

FOOD SAFETY POLICY COORDINATION IN THREE CHINESE CITIES

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Paper prepared for the Conference on 'Regulation in the Age of Crisis'
Third Biennial Conference of the Standing Group on Regulatory Governance of the
European Consortium for Political Research ECPR
and the Regulation Network
17-19 June 2010
University College Dublin

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ABSTRACT

Politicians make institutional choices for the delivery of public services, including the regulation of food safety, based on the incentive systems in which they operate. The incentives to manage agency problems (a manifestation of which may be poor coordination) vary from regime to regime. In mainland China the dilemma of serving multiple principals is almost entirely an internal (bureaucratic) affair. In Taiwan the problem of multiple principals is arguably more complex because politicians must win elections to stay in office. Both arrangements provide powerful but different sorts of incentives to manage food safety agency problems. In Hong Kong although the political executive is not elected, public opinion is also significant. Regime change in Hong Kong also impacted institutional choices. Based on the melamine tainted milk powder case exposed in 2008 the paper shows how regime differences impact the incentive system for politicians and thus their institutional choices for the coordination of food safety policy.

Introduction

Political executives choose among various institutional designs for the delivery of public services based on their calculation of benefit to themselves. In regulatory policy domains, politicians can choose more autonomous arrangements, such as an authority or independent commission or use more tightly controlled bureau-type agencies. The choices have consequences for the management of agency problems. In the case of food safety in Greater China (here including mainland China, Hong Kong and Taiwan) politicians have chosen more tightly controlled bureau-type agencies to regulate food safety. They manage agency problems through a variety of mechanisms. The incentives to manage agency problems (a manifestation of which may be poor coordination) vary from regime to regime. On the mainland the dilemma of serving multiple principals is almost entirely an internal (bureaucratic) affair. In Taiwan the problem of multiple principals is arguably more complex because politicians must win elections to stay in office. Both arrangements provide powerful but different sorts of incentives to manage food safety agency problems. In Hong Kong although the political executive is not elected, public opinion is also significant.

In this paper we focus on three provincial-level cities (Shijiazhuang [pop. 9.8 million], capital of Hebei province; Hong Kong [pop. 7.8 million], a provincial-level special administrative region of China; and Taipei [pop. 2.6 million], the administrative center of

¹ The authors gratefully acknowledge the support of the Hong Kong Research Grants Council in the preparation of this paper.

Taiwan arguably a provincial-level unit as well²). The three cities are characterized by various degrees of formal autonomy from the political center (Beijing), with Shijiazhuang having the least autonomy and Taipei the most, approaching the autonomy of an independent state. The range of autonomy has allowed the local political executives of the three cities varying degrees of freedom to design institutional arrangements to manage food safety. In formally more tightly controlled Shijiazhuang the political executive, faced with conflicting policy priorities imposed from the center and monitoring and supervision that comes mostly from the center, has relatively neglected food safety. In formally more autonomous Taipei, the political executive, faced with conflicting policy priorities thrown up both from the center and locally and strong monitoring and supervision by the public (including the media), has paid close attention to food safety. The political executive has paid particular attention as the policy domain of food safety has become intertwined with the very sensitive subject of ‘cross-strait’ relations and party politics in Taiwan. In Hong Kong, faced with conflicting policy priorities thrown up locally and some monitoring and supervision by the public (including the media), the political executive has paid considerable attention to food safety. To manage the multiple principal problems in Taipei, local politicians have centralized food safety institutions to manage agency problems. So, too, have politicians in Hong Kong. In mainland China, however, faced with mostly internal relatively weak pressures to reduce agency problems, politicians continue to rely on highly decentralized and fragmented institutional arrangements which have allowed them to pursue other goals, such as economic growth. We argue that regime type has a direct impact on the choice of institutional arrangements. The paper is based on archival research and interviews carried out in the three places with food safety officials, commercial operators, market managers, wholesalers, retailers, and NGOs from 2007 to 2009.

Theoretical considerations

We assume that actors are utility maximizers, where utilities may mean power, income, leisure, influence on policy, preferences and so forth. Although bureaucrats are assumed to be utility maximizers, following Downs we identify a range of bureaucratic behavior that goes from the completely self-interested to mixed-motive (Downs, 1966, 88). Even the most altruistic of bureaucrats, however, will ‘face a nearly overwhelming obstacle

² The population of the metropolitan area Taipei City, Taipei County, and Keelung County is 6.7 million. Taiwan’s sovereignty as an independent state is not widely recognized.

to exercising that inclination' (Downs, 1966, 110). As Downs observes, 'The specialization inherent in all bureaus tends to create pressures upon the occupant of almost every position to be an advocate, loyal to some particular bureau or bureau section' (Downs, 1966, 110). This loyalty places a premium on vertical communication. And because bureaus are also utility maximizers, they come into conflict with other bureaus as each seeks to expand its turf (Downs, 1966, 110). This situation fits the cases we discuss below. To overcome compartmentalization within government politicians have sometimes re-organized, especially centralized, to improve coordination.

We use principal-agent theory to examine the incentives for coordination within government. According to agency theory, the relationship of principals and agents is one of conflicts of interest and information asymmetry (Moe, 1984; Horn, 1995; Frederickson and Smith, 2003, 185-207; Peters, 2005, 47-70). Pursuing their own interests, agents seek to hide information and action from principals which results in adverse selection and moral hazard. Principals use a variety of strategies, including monitoring, supervision, and performance-based rewards structures in an attempt to align principal-agent incentives (Jensen and Meckling, 1976; Rees, 1985; Horn, 1995; Tirole, 1986; Milgrom and Roberts, 1992; Baiman, 1982).³ We understand that supervisors have influence over promotions, which may help to align incentives between principals and agents (Downs, 1966).

We conceive of poorly coordinated policy as an outcome of agency problems. Although coordination may be conceived of in minimalist terms to involve no more than 'avoiding direct conflicts among programs,' (Peters, 2002: 3) we define coordination more broadly to mean the process by which two or more policies or programs are matched or harmonized to achieve shared goals and objectives.⁴ Coordination usually involves activities such as sharing information, providing feedback, avoiding divergences of goals among organizations, seeking consensus, arbitrating inter-organizational differences, steering or setting parameters within which organizations should work, establishing common priorities, and setting a common overall strategy (Metcalf, 1994, 292-4). Metcalf has suggested that these activities range on a scale from least coordinated (sharing information) to most

³ According to Horn (1995), in regulatory agencies the external labor market reduces agency problems. In our cases food safety regulatory bodies are bureau-type agencies, not the more independent commissions or authorities that typically rely on external labor markets to reduce agency problems.

⁴ Adapted from Kilgore and Ellefson, 1992; see also Rogers and Whetton, 1982; Warren et al 1974; Mott 1968. This is referred to as 'negative coordination', which requires 'a more active stance of assuring that programs work together and support each other' (Peters, 2002; 3)

coordinated (common strategy). In terms of coordination activity, we expect more autonomous organizations to engage in more minimalist activity such as information sharing, while more interdependent organizations engage in establishing common priorities, that is, activity closer to the top of the scale. More centralized institutional arrangements may increase coordination, although not always.

In the food safety policy domain coordination takes place within government (among government departments and agencies at the same level and at other levels, and among various occupation groups in government [e.g., generalists and specialists such as doctors, veterinarians, food safety inspectors, and health workers]), between governments and key stakeholders, usually private companies or organizations (the trade including producers, processors, importers, retailers, developers and so forth), and between government and the community. In this paper we limit our discussion to coordination among government agencies.

The food safety policy domain is characterized by the important role played by experts (e.g., medical doctors, food inspectors, and veterinarians), unsure science (e.g., the relatively unknown health risks of genetically modified food), separate roles for producers and consumers, risks of regulatory capture, globalized food production and processing chains, and periodic food crises that can have global significance (Ansell and Vogel, 2006; Toke 2004; Nestle, 2003). In all three cities, public health authorities have taken the lead in managing food safety policy although in those cities embedded in producer areas (China and Taiwan) agricultural authorities are also involved. A kind of regulatory capture has been a severe problem in mainland China where local authorities appear to have undermined the enforcement of food safety regulation. In Hong Kong, which produces very little of its own food, public health authorities have had a relatively freer hand.

Regime differences

All three cities considered here are part of ‘unitary’ (not federal) constitutional arrangements that give all formal power to the central government which may delegate authority to localities, delegations that may be withdrawn as the center chooses. Within this system there is tremendous variation among the three cities. Arguably the most tightly controlled is Shijiazhuang. The central government on the mainland approves Hebei province’s budget which in turn approves the budget of Shijiazhuang. The senior political appointments in Shijiazhuang (e.g., Mayor, Deputy Mayors, and Bureau Chiefs) are all

selected by the Hebei province Chinese Communist Party (CCP) committee's Organization Department, through the 'nomenklatura' system (Burns, 1994; Lieberthal, 2005). The CCP also vets all leading appointments in the city's civil service. Accordingly, the local municipal party committee selects the heads of most of the food safety-related agencies. A party 'core group' (*dangzu*) in each agency manages personnel appointments inside the agency.

The central government has established three general patterns for the management of local government agencies (See Burns and Zhou, forthcoming). Some agencies are managed through a 'vertical' system, meaning that the central government has the sole authority over the functional area and offices located throughout the country, such as in Shijiazhuang, are 'dispatched' by the central agencies in charge. The central agencies have full responsibility for the appointment of leaders, personnel decisions within the agency, business management, and appropriation of funds for the local 'dispatched' offices. Typical examples are the customs authority, state security, the national tax office, and foreign exchange management. None of the food safety-related agencies in Shijiazhuang city were of this type.

Other arrangements are 'semi-vertical' and differ from the fully vertical system discussed above in two ways. First, the vertical relationship begins at the provincial level rather than the central level. That is, the central agency in a semi-vertical arrangement does not have the authority to appoint the leadership group of the provincial agency. Second, a given agency of a higher-level government has the power to appoint the leadership group of the agency at the lower level, but has no responsibility for other personnel appointments, or for the appropriation of funds to run the office. In most cases, members of the leadership group appointed by a higher level agency are local people, but under the vertical system, a transfer of office heads from city to city or from one county to another is possible and occurs. Typical examples are land and resources management, industry and business administration, local tax offices, and the general administration of quality supervision, inspection and quarantine, responsible for food and product quality and safety (e.g., General Administration for Quality Supervision, Inspection and Quarantine [AQSIQ]).

Other local government agencies are managed entirely by local governments at the same level. They hire from among local people and are financed and managed locally. Not surprisingly, in cases of conflict between the central government and the localities, these locally constituted agencies usually take the side of the local government. Most of the food safety-related agencies in Shijiazhuang, such as the agriculture bureau were of this variety.

Authorities on the mainland have adopted a centralized performance management system (called the ‘organization responsibility system’ [ORS], see Burns and Zhou, forthcoming) to evaluate the performance of bureaucratic units and individual officials. According to the ORS local governments and their leaders are assigned targets in a host of areas and sign contracts with higher level authorities for completion of the contracts. In many cases the targets conflict with one another. The central government has especially emphasized achievement of GDP growth and tax remittance targets. Personnel movements are tied to achievement of these performance targets.⁵ Studies have shown that local leaders whose counties, districts, or provinces do well on the economic indicators, especially economic growth and remittances of taxes, tend to have a greater chance of promotion (See Lin, 2008). None of the targets that form part of this system focus on food safety. They do, however, focus on social stability, including the incidents of mass protest and the like, which could emerge as a consequence of serious food safety regulatory blunders. Neither Taiwan nor Hong Kong operates a similarly unified and all encompassing performance management system such as this.

Taiwan’s ‘unitary’ system evolved considerably during the 1990s. The 1999 Law of the Local System, incorporating 1994 autonomy laws, gave Taiwan a ‘semi-federal’ system because the Law ‘put into effect the power-sharing found in a federal system despite the preservation of the original unitary political framework’ (Peng, 2003; Tan et al, 1996, 488). As a result Taipei city no longer submits its budget for approval to the central government in Taiwan and the city may embark on major development plans on its own. County governments may raise revenue through bonds or lotteries; land, property, mortgage and recreational taxes and capital gains taxes from land appreciation (Tan et al, 1996, 490). The political executive (Mayor) of Taipei city is directly elected through competitive elections and universal suffrage as is the City Council. The Mayor may appoint heads of municipal government departments, such as the Department of Health, except for the chief controller, the civil service personnel chief, and the police chief who are career civil servants (Tan, 2000, 57). Two Deputy Mayors assist the Mayor, one appointed by the Mayor and the other appointed by the Executive Yuan through the civil service system (Tan, 2000). The Examination Yuan, led by political appointees, makes civil service policy and supervises the Ministry of Civil Service and the Central Personnel Administration in the management of a

⁵ Our discussion assumes that personnel administration is performance-based. See Burns and Wang (2010) for a discussion of corruption.

unified civil service. Accordingly, the heads of the Taipei food safety related agencies are all appointed by the Mayor of Taipei. Staff members of the agencies are career civil servants.

Hong Kong, a 'special administrative region' of the People's Republic of China since 1997 enjoys much more autonomy than Shijiazhuang, but less than Taipei. Hong Kong's Chief Executive is selected by the Chinese Communist Party (with local consultations) and appointed by the Central Government in Beijing. Since 2002 the Chief Executive selects 14 Bureau Chiefs (political appointee policy secretaries who may come from outside the civil service) who are also appointed by the Central Government. Most other government administrative posts are held by civil servants appointed by department heads and supervised by a Public Service Commission. Accordingly, the heads of the Hong Kong food safety-related agencies are all career civil servants (Burns 2004) while the policy secretary with food safety responsibilities is a political appointee.

Just as the political systems of the mainland and Taiwan are poles apart, so too is the extent to which their civil societies are robust. The mainland is characterized by a relatively weak (although developing) civil society, which has meant that government has generally not had to negotiate with powerful politically autonomous interest groups such as business groups over policy. Rather the negotiation goes on within the state and on its fringes, occupied by powerful state-owned enterprises. Moreover social class divisions, although also emerging, are less significant than they are in Taiwan or Hong Kong. Still, China's rapid economic growth, raising educational levels, highly mobile population (there are 80 million migrant laborers on the mainland), widespread access to the internet especially in the cities and emerging middle class have made the government especially sensitive to challenges to its authority. Authorities place a high value on social stability and are willing to replace officials who have committed serious policy blunders to assuage popular anger.

Taiwan's civil society is well developed which has facilitated networks as coordination mechanisms and government/business bargaining and negotiation over policy, such as with developers over land use and poultry association leaders over central slaughtering of chickens. Class formation in Taiwan is relatively weak (weaker than in Hong Kong) due in part to redistributive policies (e.g., land reform) implemented soon after World War II (For an alternative view see Gates, 1979). The need to win votes in competitive elections in Taiwan explains the sensitivity of governments in Taiwan to public opinion, and the leaderships' perceived need to accept responsibility for policy blunders. The blame game in Taiwan resembles the games played in western competitive democracies as political

leaders seek to avoid blame or to accept it and move on. Taiwan's aggressive and relentless media, one of the freest and most competitive in Asia, follows the exploits of politicians closely and free speech has been interpreted in Taiwan to give the media a wide berth. Rumor, innuendo, and outright falsehoods, followed by threats of lawsuits, are published and broadcast in the print and broadcast media on a daily basis.

Hong Kong's relatively well developed civil society (less well developed than in Taiwan) has encouraged networks as coordination mechanisms. Hong Kong's 'soft authoritarianism' is characterized by appointed government, but a free and relatively critical press, and recognition of civil liberties including the freedom of association and speech that in practice set Hong Kong apart from the mainland. Class formation in Hong Kong is relatively advanced (Chiu and Lui, 2009).

Finally, in all three systems public opinion plays some role in governance decisions, but freedom of expression and freedom of the press are much more highly valued in Taiwan and Hong Kong than on the mainland.

Food safety regulatory regimes

By the mid-1990s politicians in all three places had established highly fragmented, uncoordinated institutional arrangements for regulating food safety. To a certain extent how they came to this situation is path dependent. Yet by 2000 in Hong Kong and 2008 in Taiwan politicians adopted radical reforms that centralized the regulatory regimes to improve policy coordination. In spite of severe food crises on the mainland politicians there continued with the same highly fragmented and uncoordinated arrangements. How can we explain the logic of these choices?

The logic of institutional stasis on the mainland

On the mainland at the central level by 2000 food safety regulatory responsibilities were shared by many different agencies, including the Ministry of Health, the Ministry of Agriculture, the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), the State Administration for Industry and Commerce, and the Ministry of Commerce (See Table 1).⁶ The Food Hygiene Law of 1995 charged the Bureau of Health

⁶ For the institutions involved in 1998, see Albert Lam Chi Chiu, *Consultant's Report on Food Safety and Environmental Hygiene Services in Hong Kong* [report prepared for the Hong Kong Government] Hong Kong: photocopy, 1998, paragraphs 3.01-3.06 and Appendix 3(a). See also Tam and Yang, 2005.

Supervision of the Ministry of Health (MoH) with ‘nationwide food control, formulation of food regulations and registration of new source food and health food’ (Tam and Yang 2005). The Bureau was supported by the MoH’s National Institute of Food Safety Control and Inspection. The system was characterized by strong vertical communications, overlapping responsibilities, and significant regulatory gaps. Each regulatory agency issued its own rules and standards on food safety within its own jurisdiction, resulting in regulatory confusion.

Table 1
Key Food Safety Regulatory Responsibilities, 2000

| Agency | Responsibility |
|--|--|
| Ministry of Health | Issuing hygiene licenses to businesses engaged in food production, marketing or sales; monitoring, inspecting, and providing technical guidance for food hygiene; appraising and publicizing the status of food hygiene; investigating and dealing with food poisoning or food contamination; and imposing financial penalties or revoking hygiene licenses for violators of the law |
| Ministry of Agriculture | Formulating and enforcing quality and safety standards for agricultural inputs and farm products |
| General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) | Issues production permits for food processors and producers, supervises licensed food enterprises for compliance with regulations concerning food manufacturing, packaging and labeling; enforces controls on unlicensed food processing and production |
| State Administration for Industry and Commerce | Issues business licenses and oversees food hygiene in urban and rural markets |
| Ministry of Commerce | Enact and amend standards and rules regarding the procedures for food processing, packaging, storage, transportation and sales. |

Source: Adapted from Tam and Yang, 2005, 10-11.

At the central level, coordination should have been provided by a vice premier of the State Council and/or a Politburo standing committee member. But the cross-cutting nature of food safety (crossing the health, rural [agriculture], and commerce policy systems, each with a senior official in charge) militated against strategic coordination. Powerful bureaucracies able to resist change operated in each of these areas. As we have seen the ‘organizational responsibility system’ on which official performance was judged failed to make food safety a high priority.

Enforcement of food safety regulations was the duty of local governments such as Shijiazhuang City. Each of the agencies identified in Table 1 had a provincial, prefectural/district and county office which was responsible for implementing their own food

safety-related laws and regulations (e.g., the Food Hygiene Law, the Product Quality Law, the Agricultural Law, and the Standardization Law). We speculate that these local agencies were often ill-equipped to carry out their supervisory functions. In 2008, for example, Huaxia Dairy reported that although Sanhe City⁷ AQSIQ inspectors visited the farm once a month they only collected test results conducted by Huaxia, had no lab of their own, and, not surprisingly, collected no samples for testing.⁸

Although these local government offices took professional guidance from higher level offices (that is the county industry and commerce bureau took professional guidance from the prefectural and provincial industry and commerce bureau (ICB), which in turn took professional guidance from the ICB at the center), personnel arrangements including promotions were handled by local party committees. We argue that local governments used their power over promotions to influence local food safety regulatory bodies in the performance of their duties.

In the late 1990s and early 2000s, numerous food safety scandals emerged on the mainland. In 2003, for example, the Ministry of Health reported 379 severe food poisoning cases, affecting more than 12,000 people, 323 of whom died. In the same year the AQSIQ reported that one fifth of some 2,000 types of food stuffs it inspected failed to meet government standards (Tam and Yang, 2005, 9). And in 2003 the notorious Fuyang powdered milk scandal made 217 babies sick and killed a dozen more.⁹ In the Fuyang case, eerily similar to the Sanlu milk powder case five years later, powdered milk producers scattered all over the country sold substandard product (containing only two to four percent protein compared to 12 percent required by food standards) at very low prices to poor rural households in Fuyang City, Anhui province. In the Fuyang case which was first reported in the local media in April 2003, local authorities turned a blind eye to consumer complaints for a year. Only when the central media took up the story in April 2004 that got the central

⁷ Sanhe City is a county-level city in Hebei province.

⁸Interview with a director of Huaxia Dairy, 8 November 2008. Huaxia Dairy is a US-invested dairy producer (milk, yoghurt, and ice cream) with 5,000 head of milk cows located in Sanhe County, Hebei. See their website: <http://www.huaxiadairyfarm.cn/about.asp>, accessed 24 June 2009. Huaxia's milk is tested by a lab in Beijing. After the Sanlu milk powder scandal erupted, the AQSIQ inspectors visited the farm every 10 days rather than once a month. Their capacity to inspect or test remained unchanged. Huaxia attributed this situation to the dairy's commitment to high quality and the dairy's reputation.

⁹ Emergency Office of State Council. (2005). Anhui Fuyang Liezhi Naifen Shijian (Inferior-Quality Milk Powder Event in Fuyang, Anhui Province), retrieved 20 May 2008 from http://www.gov.cn/yjgl/2005-08/09/content_21396.htm. See also Tam and Yang, 2005.

government's attention, did food safety regulatory authorities in Fuyang and Anhui (and at the center) take action (Li, 2009). The Fuyang case revealed the lack of information sharing among local agencies charged with food safety. The Fuyang health bureau, for example, failed to share a list of substandard milk powder it had produced with the local industry and commerce bureau (ICB) until a central level task force descended on Fuyang. The local AQSIQ sought to charge the local industry and commerce bureau for tests it performed on milk powder, which the ICB needed to carry out its market supervision work. Moreover, because different agencies used different standards, one agency's list of contaminated products did not match lists produced by other agencies. Finally, in the Fuyang case, all agencies shirked their responsibilities and no agency took responsibility for the substandard milk powder, each blaming the other.¹⁰ Given the severity of the incident, the wide spread coverage it received in the Chinese media, and the high level attention it received by the central government, how could a similar but much worse incident occur again in 2008?

In 2003, as part of a government re-organization plan that sought in part to overcome the coordination problems alluded to above, central authorities established the State Food and Drug Administration (SFDA), reportedly inspired by the US Food and Drug Administration.¹¹ The SFDA had wide responsibilities that included organizing 'relevant authorities' to draft laws and regulations on food safety and to formulate a comprehensive supervision policy and work plan and supervise its implementation; to exercise comprehensive supervision on food safety 'in accordance with the law' and to organize and coordinate the supervision work on food safety carried out by 'relevant authorities'; to organize and carry out investigations and impose punishments on violators of food safety regulations, including carrying out specific law-enforcement campaigns on food safety; to comprehensively coordinate the testing and evaluation of food, formulate provisions for releasing information on food safety and in conjunction with 'relevant authorities' to monitor their implementation, and 'together with relevant authorities' make information available to the public on food safety; to direct comprehensive supervision of food safety management; and to carry out exchanges and cooperation on food safety management with foreign governments and international organizations.¹² Officially the SFDA was described as the

¹⁰ The last half of this paragraph is based on Tam and Yang, 2005, 14-16.

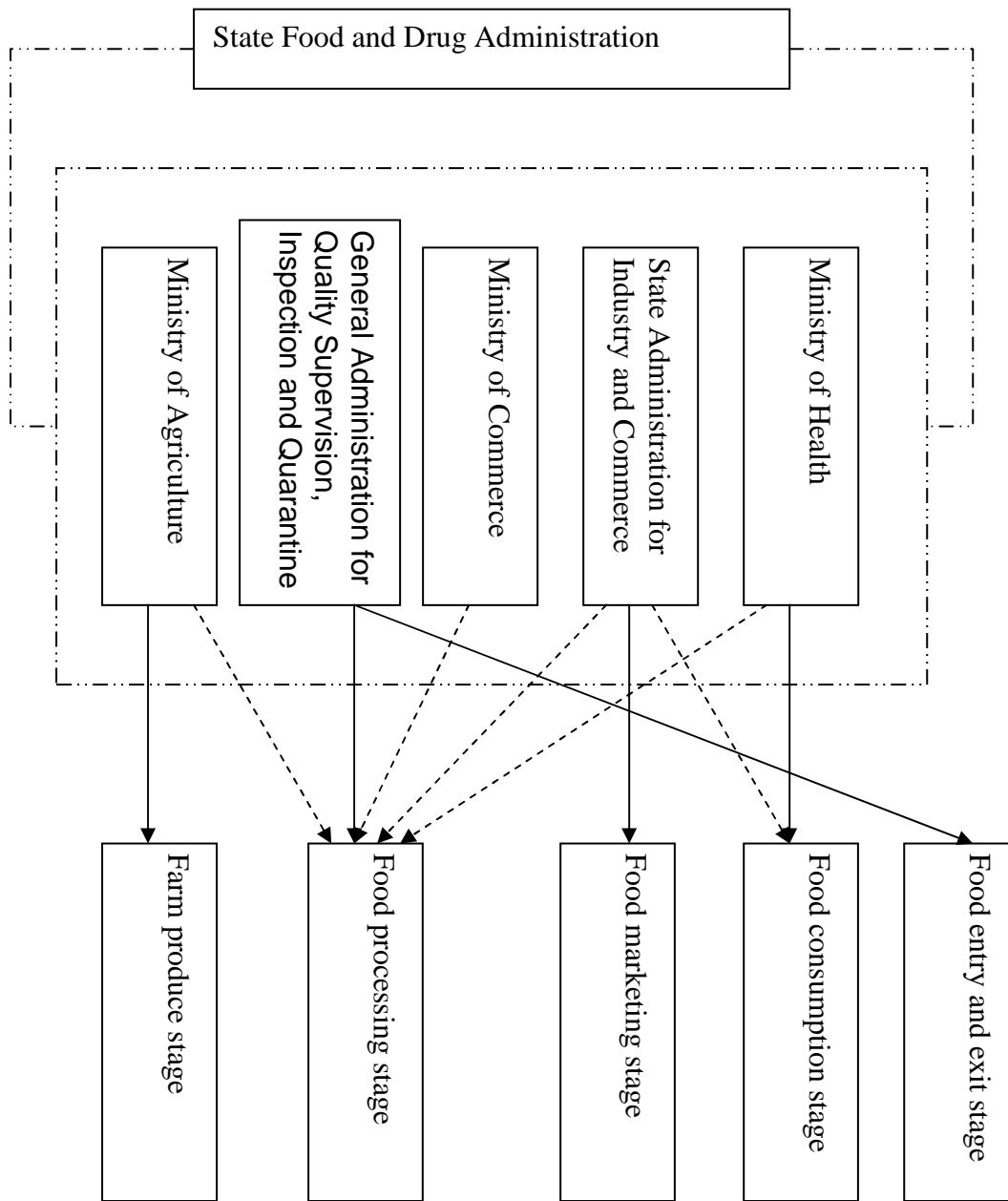
¹¹ Tam and Yang, 2005, 12. See their discussion of the major differences between the two agencies.

¹² Summarized from 'Main Responsibilities of SFDA on Food Safety' (English translation) from official SFDA website: <http://former.sfda.gov.cn/cmsweb/webportal/W45255826/index.html> retrieved on 27 March 2009.

body charged with the real implementation (*zhuashou*) of the policy and comprehensive supervision and coordination. Eventually authorities set up SFDA in each province, and in prefectural-level cities such as Shijiazhuang.¹³ (See Figure 1)

Arguably the most important function of the SFDA was to coordinate food safety policy in key areas such as regulation drafting, supervision policy, actual supervision work, investigation of major lapses of food safety, regulation and law enforcement and so forth. Yet interviews with officials of the SFDA indicate that from its very inception the agency was unable to carry out most of these tasks (Jiang, 2005, 70).

¹³ At the time of writing authorities had also set up SFDA in county-level cities, such as Sanhe City, Hebei.



Note: → Stage regulation; - - -> Category regulation; Coordination relationship

Figure 1: Food Safety System in 2004, revised from Jiang (2005) *Rebuilding of China's Food Safety Regulation System*, p66

The weaknesses of the SFDA were many. First, the food safety function was cobbled onto a drug licensing authority, with drug licensing receiving most official attention. So attractive were the bribes paid by various drug companies to win official approval, that even

the head of the SFDA was found guilty of serious corruption and executed in 2007.¹⁴ This episode which stretched over the years 2005-07 seriously undermined the credibility of the SFDA. We speculate that because it was much less lucrative than drug licensing, food safety undoubtedly received less attention within the SFDA. The June 2010 arrest of a Deputy Chief of the SFDA indicates that corruption continues to be a serious problem (*South China Morning Post [SCMP]* June 5, 2010). Second, politicians set up the SFDA at the rank of vice minister (*fubuzhang*) in rank-conscious China, which virtually eliminated any possibility of the SFDA bringing together powerful ministries such as Health or Agriculture or the other bureaus at its same rank (Jiang, 2005, 69-70). The SFDA had no capacity to supervise or organize the coordination of these agencies. To boost its clout the SFDA worked through the offices of Vice Premier Wu Yi (charged with the public health portfolio) and the office of the Secretary General of the State Council to coordinate policy and implementation on food safety. SFDA initiatives, apparently, could safely be ignored. Soon after it was set up the SFDA issued a directive demanding that 'relevant agencies' update it on a bimonthly basis on the implementation of a food and drug safety project that included milk products. The SFDA reported that it did not receive adequate cooperation from the health and industry and commerce bureaucracies or from the AQSIQ (Tam and Yang, 2005, 14). Interviewees within the SFDA reported that of the seven major areas that it was charged with coordinating policy and policy implementation, in reality it could only operate in two of them (Jang 2005, 67).

Third, the SFDA had no independent capacity to carry out investigations on its own or to enforce the law or punish violators (Jiang 2005, 67). By its institutional design, the SFDA was dependent on other agencies for these services. They, operating under their own laws and regulations, could choose to ignore requests from SFDA for assistance or cooperation and apparently did.

In August 2008 just before the Sanlu tainted milk powder scandal became public authorities transferred food safety policy coordination authority to the Ministry of Health.¹⁵ This decision left in place the highly fragmented food safety system that authorities on the mainland have been unwilling to change, principally we argue because they perceive that

¹⁴ See China Daily, 10 July 2007 at website http://www.chinadaily.com.cn/china/2007-07/10/content_5424937.htm, accessed 24 June 2009.

¹⁵ See article in China Daily, 26 August 2008, http://www.chinadaily.com.cn/china/2008-08/26/content_6969573.htm, accessed 27 June 2009. In 2009 China passed a new Food Safety Law and in 2010 established a National Food Safety Commission chaired by Vice Premier Li Keqiang http://www.worldbulletin.net/news_detail.php?id=53908, accessed June 7, 2010.

tighter more coordinated arrangements would slow economic growth. How did this system work in practice? We turn now to a discussion of the Sanlu tainted milk powder scandal.

Sanlu tainted milk powder case

China has long history of milk consumption but the consumption level is very low, only about 5.6 kilograms per capita in 2003 (Fuller and Beghin, 2004, 10-12). Even in 2008, it was only 25.59kg, one fourth of the average world level.¹⁶ From the government came, however, a strong push to drink milk. Both President Hu Jintao and Premier Wen Jiabao have expressed such desire on different occasions.¹⁷ Also, to boost rural incomes authorities encouraged individual farmers to raise (one or a few) dairy cows. That led to a remarkable expansion in China's dairy industry and there has indeed been a rapid growth in dairy production and consumption in recent years.

The contemporary Chinese dairy industry began with cooperatives that owned both farms and cows. This system required the industry to spend huge resources on raising dairy cattle. In 1987, Sanlu Group, a large, famous-brand, state-owned enterprise majority owned by the Shijiazhuang City government, initiated a reform that gave cows to farmers and let companies focus on production and marketing. By doing so, dairy enterprises no longer needed to be responsible for dairy cattle farming. Sanlu's chairwoman, Tian Wenhua was the innovator and major promoter of the transformation. Tian's reform paid off and reduced the cost of producing raw milk at Sanlu. However, the move split farming and processing into two separate operations. Middlemen then set up milk stations to buy the milk from farmers and then to sell it on to Sanlu. This mode of operation continued to exist, even after the Sanlu incident broke out. Farmers walked their cows twice a day to milk collection stations for milking and according to preplanned schedules.¹⁸ The milk stations sold the milk to dairy

¹⁶ Zhongguo Ruye Fazhan Licheng Pandian (Development History of China's Dairy Industry) (2008). Retrieved Jan. 11, 2009 from http://www.nfsc.com.cn/marketing/html/article_240.shtml.

¹⁷ Meitian Yijin Nai Qiangzhuang Zhongguoren, Zhongguo Aixin Xingdong Jianjie (1/2 Kg Milk Per Day Make Strong Bones, Love in Action) (2008). Retrieved Feb. 11, 2009 from <http://www.niangzao.net/News/569/56938.html>.

¹⁸ Schiere, Hans, Xiaoyong Zhang, Kees De Koning, & Huib Hengsdijk. (2007). *China Dairy Chains--Towards Qualities for Future*. China/ the Netherlands: Wageningen UR.

enterprises. Most of the middlemen/investors are village leaders or local business men who may have been motivated more by profit and than by the production of clean milk.¹⁹

The quality of the milk collected by milk stations varied. In addition to individual farmers and small farms not having sufficient equipment and professional knowledge to take care of the cows, milk collection stations could adulterate the milk.²⁰ According to a World Health Organization investigation, 'In China, where adulteration has occurred, water has been added to raw milk to increase its volume. As a result of this dilution the milk has a lower protein concentration. Companies using the milk for further production (e.g. powdered infant formula) normally check the protein level through a test measuring nitrogen content. The addition of melamine increases the nitrogen content of the milk and therefore its apparent protein content.'²¹ Chinese industry insiders also confirmed this. Milk collection stations added water and alkali to raw milk, and later animal and plant protein powders that contain melamine.²² The adulteration took advantage of a loophole in the regulations, which allowed the volume of nitrogen to represent protein. From the Fuyang milk powder episode, discussed above, farmers had learned that demonstrating sufficiently high protein levels was important. Such adulteration was common for many years and seems to have been an open secret in the dairy industry. Still before 2007 dairy enterprises could control the quality of raw milk and refused to buy substandard raw milk because it was a buyer's market.

In China's dairy industry, domestic raw milk competes with imported reconstituted milk. The latter used to be much cheaper than the former. Dairy enterprises used imported reconstituted milk as the raw material for yogurt and fresh milk production because of the following advantages. First, the quality of reconstituted milk was much higher than raw milk collected domestically. Some dairy products, such as fresh milk and yogurt, need high quality raw milk, which only a small part of domestic raw milk producers could meet. Second, the cost of reconstituted milk was much cheaper than domestic raw milk. Third, there was a loophole of food safety policy. Chinese authorities did not require the labeling of

¹⁹ Ibid.

²⁰ Interview with a director, Huaxia Dairy, 8 November 2008.

²¹ WHO. (2008). Questions and Answers on Melamine. Retrieved Jan. 1, 2009 from <http://www.who.int/csr/media/faq/QAmelamine/en/index.html>.

²² Gong, Jing. (2008). Hebei Dairy's Messy Supply Chain. Retrieved Jan. 22, 2009 from <http://english.caijing.com.cn/2008-09-22/110014641.html>.

reconstituted milk until the end of 2005 and dairy enterprises took their time to comply. Domestic raw milk then had no comparative advantage. Besides, farm feed prices increased putting farmers in a worse position. According to government statistics, in 2006 40 percent of dairy farmers lost money, 30 percent broke even, and only 30 percent survived with a slim profit.²³ As a consequence, many cows were killed in 2006.

From the beginning of 2007, China's largest milk powder supplier, New Zealand, suffered drought, which led to a reduction in raw milk production and exports,²⁴ which dramatically increased the import price in China.²⁵ Due to a surge in the international milk powder price, dairy enterprises looked for raw milk from domestic farms. But the domestic supply was also inadequate because many milk cows had been killed in 2006. This situation transformed a buyers' market into sellers' market: dairy enterprises began to compete to collect domestically produced raw milk.

At the same time, public policies did not help and some even had unintended consequences. In 2007 to address the problem of killing dairy cows, the State Council promulgated measures to support dairy farming.²⁶ But a milk cow needs at least two years to produce milk for the first time.²⁷ The State Council policy did not help cover the gap between supply and demand. Then in January 2008 the Chinese National Development and Reform Commission imposed price controls on dairy products in order to calm consumers. This action put dairy enterprises in an even worse position. They had to deal with rising costs and a shortage of supply but could not get a payoff due to price controls. A possible way out was to loosen quality control to reduce costs. Dairy enterprises had to deal with the milk stations.

²³ Gong, Jing. (2008). Hebei Dairy's Messy Supply Chain. Retrieved Jan. 22, 2009 from <http://english.caijing.com.cn/2008-09-22/110014641.html>.

²⁴ Beijing Zhongjing Zongheng Economic Research Institution. (2007). *China Milk Powder Market Supply, Demand & Competition Situations Research Report*. Beijing: Beijing Zhongjing Zongheng Economic Research Institution,.

²⁵ Ibid.

²⁶ State Council Promulgated Policies to Support Dairy Industry, Raw Milk Price Began to Go up (Guowuyuan Chutai Zhengce Fuchi Naiye, Yuanliaonai Jiage Kaishi Shangsheng) (2007). Retrieved March 1, 2009 from <http://finance.sina.com.cn/chanjing/b/20071224/16554329767.shtml>.

²⁷ Qi, Liming. (2007). Nainiu Weishenme Neng Channai (Why Cows Could Produce Milk). Retrieved March 1, 2009 from <http://blog.cctv.com/html/29/712229-16622.html>.

With milk collection entering a sellers' market, in which dairy enterprises chose to exercise less quality control over raw milk, milk stations had more bargaining power.²⁸

Dairy enterprises clearly knew about the various quality levels of raw milk during collection and where to sell these different grades of product. They paid more money for higher quality raw milk and less for lower quality. (That is, they no longer refused low quality raw milk.) They then used different qualities of milk to produce various kinds of dairy products (See Figure 2). The best raw milk was used to make yogurt and fresh milk, the suboptimal raw milk to make breakfast or peanut milk, and the worst quality to make low quality infant milk powder for sale in rural areas where government regulation was much weaker. They chose adults as their major consumption target because they are better able to tolerate milk containing melamine. At the same time, dairy enterprises knew they should use the best quality milk (melamine-free) for the Beijing Olympic Games which were scheduled for August 2008, and thus although melamine was found in most milk products in China in September, no dairy products used in the Olympic Village were found to contain melamine.

²⁸ Gong, Jing. (2008). Hebei Dairy's Messy Supply Chain. Retrieved Jan. 22, 2009 from <http://english.caijing.com.cn/2008-09-22/110014641.html>.

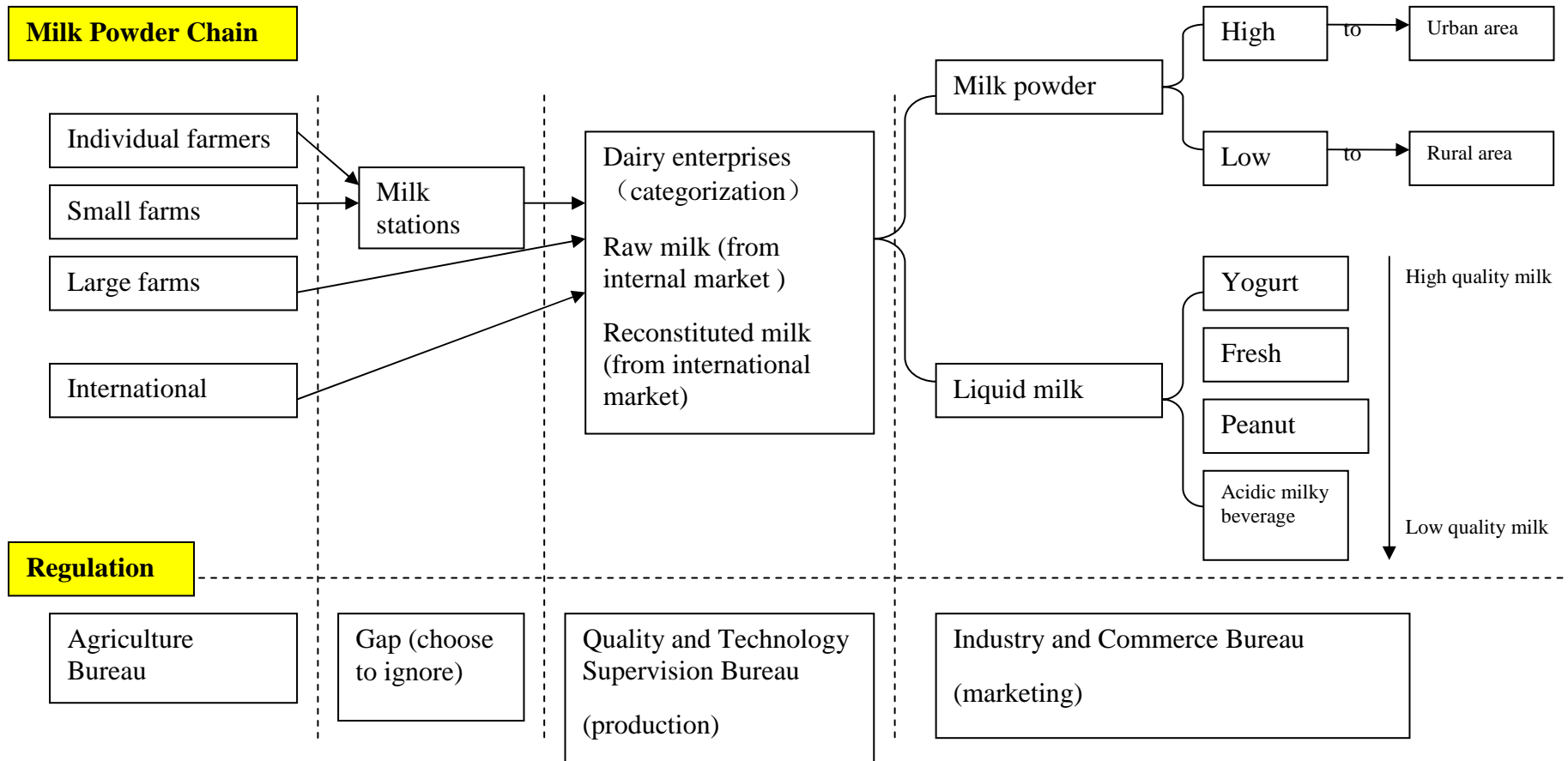


Figure 2: Dairy Industry

Source: Li (2009).

The Sanlu milk powder scandal became public in 2008, four years after Fuyang milk powder case. During the four years, the food safety regulation system had changed little (See above). Thus the structure of the Shijiazhuang City Government included the four main regulatory agencies for food safety (agriculture, quality supervision, industry and commerce and health), a Commission for Food Safety (CFS) and other agencies suitable for the local situation. The CFS collated information and made and released plans for food safety campaigns.²⁹ At this point, the City CFS did not perform coordination work, and only conducted campaigns or crackdowns within a limited jurisdiction.

The Sanlu Group was a foreign-invested state-owned enterprise.³⁰ The government-owned Shijiazhuang Dairy Company held 56.4% of shares in the Sanlu Group, while the New Zealand Fonterra Group owned 43% of Sanlu. In addition another three Chinese companies – Shijiazhuang Hongqi Dairy Company, Chengde Huaning Dairy Company and Tangshan Kangning Dairy Company – held 0.2% shares of Sanlu, each. Its assets included a liquid milk plant, a plant in Jinan and three wholly-owned subsidiaries, as well as 19 joint ventures.³¹ Before the incident, although it had been blacklisted in April 2004 for producing sub-standard milk powder along with 45 other companies caught up in the Fuyang case (*Mingbao* September 14, 2008), its milk powders had a good reputation and it was granted a “Renowned Chinese Brand Products” certificate. In January 2008 its infant formula received the National Science and Technology Progress Award, the first time a dairy product had won the award in the award’s 20 year history (*SCMP* September 14, 2008). As a result of such official recognition, Sanlu’s products had also been exempted from government inspections for years because AQSIQ deemed it to have superior quality controls. Even the official China Central Television (CCTV) made a

²⁹ For a specific campaign plan, see <http://www.sjzfs.gov.cn/in.aspx?ID=3767>. This reveals that the CFS is not designed to coordinate food safety policy between functional agencies. After making a general plan, the CFS did nothing except to ask each agency to report its campaign results. It took no actions to integrate regulation resources.

³⁰ The Sanlu Group was listed on the website of Shijiazhuang municipal State-owned Assets Supervision and Administration Commission because Sanlu was a state-owned company. see <http://www.sjzgz.gov.cn/col/col11565/index.html>

³¹ Magazine, *Caijing*. (2009). Who Owns Sanlu Group? Retrieved Jan. 21, 2009 from <http://english.caijing.com.cn/2009-01-06/110045400.html>.

documentary to introduce Sanlu's 1100 quality testing procedures. In China were consumers make purchases based on brand names, especially with large numbers of counterfeit products available in the market, Sanlu was at the top of its game.

The Sanlu Group had maintained the number one position in both production and sales of blended milk powders nationally for 12 consecutive years when New Zealand's Fonterra invested in it, taking a 43 percent stake in 2005.³² This was one of the largest-ever foreign investments in a dairy company in China at the time³³ and Sanlu also viewed it as 'the first crucial step towards its objective of aiming at world-class levels and developing the Sanlu Group into a global leader in the dairy industry in line with the requirements of the international market, with expanded market share and increased strength.'³⁴

Its former chairwoman, a veterinarian, had worked for the company for almost 40 years. Under her leadership, since 1986 the enterprise shifted its focus from farming to production and marketing. Sanlu gave away its dairy cows to local farmers, who later repaid their debts with milk deliveries.³⁵ Using this new business model Sanlu reduced costs but lost control over the quality of raw milk.

As early as December 2007 Sanlu Group had received complains about the quality of their baby formula.³⁶ These were followed in February and March 2008 by further customer complaints that Sanlu strongly denied.³⁷ However, in May the Group

³² Fonterra and San Lu Reach Joint Venture Agreement (2005). from <http://www.scoop.co.nz/stories/BU0512/S00032.htm>.

³³ Ibid.

³⁴ Ibid.

³⁵ Wang, Heyan, Tao zhu, & Doudou Ye. (2009). *Caijing Zazhi Tebie Baodao: Sanlu Du Naifen Shenpan*(*Caijing Magazine Special Report: Sanlu Poisonous Milk Powder Sentences*). Retrieved Jan. 20, 2009 from <http://www.sachina.edu.cn/Htmldata/news/2009/01/4773.html>.

³⁶ Wang, Heyan, Tao zhu, & Doudou Ye. (2009). *Caijing Zazhi Tebie Baodao: Sanlu Du Naifen Shenpan*(*Caijing Magazine Special Report: Sanlu Poisonous Milk Powder Sentences*). Retrieved Jan. 20, 2009 from <http://www.sachina.edu.cn/Htmldata/news/2009/01/4773.html>.

³⁷ *SCMP* 13.9.2008 and 14.9.2008; *Ming bao* 14.9.2008.

discovered that the content of non-protein nitrogen in its product was quite high but according to reports doubted that the cause might be melamine. By June 2008, health authorities in Jiangsu province had recorded 15 cases of kidney stones in infants who had used Sanlu milk powder.³⁸ On June 30, 2008 a member of the public made an inquiry about Sanlu's milk powder on the AQSIQ's website. AQSIQ replied that it needed more information and dropped the matter.³⁹ In July 2008, Changsha health authorities recorded cases of kidney stones in infants and Hunan Cable TV explicitly linked renal failure in infants to possible contaminated Sanlu milk powder (*SCMP* September 13, 2008). In early July a hospital in Gansu Province also reported to the Provincial Health Bureau (PHB) that 16 infants under one year of age were in hospital with kidney problems. A month later the Gansu PHB told the hospital that it was 'still investigating' this case, but publically the PHB said that it 'could not establish a link' between the kidney failure and Sanlu's product. At the time Gansu PHB's own hospital had admitted more than 10 cases of renal failure among infants, an abnormally high number.⁴⁰ In July, Sanlu sent a sample of its milk powder to a test center of the Hebei Entry-Exit Inspection and Quarantine Bureau which on August 1 confirmed that the product did contain melamine. Still in August, in the run up to and during the Olympics, CCTV continued to identify Sanlu as a 'high quality domestic brand' (*SCMP* September 13, 2008).

This narrative reveals that complaints and doubts about Sanlu's powdered milk had been around for a long time. Local health authorities outside Hebei province did not share their findings or suspicions about the link between Sanlu's milk powder and kidney stones in infants with other regulators. Throughout this time no publicly available complaints were available from hospitals or health bureaus in Hebei province. The AQSIQ, apparently satisfied with its own finding that the Sanlu brand was of such high

³⁸ *Caijing* 15.9.2008.

³⁹ Reported in *Nanfang Ribao* 1.7.2008 in *SCMP* 13.9.2008.

⁴⁰ *Caijing* 15.9.2008; and Chen Qian. (2008). Gansu Shangbao Ying'er Shenjieshi Bingli 59 Li (Gansu Province Reports 59 Cases of Baby Kidney Stones). Retrieved Sep. 12, 2009 from <http://www.caijing.com.cn/2008-09-11/110011817.html>. In an interview with Ministry of Health officials we were told that the Ministry sent a task force to investigate the Gansu kidney stone problems, but that they did not link them to Sanlu infant powdered milk formula. Interview 16 December 2008.

quality that it was exempt from testing, failed to investigate complaints from the public about the product or to bring the issue up with other regulators. While the local media outside Hebei raised concerns, the center's propaganda machine drowned out any doubters. The period of the Olympics especially August 2008 was a sensitive time and it is likely that the CCP Propaganda Department in Beijing had banned stories about food safety problems during August.

From August 1 the Sanlu Group, the Shijiazhuang City Government, and the AQSIQ in Beijing covered up the issue. On August 1 Sanlu held a board meeting (undoubtedly attended by representatives of the Shijiazhuang government, the majority shareholder and Fonterra, the largest minority shareholder), from which the Shijiazhuang government learned of the toxic milk situation. In response Deputy Mayor Zhao Xinchao, whose portfolio included public health, led a team of Shijiazhuang government officials to visit the Sanlu Group headquarters for a meeting with Sanlu executives on August 2. The team included the City Secretary General, and officials from the Supervision and Technology Bureau (local AQSIQ), the Food and Drug Inspection Bureau (local SFDA body), the local Industrial Development Bureau, the Agriculture Bureau, and the City CCP Propaganda Department News Section.⁴¹ That is, from August 2 the local AQSIQ and SFDA had the information about situation in Sanlu. The city officials refused Sanlu's suggestion to recall the milk powder privately. Rather they required Sanlu to exchange the contaminated product for new product and compensate consumers to keep them quiet. Apparently they intended to keep the issue secret until the end of the Olympic Games.⁴² Accordingly Sanlu issued no public recall for the product. Sanlu also paid the largest Chinese search engine, Baidu, to control and delete most negative information about the company.⁴³ It is likely that the Shijiazhuang food safety authorities reported this matter to the AQSIQ in Beijing immediately. A food poisoning scare at the Olympic Village would

⁴¹ Wang, Heyan, Tao zhu, & Doudou Ye. (2009). *Caijing Zazhi Tebie Baodao: Sanlu Du Naifen Shenpan*(*Caijing Magazine Special Report: Sanlu Poisonous Milk Powder Sentences*). Retrieved Jan. 20, 2009 from <http://www.sachina.edu.cn/Htmldata/news/2009/01/4773.html>.

⁴² Ibid.

⁴³ Sanlu Jituan Gongguan Jiejue Fang'an Jianyi Yuanjian (Original File About Suggestions on Sanlu Group Resolution) (2008). Retrieved Jan. 1. 2009 from <http://xk.cn.yahoo.com/articles/080912/1/d6z5.html>.

have been a public relations disaster. After the scandal was exposed in September, the head of the AQSIQ, Li Changjiang, stated in a press conference that ‘After the baby formula was found to be tainted by melamine, we conducted immediate tests of the dairy supply for the Olympics and no melamine was found.’⁴⁴ No melamine was found because Sanlu knew about the contamination, and supplied only high quality milk for the Olympics. We speculate that the AQSIQ did not share the information about Sanlu (or other dairy enterprises) with the rest of the Central Government. We also speculate that based on its investigations in Gansu Province, some officials of the Ministry of Health may also have had information about the case in August. Still, throughout August and into September Sanlu continued to use contaminated raw milk to produce liquid milk for sale in some markets.⁴⁵

On September 8 the New Zealand government, having learned of the contaminated milk powder from Fonterra (which had the information from the August 1 board meeting), reported to the AQSIQ that potentially deadly milk powder was continuing to be sold by Sanlu.⁴⁶ (We infer from Li Chunjiang’s press conference that AQSIQ had known about this case since early August.) The Ministry of Health claims that it only became aware of the problem on September 8. And on that day the Shijiazhuang government claims that it reported the matter to the Hebei Provincial government.⁴⁷ On September 9 and 10 Sanlu continued to maintain publicly that the product was not to blame. Finally on September 11 the Gansu Provincial Health Bureau held a press conference, naming Sanlu as the producer of milk powder contaminated with melamine (*Mingbao* September 13, 2008). Only then did Sanlu admit that its product had been contaminated. That is, during the 38

⁴⁴ ‘Dairy Supply for Olympics Safe due to ‘Special Management’ at website: http://news.xinhuanet.com/english/2008-09/17/content_10052104.htm, accessed 27 June 2009.

⁴⁵ Wang, Heyan, Tao zhu, & Doudou Ye. (2009). *Caijing Zazhi Tebie Baodao: Sanlu Du Naifen Shenpan*(*Caijing Magazine Special Report: Sanlu Poisonous Milk Powder Sentences*). Retrieved Jan. 20, 2009 from <http://www.sachina.edu.cn/Htmldata/news/2009/01/4773.html>.

⁴⁶ Waijiaobu Fayanren Jiu Sanlu Naifen Youguan Wenti Da Jizhe Wen (Sep. 13) (Ministry of Foreign Affairs' Press Conference on Sanlu Milk Powder) (2008). Retrieved Jan. 1, 2009 from <http://msn.china.y.net.com/view.jsp?oid=43246454.>; interview with an official from Ministry of Health on Dec. 16, 2008.

⁴⁷ *SCMP* 14.9.2008 and *Ming bao* 14.9.2008.

days from August 2 to September 9, neither the AQSIQ nor other food safety authorities nor Sanlu had taken any effective measures to address the problem.⁴⁸

From September 9 the central government response was swift. The AQSIQ reported to the State Council and the MoH, the new coordinator at the central level for food safety (since 2008 in the wake of the demise of the SFDA), sent a task force to Shijiazhuang to investigate.⁴⁹ On September 10, the State Council held meetings on the Sanlu milk powder incident and launched a first level emergency response, the highest level response for an emergency. On the 11th, the MoH held a press conference to inform the public of the kidney stone situation in infants and warned the public not to use infant formula because it suspected that kidney stones in babies were caused by Sanlu infant formula. Just before the MoH press conference, the Sanlu Group recalled 700 tons of tainted baby formula, claiming they found contamination with their milk powder by self-detection. Meanwhile, the AQSIQ identified 22 dairy enterprises whose baby formula was contaminated with melamine. Of these the samples of the Sanlu Group contained the highest levels of melamine, at 2563 mg/kg (ppm), while others contained between 0.09-619 mg/kg (ppm).⁵⁰ The State Administration for Industry and Commerce (SAIC) then ordered all these products off the shelf.⁵¹ On September 13, the State Council set up a leading small group (LSG)⁵² to deal with the issue and investigation and follow up

⁴⁸ Sanlu Manbao 8 Ge Yue, Shijiazhuang Shi Zhengfu Wanbao 38 Tian (Sanlu Hid the Emergence 8 Months, Shijiazhuang City Government Reported 38 Days Late) (2008). Retrieved Sep. 24, 2008 from http://business.msn.com.cn/MsnFinance/posting_common_cccb472d-8a59-45c3-b0e9-cf225510d319_1.html.

⁴⁹ Interview with a MoH official on Dec. 16, 2008.

⁵⁰ Guoyuyuan Youguan Bumen Fuze Ren Jiu Sanlu Pai Yingyou'er Naifen Zhongda Anquan Shigu De Youguan Qingkuang Da Jizhe Wen (State Council Press Conference on Food Safety Incident of Sanlu Baby Formula) (2008). Retrieved Sep. 19, 2008 from http://news.xinhuanet.com/newscenter/2008-09/17/content_10047267.htm.

⁵¹ State Council Information Office. (2008). Guowuyuan Youguan Bumen Fuzeren Jiu Sanlu Pai Yingyou'er Naifen Zhongda Anquan Shigu De Youguan Qingkuang Da Jizhe Wen (Sep. 16) (Press Conference on Sanlu Milk Powder). Retrieved Jan. 1, 2009 from http://news.xinhuanet.com/newscenter/2008-09/17/content_10047267.htm.

⁵² Officially a State Council LSG, named 'Sanlu Brand Milk Powder Major Security Incident Crisis Leading Small Group'.

remedial action followed swiftly.⁵³ Subsequently Sanlu halted all production as did industry giants Mengniu and Yili when melamine was found in their products, too. In the end, Sanlu was fined, went bankrupt and its assets were sold off. The Chairman of Sanlu was fined, and sentenced to life in prison for ‘producing and selling fake or substandard products’ (Article 140 of China’s criminal law). Three other executives were convicted of the same charge and sentenced to five, eight, and 15 years in prison.⁵⁴ Numerous Shijiazhuang officials, including the Mayor, Vice Mayor in charge of health, the Vice Mayor in charge of state assets supervision and food safety, the head of the Agriculture Bureau, head of the Animal Husbandry Bureau, the Director of the local FDA, and the head of the local AQSIQ were also fired. The head of the central government’s AQSIQ, Li Changjiang, resigned to take responsibility for covering up this incident.⁵⁵ Curiously Li and many other officials have since been reappointed to other senior positions.

In the Sanlu case, we speculate that because the local government controlled the promotion of officials in local quality control offices, even though they were nominally part of a nation-wide (semi-vertical) quality control system, the local principal’s concern for high growth and full employment (to ensure the principal’s own promotion) could over-ride the formal task of ensuring that quality standards were maintained. Moreover, the local principal’s concern for his/her own promotion which was linked to an overarching performance criteria (high growth and high tax remittances), meant that it was not in the principal’s interest to invest in strong quality control capacity, which was perceived to undermine (at least in the short term) achieving the economic goals. Given that many local principals on the mainland expect to stay in a particular office no more than from five to eight years, their time horizon was mainly short term. Promotion within local government was very competitive and they gambled that no quality problems of serious concern to central-level principals would emerge during their relatively brief watch. Given the nature of the political system which gives taxpayers and consumers

⁵³ Interview with official of MoH on Dec. 16, 2008.

⁵⁴ Caijing. (2009b). "Du Naifen" Xingshi Xilie an Shoupi Xuanpan (Criminal Sentences On "Toxic Milk Powder"). Retrieved Jan. 29, 2009 from <http://www.caijing.com.cn/2009-01-22/110050870.html>.

⁵⁵ ‘Shijiazhuang mayor sacked over tainted milk scandal,’ *China Daily* 18.9.2008 on website: http://www.chinadaily.com.cn/china/2008-09/18/content_7038408.htm , accessed 27 June 2009.

little voice, this was a reasonable expectation. If serious problems emerged in the longer term, they would have moved on to a higher post.

Central principals tolerated this behavior because local principals (their agents) were able to deliver the goods – high growth and full employment. Accordingly, it was not in (at least in the short-term) the interest of central principals to develop strong quality control capacity, especially for the domestic market. The political system gives taxpayers and consumers (yet another group of principals) relatively little voice, and their complaints could mostly be ignored or ‘managed’ (for example, through the politically-dominated courts, side payments or extra-legal means).⁵⁶ By this logic the goals of regulatory institutions such as those put in place for food safety were displaced to support the developmental project that highly valued high growth and full employment. We note that as late as 2010 in spite of the scandal, local milk powder producers in various parts of China continued to sell products that they knew to be adulterated with melamine (SCMP February 10, 2010).

The logic of institutional reform in Taiwan and Hong Kong

In both Taiwan and Hong Kong politicians have centralized their food safety regulatory regimes to improve coordination. In the Taiwan case, politicians need to win votes and play to popular opinion moved them to act. In the Hong Kong case, in the absence of democratic politics the incentives were a bit different. We argue that in the Hong Kong case the colonial political executive chose fragmented arrangements that involved to elected councils to increase government legitimacy. Regime change in 1997 installed a more legitimate government (the Chief Executive was ‘elected’ unopposed by a CCP appointed Election Committee and Hong Kong had an elected legislature). The government took the opportunity to reform the food safety regulatory arrangements to

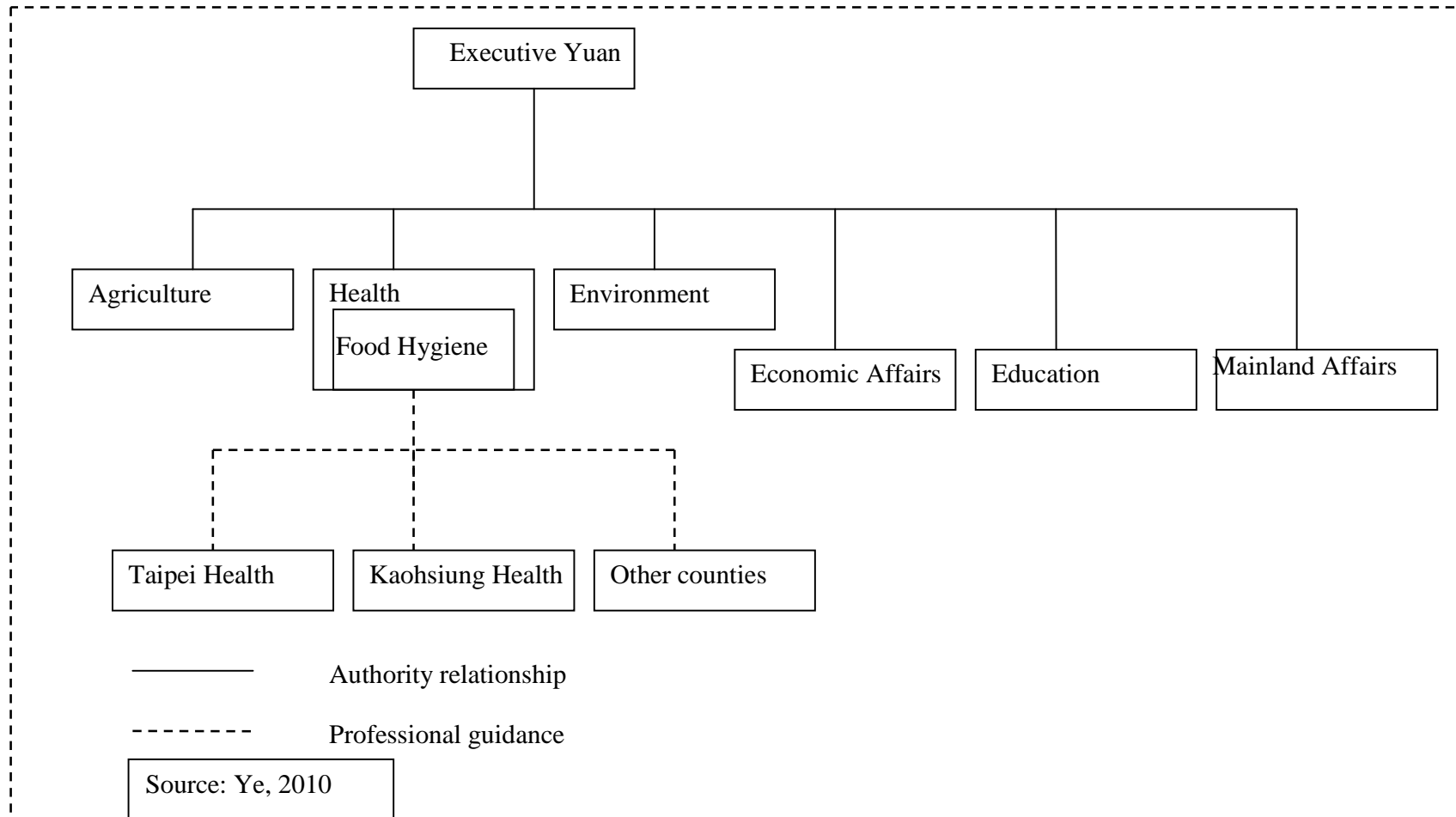
⁵⁶ In contrast to the domestic scene, central and local principals had an interest to develop the export quality control system, to which foreign trade was tied, reputation mattered, and customers (through their overseas governments) had more voice.

improve their performance. In these cases food safety crises provided an opportunity (window) for politicians to act.

In both Taiwan and Hong Kong politicians initially established highly fragmented food safety regulatory regimes. The institutional arrangements and coordination mechanisms for food safety control at the central level in Taiwan in 2008 are illustrated in Figure 3 (Ye, 2010). This figure identifies the three main agencies of the Executive Yuan in charge of food safety control are the Department of Health, the Council of Agriculture, and the Environmental Protection Administration. The Council of Agriculture is responsible for the safety of the farm products; the Department of Health is responsible for the safety of the food in the market and also the hygiene of the restaurants. As will be discussed below, these three ministries take the main responsibility of food safety control and there are coordination meetings among them. Another three ministries also have responsibilities related to food safety control. The Bureau of Standards, Metrology and Inspection under the Ministry of Economic Affairs was in charge of the inspection for imported food. The Ministry of Education is responsible for food safety education. Mainland Affairs Council becomes related when the food was imported from PRC. The Food Hygiene Division under the Department of Health (before 2010) was in charge of regulation enforcement for food in markets and in restaurants. At the local level, the Public Health Bureaus of Taipei, Kaohsiung and other counties are under the professional guidance of Food Hygiene Division. At the local level, the Public Health Bureaus of Taipei, Kaohsiung and other counties are under the professional guidance of Food Hygiene Division (Ye, 2010).

Figure 3

Food Safety Regulatory System, 2007



Still, with so many government agencies involved in food safety policy formulation and implementation their responsibilities frequently overlapped or conflicted with each other. No single bureau coordinated regulation enforcement. The Food Hygiene Division at the central level and its local counterparts were understaffed and underfunded. In 2008 the establishment for the Food Hygiene Division was 28 and its budget less than 100 million NTD, a budget that had been declining for many years (Ye, 2010, 7). Moreover, the highly fragmented arrangements encouraged over the regulation of food safety. For example, the Bureau of Standards, Metrology and Inspection under the Ministry of Economic Affairs was in charge of the inspection of imported food. When the Bureau failed to screen out tainted products and let them enter into the market, then public health authorities were supposed to recall, test and remove tainted products from the shops. In other words, public health bureaus would be punished for the failure of the standards and inspection bureau.

The impetus for change came from popular reaction to revelations in the press in September 2008 that Taiwan had imported tainted milk powder from the mainland. Authorities in Taiwan discovered that a subsidiary of New Zealand's Fonterra Group, an investor in Sanlu, had imported 25 tons of the milk powder into Taiwan⁵⁷ and that mainland sourced tainted milk powder was widespread in many products in Taiwan. The government then banned the import of the tainted milk powder from the mainland and ordered stores to remove the products containing the milk powder from store shelves. At the same time various health bureaus started to test milk products in the market. Given that melamine was not a compulsory test item before September 2008, various health bureaus adopted different standards to define toxic products. Then on September 23, the Department of Health announced that they would adopted Hong Kong's standard (2.5 ppm) as the national uniform standard to define melamine-tainted products. The WHO subsequently also adopted this standard (Lui, 2008). The change of policy prompted a furious reaction from the trade, the media, consumer groups and legislators of both parties that ultimately forced the Minister of Health, Lin Fang-yue to resign (*Taipei Times*, September 26, 2008). Industry groups demanded that the government compensate importers and retailers for

⁵⁷ China Milk Scandal: Asia, Europe tightens controls at http://www.monstersandcritics.com/news/asiapacific/news/article_1433115.php/China_milk_scandal_Asia_Europe_tighten_controls_Correction, accessed April 26 2010.

their losses (Ye, 2010, 5). The media played a major role in pressing the government to take responsibility for the policy reversal. The issue became so salient because it highlighted the difference between the two major parties on relations with the mainland (Ye, 2010, 54). Since it lost the presidency in May 2008 to the KMT, the DPP in opposition had spared no effort to criticize the KMT's governance and its pro-Mainland China stance. The fact that the melamine-tainted milk products were imported from Mainland China gave DPP another chance to criticize KMT (Ye, 2010, 55). According to the DPP, importing tainted food from the mainland demonstrated the danger of the KMT's policies to Taiwan. The DPP saw the policy reversal as more evidence of the KMT government's willingness to sacrifice food safety standards to improve relations with the mainland.

This episode and the resignation of the Minister of Health provided an opening for further institutional reform of the food safety regulatory regime. With great speed politicians established a unified bureau at the central level to coordinate food safety policy, ending a twenty year debate on the appropriate institutional arrangements for food safety. The reform focused on both the policy making and implementation processes. To better coordinate policy making in June 2009 politicians established a Food Safety Commission, chaired by the Deputy Head of the Executive Yuan. Politicians charged the principal official of Department of Health with implementing the decisions of the Commission. The Commission included the Department of Health, the Council of Agriculture, the Environmental Protection Administration, the Ministry of Economic Affairs, and the Ministry of Education. The government also established a vice-principal's meeting among the Department of Health, the Council of Agriculture, and the Environmental Protection Administration to improve coordination. The three vice-principals meet every month to discuss food safety issues (Ye, 2010).

Then on May 12, 2009 the Legislative Yuan passed the Organic Act of the Taiwan Food and Drug Administration (TFDA) under the Department of Health. The Bureau began to operate on January 1 2010. The TFDA integrates the operations of four existing agencies: the Food Hygiene Division, the Pharmaceutical Affairs Division, the Bureau of Food and Drug Analysis, and the Bureau of Controlled Drugs. The scope of its responsibilities encompasses the administration of foodstuffs, new traditional medicines, drugs, controlled drugs, medical devices, and cosmetics; planning and formulation of laws and regulations; inspection, registration, and

evaluation of imported products; laboratory accreditation; risk assessment; and consumer protection measures (Ye, 2010; Ministry of Interior, January 3, 2010). The official rationale for the new arrangements was to improve administrative efficiency. Operations that in the past were dispersed under different units were put under one roof. In addition, the new Bureau took back the inspection and evaluation for imported food products from the Ministry of Economic Affairs. Therefore, from 2010 the TFDA managed all import inspection, while routine inspections are managed by the private sector. Finally, politicians increased the budget of the bureau in 2010 to 156 million NTD, which was the largest increase in 20 years (Ye, 2010, 53).

This case indicates that several factors contributed to the change to the institutional arrangements including a relatively mature civil society, strong interest groups, the media as the watchdog and a competitive party election system.

In Hong Kong the logic of institutional reform took a different form. By the mid 1990s, the colonial political executive chose to manage food safety and environmental hygiene through eleven different departments and agencies (Health and Welfare Bureau, 1998). These included two elected municipal councils, set up to address legitimacy problems, which each had authority to make different by-laws with different standards applicable in their respective (urban and rural) jurisdictions; three policy bureaus, three agencies (departments) and the Hospital Authority. At that time key aspects of food safety were the domain of the Department of Health (DH) under the Health and Welfare Bureau. The DH operated mainly through a food surveillance system, testing samples of imported food and spot checks on retailers and restaurants. The Agriculture and Fisheries Department (AFD), where veterinarians were located, managed wholesale markets and supervised the inspection of imported live animals. AFD was managed by the Economic Services Bureau, reflecting its trade facilitation and agriculture and fisheries development functions. The Urban Services and Regional Services departments, both reporting to different elected municipal councils, focused on restaurant licensing and environmental hygiene including the cleanliness of food markets. The extreme decentralization of Hong Kong's food safety regime meant that no focal point existed to steer and coordinate policy in food safety. No policy bureau had responsibility for the municipal councils and their executive agencies (the Urban Services Department and the Regional Service Department) and the Director of Health's powers to make binding decisions on food safety was considerably limited.

The fragmented arrangements undermined the ability of the administration to address large scale food safety emergencies quickly. In 1997, 2001 and 2002, for example, Hong Kong was the site of a deadly outbreak of avian flu in humans (Poon, 2004). In these cases authorities established links between public health and the way food was handled. The crises also revealed breakdowns in communications that went beyond the usual information asymmetries that characterize typical government bureaucracies. A lack of communication within agencies in Hong Kong (e.g., the DH, AFD, and the Hospital Authority) and between the Hong Kong and mainland governments was especially damaging.

Still, under these fragmented arrangements ties evolved linking food safety agencies at an operational level and inter-departmental working committees and task forces were used to handle crises, such as the 1997 avian flu outbreak (Poon, 2004). Initially led by the Department of Health because officials viewed avian flu as primarily a health risk, the Urban Services Department was brought in to clean up Hong Kong's wet markets and the Agriculture and Fisheries Department to inspect local chicken farms, and then on December 29, 1997 to slaughter all (1.5 million) chickens in Hong Kong, initially planned as a 24-hour operation. Only after strong criticism from the legislature, the public, and the trade that the government had acted too slowly did the Chief Executive appoint the Chief Secretary to coordinate follow-up action (Poon, 2004).

With regime change in 1997 and more legitimate local leadership, politicians sought to abolish the inefficient elected councils and replace them with more effective institutional arrangements (Constitutional Affairs Bureau, 1998). the political executive replaced the fragmented and autonomous arrangements with a single more tightly controlled agency (the Food Safety Center within) the Food and Environmental Hygiene Department (FEHD) which was formed from pieces of the Department of Health, the (re-named) Agricultural, Fisheries and Conservation Department, and the Urban Services and Regional Services departments.⁵⁸ These

⁵⁸ The process did not happen all at once. FEHD was created in 2000, containing an Environmental Hygiene Branch, Food and Public Health Branch and Administration and Development Branch. The Food and Public Health Branch absorbed sections of the former Hygiene Division (Food Surveillance and Food Import Control) and created a new agency, the Veterinary Public Health Division drawing staff from the Agricultural, Fisheries, and Conservation Division. After a series of food incidents, the Center for Food Safety was only set up within FEHD in 2006, when the government's plan to create a new Food Safety Inspection and Quarantine Department failed (see the text). Source: Peter Poon, FEHD, 30 June 2009.

arrangements put a single policy secretary working with one permanent secretary in charge of most of the relevant food safety departments FEHD, AFCD, and Health, and abolished the confused structure of elected municipal councils and urban and rural services departments. This arrangement provided for a lead department (FEHD) and a single source of policy. The new arrangements facilitated the establishment of a new, high level Steering Group on Food, the first such regular policy coordination mechanism for food safety created in the Hong Kong government.

Not surprisingly the new arrangements have not completely eliminated bureaucratic conflicts among departments even those housed under one bureau. As a result of the reforms the single permanent secretary's position has been split into two, which means turf battles between the two permanent secretaries that would be pushed up the policy secretary. Moreover, AFCD's mission to develop agriculture and fisheries in Hong Kong makes it in some sense unsuitable to regulate food safety. As the former Director of FEHD pointed out, 'The two departments [FEHD and AFCD] have very different missions. Because of this, they also have different approaches [to cooperation]. ... If you ask the AFCD people, if they are honest with you, they will tell you they are not quite sure what they are doing. They are caught between two bosses now [Health Welfare and Food; Environment, Transport, and Works]. [They say] for my first 20 years in the department my job was to help the industry develop. When it comes to the control side [and FEHD asks] "Hey, can you control the farmers for us?" they will be very reluctant... But from day one FEHD is the control agent, we don't care whether the pig farm is prospering or not, we want to make sure the food is safe. Therefore we are very control oriented...'

Although AFCD has provided support and cooperates at an operational level with FEHD on food safety issues every day, its commitment to food safety was tested to the limit in 2005 when the government produced a new blue print for food safety reform that essentially called for the AFCD to be abolished. This episode demonstrates the limits to which the department is committed to policy coordination. Survival comes first, and in this case all key players recognized that the department should continue to exist even at the expense of perhaps better coordinated food safety policy implementation.

The new arrangements have facilitated improved coordination between the Hong Kong government and mainland authorities. The permanent secretary has regular meetings (three times per year) with officials of the AQSIQ⁵⁹ in Beijing to review food safety policies. Regular meetings were also held between food safety officials in Hong Kong, Guangdong, Shenzhen and Zhuhai to review operational matters. Contacts between Hong Kong and the mainland have also been strengthened. These include a new notification system contained in protocols signed between the Hong Kong government and AQSIQ and Ministry of Agriculture that requires these agencies to notify the Hong Kong government of any adulteration of food or incidences of animal disease coming from AQSIQ-export registered farms. The two governments have also established a regular annual meeting of the policy secretary for HWF and the Minister of AQSIQ to review food safety issues and procedures.

In spite of these developments, information asymmetry and conflicts of interest still characterize Hong Kong mainland food safety issues, however. Problems with mainland-sourced food are complex. Given that Hong Kong cannot send thousands of inspectors to investigate every farm or food processing factory, the government relies heavily on the AQSIQ bureaucracy. The ministry in Beijing, however, may not know what is going on at local level. During the malachite green scandal, the government pushed the AQSIQ to set up a system of registered fish farms in China from which exports to Hong Kong would come. The authorities issued a list of such farms in short order, but Hong Kong journalists who tried to visit the farms found out that many did not exist. Hong Kong is thus dependent on the mainland for information and the quality of its regulation. Although AQSIQ in some sense acts as an agent of the Hong Kong government on the mainland, AQSIQ has its own control problems.

The post-1997 political executive choose to exercise much tighter control over the food safety bureaucracy, in keeping with new governance ideas and pressure from the public for better service (better protection for beneficiaries).

⁵⁹ On the mainland the Hong Kong government's key partner is the General Administration for Quality Supervision, Inspection and Quarantine (AQSIQ), part of the central government in Beijing. The AQSIQ supervises a network of local Entry and Exit Inspection and Quarantine bureaus (the Guangdong province bureau and Shenzhen and Zhuhai bureaus are key regulators for Hong Kong food imports) that implement central government quality controls for all exports, including food. The AQSIQ maintains registers of approved farms and processing plants that may export food to Hong Kong (and the rest of the world).

Conclusion

From an agency perspective, the problems of multiple principals have been addressed differently in the three places. On the mainland an incentive system that rewards officials for fulfilling a narrow range of targets has had the unintended consequence that they relatively ignore non-targeted policy goals. The central government highly values economic growth and tax remittances. Only if food safety scandals lead to widespread popular unrest are local officials be penalized under this system. Accordingly agents on the mainland spend most of their time focused on their bureaucratic superiors and the public as principal is relatively ignored. The incentive system fits comfortably with institutional stasis in the food safety regulatory domain. Pressure for food safety reform has probably come mostly from China's external trade partners. Apparently the link between food exports and economic development is easier for officials to grasp.

In early 2010 the mainland government established a new National Food Safety Commission at the center, chaired by Vice Premier and Politburo Standing Committee member, Li Keqiang. Putting Li in charge indicated that food safety was now perhaps receiving more attention at the center. The Commission promised better coordination of food policy making. Left out of the picture, however, were more effective measures to coordinate the huge number of bureaucratic players with food safety enforcement responsibilities. We speculate that even if such a re-organization took place given an incentive system that encourages officials to look inward, and the emphasis on economic growth to ensure stability, dramatic changes to the enforcement of food safety standards are unlikely.

In Taiwan, of course, local officials are also looking up to their bureaucratic principals but the incentive system of competitive elections in a system with media freedom and a well developed civil society means that the public as principal is also important. We have seen how public disgust with the handling of a food safety crisis opened a window for administrative reform that could improve policy coordination through centralization (although we recognize that this need not be the case). Hong Kong shares similarities with both the mainland and Taiwan, characterized by aspects that are both authoritarian and liberal at the same time. The public as principal became more prominent in the post-1997 era as the government required some degree of popular support to push through its policy agenda.

The three cases reveal the impact of regime differences on the institutional arrangements for food safety regulation. The role of the public and pressure from civil society, including interest groups and NGOs, is magnified in competitive systems such as that found in Taiwan. Principals and agents both must take public pressure into account as part of their calculus. Further, the Hong Kong case demonstrates how regime change can have an impact on institutional choices, again highlighting the importance of regime.

Although we have focused to some extent on three cities, they are embedded in larger systems. Issues of size and scale are not insignificant. Accordingly we expect much more gradual change on the mainland than in either Taiwan or Hong Kong. That said, in both Taiwan and Hong Kong introducing more effective institutional arrangements for food safety (including more centralization) took decades to achieve.

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