



Why small and medium chemical companies continue to pose severe environmental risks in rural China



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ABSTRACT

In China, rural chemical SMEs are often believed to still largely operate below the sustainability radar. This paper investigates to what extent and how chemical SMEs are already experiencing pressure to improve their environmental performance, using an in-depth case study in Jasmine County, Hebei province. The results show that local residents had rather low trust in the environmental improvement promises made by the enterprises and the local government, and disagreed with the proposed improvement plans. Although the power of local residents to influence decision making remained limited, the chemical SMEs started to feel increasing pressures to clean up their business, from governments, local communities and civil society, and international value chain stakeholders. Notwithstanding these mounting pressures chemical SME's environmental behavior and performance has not changed radically for the better. The strong economic ties between local county governments and chemical SMEs continue to be a major barrier for stringent environmental regulation.

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1. Introduction

Since the early 1980s, rural industries originally referred to as Township & Village Enterprises (TVEs) and later relabeled small and medium-sized enterprises (SMEs), have been a significant engine of China's economic transition. The promulgation of the 2002 *Law of China on the Promotion of Small and Medium-sized Enterprises* caused a new acceleration of SME development.¹ In 2009, China had registered 43 million SMEs, together responsible for 58.5% of the national GDP, half of China's tax revenues, 68% of China's exports, and nearly 80% of the job opportunities in cities and towns (Xinhua, 2012).

However, the environmental costs of China's rural industrialization are enormous (Wang et al., 2008). Rural industries have been and still are notorious for their air and water pollution, for their inefficient use and waste of natural resources, for the destruction of

the ecological environment and for damaging human health (Zhang, 2002). Many studies ascribe the poor environmental performance of SMEs to the sheer number and dispersment, the sub-standard production technology, their poor operation and management systems and routines, the shortage of finances, the lack of environmental awareness, and last but not the least: the strong local government–SME alliance (Guo and Zheng, 2012; Kostka and Mol, 2013). Rural SMEs continue to be notorious polluters, regardless of specific efforts and campaigns, such as the massive 1997 SME closure campaigns (Xu et al., 2001). Among these rural SMEs, chemical and petro-chemical companies are among the most polluting and also blamed for causing so-called “cancer villages” in China (Sun, 2009).²

Following increasing numbers of chemical pollution accidents chemical risk management has moved high on China's policy agendas and chemical companies experience increasing state, public and value chain pressure to improve their environmental performance (He et al., 2011, 2012a). While there is growing evidence of mounting pressure on chemical companies to clean up

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¹ In China, industrial companies with less than 1000 employees and an annual income of less than 400 million yuan (63 million U.S. dollars) qualify as SMEs; companies with less than 20 employees and less than 3 million yuan in annual income are considered to be “micro-companies”, according to Document No.300 MIIT in 2011.

² By the end of 2010 the total number of petrochemical and chemical plants in China reached nearly 96,000, of which 60,000 are small scale ones. Almost half of the 1800 pesticide production enterprises were SMEs, according to the National Bureau of Statistics of China (2011).

their business in China, this is not necessarily so for chemical SMEs in rural China. Existing studies on environmental performances of chemical companies rarely distinguish between rural SMEs and urban, transnational companies (Grasa et al., 2002; He et al., 2012b; Huang et al., 2013; Zhang et al., 2013). But if a distinction is made, small rural chemical SMEs are often believed to still largely operate below the sustainability radar in China, because: 1) unlike the larger companies they are hardly visible in the national and international media; 2) they are less internationally integrated; 3) they are less subject to stringent governmental regulation and enforcement, also because local governments have key (financial, economic, political) interests in maintaining these companies in operation within their jurisdiction; 4) they are less confronted with a well-informed, environmentally aware, and well-resourced Chinese middle class, as rural neighboring residents lack (access to) information, knowledge, legal aid, and non-governmental organizations (NGOs).

But the “environmental frontier” in China is far from static and those practices and organization that could function below the sustainability radar just a few years ago might very soon become visible for increasingly independent state environmental agencies, a better informed civil society and growing international interdependencies. This paper aims to investigate to what extent and how chemical SMEs in rural China are already experiencing pressure to improve their environmental performance, using an in-depth case study in Jasmine County in Hebei province. The next section presents the analytical framework and methodology followed by an overview of environment pollution and performance of the case study chemical SMEs. Sections 4–6 analyze the legal and administrative interventions on, the interactions of civil society with, and the international value chain impact on SME environmental performance, respectively. Section 7 concludes the paper with suggestions for the future of rural SME risk management in China.

2. Changing chemical risk politics in rural China: framework and methodology

2.1. Research framework

In rural China, local leaders strongly facilitated the establishment of new SMEs as these factories were expected to drive local economic development, played a main role in fulfilling targets of local leaders, and local leaders more than incidentally had a financial stake in local companies (OCED, 2006). Local governments tend to form close relationships with polluting enterprises as an “alignment of interests” aiming to speeding up the economic growth and taking environmental protection as a secondary objective (Guo and Zheng, 2012). Rural SMEs had particularly strong incentives to cultivate good relationship with bureaucrats, because they had difficulties in obtaining preferential treatment from the central government; a consequence of the ‘liability of smallness’ and lack of legitimacy (Wu and Leung, 2005). This intricate relationship between local governments and polluting companies had consequences for environmental policy-making and implementation. Although in principle firms that failed to comply with environmental regulations risked incurring non-compliance penalties and revoking of their operating permits (Weng and Lin, 2011; Smallbone and Welter, 2001), in the practice of rural China application remains limited. Especially in the case of pollution from “key protected firms” local enforcement was powerless due to dependence on the local government (Wang et al., 2008; Van Rooij and Lo, 2010; Stevens et al., 2013), and the career paths of Environmental Protection Bureau (EPB) leaders (Kostka, 2013; Liu et al., 2012). Pressures from higher level governments

and agencies, the public, and international economic relations, put pressure on the lax chemical risk management through a closed and protective relationship of local governments and SMEs.

Faced with severe chemical pollution and increasing public pressure, China’s leadership developed a large number of policy initiatives and ambitious investments (Liu et al., 2012). A series of laws, regulations, standards, and actions on chemical risk management has been promulgated and the central government has started to improve enforcement of its environmental laws and regulations (MEP, 2012, 2013; Wang et al., 2012). The number of environmental inspections by national environmental and other agencies has increased to ensure supervision by local EPBs and compliance and risk management by local companies, especially SMEs. The national environmental monitoring system and inspection and enforcement institutions have been gradually improved to ensure a better surveillance of the compliance of environmental regulations by Chinese and foreign SMEs (Stevens et al., 2013). A new emerging Chinese middle-class started to articulate their environmental interests in recent years, as displayed by anti-pollution protests which confront local governments and enterprises with their environmental abuses (Göbel and Ong, 2012; Kennedy, 2012; Yang and Calhoun, 2007). Chemical companies in China have also become subject to increasing civil society scrutiny, as increasing numbers of NGOs, media, and citizens and residents living adjacent to these chemical facilities now complain, report and protest on the risks of these facilities, especially following a number of very visible incidences (Lee, 2008; Liu et al., 2010; Qi et al., 2012; Tang and Tang, 2012). But, rural and low-income people found it still difficult to defend their rights in environmental disputes because they often lack similar means, capacity and freedoms as the urban middle class. Some of them may be bold and resourced to seek material compensation from authorities or companies, but most of them not. In the countryside social networks, microblogs and knowledge and information infrastructures are difficult to access and poorly developed (Dong, 2012). However, better access to mobile phones and the Internet might enable rural population to learn from urban developments, to share, exchange and disseminate local information, and to coordinate movements and protests more effectively (Klein, 2011).

In addition, international linkages of chemical companies—e.g. by being part of a transnational company and/or through value chains linkages with global markets—have triggered the introduction of voluntary standards, global environmental management and corporate social responsibility systems, sustainability reporting initiatives, and advanced product quality programs, all contributing to improved environmental performance of Chinese chemical production facilities (Darnall et al., 2009; He and Yang, 2012; Mol, 2011; Zadek et al., 2012). In case of severe chemical risks, international corporate buyers and suppliers are more likely to respond by canceling purchasing or selling agreements, stopping delivery of an input, or requesting environmentally sound substitutes (Zadek et al., 2012; Henriques and Sadorsky, 1999). While the domestic value chain pressure on Chinese chemical SMEs is not yet emerging, Chinese SMEs are raising the bar to meet international standards of sustainability and responsibility as part of their strategy of internationalization and moving higher up the value chain.

In line with developments in OECD countries, a transition from state-dominated environmental regulation to more participatory environmental governance can be observed also in China during the past decade (Mol and Carter, 2006). The idea of environmental governance would mean the deviation from a model where the close ties between the local government and chemical SMEs is decisive on environmental reform of the latter, towards a model where three types of the actors are involved in chemical industry environmental management in rural China (see Fig. 1). Hence, apart from

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