemente con la del Reino Unido. Los actores gubernamentales, los medios de comunicación y el público ocupan la mayor parte del espacio de monitoreo en China. Pero los organismos de certificación independientes de terceros juegan un papel importante fuera del gobierno en el Reino Unido. Este artículo concluye que los dos parámetros del espacio de monitoreo son cruciales para un monitoreo efectivo. Es necesario que cada país mantenga su espacio de monitoreo de acuerdo con su propio contexto regulatorio.

**Palabras clave:** monitoreo, pluralidad, cooperación, regulación, inocuidad de los alimentos

## 评价食品安全规制中的“监督空间”： 中国与英国的比较

### 摘要

监督是一个关键的、但在很大程度上被当代规制所忽视的方面。本文将食品安全规制作为案例研究。本文比较了中国与英国的监督过程。通过运用“监督空间”的概念，本文探讨了两个参数。第一，一系列参与者拥有监管能力并共享监督空间。第二，这些参与者经常相互合作，而不是分离。中国的监督空间架构与英国形成鲜明对比。政府机构、新闻媒体、公众在中国占据了绝大多数的监督空间。但英国独立第三方认证机构在除政府外的监督空间扮演了重要角色。本文结论认为，这两个监督空间参数对有效执行监督而言至关重要。两国都需根据各自的监管背景维护其监督空间。

关键词：监督，多元性，合作，规制，食品安全

## 1. Introduction

The process of monitoring is a key component in any regulatory regime. It generates information about compliance and, hence, provides a bridge between norms (such as written standards) and the possibility of changing behaviour (for example, through formal enforcement). Originating from cybernetics, the process of monitoring is an essential part that any control system must possess at the point where it comes into contact with the world outside (Hood and Margetts 2007). The process of regulation is basically a control system. Thus, monitoring is key to the existence and effectiveness of any regulatory regime. It is critical that within the regulatory process, there is some effective capacity to monitor the conduct of regulatees (Hood, Rothstein, and Baldwin 2001).

Monitoring, however, is often complex and tricky in practice. The Husi incident<sup>i</sup> and the “dirty chicken” incident<sup>ii</sup> provide vivid illustrations. In both cases, the companies in question were approved by government authorities to conduct food business. However, the authorities failed to detect illegal activities in the first instance. As business partners, buyers such as McDonald’s (China) and Tesco failed to check the behaviour of their suppliers. While certification bodies had issued certificates of conformity, they failed to monitor their clients effectively. These two incidents were kept hidden until journalists brought them to light following undercover investigations. Questions then arise: how has the capacity of monitor-

ing been dispersed amongst different actors? Why have most of them failed to the extent that detection was eventually secured through journalism?

Surrounding the issue of monitoring, researchers offer much discussion. In the discourse of government regulation, the existing literature has shown that regulators’ enforcement strategies and regulatees’ level of compliance are significantly influenced by processes of monitoring (Braithwaite and Makkai 1991; Kagan 1989; Ko, Mendeloff, and Gray 2010). From the perspective of decentralisation, researchers examine the role of individual businesses (O’Rourke 2003), certification bodies (Marx and Cuypers 2010; Overdevest and Zeitlin 2014), and whistle-blowers (Brown et al. 2014; Etienne 2015), amongst other actors. However, it is still not clear why such a system, occupied by multiple actors failed.

Analyses of weaknesses linked with each actor and monitoring technique offer part of the explanation. The limitation of resources, amongst other reasons, has been offered as a primary cause for government failure. This triggers the involvement of non-state actors. However, there are also concerns about these actors. For example, certification bodies economically depend on their clients (Verbruggen 2014) and their monitoring techniques are flawed (Wright et al. 2013). Whistle-blowers are often reluctant to blow the whistle because of fear of retaliation (Alford 2001; Smith 2014). “Meta-control” approaches attempt to achieve cooperation between, in particular, state and non-state bodies (Vaale-Hallberg 2015;

Verbruggen and Havinga 2015). These reflections provide a good starting point for solving those puzzles.

For a holistic approach to analysis, this article proposes the concept of “monitoring space.” It is modelled on the analytical framework of “regulatory space,” which was initially explained by Hancher and Moran (1998). They coined this term to describe the broad, uneven, and dynamic participation in regulatory processes by a variety of actors and the interdependent relationships between these actors (Hancher and Moran 1998; Scott 2001; Vibert 2014). “Monitoring space” emphasises the fragmentation of monitoring capacity amongst a number of state and non-state actors on the one hand, and the cooperation between these actors on the other. This is fundamentally based on the fragmented and uneven possession of monitoring resources within the space. Related to this ground, the status of a “monitoring space” is not static. It varies with national settings and changes with time.

This article takes food safety regulation in Mainland China and the United Kingdom (UK) as an example to explain the concept of “monitoring space.” Two explanations justify the selection of these two jurisdictions. Firstly, in both countries, the food safety regulatory regime demonstrates some feature of plurality. This feature constitutes the key to “monitoring space.” The resemblance also enables further comparison between these two countries. Secondly, the approach to economic development in China contrasts sharply with the UK. While the economy in

China is firmly rooted in government planning (Huang 2008), market mechanisms have played a fundamental role in the UK. As a result, the plurality in these two countries varies to some degree. This reality enables us to understand where the strengths and weaknesses lie within a given “monitoring space.”

This article approaches as follows. The second section elaborates the concept of “monitoring space,” which originates from the fragmented capacity for monitoring. Discussion of this intellectual construct is then followed by two sections. Each focuses on one aspect of the monitoring space—plurality and cooperation—in processes of food safety regulation in China and the UK. This article concludes by highlighting the phenomena of “monitoring space” and its implications for regulatory research and institutional design in the future.

## **2. Monitoring space based on fragmented capacity**

**T**he concept of “monitoring space” addresses issues concerning the plurality of and cooperation between actors. These actors derive their capacity from possession of resources that exist in multiple forms. Hood and Margetts (2007) proposed the nodality, authority, treasure, and organisation (NATO) scheme to explain this phenomenon. Government frequently builds its monitoring tools on its position as a node of some informational or social network to pick up information from other bodies, on its legal powers

to require information or to conduct inspection, on its fungible chattel to encourage others to monitor regulatees, or on its organisational resources to scrutinise and collect information directly (Hood and Margetts 2007; Hood, Rothstein, and Baldwin 2001).

Although the NATO scheme was developed in the context of government regulation, it equally applies to non-state actors. This is because regulation is primarily a control system and non-state actors also exert a certain degree of control over some regulatees. Indeed, many non-state actors have derived key controlling capacity from information, authority, wealth, and organisational resources (Scott 2001). The presence of non-state actors as nodes within a network facilitates the constant flow of information. Contracts often provide instruments from which non-state actors obtain authority to monitor other parties (Scott 2001). The possession of treasure and organisational resources is one explanation for the involvement of non-state actors in performing some monitoring function (Grabosky 1995). As a result, the monitoring space is shared amongst various actors based on fragmented capacity.

Yet, the distribution of resources is uneven. For example, the positions of nodal receivers are different. There have long been problems of information asymmetry in the relationship between the public and businesses (Darby and Karni 1973; Stigler 1961), and between regulators and regulatees (Coglianese and Mendelson 2010). The authority of different actors varies. Government

bodies often require information with legal sanctions for non-compliance in the back (Hood and Margetts 2007). But this is less likely to happen in cases of non-state actors. The possession of treasure and organisational resources inevitably changes from one actor to another.

In addition, the motivation of each actor for deploying resources is often rather problematic. In cases of certification bodies, profit is likely to be prioritised over monitoring functions (Albersmeier et al. 2009). Auditors may be “captured by their clients” (Grabosky 1995). Insufficient motivation has been a major barrier to effective whistleblowing schemes (Malmstrom and Mullin 2014). These phenomena reflect the limitations of each actor. They also create bases for cooperation, though to a limited degree.

As noted earlier, the national settings in China and the UK are distinct. An attempt to compare practices in these two countries must take this factor into consideration. In China, the state plays a predominant role in almost all aspects of the society (Huang 2008). There is a lack of commitment by state leaders to privatise and to move to a market economy (Nakagane 2009). Market players are often weak in processes of regulation. In the UK, largely due to the highly developed market, there is a tradition and culture of regulation by market players (Burnett 1979; Moran 2003).

The past few decades have witnessed some changes in China. There are new bodies entering the regulatory

space, including the monitoring space. However, this does not imply that the macro regulatory culture has been fundamentally transformed. The accession to the WTO has pushed the Chinese economy to globalisation and left the government with no choice but to accelerate the transition to a market system (Wu 2009). The central government reiterated its commitment to economic and regulatory reform. It encourages non-state bodies to take initiatives in regulation.<sup>iii</sup> Yet, as Hancher and Moran (1998) noted, those “who controlled the necessary resources at the historical moment when regulation was initiated would have a good chance of exercising a continuing dominant influence.” The following analysis approaches against this background.

### **3. Food safety monitoring space in China and the United Kingdom**

**A**s explained earlier, the fragmentation of capacity leads to a somewhat fragmented monitoring space. Processes for monitoring food businesses in China and the UK provide a good demonstration. This observation is of great significance. It enables us to identify gaps in the current system. It also allows us to discover potential resources that may be more effectively deployed in each country in future.

#### **3.1. The plurality of actors**

The processes of monitoring in food safety regulation both in China and in the UK enlist a variety of actors. These

actors range from state to non-state bodies and from organisations to individuals.

##### **3.1.1. State bodies**

A similarity between the two countries is that there is one principal competent authority at the national level. In China, the reshuffle of the State Council in early 2013 consolidated most of the food safety regulatory functions into the China Food and Drug Administration (CFDA). In early 2018, even more significant reform took place. A number of key national regulatory authorities merged and formed the State Administration for Market Regulation (SAMR). The newly established SAMR took over the functions performed by the former CFDA, amongst others, and is now the principal food safety regulator at the national level. In the UK, the Food Standards Agency (FSA) plays this role.<sup>iv</sup>

What is different is that the main responsibility of the SAMR is coordination, while the FSA conduct monitoring activities directly in certain sectors. In China, the vast majority of daily monitoring tasks have been undertaken at the county and district level. Food authorities at the prefectural and provincial levels are mostly in charge of supervising food authorities at its lower level. The SAMR coordinates monitoring activities across the country. In contrast, in the UK, in sectors involving meat establishments subject to approval, milk production holdings and egg production units, the FSA conduct hygiene controls directly. In the other sectors, the daily duties to monitor food busi-

nesses are performed at the local level (district or county without districts) by Environment Health Officers.

### 3.1.2. Non-state actors

In both countries, non-state actors perform some functions of monitoring. They range from the food industry to third parties, and from business partners to the public. In China, the Food Safety Law 2009 (as amended in 2015) (FSL) introduced an obligation for food businesses to check suppliers’ licences and product certificate of conformity. Wholesalers and retailers who have fulfilled this obligation may be exempted from administrative penalties (Article 136). In the UK, the Food Safety Act 1990 (FSA 1990) incorporated the defence of due diligence with which food businesses may defend themselves (Article 21). In practice, food businesses as buyers may conduct on-site inspections into their suppliers’ premises. With the prevalence of private food safety assurance schemes, third-party certification bodies play an increasingly more important role in monitoring food businesses. They issue certificates of conformity based on private standards. The TÜV Rheinland and the SGS are two typical cases in both countries.

The abovementioned two groups of actors, food businesses and certification bodies, perform monitoring functions based on contracts with the regulated businesses. There are also actors that do not rely on any contract. For example, non-governmental organizations (NGOs), such as Greenpeace in China and the British Consumers’ Association (CA, also known as *Which?*)

in the UK, sometimes reveal undesirable behaviour of food businesses. The media also contribute to the detection of non-compliance, as demonstrated by the two incidents mentioned at the beginning. Individuals including whistle-blowers and the public often play a role of informant to the other actors.

### 3.1.3. Contrasting China with the UK

Nevertheless, the distinct trajectories of economy development in these two countries contribute to variations in the position of different actors within the monitoring space. A first sharp contrast lies in the engagement of certification bodies in certifying food businesses based on private assurance schemes. In China, this phenomenon is rarely observed. Compared with multinational certification bodies, indigenous firms have limited eligibility, in the sense that they mainly conduct audits based on ChinaGAP, GMP, ISO22000, and HACCP rather than internationally recognised private schemes. Certification bodies in the UK frequently certify food businesses based on private schemes and they are more often involved in food business (Wright et al. 2013).

A second remarkable contrast relates to the media. In comparison, they are more active in detecting non-compliance in China than their counterparts in the UK. Typical incidents including the Guangqi incident (2014),<sup>v</sup> the Husi Incident (2014), and more recently the online take-away service, Eleme, incident (2016)<sup>vi</sup> were all investigated by journalists in the first instance and brought to light by news media. An analysis into 295 food safe-

ty incidents revealed that news media were the second largest group of actors (31.2 per cent) detecting non-compliance with food safety laws, following government authorities (52.5 per cent) (Liu et al. 2015). The FSL recognised their important role and encouraged them to detect undesirable behaviour (Article 10). While news media perform some of the role of monitoring in the UK, they are less active in practice. This can be observed through daily news reports.

More distinctions come from the role of NGOs, whistle-blowers and the public. In China, indigenous NGOs are underdeveloped. There are international examples such as Greenpeace, who sometimes test foodstuffs and publish testing results. But this is very unusual and different from the case in the UK, where consumer organisations such as *Which?* regularly publish monitoring results. Whistle-blowers and the public are important informants, allowing government authorities and the media to detect non-compliance in China. The latter two groups often maintain bounty schemes to encourage potential informants to report relevant issues. These phenomena are not prominent in the UK.

### 3.2. A resource-based analysis

Analysis based on the NATO scheme, as noted in section 2, shows that actors derive their monitoring capacity from resources including their nodality, authority, treasure, and organisation. Different resources are linked with specific methods of monitoring. Table 1 shows

some examples.<sup>vii</sup> Examination from this perspective draws our attention to the strengths and weak links within the monitoring space. It also offers a base for analysing the tension and cooperation between actors.

#### 3.2.1. Nodality

Nodality allows one to receive information from others, without incurring direct cost to oneself. In practice, it is mainly the flow of information between different actors. Comparatively speaking, government authorities are in a better position than others to gather and disseminate information, due to their legal mandates. News media do not have the same advantage, but are still in an advantageous position because of their function as a hub of information.

As statistics show, information contained in news reports and from the public is an important trigger for the initiation of government action in China. In 2015, competent authorities across the country received over 400,000 complaints concerning foodstuffs (although not all are relevant to food safety).<sup>viii</sup> The FSA are sometimes also notified of food safety incidents by others, including government bodies and non-state bodies, such as food businesses.<sup>ix</sup> In comparison, Chinese food authorities more often rely upon external informants.

#### 3.2.2. Authority

Authority denotes the power of actors to require information or entry into premises for collecting information. This power is mostly backed by sanc-

**Table 1:** Actors and Methods of Monitoring based on Different Resources

	<b>Nodality</b>	<b>Authority</b>	<b>Treasure</b>	<b>Organisation</b>
<b>Government authorities</b>	Receiving information from others	Requiring reports; Power of entry; Sampling/testing	Bounty scheme; Commissioning testing	Survey; On-site inspection/audits
<b>Food industry</b>	Receiving information from others	Require documents; Power of entry	Purchasing inspection service	On-site inspection
<b>Certification bodies</b>	Receiving information from others	Require documents; Power of entry	NULL	On-site inspection/audits
<b>NGOs</b>	Receiving information from others	NULL	Commissioning testing	Surveillance
<b>The media</b>	Receiving information from others	NULL	Rewards for qualified informants	Undercover investigation
<b>Whistle-blowers</b>	Receiving information from others	NULL	NULL	Collecting information in person
<b>The public</b>	Receiving information from others	NULL	Commissioning testing (rare)	Collecting information in person

Note: This table is merely illustrative, not comprehensive or precise. Examples of collection methods include relevant legislation; official reports issued by various government authorities, food trade associations, or accreditation/certification bodies; and news reports.

tions against non-compliance with the requirement. In practice, government authorities derive power from legal provisions. Non-state actors may rely on contractual arrangements that are ultimately backed by law. These non-state actors include food businesses and certification bodies, which may be contract-based actors. Other non-state actors—non-contract-based ones—do not possess such power.

Government authorities in both countries are empowered to conduct ac-

tivities of monitoring, such as entering premises to inspect, sample, and require relevant documents. Any obstruction of authorised food officers may incur sanctions including fines or imprisonment in the UK or administrative detention and revocation of licence in China. The main contrast lies in certification bodies. Online research into these bodies and the reality of less developed private assurance schemes show that these contract-based actors are not yet widely recognised in China. The authority embedded in these bodies—to conduct on-

site inspection or audits or to require reports—has not been deployed as effectively as in the UK.

### **3.2.3. Treasure**

Treasure enables actors to use tangible *quid pro quos* to exchange for information. In monitoring processes, actors deploy treasure mainly in two approaches—to purchase testing or professional inspection service from third parties or to purchase clues or information from informants. Government authorities, the food industry, NGOs and the media are more active in deploying their treasure, as shown in Table 1.

Following the first approach, the advanced development of private sectors in the UK makes it easier and more prevalent for food businesses and non-contract-based actors to deploy their treasure in this way. In China, there have been cases of this kind. But the practice is still limited because of the underdeveloped private sector and a lack of the tradition of private regulation. In addition, private bodies in the UK may be designated as “control bodies,” according to the law, to conduct food testing.<sup>x</sup> Chinese government authorities are rather reluctant to harness the capacity of, e.g., private laboratories, out of a concern about damaging public confidence in government action. But this tradition is changing. Shanghai is a pioneer in this respect. As shown in the decisions of administrative penalties published by the Shanghai Food and Drug Administration, local food authorities commission private firms to sample and test.

In the second scenario, Chinese government authorities are much more active than their peers in the UK. The practice of bounty schemes in China started from the area of anti-corruption in 1998 (Wang 2010). In the past few years, it has been expanded to many other areas. Food authorities maintain a formal bounty scheme containing three levels of cash reward to informants, according to their contribution to the detection and verification of the breach of a food law. In the UK, there is not such an arrangement. Informants may raise complaints to food authorities, but without direct material reward.

### **3.2.4. Organisation**

Organisational resources are personnel, equipment, and facilities. Actors rely on these resources to conduct activities of monitoring. In comparison, food authorities, contract-based actors, and the media are in a more advantageous position over the other actors. Contract-based actors have particular strengths because of their industrial expertise, technologies, and equipment. News media sometimes appoint dedicated journalists to conduct an investigation into a particular case. In this way, they can uncover a story at an earlier stage than any other actor.

However, in both countries, government authorities encounter a shortage of resources. Compared to the large number of food businesses, the number of food officers is rather small. In China, there are legal provisions on training food officers (FSL Article 116), but local authorities are still short of food in-

spectors, essential knowledge, and techniques (Liu and McGuire 2015; Yang et al. 2012). According to the annual report prepared by the former CFDA, by the end of 2015, there were nearly 12 million valid licences for food businesses. In contrast, the total number of food officers (including administrative staff) was not more than 60,000. In the UK, by 2015, over 400 local authorities (around 5,000 staff in total) were regulating around 600,000 food establishments and 195,000 holdings. The contrast between the size of the food industry and regulatory resources is sharp and poses serious challenges to the government. It is difficult, if not impossible, to see any change in the near future. In addition, resources possessed by certification bodies are less effectively deployed in China, while non-contract-based actors are relatively more active in China than their counterparts in the UK.

In short, Table 1 offers a relatively simple way for observing the monitoring space in food safety regulation. By linking this table to the relevant practice in China and the UK, the resource-based analysis demonstrates three important aspects. Firstly, in both countries, there is indeed some “monitoring space” that is occupied by multiple actors. Secondly, these actors possess and deploy resources to a varied degree. In China, government authorities and non-contract-based actors are more active than contract-based actors. In contrast, in the UK, besides government authorities that perform statutory functions, contract-based actors are more active than non-contract-based actors. Given the broader coverage that

can be achieved by non-contract-based actors, given the highly technical and industrial expertise that is possessed by contract-based actors, the “monitoring space” in both countries shows strengths and gaps. This is linked with the third aspect. That is, all actors have their own weaknesses. This feature makes the relationship within the monitoring space rather complex, as discussed in the following section.

#### **4. Limited cooperation within the food safety monitoring space**

**A**nalysis based on Table 1 shows that different actors possess and deploy resources in an uneven manner. As a result, these actors have strengths and weaknesses in different aspects. This situation is further complicated by the motivations behind the action of each actor. In turn, the techniques for and, ultimately, the effectiveness of monitoring often show limits. These observations imply that there is bound to be cooperation within the monitoring space, but only to a certain degree.

##### ***4.1. Motivations and monitoring technique***

Motivations are a critical factor influencing the activity of each actor (de Vroom 1985). Those who perform monitoring functions may have considerations that lead them to deviate from the purpose of detecting or revealing non-compliance. This claim applies both to government authorities and to non-state bodies.

#### **4.1.1. Government authorities**

In China, economic considerations often hinder local governments from fulfilling their duties of monitoring. It may be ascribed to two factors. Firstly, for a long time, performance-based management within the government has focused on short-term economic development (Rothstein 2015; Zhou 2014). To maximise economic growth and, hence, the opportunity for promotion, local governments and food officers tend to ignore regulatory tasks (Skinner, Joseph, and Kuhn 2003). Secondly, the policy priority of agricultural interests and food industry is growth over safety and health protection (Liu and McGuire 2015). This was also a critical issue before and during the bovine spongiform encephalopathy crisis in the UK.

However, in the past few years, monitoring processes in China have greatly improved, like those in the UK. For example, in both countries, a common practice is to not give prior notice to targeted food businesses being inspected. More strikingly, the government in China has introduced a “dual-random” system—selecting inspectors and targeted food premises randomly each time. Another design is to apply cross-inspection, enabling local authorities to conduct inspections across different areas. These steps aim to reduce the possibility of arbitrary administration and to increase the effectiveness of detecting non-compliance.

Another trend in China is a risk-based approach to official controls. The former CFDA developed a programme

to assess the level of risk linked with food businesses. The main factors influencing the determination of risk levels include the category of food products, the size of the food business, targeted consumers, and the current status of compliance. The track record concerning regulatory enforcement influences the adjustment to the level of risk. The frequency of inspection is based on the level of risk. This approach is more advanced in the UK. As explained in the Food Law Code of Practice, the level of risk is determined according to the accumulative scores following each qualified inspection. The higher the score is, the higher the risk level is and the more frequent the inspection will be.<sup>xi</sup> This risk-based approach was designed to ease the tension between the highly stretched regulatory resource and the great number of regulatees.

#### **4.1.2. Non-state bodies**

Non-state bodies also bear other considerations beyond detecting non-compliance. But contract-based actors are different from non-contract-based ones. Food businesses and third-party inspection or certification bodies are mainly driven by profit. Under the current legal system in both countries, food businesses take the primary responsibility for the safety of their food. But in practice, the buyers' check of suppliers and their products are limited to a rather limited degree, out of cost considerations. Especially in China, the legal requirements are set down in a prescriptive way—buyers should check suppliers' licence and product certificate of conformity. It risks causing cre-

ative compliance, whereby buyers follow the letter of the law and only check legal documents without further examination of food safety-related issues.

Third-party inspection and certification bodies developed in response to the demand from supermarkets for independent verification. They do not have the motivation to detect all non-compliance or to reduce food safety risk (Wright et al. 2013). Rather, the main concerns are better long-term relationships with clients and higher economic profits. Consequently, they are often “captured” by clients and view reality “not through a lens of professional detachment, but from the clients’ perspective” (Albersmeier et al. 2009; Grabosky 1995).

These considerations cause serious limitations to monitoring techniques. Two typical issues are prior notification and fixed frequency of inspection. A research report assessing private assurance schemes in the UK showed that a large proportion of inspections are conducted with prior notice. Over 80 per cent of inspections are carried out at fixed intervals (Wright et al. 2013). These arrangements allow businesses to prepare for inspection: “when there’ll be a site audit, everything would be absolutely perfect” (Lawrence, Wasley, and Ciorniciuc 2014).

Although some schemes are launched unannounced or involve a short-notice inspection programme, such as the BRC Unannounced Audit Programme and the Global GAP, the extent is rather limited.<sup>xii</sup> There are concerns that auditors should avoid allow-

ing “unannounced audits to become a hard cynical tool to catch companies out,” for the purposes of avoiding “a game of cat and mouse emerging and destroying the positive relationship” between food businesses and auditors (Howlett 2013).

In cases of non-contract-based actors, while NGOs, whistle-blowers, and the public may have more moral consideration, news media often have better circulation. In practice, the whistle-blowers’ moral consideration can be deterred by a fear of retaliation (Alford 2001; Malmstrom and Mullin 2014) or there is simply not enough incentive for taking any action. The public are mostly indifferent to non-compliance unless it endangers their own rights or interests, as the “natural state of humankind vis-à-vis risk is apathy” (Sandman 1993). In contrast, news media often act as they have particular interests in stories that violate norms and tend to emphasise emotional charges rather than technical claims (Luhmann 2000).

Consequently, the performance of these actors is also restricted. NGOs do not often detect non-compliance. Consumers and the public pay a lot of attention and are particularly active in China in bringing forward information. But within the large amount of information, only a small proportion is relevant to food safety. For instance, according to the published decisions of administrative penalties in Shanghai, most public complaints led to the detection of several packs of expired or incorrectly labelled food in small independent grocery shops, and no further serious issues were detected.

News media are also active in China. But they often exaggerate or misinterpret reality. Journalists are more interested in “big brands” and adverse information to catch more readers in their coverage, which may create unnecessary misunderstanding amongst readers.<sup>xiii</sup> This phenomenon can be observed in the daily news report about food safety issues.

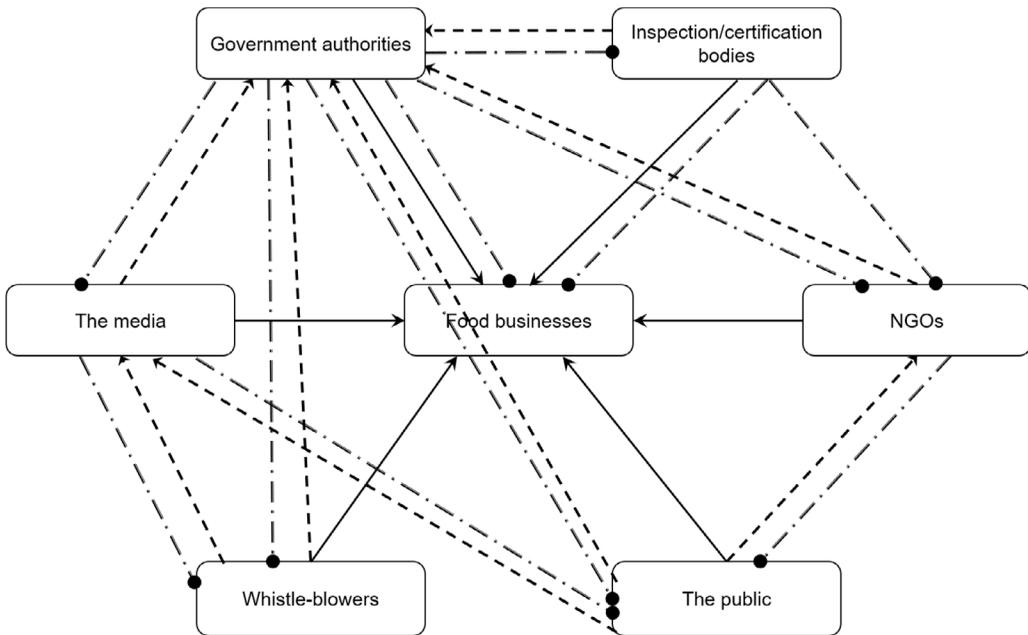
**4.2. Limited cooperation**

The above analysis into the possession and deployment of resources draws our attention to two issues. Firstly, the uneven allocation of resources and limited

techniques create the necessity and possibility of cooperation within the monitoring space. Secondly, various motivations and limited techniques imply that cooperation can only be achieved to a limited extent.

**4.2.1. Cooperation within the monitoring space**

Within a monitoring space, actors are connected with each other in a complex way. With the risk of oversimplification, Chart 1 briefly shows the connection. Apart from direct monitoring activities by surrounding actors targeting food businesses, there is also cooperation



**Chart 1: Structure of a monitoring space**

- > Direct monitoring
- - - - -> Informants reporting clues to undesirable behaviour of food businesses
- · - · - ·> Offering legal or technical support or incentive

Note: The links between actors are drawn based on the current legislation, literature, and relevant official reports and news reports.

between these surrounding actors. For example, all of the other surrounding actors may play a role of informants to government authorities. Whistle-blowers and members of the public may also provide clues to illegal activities to the media or NGOs. From a different perspective, government authorities can provide important legal support or incentives to encourage other actors to take action, either to influence the behaviour of food businesses directly or to provide government with information. Support of this kind may also exist between other actors. It should be noted that this chart is only illustrative, rather than descriptive or exhaustive.

Indeed, in both countries, it is not difficult to observe cooperation. In China, the voice of consumers and the public has gained increasingly more attention in processes of law implementation by government (Liu and McGuire 2015). To understand how often food authorities have relied on the public to detect non-compliance, research for this article included 500 decisions of administrative penalties. These decisions were issued by food authorities in Shanghai between January and March 2018.<sup>xiv</sup> Analysis shows that 247 out of 500 cases clearly indicated the source of information. Complaints by the public contributed 56 cases (22.67 per cent of known sources). The strength of this crowdsourcing approach lies in its significant expansion of coverage. It helps ease the burden on government authorities and increase the possibility of detecting non-compliance. This approach is particularly useful in the context of China, where the food industry is mas-

sive and has a highly heterogeneous structure and where market mechanisms do not work effectively (Zhang 2013).

In the UK, government authorities more often consider third-party intervention based on private assurance schemes. As specified by European Union law, participation in these schemes and receiving independent checks are taken into consideration in processes of official controls.<sup>xv</sup> This is practised in the UK. Compliance with industry-led standards and independent monitoring interventions influence the determination of risk levels presented by food businesses.<sup>xvi</sup> In a document issued by the former CFDA, the Chinese government also encourages food businesses to have their food safety management system assessed by third parties. But this is an advanced step in the current context, where certification is not yet a widespread practice. Whether and to what extent it can be put into practice is still uncertain.

Non-state actors sometimes need support from the state. To whistle-blowers and the public, the state is in a position to provide legal protection and rewards to create incentives. In terms of protecting whistle-blowers, the UK has done a better job than China. In the UK, whistle-blowers are protected under the Public Interest Disclosure Act 1998 (part of the Employment Rights Act 1996).<sup>xvii</sup> In China, whistle-blowers and external sources (such as the public) were not separated for a long time. There was not any specific protection available to whistle-blowers and it was not unusual to see “reta-

liation” (Li 2014; Shi 2015). The 2015 Amendment to the FSL paid special attention to whistle-blowers, stating that any employer that takes retaliatory steps against a whistle-blower will be punished. But how well this works is still to be tested. Bounty schemes are designed to encourage informants to bring forward clues of non-compliance. But a prerequisite is that potential informants possess sufficient knowledge of regulation, which may only be achieved through publicity and promotion by government authorities or NGOs. To contract-based actors, firstly they need the state to back the contractual arrangement, which is achieved through contract law. Secondly, as explained previously, gaps in their monitoring techniques need to be bridged. This may only be achieved through official controls of government authorities.

Non-state actors themselves also cooperate with each other. One typical example is perhaps businesses partners’ reliance on certificates or documents issued by third-party certification or inspection bodies. As food businesses may not conduct inspections or audits directly, they frequently require suppliers to obtain certain certificates as a “quality signal” (Gawron and Theuvsen 2012) or to purchase inspection service from third parties. There is also cooperation between whistle-blowers and journalists. Whistle-blowers serve as a source of story ideas, which sometimes end up as high-profile exposés through the media. In return, media exposure empowers whistle-blowers to pursue justice in cases of wrongdoings in certain cases (Wahl-Jorgensen and Hunt

2012). At the same time, the circulation of news reports online by netizens helps amplify the influence of these stories (Tong 2011). NGOs usually rely on volunteers from the public to conduct surveillance while consumers’ concerns about food safety may be eased by the work of NGOs.

#### **4.2.2. Limits of cooperation**

However, cooperative relationships have another function. Because no single actor can perform the function effectively on its own, there is a need for such interaction. But also because of this, the interaction is bound to be restricted. This observation is particularly important to government authorities, as they are the default actor in performing the monitoring function.

In the Chinese case, while promoting bounty schemes, government authorities have to be aware that bounty schemes may cause unintended results (Hood 1983). Over-relying on them risks receiving a good deal of unreliable information. It also risks distorting the calculation of real levels of risk, impeding government authorities from achieving regulatory goals (Baldwin, Cave, and Lodge 2012). This is mainly because problems that draw the attention of the public are often the most obvious and minor ones. This inevitably distracts the attention of regulatory authorities from more severe issues.

The hype generated by news media is another concern. Focusing on the voices of journalists risks shifting the attention of government authorities from the real high-risk areas to

the most obvious trivial infractions (Lochner, Apollonio, and Tatum 2008). An ironic phenomenon in China is that while food authorities promote bounty schemes, many local areas are suffering from shortage of qualified staff, essential equipment, and basic facilities. While food authorities have intervened in numerous ordinary offences, they often fail in detecting serious law-breaching activities at an early stage until significant loss and damage have been caused. The analysis here may offer some explanation.

In the UK, private assurance schemes and third-party certification and inspection have seen significant development in practice. However, it is not free from problems either. As noted earlier, the main objective underpinning private action and the monitoring techniques is problematic. It is necessary for government authorities to continually assess and review their cooperation with private bodies. This is also a critical issue for Chinese government authorities, since private certification and inspection services have been rising in recent years.

## **5. Conclusion**

**T**he process of monitoring is a central, but somewhat neglected, aspect of contemporary regulation. Its effectiveness directly influences the successful operation of the whole regime and, ultimately, the achievement of policy goals. To understand this element of regulation more comprehensively, this article has proposed the concept of “monitoring space.” It is

a holistic approach to analysis, containing two dimensions. Firstly, a number of actors share the “monitoring space.” This is primarily because of the fragmentation of resources and capacity. Against different socioeconomic backgrounds, the structure of the “monitoring space” varies. Secondly, the uneven allocation of resources and the variation in motivations contribute to the deployment of resources to a varied degree by each actor. It, in turn, leads to a limited cooperation within the “monitoring space.” These two dimensions are crucial to the effectiveness of any process of monitoring.

The concept of “monitoring space” embraces a “resource-based” approach to analysis. In practice, there may not be a clear-cut division between those four types of resources—nodality, authority, treasure, and organisational. But this approach provides a working base for further examination. It allows us to better understand “where the capacity lies within the existing regimes” and to “strengthen those that appear to pull in the right direction and inhibit those that pull the wrong way” (Scott 2012). This approach is of fundamental significance not only for solving puzzles in the sector of food safety, but also for analysing issues in some other policy areas; not only for evaluating the process of monitoring, but also for examining the other elements of regulation including standard-setting and enforcement.

This article has elaborated the concept of “monitoring space” in food safety regulation in China and the UK. It identified government authorities;

contract-based actors, including food businesses and certification or inspection bodies; and non-contract-based actors, including NGOs, the media, whistle-blowers, and members of the public as all performing some monitoring functions. Food authorities, the media, and the public have been more active than the other actors in China; in the UK, government authorities and contract-based actors have stood out. It is difficult and would be inappropriate to say that one system is better than the other. After all, each actor has strengths and weaknesses. The context of China is also distinct from that of the UK. The significance of comparison lies in the observation of strengths and weaknesses linked with each model. These observations shed light on the puzzles concerning “who” and “why did they fail” raised at the beginning.

This article suggests that in practice, important attention needs to be paid to the following aspects. In China, given the lack of qualified food officers at the local level, it is necessary for government authorities at higher levels to develop detailed guidelines or manuals

for conducting activities of monitoring. In the long run, clear and strict requirements on the qualification of food officers and continuous professional training are crucial. In terms of cooperation with non-state actors, Chinese government authorities need to be cautious about their heavy reliance upon the public and the media. To some extent, the government may further facilitate the involvement of contract-based actors in performing functions of monitoring. In the UK, the system of monitoring has been better established than it has in China. However, government authorities may harness the capacity of the public in a more creative way to bridge the gap in regulatory resources and to expand the coverage of the system of monitoring.

Last but not least, any “monitoring space” is bound to be fragmented. In most cases, “strategic redundancy” is necessary. It requires multiple actors to perform the function of monitoring. It also requires these actors to cooperate with each other. More effective processes of monitoring can only be built on the efforts from all sides of society.

## Notes

- i Shanghai Husi Food Co. Ltd. (Husi) committed serious offences against the law. For example, workers picked up meat from the factory floor and put it back on the production line directly. They mixed expired meat with fresh meat. Business partners of Husi included many big brands, such as McDonald’s (China), Burger King, Pizza Hut, etc.
- ii Two of the largest UK poultry processors—2 Sisters Food Group and Faccenda—were accused of wrongdoing. Workers picked up chicken from the floor and put it back on the production line directly. Breakdown of machines led to high-risk material (such as guts and offal) piling up for hours. Big names such as Tesco, Asda, Sainsbury’s, Aldi, and M&S, which had those two companies as suppliers, were involved.

- iii This trend is reflected in the key documents on economic and regulatory reform issued by the State Council and the National Development and Reform Commission each year.
- iv In Scotland, the Food Standards Scotland has been in operation and discharging relevant responsibilities since April 1, 2015. But its creation was mainly out of political considerations, rather than regulatory concerns.
- v Guangqi Company supplied food ingredients to many bakeries in Hangzhou, Zhejiang Province, selling expired food ingredients to its buyers.
- vi Eleme (“Are you hungry”) is an online platform that offers take-away ordering service. A journalist found that many food providers on this platform were not licensed to provide catering service and the hygiene condition on premises was poor.
- vii Table 1 and the theoretical framework of the NATO scheme are also explained in another article by the author. See An (2019).
- viii See <http://www.sda.gov.cn/WS01/CL0051/148941.html>, accessed March 31 2016.
- ix See the Annual Report of Incidents prepared by the FSA each year.
- x A control body is an independent third party to which the competent authority has delegated certain control tasks. See Regulation (EC) No 882/2004 of April 29, 2004 of the European Parliament and of the Council on official controls performed to ensure the verification of compliance with feed and food law, animal health, and animal welfare rules [2004] OJ L165/1.
- xi For more details, see Food Law Code of Practice (England) (March 2017).
- xii The BRC programme is voluntary and the decision to participate rests with the food businesses that have been certified with a certain grade. In the Global GAP case, unscheduled surveillance inspections of a minimum of 10 per cent of all certified producers per annum are carried out. But they are still announced 48 hours in advance and there is only a 10 per cent chance of receiving such a visit. See Kalfagianni and Fuchs (2015).
- xiii This information came from an event on freedom of information in food safety regulation, hosted by a newspaper, in Beijing on April 18, 2015.
- xiv These decisions were published up to April 30, 2018. Instead of random sampling, this research collected all 500 cases in a row up to this date.
- xv See Regulation (EC) No. 882/2004 of April 29, 2004 of the European Parliament and of the Council on official controls performed to ensure the verification of compliance with feed and food law, animal health, and animal welfare rules [2004] OJ L165/1.
- xvi See Food Law Code of Practice (England) (March 2017).
- xvii The guiding procedure is that whistle-blowers first understand if their company has a whistleblowing procedure. The first choice should be their employers or other responsible people so that the problem can be better solved. If they believe that their employers will cover up the problem, would treat them unfairly if they complained, or has not sorted it out, they can blow the whistle to a prescribed body, i.e., the FSA and local food authorities in the area of food safety.

## References

- Albersmeier, Friederike, Holger Schulze, Gabriele Jahn, and Achim Spiller. 2009. "The Reliability of Third-Party Certification in the Food Chain: From Checklists to Risk-Oriented Auditing." *Food Control* 20 (10): 927.
- Alford, C. Fred. 2001. *Whistleblowers: Broken Lives and Organizational Power*. Ithaca, NY: Cornell University Press.
- An, Yongkang. 2019. "以资源为基础的多元合作 '监督空间' 构建——以我国食品安全领域为例 (A Resource-based Approach to Analysing the 'Monitoring Space' — The Case of Food Safety Regulation in China)." *浙江学刊 (Zhejiang Academic Journal)* 5: 103.
- Baldwin, Robert, Martin Cave, and Martin Lodge. 2012. *Understanding Regulation: Theory, Strategy, and Practice*. 2<sup>nd</sup> ed. Oxford: Oxford University Press.
- Braithwaite, J, and T Makkai. 1991. "Testing an Expected Utility Model of Corporate Deterrence." *Law and Society Review* 25: 7.
- Brown, A. J., David Lewis, Richard E. Moberly, and Wim Vandekerckhove, eds. 2014. *International Handbook on Whistleblowing Research*. Edward Elgar.
- Burnett, John. 1979. *Plenty and Want: A Social History of Diet in England from 1815 to the Present Day*. 2<sup>nd</sup> ed. Scholar Press
- Coglianesi, Cary, and Evan Mendelson. 2010. "Meta-Regulation and Self-Regulation." In *The Oxford Handbook of Regulation*. Edited by Robert Baldwin, Martin Cave, and Martin Lodge. Oxford University Press.
- Darby, Michael R, and Edi Karni. 1973. "Free Competition and the Optimal Amount of Fraud." *The Journal of law and economics* 16 (1): 67.
- de Vroom, Bert. 1985. "Quality Regulation in the Dutch Pharmaceutical Industry: Conditions for Private Regulation by Business Interest Associations." In *Private Interest Government: Beyond Market and State*. Edited by Wolfgang Streeck and Philippe C. Schmitter. SAGE Publications.
- Etienne, Julien. 2015. "Different Ways of Blowing the Whistle: Explaining Variations in Decentralized Enforcement in the UK and France." *Regulation & Governance* 9: 309.
- Gawron, Jana-Christina, and Ludwig Theuvsen. 2012. "Agrifood Certification Schemes in An Intercultural Context: Theoretical Reasoning and Empirical Find-

ings.” In *Food Chains: Quality, Safety and Efficiency in a Challenging World*. Edited by George Baourakis, Prodromos Kalaitzis, and Konstadinos Mattas. Routledge.

Grabosky, Peter N. 1995. “Using Non-Governmental Resources to Foster Regulatory Compliance.” *Governance* 8 (4): 527.

Hancher, Leigh, and Michael Moran. 1998. “Organising Regulatory Space.” In *A Reader on Regulation*. Edited by R. Baldwin, C. Scott and C. Hood. Oxford University Press.

Hood, Christopher. 1983. *The Tools of Government*. London: Macmillan.

Hood, Christopher, and Helen Margetts. 2007. *The Tools of Government in the Digital Age*. 2<sup>nd</sup> ed. Palgrave Macmillan.

Hood, Christopher, Henry Rothstein, and Robert Baldwin. 2001. *The Government of Risk: Understanding Risk Regulation Regimes*. Oxford: Oxford University Press.

Howlett, George. 2013. “Unannounced Audits.” <http://safefood360.com/unannounced-audits/>.

Huang, Yasheng. 2008. *Capitalism with Chinese Characteristics: Entrepreneurship and the State*. Cambridge University Press.

Kagan, Robert A. 1989. “Editor’s Introduction: Understanding Regulatory Enforcement.” *Law & Policy* 11 (2): 89.

Kalfagianni, Agni, and Doris Fuchs. 2015. “The Effectiveness of Private Food Governance in Fostering Sustainable Development.” In *The Changing Landscape of Food Governance: Public and Private Encounters*. Edited by Tetty Havinga, Frans van Waarden, and Donal Casey. Edward Elgar.

Ko, Kilkon, John Mendeloff, and Wayne Gray. 2010. “The Role of Inspection Sequence in Compliance with the US Occupational Safety and Health Administration’s (OSHA) Standards: Interpretations and Implications.” *Regulation & Governance* 4 (1): 48.

Lawrence, Felicity, Andrew Wasley, and Radu Ciorniciuc. 2014. “Revealed: The Dirty Secret of the UK’s Poultry Industry.” *The Guardian*, July 23, 2014. <http://www.theguardian.com/world/2014/jul/23/-sp-revealed-dirty-secret-uk-poultry-industry-chicken-campylobacter>.

Li Shuming. 2014. “沃尔玛解聘举报员工，该有人管管 (Wal-Mart Dismissed Four Whistleblowers).” *检察日报*, September 18, 2014, 4.

Liu, Peng, and William McGuire. 2015. "One Regulatory State, Two Regulatory Regimes: Understanding Dual Regimes in China's Regulatory State Building Through Food Safety." *Journal of Contemporary China* 24 (91): 119.

Liu, Yang, Feiyan Liu, Jianfang Zhang, and Jianbo Gao. 2015. "Insights into the Nature of Food Safety Issues in Beijing Through Content Analysis of an Internet Database of Food Safety Incidents in China." *Food Control* 51: 206.

Lochner, Todd, Dorie Apollonio, and Rhett Tatum. 2008. "Wheat from Chaff: Third-Party Monitoring and FEC Enforcement Actions." *Regulation & Governance* 2 (2): 216.

Luhmann, Niklas. 2000. *The Reality of the Mass Media*. Translated by Kathleen Cyoss: Stanford University Press.

Malmstrom, Frederick V., and David Mullin. 2014. "Why Whistleblowing Doesn't Work." *Skeptic* 19 (1):30.

Marx, Axel, and Dieter Cuypers. 2010. "Forest Certification as A Global Environmental Governance Tool: What is the Macro-effectiveness of the Forest Stewardship Council?" *Regulation & Governance* 4 (4): 408.

Moran, Michael. 2003. *The British Regulatory State: High Modernism and Hyper-Innovation*. Oxford University Press.

Nakagane, Katsuji. 2009. "SOE Reform and Privatization in Transition: China in Comparative Perspective." In *Transition from Socialist to Market Economics: Comparison of European and Asian Experiences*. Edited by Shinichi Ichimura, Tsuneaki Sato and William James. Palgrave Macmillan.

O'Rourke, Dara. 2003. "Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring." *Policy Studies Journal* 31 (1): 1.

Overdevest, Christine, and Jonathan Zeitlin. 2014. "Assembling An Experimentalist Regime: Transnational Governance Interactions in the Forest Sector." *Regulation & Governance* 8 (1): 22.

Rothstein, Bo. 2015. "The Chinese Paradox of High Growth and Low Quality of Government: The Cadre Organization Meets Max Weber." *Governance* 28 (4): 533.

Sandman, Peter M. 1993. *Responding to Community Outrage: Strategies for Effective Risk Communication*. AIHA Press.

Scott, Colin. 2001. “Analysing Regulatory Space: Fragmented Resources and Institutional Design.” *Public Law* (Summer): 329.

Scott, Colin. 2012. “Regulating Everything: From Mega- to Meta-Regulation.” *Administration* 60: 61.

Shi Jianlei. 2015. “食品厂员工拍照举报车间 公司将其诉至法院 (Employee Who Blew the Whistle was Sued by his Employer).” 北京晨报. <http://finance.chinanews.com/sh/2015/11-05/7606514.shtml>.

Skinner, Mark W., Alun E. Joseph, and Richard G. Kuhn. 2003. “Social and Environmental Regulation in Rural China: Bringing the Changing Role of Local Government into Focus.” *Geoforum* 34 (2): 267.

Smith, Rodney. 2014. “Whistleblowers and Suffering “ In *International Handbook on Whistleblowing Research*. Edited by A.J. Brown, David Lewis, Richard Moberly, and Wim Vandekerckhove. Edward Elgar.

Stigler, George J. 1961. “The Economics of Information.” *The Journal of Political Economy* 69: 213.

Tong, Jingrong. 2011. *Investigative Journalism in China: Journalism, Power, and Society*. London/New York: Continuum.

Vaale-Hallberg, Marie. 2015. “Self-Regulatory Regime: Experiences So Far.” *European Food & Feed Law Review* 10 (1): 57.

Verbruggen, Paul. 2014. *Enforcing Transnational Private Regulation: A Comparative Analysis of Advertising and Food Safety*. Edward Elgar.

Verbruggen, Paul, and Tetty Havinga. 2015. “Food Safety Meta-Controls in the Netherlands.” *European Journal of Risk Regulation* 6 (4): 512.

Vibert, Frank. 2014. *The New Regulatory Space: Reframing Democratic Governance*. Edward Elgar.

Wahl-Jorgensen, Karin, and Joanne Hunt. 2012. “Journalism, Accountability and the Possibilities for Structural Critique: A Case Study of Coverage of Whistleblowing.” *Journalism* 13 (4): 399.

Wang Li. 2010. “作为行政手段的举报奖励制度研究 (Bounty Schemes as an Administrative Measure).” *浙江学刊 (Zhejiang Academic Journal)* 6: 145.

Wright, M, G Palmer, A Shahriyer, R Williams, and R Smith. 2013. "Assessment and Comparison of Third Party Assurance Schemes in the Food Sector: Towards A Common Framework." In *Final Report for the Food Standards Agency CR2435 R2 V8*.

Wu, Jinglian. 2009. "China's Transition to a Market Economy: How Far across the River?" In *Transition from Socialist to Market Economics: Comparison of European and Asian Experiences*. Edited by Shinichi Ichimura, Tsuneaki Sato, and William James. Palgrave Macmillan.

Yang, Lijie, Yongzhong Qian, Chen Chen, and Fang Wang. 2012. "Assessing the Establishment of Agro-Food Control Systems Based on A Relevant Official's Survey in China." *Food Control* 26: 223.

Zhou Li'an. 2014. "行政发包制 (Administrative Subcontract)." *社会 (Chinese Journal of Sociology)* 34 (6): 1.

Zhang Zhiyuan. 2013. "食品安全有奖举报制度之法理基础 (The Legal Rationales behind Bounty Schemes in Food Safety Regulation)." *北京行政学院学报 (Journal of Beijing Administrative College)* 2: 89.