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Abstract

Risk and uncertainty have emerged as important concepts in the worlds of academic research, government policymaking and practical issues in businesses. The recent direction of interdisciplinary and hybrid approaches bring a new advancement to the research of risk regulation. In particular, the main academic debate in political science considers how government institutions manage risk issues, interact with other actors and thus produce different regulatory outcomes. Following this argument, even within a country, the existence of sectoral and regional variations in control styles (i.e. oversight, mutuality, competition, contrived randomness) and aggressiveness is not surprising. This proposed research project of food safety regulation in China aims to explain variations in risk regulatory regimes, and evaluate the ‘goodness of fit’ between various established theories on regulation and the empirical observation in a different context. Using an established analytical approach in regulation to go into a new territory with remarkably different institutional and political background can help refine the past theories and develop new one. By looking at the three control elements (i.e. information-gathering, standard-setting, and behaviour-modification), the nature of regulation of the food control system is explored comprehensively – covering both policy formulation and implementation. Four perspectives on explaining regulatory regime variations – private interest, opinion-responsiveness, institutional setting, and international obligation – are assessed accordingly.

This research prospectus is divided into five parts. First, it introduces the research topic, research question and significance of the study. The second part explains the analytical framework and theoretical expectations that conform to the basis of the project. In the third section, research design and methodology are discussed. In the final part, the preliminary finding is discussed.

I. Research background, question and significance

Risk and uncertainty have emerged as important concepts in the worlds of academic research, government policymaking and practical issues in businesses. The regulation of risk encompasses all forms of state intervention in the market or social processes, in order to control potential adverse effects to society and human health (Hood et al. 2001). The recent direction of interdisciplinary and hybrid approaches bring a new advancement to the research of risk regulation. In particular, the main academic debate in political science considers how government institutions manage risk issues, interact with other actors and thus produce different regulatory outcomes. Whilst recent analysis has approached risk study through an interdisciplinary lens, some research gaps and limitations are yet to be further investigated. The main problems include neglecting the interaction effects of different factors on regulation; over-emphasising policymaking while leaving alone implementation analysis; overlooking the international forces on national regulatory policy; and disregarding the importance of local contexts. Besides, much of the previous literature on regulation has been developed and applied under the affluent democratic context with similar political and economic systems. However, risk regulation in authoritarian regimes and less developed regions has been under-researched.

Food safety in China has raised both local and international concerns in recent years. According to the Ministry of Health (MoH), there were 2,305 cases on serious food poisoning in China in 2004, involving 42,876 persons and among them 255 died.¹ The continuous outbreak of food scandals caught the public awareness within the country and also around the world. Meanwhile, the common reaction of both the local and international societies is to demand the Chinese government to impose stricter regulation on food safety. Facing these requests, the Chinese officials repeatedly emphasise their commitment in ensuring safety on food products. For example, in 2003, responding to food quality problems, the central government sought to re-centralise the management of food safety by creating another agency – the State Food and Drug Administration (SFDA)² – in order to coordinate food-related agencies. Various government departments claim that regulatory strategies and efforts have been improved and strengthened in recent years. Nonetheless, this proclaimed commitment has not been implemented in a uniform way. Evidence shows that regulatory regimes and their corresponding aggressiveness vary both sectorally and regionally – it is never the case that regulatory tool kits and control components are consistent for all food sectors among different regions in China. For example, for the regulation of agricultural products, persuasion or education are more frequently used. In contrast, the hybrid form of sanction and competition is the predominant control strategy used in the food manufacturing sector.

¹ Homepage of MoH

<http://61.49.18.92/publicfiles/business/htmlfiles/zwgkzt/pwstj/index.htm>

² Two of the SFDA divisions are especially dedicated to food safety regulation: Division of Food Safety Coordination and Division of Food Safety Supervision. Main duties of the Division of Food Safety Coordination include: to coordinate with other bureaus and agencies to devise and enforce the annual plan and other programs for food safety, to set unified food safety standards, to collect and analyse information on food safety, and to disseminate food safety information to the public. For the Division of Food Safety Supervision, it is empowered to design regulatory measures and means, investigate major food safety incidents, and coordinate campaigns to combat counterfeit foodstuffs.

Then, what are the factors affecting the variations of different regulatory strategy and style? This proposed project of food safety regulation in China aims to deal with this puzzle and evaluate the ‘goodness of fit’ between various established regulation theories and the empirical observation in a new territory – China. The proposed research question is: **‘Why do regulatory regimes vary in control tools and styles in different food sectors?’** By the cybernetic approach which looks into the three control components – standard-setting, information-gathering, and behaviour-modification, both levels of policy-making and policy-implementation can be explored. This comprehensive level of analysis is especially significant due to the great discrepancies between central policy-making and local policy-implementation in developing countries like China.

In a wider sense, food safety regulation can be understood as a kind of risk regulation. Risk is highly related to uncertainty and is technically defined as the probability of the occurrence of an event which has potential adverse effect. The study of risk regulation, particularly in developing countries, is emerging as an important topic in social science for the reasons stated below. First, as raised by Ulrich Beck in his influential book *Risk Society* (1992), modern society is organised in response to risk generated by modernisation – the scientific and technological development in the classical industrial society. Under globalization, risk is no longer a presupposed ‘latent side effect’ and is only limited to certain groups; instead, local risk can spread worldwide. At the same time, by the ‘boomerang effect’, risk displays an equalising effect among different class positions since no one can escape from the modern risk. Eventually, risk society turns to become a world risk society (Beck 1999), in which all societies face the same challenges of the second modernity.

Second, following the change in the risk society, the control of risk or uncertainty is emerging as a political issue. In the broad level, risk regulation encompasses all forms of state intervention in the market or social processes, which aims at controlling potential adverse effects to society and human health (Hood et al. 2001). However, for the government, the regulation of risk activities is never an easy and uncontroversial task. For example, the government has to consider the prolonged debate between lay-people and experts about risk acceptability (e.g. genetically-modified food disputes), deal with the crisis of trust towards them, and face the pressures from the interest groups, news media and the international society. Failure to regulate risk may lead to political outcome or even crisis. Take food risk (e.g. additives, contaminants and toxins) as an example, the government’s role is to intervene in food market and control potential harms resulting from food consumption. Its regulation is a complex issue, involving multidisciplinary areas and multilevel regulatory coordination. At the same time, policy coordination is influential because the food consumed at the end has gone through couples of farming, manufacturing and distribution processes. Facing these challenges, the study of regulation of risk is particularly crucial.

In general, viewing regulation from a new lens of controlling risk multiplies and expands the sources of regulation, and embraces both state and non-state actors (Hutter 2006). The study of risk regulation is important in the sense that it helps foresee the future consequences of human action, and more significantly, the way of controlling the various unintended consequences. It covers a wide range of multidisciplinary studies, including science (e.g. risk assessment), sociology (e.g. risk

perception), law (e.g. rule-making), politics (e.g. interest group lobby), and public administration (e.g. policy implementation). Besides, risk regulation study is not bounded to national level but extends to multi-national and international spectrums, getting transnational or supranational actors involved in it. In this way, the analysis of risk regulation has been considered as important and should cover several levels of analysis.

At the same time, this proposed research is significant in the following ways: in the theoretical aspect, regulatory theories need further development, especially in the field of regulatory styles and strategies. As will be shown in the following sections, Hood's four social basis of control in the grip/group cultural theory are combined with the three control components, and accordingly twelve tool kits of control are developed. Yet, the existing literature cannot answer the question why the regulators lean towards a worldview but not the others. The research gap here is that how political science explanations can be linked up with cultural theory; and in a wider sense, how cultural theory can be utilised as a new approach to public policy analysis (Lodge et al. 2008). On top of Hood et al.'s studies (1999, 2001 and 2004), this research attempts to do some foundation work on this approach and connect cultural theory with regulatory explanation in the field of political science.

Empirically, literature in regulation is partly built on work in food safety, and majorly on utility deregulation and re-regulation in the sectors of electricity and telecommunication. These utility sectors share the common feature of the market as monopolistic in nature. Even after the era of 'deregulation', competition is mainly among a few large enterprises within a region, while export and import of product are not common. The area under research is how transnational risk such as food risk is regulated beyond the national level and to the international spectrum. Compared with the utility industry, food sector is prominent in the sense that its market is much more competitive. With different policy environment, regulatory strategies adopted by regulators may vary. And within food safety regulation literature, there has been a considerable focus on the origins of the food and drug laws (for example, Schofield & Shaoul 2000), while only a few highlight the implementation level. Thus further research on this area is required to address this research gap.

Besides, theories developed to explain regulation are built up under the contexts of Western democracies. However, it is widely agreed that they may not be applicable in contexts with distinguished political system, economic condition and culture. This makes regulation in China an interesting case to study and it provides a different picture about how studies on regulation can be understood in a new way. Using an established analytical approach to go into a new territory with remarkably different context can help refine the past theories and develop new one. In the political-administrative aspect, China is singular in the sense that it is a socialist and developing country. Although policy making is strongly influenced by the Chinese Communist Party, the executive, legislative and judicial branches are increasingly emerging with more leading roles and identities. Overall institutional endowment is featured with weak administrative capacity, invalid independent judiciary, weak civil societies, and captured media. In the face of weak labour and consumer unions or other public interest groups, direct public participation in risk regulation is developing gradually as a way to build public trust (for the importance of citizens' trust on regulatory capacity, see Giddens 1990; Power 1997; Durant & Legge 2005). At the

same time, to cope with various policy challenges, policy learning has been one of the new directions in recent years. Under these distinctive political and social settings, regulatory explanations for Western democracies have to be improved to explain risk regulation in China adequately.

In the economic landscape, like other sectors, food industry in China was transitioned from public ownership to collective or private ownerships under various economic reforms since 1978. Alongside the radical transformation, the regulatory system has been improving gradually and a comprehensive and effective regulatory system is yet to be established. This arrangement is not uncommon for the less developed countries – as explained by Beck (1992), protecting economic growth and employment enjoys unchallenged top priority, and this is the rationale to keep the loopholes in prescribed regulations wide and their enforcement lax. In the international horizon, risk spreads worldwide under globalisation and its regulation is not bounded to national level but extends to multi-national and international spectrums, getting transnational or supranational actors involved in it. Particularly, after joining the WTO in December 2001, Chinese food market becomes more integrated into the global economy and food safety issue is coming under greater international scrutiny. There are growing pressures from other countries and multinational organisations to ensure that safety and quality of exported food are up to the international standards. All these make food regulation particularly an interesting case to look into, at local, national and international levels.

This proposed project pioneers this valuable but disregarded area of academic research, and contributes to further our understanding on risk regulation by exploring and assessing omitted variables in previous work in risk regulation. With this interesting case, our understanding on risk regulation can be put forward. In general, this proposed study can address the past research gaps by different levels of analysis, primarily of provincial level for information-gathering and behaviour-modification, plus national level of standards-setting in the context of international obligation. For the theoretical framework, in addition to Hood et al.'s three perspectives mentioned above, other factors will be brought in as value-added contribution: political and bureaucratic settings, local socio-economic conditions, and engagement in international obligations. As emphasised by some Chinese scholars working on regulation in other areas (Ma 2000; Wang et al. 2003; Ma & Ortolano 2000), these institutional settings and features should not be neglected when analysing policies in the Chinese context. Drawing lessons from previous studies about both Western countries and China, this proposed research will test various hypotheses developed by all these approaches in different cases, with their predictive power being evaluated and interaction effects being figured out. In this way, the literature on food regulation and regulation can be significantly improved.

II. Analytical framework and theoretical expectations

This section explains in details about what this research is exactly going to study, and from what perspectives it is analysed from.

Dependent variable

Control tools, styles and aggressiveness

To understand regulation from a cybernetic angle, Hood et al. (1999, 2001) suggest a comprehensive control theory perspective. According to them, for a regulatory regime to work, the control system in art or nature must by definition contain a minimum of the three components:

There must be some capacity for standard-setting to allow a distinction to be made between more and less preferred states of the system. There must also be some capacity for information-gathering or monitoring to produce knowledge about current or changing states of the system. On top of that must be some capacity for behaviour-modification to change the state of the system (2001: 23).

Standard is the ‘director’ element of the control process, which varies widely in explicitness (i.e. how far they were announced in advance and formula-bounded), reflexivity (i.e. how far they were imposed uniformly from the top), and stability (i.e. how far they were revised). Being the ‘detector’ in the control process, information has to be obtained in order to ensure the target is being controlled. Variations in the tool of information-gathering include inspection, audit, certification, authorisation, and mediation. The ‘effector’ component aims to change the unsatisfactory behaviour of the regulated. Tool kits include naming and shaming, prosecution, and termination of licenses. Indeed, behaviour-modification can be perceived as similar, if not identical to, regulatory enforcement – both of them are to influence the behaviour of the persons and institutions sought to be controlled. For example, the deterrence and compliance debate about enforcement argues that the compliance strategy aims to prevent harm from happening. Persuasion, discussion, and conversation are normally adopted as the tool kits, while their style is conciliatory in nature. On the other hand, deterrence is an approach to punish the law-breakers, while prosecution and sanction are usually the methods to prohibit the wrong-doing. According to Ayres and Braithwaite’s (1992) pyramid of sanctions and pyramid of enforcement strategies in Figure 1 and Figure 2 respectively, there is an escalation of enforcement from compliance (e.g. persuasion) to deterrence (e.g. penalty).

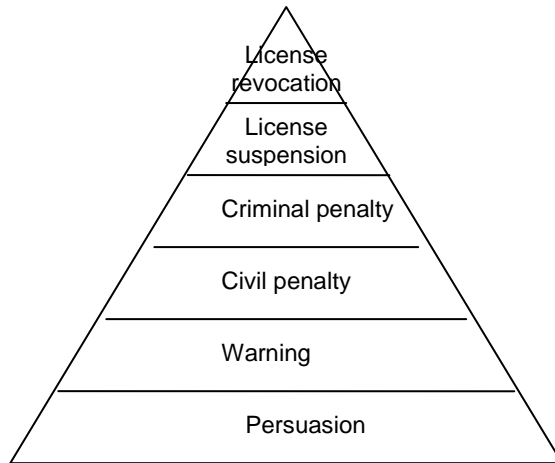


Figure 1: The sanctions pyramid

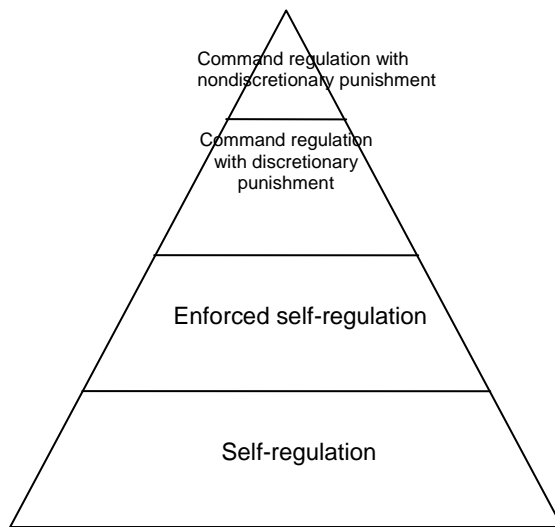


Figure 2: The enforcement strategies pyramid

The ‘control theory perspective’ is combined with different worldviews developed by the grid/group cultural theory in Hood et al.’s another study *Regulation Inside Government* in 1999. Grid/group cultural theory presents two dimensions of how human organisation is managed or regulated: grid and group (Hood 1998). ‘Grid’ denotes the extent to which our lives are circumscribed by conventions, rules or laws; while ‘group’ denotes the extent to which individual choice is constrained by group choice. This classification well demonstrates the debate in public management – grid represents the tension between rule-based and discretion; group argues whether the organisation should be organised in a communitarian or professional public service way. Combining the two organisational dimensions gives alternative polar worldviews (Table 1) – hierarchist, egalitarian, individualist, and fatalist.

		Group	
		Low	High
Grid	High	Fatalist	Hierarchist
	Low	Individualist	Egalitarian

Table 1: Four worldviews in grip/group cultural theory

And accordingly, risk regulation regimes in a cultural theory frame have four varieties (Table 2): oversight, mutuality, competition, and contrived randomness. From the cultural theory perspective, these variations in control style are the core difference between risk regulation regimes.

		Group	
		Low	High
Grip	High	Fatalist Control strategy: Contrived Randomness	Hierarchist Control strategy: Oversight
	Low	Individualist Control strategy: Competition	Egalitarian Control strategy: Mutuality

Table 2: Four control styles of regulation in grip/group cultural theory

Further integrating the grid/group cultural theory with the three genetic components of the control system discussed above gives the regulator’s twelve instruments in Table 3.

	Oversight	Mutuality	Competition	Contrived Randomness
Standard-setting	Hierarchical ordering	Participative	Developing through ‘natural selection’	Unpredictable/disorganised
Information-gathering	Subpoena-style	Network-style	Incentive-style	Lottery-style
Behaviour-modification	Response to authority	Exposure to mutual influence or persuasion	Quest to be high in a league	Pay-offs of action unpredictable

Table 3: A regulator’s took kit: twelve instrumentalities (Hood et al. 1999: 49)

These distinctions between oversight, mutuality, competition, and contrived randomness forms of control over individuals are the starting point of this project. To put the debate forward, another distinction is the degree of control aggressiveness between the four strategies – the four control styles display different degrees of control aggressiveness, measured in terms of the utility of the ‘benign big gun’ and the formality. Implied by the pyramids of sanctions and enforcement strategies (Table 1 and Table 2), since oversight emphasises the use of punishment and sanction and is more like the deterrence approach, it can be perceived as a kind of more aggressive control style. In contrast, mutuality stresses on the efficacy of persuasion and discussion as the control tool kits, it is relatively less formal and less aggressive. Meanwhile, for the control style of competition, the role of the regulator is relatively limited. Through market mechanism, the regulated industries will compete with each other and finally achieve compliance.

In sum, it is possible to classify different regulatory regimes in terms of their control style and the degree of aggressiveness, by using indicators such as the formality of rule and the utility of the ‘benign big gun’. Then, the next question to be answered is: why do regulatory agencies lean toward one regulatory style rather than

toward another? Using standard political science explanations to explain regulation based on the cultural theory can provide a new insight in the study of public policy analysis. For example, Hood et al.'s *Regulation Inside Government* (1999) uses the idea of 'relational distance' to explain why a certain strategy is used in the regulation inside the government. Besides, Hood et al.'s *The Government of Risk* (2001) compares how risks or hazards are regulated across nine different policy domains, and how variations among the regulatory regimes can be explained. Three shapers of regulatory regimes are identified: market-failure, opinion-responsive, and interest-driven. Hypotheses developed by these shapers are being tested in the nine policy domains, by which the predictive powers of the three competing theories are assessed. In addition, institutional inertia and features of the 'inner life' of regulatory organisations are used to explain the disparities between expected and observed findings. In general, the methodology notes of the two studies offer a detailed and comprehensive framework to conceptualise, operationalise and measure the variables in interest. But they did not explicitly incorporate the cultural theory perspective with political science explanations. On top of these two pieces of work, this study tries to do some foundation work to connect cultural theory with political science studies.

Independent variables

i. Private interest

Academic economists regard regulation as the product of interest group competition, and this thought has developed into the private interest theory of regulation. Stigler (1971) and Peltzman's (1976) theories of economic regulation explain who will receive the benefits or burdens of regulation, what form regulation will take, and the effects of regulation upon the allocation of resources. In general, their ideas are that regulation is acquired by the regulated industry and is designed and operated primarily for its private benefit – in the form of direct subsidy of money, control over entry by new rivals and retard of the rate of growth of new firms. In return, the regulated industries are prepared to provide votes and resources to political parties. Regulation then ends up being 'captured' by the firms which are supposed to be disciplined. Meanwhile, because of the collective action problem (Olson u 1971), concentrated industries with smaller group size normally bear lower cost of collaboration than the diffused ones. Therefore, they are more likely to be better organised and succeed in capturing the regulatory bodies. Overall, private interest theory suggests different actors involved in the regulatory space seek to maximise their self-interests and act accordingly.

Unfortunately, the empirical evidence on the causes and consequences of regulatory capture is scarce (Dalbo 2006: 220). Most of the literature that is concerned with regulatory capture has been developed in the context of utility regulation. Evidence involving corruption is broadly recognised as an indicator of regulatory capture. Nevertheless, corruption alone cannot exhaust the idea of regulatory capture, especially since evidence of corruption is difficult to gather and assess. Further effort to operationalise the concept of capture in other ways is necessary because this can help evaluate the explanatory power of the competing public interest and private interest theories.

Based on private interest theory and collection action problem discussed above, the following hypotheses are derived:

H1: Regulatory bodies are more likely to be captured in concentrated food sectors, thus aggressiveness of the control of these sectors tends to be lower

H2: Large scale enterprises have higher stakes (e.g. their control over employment, investment, and local economic development) in lobbying regulatory bodies than small household workshops as they enjoy privileged political status. Control aggressiveness tends to be lower and mutuality is more like to be used for these enterprises

Regulators also aim to maximise their self-interest in the regulatory process. For example, regulatory agencies in the local level may consider the contexts of the regulated industries, including their share of employment in the total labour force of the region and GDP share of the local economy. For example, Metz's study (1996) finds out that the economic benefits associated with risks appear to be a significant source of risk attenuation at the local level.

H3: In order to maximise local interest, control aggressiveness is lower for the food sector which plays a pivotal role in local economy and labour employment

ii. *Opinion-responsiveness*

The mechanism of opinion responsiveness is derived from the Social Amplification of Risk Framework (SARF) – regulation is a kind of ripple effect responding to crisis and public attention. Normally, the published news about dangerous or adulterated food is accompanied by demands for government correction. As a form of regulatory response to the external pressure, tighter enforcement or institutional change are expected. However, it should be noted that the media in China is largely controlled by the state. Though news coverage about food scandal is growing in recent years, to a large extent, censored local media may not be able to criticise the regulatory agencies freely. On the other hand, foreign media is not under the control of the Chinese Communist Party. Therefore, if food scandals are reported by foreign media in the international level, the central government in general is more active to respond. In sum, it is likely that foreign press may impose more pressure on national regulatory bodies.

H1: Aggressive control style and oversight are expected for foodstuffs suffering from serious scandals

H2: Control is even more aggressive when the food crisis is under extensive media exposure and public awareness

H3: Regulatory response is more active to food scandals covered by the international media than those exposed by local media only

iii. *International obligation*

Food risk crosses the broader and its regulation should not be restricted to local level. So the significance of looking beyond international level cannot be underestimated. Earlier research has considered the formation and implementation of multilateral agreements between countries, the activities of transnational organisations such as the OECD and EU, and the relationship between risk regulation and trade. Just as the case of food safety in China, to show international obligation and commitment, the government has signed various agreements with WTO, WHO and importing countries such as Japan, EU and the US. Understanding how international measures impose impacts on China's internal regulation enrich our pictures of regulation under the context of globalisation. Particularly, the relative importance of the nation state and global forces can be assessed.

H1: Control strategy is more formal and aggressive for foodstuffs which are export-oriented

iv. *Institutional settings*

In China, various regulatory bodies are involved in regulating food risk, these include: Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Commerce (MoC), Ministry of Science and Technology (MoST), State Food and Drug Administration (SFDA), the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), the State Administration for Industry and Commerce (SAIC), Standardisation Administration of the P.R. China (SAC), and Certification and Accreditation Administration of the P.R. China (CNCA). Basically, different regulatory agencies are assigned to control different sections of the food supply chain rather than different categories of food products. In other words, more than one regulatory body have to be involved in the regulatory process of a single food product, while sometimes there may be overlapping duties among them. For example, MoA is responsible for the regulation of primary agricultural products, AQSIQ for manufacturing and processing, AIC for circulation, MoH for food consumption and SFDA for general supervision, coordination and investigation into serious food safety accidents. The fragmented authority and regulatory turf battle among agencies can bring excessive enforcement, shirking, blame-avoidance, conflicting policy objectives, functional overlaps and underlaps, and inconsistencies. The missions of a single regulatory agency can also contradict to each other itself – for example, to further develop enterprises or the industry and to regulate them.

H1: Food sectors with more horizontal fragmented institutional design are having less coordination. Then the use of competition or hybrid form of control is more likely

III. Research design and methodology

This proposed research applies comparative case study as the methodology. By using the logic of comparison, it identifies the similarities and dissimilarities of regulatory regimes in various food sectors, and concludes how their respective contexts contribute to the differences. Besides, the method of process-tracing can help figure out the combination effect of different factors. To collect data, interviews were

conducted with regulatory officials in different departments in both state and local levels; regulatees in the two food sectors; local journalists who report on food scandals; and activists working in different pressure groups concerning food safety. Laws, rules, regulations, government documents, reports and media archives were reviewed for the understanding of the policy-making process and its evolution. Beyond the national level, international agreements or mandates about food trade were examined and other countries' views and attitudes towards food made in China were considered.

This project compares the regulatory regimes between two food sectors – agricultural products and manufactured food products – in a Chinese province. The selection of cases ensures that cross-sectoral similarities and differences are covered, and systematic variations across different regulatory regimes and regulatory contexts are distinguished. The variations of the two food sectors and the characteristics of Province A are summarised in Table 4 and Table 5 respectively.

	Agricultural products	Manufactured food
Local media coverage	Low/medium	High
International media coverage	Low	High
Industry concentration	Very low	Medium
Horizontal fragmentation of regulatory bodies	Low	High
International scrutiny	Low	High
Export amount (in 2005)	High (US\$3,302,000,000)	Medium (US\$1,922,470,000)

Table 4: Characteristics of the two food sectors

	Province A
Export amount (in 2005)	Very high (US\$2,074,597,906)
Number of publicly-owned manufactured food enterprises	Low
Autonomy from the Central government	Medium
Horizontal fragmentation of food regulatory bodies	High
News media coverage on food scandals	High

Table 5: Characteristics of Province A

With variations between cases, hypotheses about the aggressiveness and styles of their control regimes can be tested. For example, in terms of industry concentration, the agricultural sector disperses geographically among the huge population of peasants while the manufactured food industry is relatively dense in enterprises. According to the private interest perspective and collection action problem, the agricultural sector is less able to capture the regulatory bodies. On the other hand, large scale enterprises in the manufactured food sector have higher stakes in lobbying regulatory bodies as they enjoy privileged political status. These can be in the forms of their control over employment, investment, and local economic development. Following the logic of private interest theory, control aggressiveness tends to be lower for large enterprises or food sectors with large enterprises dominating the market. Besides, to show international obligations, control strategy tends to be more formal and aggressive for food sectors which are export-oriented – agricultural products particularly vegetables in this project. Meanwhile, the opinion-

responsive perspective predicts that control regime is more aggressive when the food crisis is under extensive media exposure and public awareness, as in this case the manufactured food.

The dependent variables – the three control components, their corresponding styles and aggressiveness, are studied mainly based on Hood et al.’s methodological notes summarised in Table 6, with examples included. These can help distinguish and measure different control styles.

	Oversight	Competition	Mutuality	Contrived Randomness
Standard-setting	Hierarchical ordering Example: entrenched non-negotiable rules	Developing through ‘natural selection’ Example: tension between contradictory demands	Participative Example: standards agreed by consultation with regulates	Unpredictable/disorganised Example: volatile or inscrutable standards
Information-gathering	Subpoena-style Example: obligatory returns	Incentive-style Example: yardstick competition	Network-style Example: exchange of information among professionals	Lottery-style Example: random selection or unannounced visits
Behaviour-modification	Response to authority Example: ability to prosecute or confer/withhold licences or certificates	Quest to be high in a league Example: ratings leagues or prizes for top performers	Exposure to mutual influence or persuasion Example: convincing case in debate/discussion	Pay-offs of action unpredictable Example: limitation of opportunism by uncertainty about future regime or career direction

Table 6: Regulator’s control tool kits – three control components combined with the four control strategies or styles (Hood et al. 1999: 49)

IV. Preliminary findings

This section discusses the preliminary findings of the study at this stage. While the impact of private interests is still under review, we can see how international forces affect the regulatory regimes for exported food products, and at the same time result in the establishment of a separated regulatory institutional-setting for specific inspection and examination. On the other hand, public perception is identified as one of the most important factors which direct regulatory priority. Yet, its sole impact is rather difficult to assess since the regulatory agents are able to guide and shape the media attention and hence, public opinion.

Media/opinion-responsiveness

The study finds out that the regulatory agents largely took seriously the public opinions and the media attentions on food scandals, including both the agricultural and manufactured food products. Their responses included: conducting risk analysis and assessments to the problematic foodstuffs, strengthening the inspection force in that particular area (whatever the results of the risk analysis were), communicating with the media, educating the public by workshop and public clarification, and requesting the experts to explain the scientific risk analysis results. Among these, expert explanations were perceived as the most useful tool because experts normally enjoyed more credibility and persuasion power in the eyes of the public. In this sense, the oversight type of control style is shown to be more useful when scandals raise public concern or cause public panic. Meanwhile, the regulatory agents also admitted that they sometimes imposed pressure on the media through the PRC Propaganda Department, which supervises and censors the local mass media. The regulatory agents want to ensure the media report the scandals positively and responsibly and do not bring public panic. In this sense, public perception was under the control of the regulators. However, the study also discovers that if media attention was raised upward to the international level, different outcomes could happen. Generally speaking, international media coverage about food scandal imposed much more appealing pressure on regulators, especially since the Chinese government devoted to show its credible commitment on assuring food safety. With the same reason, regulatory effort is expected to be biased in favour of export-oriented foodstuffs, which can be shown by the following discussion on exported food products.

These reveal the opinion-responsive perspective works well in explaining the food regulatory regimes in China. The oversight type of response to public perception on food risk is dominant; this includes strengthening the regulatory force, applying scientific risk analysis and inviting expert for explanations. At the same time, the mutuality tools are also alive, in the forms of educating the public and communication with the media. Yet, media attention and public opinions to some extent cannot be seen as a direct factor impacting on food regulation in China. Instead of affecting regulatory regimes in a single direction, the media is also being controlled and censored by the regulators and the local governments in the opposite direction. In short, their relationships are interdependent and interactive. Under this circumstance, regulators are sometimes controlling the agendas rather than responding to them, especially for serious food scandals which raise the national as well as the international concerns. Therefore, the pure impact of media/opinion-responsiveness on regulatory regimes could not be assessed easily and over-emphasised.

International Obligation and institutional setting

This study discovers that the choice of institutional setting can be affected by the force of international obligation. Therefore, this part tries to analyse their impacts together. First, the variation of the institutional setting for regulatory agents between exported and locally-consumed food is obvious. Exported food, including both the manufactured and agricultural products, is regulated by the China Entry-Exit Inspection and Quarantine Bureaus (CIQ), which are directly supervised by the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)

in the central level but not the local provincial governments. Interviews indicated that these bureaus did not enjoy discretion in law enforcement – they simply followed the laws, rules, and guidelines set by the central government as well as the standards of the importing countries. Guidelines and policy directions in the exported food domain are generally clearer, compared with those for local consumption food products. Variations in control components among different regions are not possible since all the CIQs are stationed organs directly designated by the central level authority. Under this structural setting, geographical discrepancies are not expected because the local governments are not possible to impose pressure on the regulatory bodies CIQs. As a result, CIQs are not obliged to take the local contexts into considerations such as the economy, employment and tax revenue of their governing areas. This can ensure the same set of standard is applied consistently in different regions across the country. What can be observed here is that exportation does not make any differences between provinces but between exported and locally-consumed food only. On the other hand, regulatory bodies involved in locally-consumed food (i.e. the Agricultural Bureau, Health Bureau, Bureau of Quality and Technical Supervision, and the Bureau of Industry and Commerce) are mostly the constituent parts of the local government. In other words, these regulatory bodies' direct head is the local government but not the central level ministries. Under this power structure, the budgeting, personnel management and task priorities are controlled or influenced by the local politics. From another point of view, since these regulatory agents are not the stationed agents designated by the central government, they are more able to take the local contexts into account and enjoy more flexibility in policy implementation and regulatory enforcement.

Another major disparity between exported and locally-consumed food is their inspection rate in the real practice level – every lot of exported products is inspected while locally-consumed food is just inspected by sampling. Once substandard products are discovered, the whole lot of product would be destroyed. Without the quarantine and inspection certificate issued by the CIQ, the lot of products would be unable to pass through the China Customs and exported to other countries. This measure is obviously more stringent than locally-consumed food. While facing limited regulatory resources, as claimed by the government, efforts are biased towards exported goods. This aims at avoiding international criticisms and blames towards Chinese products, and at the same time this can show the credible commitment of the Chinese government to respond to international demand.

All these institutional setting and daily measure can be perceived as a relatively stricter way of regulating exported food products, compared with food for local consumption. Meanwhile, based on the codification way of Hood's grid/group control theory, the control style of standard-setting in the regulatory regimes for exported products can be classified as the oversight one. This is mainly because concrete rules and standards are well-defined and are being followed, while discretion in the enforcement level is not likely to happen. To conclude, the impact of international obligation on regulatory regimes does not make main differences between the two food sectors – this does not match the initial prediction of the hypothesis. This is mainly because this study assumed that regulatory regimes would only vary between different food sectors but not within the same sector. But indeed goods for exportation are indeed regulated by another logic and mechanism, which is run independently from the traditional food regulatory regime. So, the next question

to be answered is: how were the export-oriented regulatory regimes being developed, and what were the factors leading to the establishment of another regulatory system separated from the traditional one?

To conclude, international obligation and the oversight style of control tools are correlated. International pressure pushed the Chinese government to formulate a regulatory regime for exported goods, while that regime is characterised by the deterrence form of enforcement. As for opinion-responsiveness, its impact is rather more complicated since the association between public opinion and the aggressiveness of the regulatory regime is interactive to each other. On the one hand, regulators reinforced the regulatory effort to the foodstuffs which suffered from scandals, and influenced the public perception by persuasion and education; on the other hand, regulatory agents would directly control the public agenda by media censorship. Under this circumstance, assessing the impact of media on regulatory behaviour would require more research effort.

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