Governing China’s food quality through transparency: A review

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In coping with food quality problems, China relies heavily on state institutions, such as laws and regulations, governmental standards and certification, and inspections and enforcement. Recently, transparency (or information disclosure) has been introduced in China’s governance framework to cope with its growing food quality and related sustainability problems. This article investigates to what extent and how China’s transparency institutions and practices regarding food production and products play a role in governing food quality and safety. Four forms of food chain transparency are distinguished and assessed: management transparency, regulatory transparency, consumer transparency and public transparency. It is concluded that in China food chain transparency is still in its infancy with respect to governing domestic food production and product quality and safety, and that only with respect to global (export) food chains transparency and accountability put some pressure on agro-food chain actors to improve their performance with respect to food quality and sustainability. By the same token furthering transparency on food quality is desperately needed as the state’s food management and control system alone proves not capable to provide safe food that is credible and trusted by domestic consumers.© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Over the past two decades China has been confronted with an increasing number of reported food quality incidents, related to domestic as well as to international markets. Some of the most well-known are melamine in domestic baby milk, waste oil resold as cooking oil, significant pesticides residues in wine (Yang, 2013),
aquaculture products that exceed EU and US heavy metal and pesticide standards (Roth, Tsay, Pullman, & Gray, 2008), high levels of hormones in meat, and large concentrations of pesticides on fresh vegetables. In 2007 Xinhua News Agency reported that over a six months period more than 60,000 fake food cases had been reported, more than 15,500 tons of substandard food was confiscated and 180 food manufacturers were caught making substandard food or using inedible materials for food production (quoted in Veeck, Yu, & Burns, 2010: 223).1 These food quality problems directly relate to human health via food intake, and indirectly affect human health through the degradation of the quality of (rural) life where (ingredients of) food is being produced and processed. The intensification of China’s agricultural and food production has affected rural life through among others non-point source pollution (nutrients, pesticides, pharmaceuticals), point source pollution by intensive fish/livestock farms and (often small; Xue & Revell, 2009) pesticides and food processing industries (He, Zhang, Mol, & Lu, 2014), land degradation, and excessive water extraction. As a consequence, China faces food quality and rural environmental sustainability crises, experiences major economic losses (among others through export bans, food poisoning, lost productivity of agricultural land, high chemical inputs in crop production) and witnesses low international but also domestic public and consumer trust in China’s food production system (Chen, 2013; Cheng, 2012; China Customer Association, 2006; Grunert et al., 2011; Yamei et al., 2008; Zhejiang Consumer Association, 2009).

1.1. China’s changing food system

China’s food system has changed over the past two and a half decades “from a predominantly state-regulated food system that was bounded by season, location and traditional taste to a much expanded food supply that offers larger quantity and variety year round and is increasingly exposed to global market forces” (Veeck et al., 2010: 222). The deregulation of agricultural production, the privatization of processing and trading, the production for export markets, as well as the entering of hypermarkets and other foreign direct investments in China’s food system have dramatically changed the food system and its environmental and health profile, for consumers and primary producers alike. While in the past, freshness, safety and quality of food was assessed through physical inspection of food by consumers based on simple rules and markers, today’s food system in China requires more advanced assessment institutions. Triggered by the changing nature of its food system, the 2001 membership to the WTO, a mounting pressure of public and international) customers, consumers, the public and state agencies. Examples are corporate social responsibility systems, private or third party food standards and certification systems, and value chain information systems. Often these public and private institutions are related and linked, and mutually condition, support and strengthen each other.

1.2. Transparency in food systems

In advanced market economies one of the most recent innovations in these public and private governance institutions for quality and sustainability in food products and production has been the development of transparency regimes. Transparency, loosely defined as the disclosure of information, has been developed and implemented in food systems in OECD countries to (i) govern the quality and sustainability of agro-food, and (ii) to increase public accountability and consumer trust in food products, production and provisioning. Transparency thus involves the disclosure of information that was earlier monopolized by (public and private) food producers/traders, which becomes now available for, among others, regulatory/inspection agencies, consumers and the wider public. For a long time, advanced transparency regimes were largely impossible in China—in general as well as in relation to food safety and sustainability. This was mainly because of the less technically and organizationally advanced nature of food information and monitoring systems; low interests in and importance and priority given to sustainability and quality of food by public and private actors; an logic of information distortion between different government levels and agencies and an absence of information verification; and limited participation of independent (organized) consumers and citizens in information disclosure. These circumstances seems to be changing somewhat lately in China, illustrated for instance by issuing the 2008 Open Information Regulation (Zhang L, Mol, He, & Lu, 2010), the rapid implementation of online real-time air quality information disclosure in over 130 Chinese

1 Xue and Zhang (2013) show that the large majority of reported incidents of acute foodborne illness in China are related to bacteria (53.3%), man-made chemicals (25.8%, especially nitrite and pesticides) and plant toxins (7.8%, especially PHA).

2 Especially among middle class families with young children, families with health problems, overseas returnees and foreigners (also from Taipei and Hong Kong), and young and white collar workers (ITC, 2011; Shi et al., 2011a).
cities, the increasing possibilities for media reporting on environmental pollution, and the recent unprecedented disclosure by the Guangdong government that 28% of the soil in the Pearl River Delta region was heavily polluted with heavy metals.\(^3\) It remains unclear whether and to what extent this forecasts a ‘transparency turn’ in China, as there remains much secrecy, monopolization and distortion of information in China. But these hopeful signs of some change do open new windows of opportunity for the public and private governance of food quality.

In this article I analyze information disclosure in China’s food production and consumption system, with two objectives: to assess the current contribution of transparency in governing quality and sustainability of food; and to identify how information disclosure can be advanced in this regard. This research mainly relies on a review and secondary analysis of existing studies and literature, complemented with primary data collected through reports, public data bases and the media/Internet. The next section conceptualizes transparency and how it can contribute to food quality governance. Subsequently, Sections 3—5 investigate different forms of information disclosure in China’s food production and consumption. The last section discusses ways forward in China’s food transparency, as well as potential problems and limitations.

2. Transparency in agrofood value chains

Transparency is high on the public, political and research agendas in national and global environmental politics and governance. Roughly defined as the disclosure of information, transparency is particularly prominent in the field of environment and sustainability, although it is certainly not limited to this field. Transparency around sustainability controversies is usually scrutinized, analyzed and assessed against two sets of promises. First, transparency policies and practices are assessed against normative criteria related to democracy, participation, accountability and right-to-know. Transparency is then believed to empower ‘captive’ and powerless citizens and consumers against the more powerful actors and organizations through reducing information asymmetries, enabling more equal participation around sustainability controversies, and enhancing accountability of the powerful actors. Second, transparency policies and practices are scrutinized against substantive promises of improving sustainability or more effective environmental governance. Transparency is then interpreted as a form of environmental ‘governance by disclosure’, where disclosing is a governance act that has substantial outcomes in terms of sustainability improvements (cf. Esty, 2004; Mol, 2006). Hence, throughout the literature transparency has positive undertones: the more transparency, the better for sustainability and for balancing power.

2.1. Emergence of transparency

The origins of transparency are to be found in earlier right-to-know movements, legislation and practices in the 1960s and 1970s, particularly in the US and other advanced industrialized democracies. The 1990s have shown three major developments in transparency developments. First, over the last two decades transparency practices and developments in environmental and sustainability politics have started to spread beyond the advanced industrialized economies to other nations and localities (Florini, 2007; Mol, 2006, 2008), among which China and Southeast Asia (Mol, 2009; Scott, Vandergeest, & Young, 2009; Tan, 2014; Zhang X., Zhang, Liu, Fu, & Mu, 2010). Transparency is slowly becoming part of China’s government reform (Xue & Liu, 2012), also to ensure government’s credibility and trust (He, Mol, & Lu, 2012). But there is of course still a road to travel before the emerging transparency regime in China equals those of advanced industrial economies.\(^4\)

Second, and less noticed, the nature of transparency changed. Initially (environmental) information disclosure entailed place-based and state-organized systems facilitating the right-to-know about local environmental polluting firms. More recent transparency systems are placeless (attached to transboundary flows of commodities), organized increasingly by private/nonstate actors (although more than incidentally backed by states; Auld & Gulbrandsen, 2010) and focusing on environmental improvements (rather than only pollution/extraction). Examples are information disclosure of organic, green or otherwise sustainable fish, wood and agrofood production and products. Transparency becomes then detached from places and part of wider (also transboundary) markets, networks and flows.

Thirdly, a “new chapter of the transparency story” (Hood, 2011: 635) has emerged in which transparency has lost its innocence (Mol, 2014a) and has become subject to debate. Transparency is no longer automatically and always linked up with democracy (by empowering oppressed citizen-consumers) and environmental improvements. Transparency is also becoming a functional element of powerful state and economic systems and hence not always evaluated positively (Gupta & Mason, 2014; Tan, 2014). Hence transparency-in-practice should be judged on its merits: transparency of what, for whom, and by whom.

Food production and product transparency falls into this new ‘placeless’ form of transparency. Food value chains are increasingly confronted with voluntary and mandatory demands to disclose information on the sustainability and health qualities of products and production processes. Recently a blossoming can be seen of new infrastructures and intermediaries/powerbrokers that facilitate, translate, certify, interpret and articulate information to make

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\(^{4}\) China received assistance from foreign countries, NGOs, companies and international organizations in advancing transparency, also in the field of food quality. Examples are the Green Watch program (World Bank assistance), the IPE air pollution disclosure (NRDC assistance), and food traceability systems around the Olympics (US FDA and Atlanta authorities).
it available and useful for different actors inside and outside food value chains. This emerging transparency in agro-food value chains only partly overlaps with conventional ‘place-based’ transparency of pollution/extraction. Transparency of place-based activities is mainly related to disclosure of information for civil society and state control, while ‘placeless’ value chains transparency is also articulated by and for economic actors.

2.2. Value chain transparency typology

With respect to transparency in value chains four ideal types of transparency can be distinguished, which in practice often mix (Table 1; Mol, 2014b). Traceability in value chains has been initially related to logistics, total quality management of chains and products, and verification of product specifications. As such it refers to restricted transparency for a limited number of economic actors in value chains, primarily motivated through economic interests. This restricted ‘management-transparency’ has its origins in management sciences and logistics and is not directed at—or does it involve—citizen-consumers or public authorities.

A second type of transparency in value chains relates to requirements of public authorities following policy and legislation on for instance food quality and product requirements, such as in the EU tracking and tracing policies. Here public bodies and authorities ‘demand’ the disclosure of information along the value chain for regulators and inspectors.

A third and wider ideal type of transparency in value chains involves disclosure of production and product information related to (claims of) health, sustainability and value ‘additionality’ through—public or private—labeling, certification and product information systems. Here transparency is meant to disclose information for consumers and (public and private) certification bodies, and it is strongly associated with the consumerist turn and what some call an alternative (food) economy (Glin, Mol, & Oosterveer, 2013). Organic, green, fair trade, healthy and all kind of other food product and processing claims are articulated in standards, disclosed in certifications, labels and information systems, and aimed at price premiums and niche market competitiveness. That is labeled ‘consumer-transparency’.

Finally, value chains are involved in what can be called public transparency, where information on (the health and sustainability of) production processes and products are disclosed in the wider public domain often through the (old and new) media. The aims are to publicly legitimate production and products (a ‘public license to produce’), to safeguard reputational capital of chain actors, to publicly defend claims of health and sustainability, and to gain a competitive advantage. Here claims by value chain actors, by regulators and by certification bodies that certify and health and sustainability claims are scrutinized by the wider public, (consumer and environmental) NGOs and the media in the public domain.

In all four ideal types of value chain transparency, disclosure and exchange of information can be—and is—applied to safeguard and improve food quality and sustainability in complex value chains and networks (Wognum, Bremmers, Trienekens, van der Vorst, & Bloemhof, 2011). But especially in the latter two forms, transparency is also motivated through normative claims on the right-to-know, counter-veiling powers and larger participation of and accountability to citizen-consumers in (agrofood) value chains.

3. Consumer transparency in Chinese agro-food value chains

How is transparency on food currently being developed and implemented in China? The most evident and visible way how in China transparency developments (aim to) contribute to food quality and sustainability is via consumer transparency. Hence, in this section I will start analyzing and assessing developments in China’s consumer transparency regarding food, and will subsequently turn to the other forms of food value chain transparency.

Disclosure of information to consumers on food quality and sustainability can take two basic forms: (i) reducing value chain complexities and hence communicating information on food production and product quality more directly from producers to consumers; and (ii) the introduction of abstract labeling and certification systems that communicate trustful information of food quality and sustainability through the value chain to consumers. I elaborate on both basic forms.

3.1. Face-to-face transparency

The distrust of Chinese urban middle class consumers in the quality of conventional food, and in the conventional (food testing, inspection, certification) institutions that should safeguard this quality, has resulted in the emergence of new—less complex, alternative—food provisioning schemes in China. The new schemes have a larger transparency to consumers through direct (personal) contacts and information exchange between food producers and food consumers. In 2013 the following new food provisioning schemes could be identified:

- at least 100 Community Supported Agriculture farms exist throughout China, including in Beijing, Qingdao, Shanghai, Chongqing, Xian, Henan and Tianjin (e.g. Shi, Cheng, Lei, Wen, & Merrifield, 2011a). The Little Donkey Farm near Beijing, established in 2008, is the best known CSA scheme in China (see Shi, Cheng, Lei, Wen, & Merrifield, 2011b);
- farmer cooperatives or groups of farmers sell fresh vegetables/fruits directly to, among others, individual supermarkets (in all major cities), restaurants, company canteens (e.g. eastern region, Chongqing and Cendu), and university canteens (in among others Shanxi, Shaanxi, Chongqing, Chengdu, Changsha, Beijing);
- mobile markets for fresh vegetables exist, among others, in Beijing, Chonqing, Gansu, Hubei, Jiangsu;
- the majority of cities have residential district-based vegetable outlets run by farmers;
- the majority of major cities have farmers markets (e.g. Beijing, Shanghai, Guangzhou, Hangzhou and Nanjing) (Liu, Kerr, & Hobbs, 2012);
- pick-your-own farms and vegetable box schemes have recently emerged in a few cities in eastern China.

These and similar initiatives provide consumers and customers with more direct information on producers, producing methods and product quality. This strengthens consumer/customer trust in safe food, contributes to the supply of healthy vegetables, fruit, dairy products (and sometimes even meat) to consumers, reduces rural non-point source pollution (by pesticides and chemical fertilizers) and biodiversity loss, and increases farmers’ incomes. They do so through direct transparency and accountability between producers and customers/consumers, without much assistance of state agencies in food quality and safety, food certification bodies, or larger distributors and retailers in the food chain.

However, these schemes are rather small scale and localized, they make use of face-to-face interactions and interpersonal trust relations, and work especially for primary production commodities and less for intensively processed food products. These schemes will run into their limitations if they are to be enlarged to serve more (or the majority of) urban food consumers regarding their entire food consumption. Larger volumes, larger distances and more processing steps will make face-to-face interactions, personalized trust and direct transparency between producers and
consumers difficult. It will require the introduction of other, less personalized and more institutionalized, transparency and accountability arrangements to secure consumer trust in safe food and to improve environmental sustainability in food production.

3.2. Transparency through abstract systems

In this respect, the increased production of and domestic market demand for public and private labeled and certified safe food is a second important transparency development in China. Systems of food labeling and certification have become quite common in OECD countries over the past two decades to inform and mobilize consumers. In China, safe food is usually understood as the common denominator of hazard-free, green and organic food.5 Safe food has seen a rising domestic market demand over the last decade (ITC, 2011; Liu, Pieniak, & Verbeke, 2013; Vernooy, 2012), and various studies indicate that Chinese consumers are even willing to pay a premium for safe food (Wu, Xu, & Gao, 2011; Zhang, Bai, & Wahl, 2012). Consumer research on safe food products in China show that consumers buying labeled food trust the label, concern about human health, have usually higher incomes and education, but are not very much motivated by environmental protection (Liu et al., 2013; Yin, Wu, Du, & Chen, 2010). While consumers use television, newspapers, and relatives and friends as sources of information on safe food, they especially trust information from the government, specialized institutions (such as certification and academicians) and the mass media. Their knowledge on the details behind and the differences of the three labels (hazard-free, green and organic) in terms of food quality, safety and environmental protection is rather poor (Liu et al., 2013). This is also not further facilitated by the fact that there are different organic labels in China.6 Evidence from other countries suggest that multiple labels and certification institutions creates consumer confusion and undermines consumer confidence in organic food (Thrøgersen, 2010). While in general Chinese consumers have positive attitudes towards (the taste, healthiness, quality of) safe food (Liu et al., 2013), there is also widespread distrust about the quality of this food and its certification labels, for instance on the absence of strict control of green food companies and on the exclusion of antibiotics, hormones and additives in organic meat (Yin et al., 2010; Zhang & Wang, 2009). Green and organic food labels come together with reports of ‘fake’ organic products, false labels, and bribing of inspection officials (Cheng, 2012; Veeck et al., 2010). And finally, very few products are actually covered by these safe food labels (Yang, Qian, Chen, & Wang, 2012). Hence, while there is a major potential for safe food in the Chinese market and the labeling and certification systems bring some transparency to the consumer, the existing consumer transparency regimes of safe food lack sufficient spreading, trust and accountability. These problems around safe food product labels and certificates have everything to do with an underdeveloped public transparency.

4. Public transparency in Chinese agro-food value chains

Public food transparency, that is the systematic disclosure of information on food quality and sustainability towards the media and the wider public, is far from institutionalized and routinized in China. Food quality and safety is increasingly emerging as topic in the Chinese core newspapers and media. An Internet search on ‘food safety’ in the Chinese Core Newspaper Database showed a steady increase of 277 hits in 2000 to over 28,000 hits in 2011 (with only an anomaly in 2008, arguably due to the Olympics; Yang, 2013). Using the Chinese search engine Baidu late 2012 gave almost 90 million results on food safety (Yang, 2013: 3), proving that food safety and food incidents are widely discussed on the Chinese Internet and thus are part of the public discourse. At the same time, this ‘public transparency’ is very disorganized, mixing all kinds of information of which the reliability and verification is questionable. Public reporting and thus public transparency on food quality and safety also does not take place systematically; it only happens around major scandals with severe health and environmental effects.7 And public information of food quality is distorted. Although there is no absolute ‘authoritarian informationalism’ (Jiang, 2010) or monolithic media control, state agencies and commercial powers actively try to intervene in and control this public and media transparency, for instance by suppressing and discrediting information/disclosures of others, framing food safety incidents, and preventing/suppressing the start of collective action.

More systematic, qualified and reliable reporting of food quality, sustainability and safety incidents by food chain actors remains restricted to and among professionals (see Xue & Zhang, 2013). Qiang, Wen, Jing, and Yue (2011) found and analyzed the content of 600 publicly available reports on food quality incidents from 43 websites, but very few of these had been noticed by public agents such as consumer organizations, environmental NGOs or official media.8

Public transparency on food quality and sustainability dysfunctions also because many food chain actors in China are not very responsive to any potential loss of reputation through disclosure and naming and shaming of unsafe and unsustainably produced food. Liu et al. (2012: 375) found that the threat of loss of reputation plays only a very small role in motivating (usually small) agricultural and fish farmers and processors to improve quality. These small producers and processors are predominantly focused on profit gains and are not deterred to cheat and ignore legal obligations to gain a cost advantage. Only a few larger and internationally operating food chain actors (processors, retailers, exporters) seem responsive, but especially following naming and shaming in the international arena. The absence of powerful, active and independent Chinese environmental and consumer NGOs working on food quality makes that reputational capital of misleading national

5 Data on organics are not very precise. In 2009 it was estimated that China had over 2 million hectares of organic agriculture (estimated 900,000 ha of cropland, 410,000 ha of aquaculture area and 760,000 ha of wild collection), around 4000 enterprises, a domestic market of over US$ 1-2 billion (ETC, 2011; Qiao, 2011) and an export market of around US$ 0.5–1 billion. Organic production has especially spiked from the mid 2000s, and was initially especially for export markets that changed recently.

6 To some extent different high-end supermarkets and product brands also ‘communicate’ food safety and trust through the value chain to final Chinese consumers (Liu et al., 2013; Veeck et al., 2010). The major difference with green and organic labels is usually the absence of references to environmental protection, although some supermarkets have started their own green products labels.

7 The motivation behind organic food consumption very much differs according to national culture. In some countries environmental protection is a major motivation of consumers to buy organic food, while in others the main or sole motivation lies in human health (Thrøgersen, 2010: 180–181).

8 The organic label of the China Organic Food Development Centre OFDC of the Ministry of Environmental Protection is the oldest (since 1994) and largest (in market share), and is also accredited byIFOAM.

9 Only recently China started to set up more systematic systems of information disclosure to the public (e.g. on polluting companies and on reporting of governmental agencies on environmental risks; Zhang L. et al., 2010; Tan, 2014), but not yet strongly and systematically on food.

10 Many reports (190 out of 600) mentioned food additives as the main food safety problem, while pesticides and heavy metals were jeopardizing food safety in only 6 and 28 reports, respectively. Most of these reports (92%) contained no information on the kind of human hazards involved.
and local food producers/processors is not really contested and challenged.\textsuperscript{11}

5. Regulatory and management transparency in Chinese agro-food value chains

5.1. Regulatory transparency

Within the framework of the 2009 Food Safety Law and a number of other basic (e.g. Agri-Food Quality and Safety Law; Law on Product Quality) and subordinate laws (administrative regulations of the State Council, ministries and food standards) attention have been given to systematic monitoring, record-keeping, information collection and inspection. This has strengthened control of food quality and safety from primary production to final consumption. There are now new and better (but still fragmented) possibilities of health, agriculture, quality supervision, industry and commerce, and food and drug authorities to inspect on site, take samples, review business records, confiscate material that violates standards and laws, and punish and even close down businesses (Jia & Jukes, 2013). Still, these food management and examination institutions face lack of qualified staff and unclear division of responsibilities (Ni & Zeng, 2009; Wu, Ye, Hu, Liu, & Cao, 2014).\textsuperscript{12} The state agencies responsible for regulatory oversight of food production and processing are often also too closely interwoven with food chain actors. Economic interests of local state officials, sectoral interests of the (partly state-owned) food sector, national interests in preventing collective dissent, and private interests of food inspectors that are bribed all prevent that regulatory transparency works.

Regulatory shortcomings are also related to information (disclosure). Although the 2009 Food Safety Law required the state to set up a unified food safety information release system, Jia and Jukes (2013: 242–243) argue that the information provisioning system of the state on food safety ill-functions. State agencies do not publish relevant information on inspections and supervision and do not enforce industries to provide relevant information. And if information from food chains does become available for regulatory agencies, more than incidentally it does not result in regulatory action nor in making this information widely available for consumers and the public. This is quite vital. Chinese citizens and consumers have high levels of trust in information provided by (national) governmental authorities, especially when it concerns environment, health and (food) risks (e.g. He, Mol, Zhang, et al., 2013; He, Zhang, Mol, Lu, et al., 2013; Liu et al., 2013; Zhang, D., Gao, & Morse, 2013, Zhang, L., He, Mol, & Lu, 2013). But with corruption, abuse of privilege, information secrecy and/or ill law enforcement this trust in governmental information will rapidly reduce (e.g. He et al., 2012; Sun & Wang, 2012), to be replaced by a loss of (domestic consumer and foreign import) credibility.

For export markets that are strongly under pressure following food safety incidents, quality guarantee labels have been introduced (first on seafood, eggs, rice, vegetables oil, wine and biscuits), not allowing packaged food to exit China unless the product has an inspection and quarantine stumble. This is meant to restore foreign trust in Chinese food, assist in product tracing, and facilitate product recalls (Liu et al., 2012: 381). Increased information exchange, procedural openness and international collaboration with governments and food authorities in export markets (US, EU, Japan) has also been part of that ‘regaining trust’ process.

As a result of this substandard regulatory performance, several independent international and third-party food inspection and testing organizations have emerged in China over the past years. Ortega, Wang, Olynk, Wu, and Bai (2011) found that Chinese consumers positively value third-party non-governmental certification programs on food safety and environment. And there are calls to set up a new independent food safety management authority for food safety supervision, not unlike what exists in the UK (e.g. Jia & Jukes, 2013: 243).

To allow for better monitoring and control in (food) chains—both during normal routines and in cases of food quality/safety incidents—western governments and major companies have made systems of tracking and tracing compulsory. In these systems products can be tracked and traced throughout different stages, from primary producer (farms) to final consumer Especially with the IT revolution tracking and tracing systems have expanded in the EU, US, Japan and other countries. In Europe, regulatory agencies increasingly request such tracking and tracing systems for (international) food chains; in China this is not yet the case. In 2004 the Chinese Ministry of Agriculture started the development of traceability systems for agri-food quality and safety, with trials in eight cities, among which Beijing and Shanghai. Since then some experience has been gained with product labeling information systems through automated computerized systems, bar code technology and/or integrated circuits. Also around the 2008 Olympics and the 2010 Shanghai Expo traceability systems have been experimented with and introduced (Zhang L. et al., 2010, Zhang X. et al., 2010). In developing these (pilot) traceability systems Chinese government institutions collaborated with foreign ones, such as those in the US, Japan and the EU.\textsuperscript{13} Although efforts have increased, up till now traceability systems are far from comprehensive, are introduced haphazardly, hardly cover SMEs, domestic food chains and western parts of China (Yang et al., 2012), and it will take quite some time before these are standard for each product. In China, the food safety system focuses still mainly on the quality and risks of the end-product, not of the entire value chain (Zhang, D. et al., 2013; Zhang L. et al., 2013).

5.2. Private sector management transparency

In advanced economies such tracking and tracing systems are also used for private product quality and safety control throughout a chain. The dominant value chain actor then puts requirements on other chain actors in terms of internal organization and management; availability of adequate systems and technical skills; unified standards in monitoring, measuring, verification and reporting; and relatively stable relations between chain actors. Many of these conditions are hard to fulfill in the agro-food chains in China, especially when smaller farms and smaller agribusinesses are involved (Yang et al., 2012; Zhang X. et al., 2010). Hence, management transparency in purely domestic agro-food value chains is not yet strongly developed. But this is different in international value chains or value chains that serve international retailers in China (e.g. Walmart and Carrefour; Kolk, Hong, & van Dolen, 2010). These larger multinationals introduce their own information and certification systems in China, often closely related to their brands. But also these corporate social responsibility and tracking and tracing systems focus especially on product responsibility and food safety, and not so much on labor and environmental issues.

So, what makes value chain transparency institutions in China also different from those in advanced market economies is the poor

\textsuperscript{11} Klein (2009) and Holdaway (2010) report on a few exceptions.

\textsuperscript{12} This might change for the better with the installment early 2013 of a new China Food and Drug Administration (Lam, Remais, Fung, Xu, & Sai-Ming Sun, 2013).

\textsuperscript{13} But at other instances, US FDA and USDA personnel have been denied visa and access to facilities in China.
active involvement of the private sector. This is not so much a characteristic of Chinese firms but arguably strongly caused by the absence of liability institutions and triviality of reputational capital (Liu et al., 2012). Both are related to the near absence of public and consumer transparency and an ill-functioning rule of law. Firms do not yet witness harsh public and market penalties if food quality/safety is put in danger; neither through liability systems nor through public reputation damage. Brands play a different role in contemporary China as they are less vulnerable for disloyal mass consumption (Eckhardt & Bengtsson, 2010), and firms easily change their name when they are ‘negatively branded’. In incidental and extreme cases the state can and does put severe penalties (up to the death penalty, in the case of melamine in milk). But there is hardly any sanctioning power of the market and the public in China. This contributes to a suboptimal and overburdened state food safety management system.

6. Conclusion: a shortcoming transparency infrastructure

China witnesses significant problems with safeguarding food quality and safety. In western advanced economies transparency institutions and regimes are important in governing food quality and safety. While for a long time China wrestled with transparency, more recently there is increasing room for information disclosure, and hence for using transparency in governing food quality/safety. In investigating the current actual role of transparency in China’s food quality governance, four transparency dimensions were analytically distinguished.

In reviewing these four transparency dimensions the overall conclusion is that the current transparency architecture in China’s food safety regime is ill-functioning and as such plays only a minor role in providing food quality and safety (see Table 2, last column). The shortcomings are to be found in all four transparency categories, in an interdependent way. For instance, consumer transparency lacks trust partly because it is not backed by reliable and accountable government and private market systems (among others through the absence of well-functioning tracking and tracing systems, and of independent third party control). But consumer transparency also fails because it is not linked up with public transparency and accountability. Public transparency does not work, due to a lack of reliable and public information from chain actors, public authorities and certifiers, the absence of liability systems, and the irrelevance of reputational capital. This means that for food quality and safety China still predominantly has to rely on regulatory state governance, with all the troubles of coordination problems, overburdening of state institutions and implementation failures, resulting in widespread consumer and public distrust in food quality.

But the route out of food quality problems goes via moving further into transparency, and not by sideling transparency as the Chinese government seems to do. The Chinese government has recently released the new 12th Five Year Plan on national food safety control systems (State Council, 2012). In this plan 10 key areas are identified for future work, to strengthen food safety for the future. But furthering transparency is not part of these ten key areas. The emphasis remains very much on a better internal coordination, organization and surveillance of the public food management and control system, and to educate people to reduce public food scares. The Chinese government ignores that enabling, enhancing and strengthening food transparency is a key precondition to improve food quality and safety, reduce food panic, safeguard food exports, and enhance trust and credibility in the government. Hence, this plan is a missed opportunity, with large consequences if not repaired.

This analysis of China’s food transparency also feeds back in, and adds to, the recent literature on transparency. Recently a wave of studies has been released emphasizing the perils and problems of advancing transparency, with respect to both its normative (more democracy) and substantial (more quality and sustainability) claims (e.g. various contributions in Gupta and Mason, 2014). These perils might be relevant for transparency developments and assessments in advanced western economies. But in China there is still a world to win in furthering transparency, both with respect to food quality and sustainability and for empowering consumers and citizens.

References


14 The ten areas are: laws, regulations and standards; surveillance and assessment; inspection and testing; processing control; export and import food safety control; emergency management; comprehensive coordination; scientific support; food safety integrity; education and training.