



# Socially responsible supplier development: Construct development and measurement validation

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## ABSTRACT

Chinese manufacturing has recently been plagued by a raft of product safety problems such as melamine-tainted milk, lead-tainted toys, toxic toothpaste, defective tyres, and fake medicines. A probable cause of these incidents is a lack of business ethics in the suppliers concerned. In the literature much has been suggested on the use of corporate social responsibility (CSR) to improve firms' ethical behaviors and on the use of supplier development (SD) to improve suppliers' capabilities. This research integrates the literature on CSR and SD to develop a new approach, called socially responsible supplier development (SRSD), to address suppliers' ethical problems. SRSD suggests leveraging a buying firm's concerted supplier development efforts to improve its important suppliers' capabilities in CSR implementation. We develop and validate scales for measuring SRSD practices. In addition, we provide empirical evidence on the validity of existing CSR scales for Chinese manufacturing firms. Our results are based on analysis of the data of 160 pairs of buyer–supplier relationships in four manufacturing industries in China. The results indicate that all the scale items possess adequate reliability and validity to reflect SRSD and CSR. We also discuss the implications of our findings for research and practice.

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## 1. Introduction

Although many researchers have strongly advocated that any manufacturing organization should develop in sustainable ways that satisfy the needs of multiple stakeholders and create values through environmental and social performance (Ciliberti et al., 2008; Vachona and Klassen, 2008; Pagell and Gobeli, 2009), many manufacturers are still severely affected by unethical behaviors that occur in their manufacturing processes and supply chains. For instance, a pet food manufacturer, Menu Foods, paid a \$24 million settlement to customers in 2008 because its Chinese suppliers intentionally spiked the gluten with melamine to pass chemical inspection (Tybout and Roehm, 2009). Unfortunately, melamine was used not only in pet food, but also in milk products for humans. The melamine-tainted milk manufactured in China caused nearly 300,000 people to fall sick and several deaths of infants (DeLaurentis, 2009). The dairy products of 21 manufacturers including such major players as Mengniu, Yili, and Sanlu were also found contaminated. The scandal spread into a global concern with recalls, bans, or warnings of contaminated food

being reported in Europe, the USA, and Asia (BBC, 2010; DeLaurentis, 2009). Investigations revealed that the problems were caused by suppliers. They are farms or similar businesses, which added melamine to diluted milk to boost the apparent presence of protein in the milk (Ma, 2009; Fairclough, 2008). In addition to food-related organizations, Mattel, a toy company, recalled approximately 14 million toys because of their excessive levels of lead or the presence of small detachable magnets that can be swallowed. This scandal resulted in Mattel facing numerous lawsuits and suffering severe reputation damage (Gilbert and Wisner, 2010). Similarly, it is not Mattel but its suppliers that produce the defective toys. There are other similar supplier-related ethical problems such as toxic toothpaste, defective tyres, and fake medicines (Ip, 2009; Lu, 2009) and strong public criticisms of Nike, Adidas, and Sainsbury for their failure in controlling labor abuses in their suppliers (Barton, 2007; Yu, 2008; Emmelhainz and Adams, 1999).

These supplier-related ethical problems and their consequences imply that buying firms need to recognize suppliers' ethical problems as a strategically important concern. In the management literature, concerns for managing ethics in organizations typically refer to the approach of *corporate social responsibility* (CSR). One common perspective to understand CSR is to use stakeholder theory to conceptualize CSR as the extent to which businesses assume the economic, legal, ethical, and discretionary responsibilities imposed on them by their various stakeholders (Maignan et al., 1999). The

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success of employing CSR to address issues of ethics and enhance organizational performance has been well documented in the literature (e.g., Luo and Bhattacharya, 2006; McWilliams and Siegel, 2000). On the other hand, the operations and supply management literature has widely reported that *supplier development* (SD) is a viable approach for buying firms to improve the capabilities of their suppliers. Similarly, SD's effectiveness in improving the operational performance of both the supplier and the buying firm is supported empirically by a number of studies (e.g., Krause et al., 2000, 2007). However, the current understanding of CSR and SD offers very few guidelines on how a buying firm can enhance its suppliers' CSR capabilities. To fill this void, we introduce a novel approach in this research – *socially responsibly supplier development* (SRSD) – to address suppliers' ethical problems. SRSD refers to the concerted supplier development efforts made by a buying firm to improve its important suppliers' capabilities to CSR implementation. We expect that by implementing SRSD, important suppliers will be induced to implement CSR and the ethical performance of both suppliers and the buying firms will be improved. In order to advance the understanding of SRSD, we develop and test the measurement scales for SRSD in this research. Using qualitative methods including literature review, expert panel discussion involving six professionals, and a pilot test involving managers of 20 manufacturers, we identify three dimensions and the corresponding scale items of SRSD. Based on the data of 160 paired buyer–supplier manufacturers in China, we quantitatively validate the scales through various statistical tests. In addition, we also validate the scale items of seven selected dimensions of CSR.

The contributions of this research to theory and practice are four-fold. First, we address the recent supplier-related ethical problems by introducing the SRSD concept that offers practical insights to manufacturers on how to take a proactive role in enhancing the ethical practices and performance of their suppliers. Second, we extend both the operations and supply management literature and the business ethics literature by introducing and developing the SRSD concept. Indeed, the development of the SRSD concept sheds light on how to integrate concepts from differing academic disciplines to generate a solution for a practical problem. Third, researchers can use the SRSD scales developed in this research to further test and refine the concept empirically. Practitioners can also use the scales as an assessment tool to evaluate their SRSD implementation status. Finally, in addition to developing the new SRSD scales, we also examine and validate seven relevant dimensions of CSR and their scale items in this research. Given the lack of validation studies on the use of CSR scales in Chinese organizations, our validation results contribute to improving the generalizability of the current CSR scales.

The remainder of this paper is divided into three parts. In the second part we provide a literature review of related works on sustainability, ethics, operations management (OM), SD, and CSR, and discuss the theoretical background underpinning the development of the SRSD concept and its three underlying dimensions. In the third section we present and elaborate on the results of using qualitative and quantitative methods to develop and validate the SRSD and CSR scales. Finally, in the last section we discuss the theoretical and managerial implications of the research findings, and suggest topics for future research.

## 2. Conceptual background

### 2.1. Sustainability, ethics, and corporate social responsibility in operations management

The importance of sustainability, ethics, and CSR has attracted increasing attention of operations and supply management

researchers. For instance, Ciliberti et al. (2008) link the adoption of CSR practices to logistics management by developing a framework of “Logistics Social Responsibility” to address various sustainable supply chain management issues. Kleindorfer et al. (2005) conduct a review of the OM literature and offer insights on future sustainability challenges facing OM researchers and practitioners. Other researchers have pointed out that the sustainable development of organizations can be influenced by OM concepts such as product design, by-product management, product life extension, recovery processes, reverse logistics, and logistics network design (e.g., Matos and Hall, 2007; Kocabasoglu et al., 2007; Zhu et al., 2008). In addition, some traditional OM quantitative methods have been employed to examine sustainability problems such as determining the optimal CSR resource allocation for achieving maximum net returns and minimum emissions (Cruz and Wakolbinger, 2008). Nonetheless, because of increasing interdependence between buyers and suppliers in supply chains, many supply management researchers propose to extend the scope of concern to include upstream suppliers when formulating approaches to enhance sustainability or ethical performance. For instance, Vachona and Klassen (2008) assert the importance of supplier collaboration on environmental practices and empirically test the impact of joint actions in environmental planning, pollution reduction activities, and environmental goal setting on process-based performance. Carter and Jennings (2004) investigate the potential contributions of purchasing to CSR adoption with respect to such dimensions as community, workplace, safety, and human right, etc. Researchers have also considered other issues such as purchasing from minority business enterprises (e.g., Carter et al., 1999), and having a concern for the environment (e.g., Carter and Carter, 1998) and human rights (e.g., Emmelhainz and Adams, 1999). While organizations are well aware that they will be adversely affected by the unethical behaviors of their suppliers, managerial guidelines on how a buying firm may proactively enhance its suppliers' capabilities in implementing ethics-related practices are virtually unavailable in the literature.

A link between the concepts of CSR, sustainable development, and business ethics has been established since the late 1990s and many scholars even consider them as synonyms (Ciliberti et al., 2008). Of these three concepts, CSR is widely considered as a management approach for achieving sustainable development and ethics, and it is closely associated with the recent triple bottom line (3BL) framework (i.e., people, profit, and the planet) (Elkington, 1998). Broadly speaking, CSR refers to “actions that appear to further some social good, beyond the interest of the firm and that which is required by law” (McWilliams and Siegel, 2001). This understanding of CSR has been expanded from the perspective of stakeholder theory, which emphasizes corporate responsibilities towards multiple stakeholders that affect and are affected by organization's actions (Freeman, 1984). Several empirical studies have provided evidence that CSR adoption can effectively reduce unethical practices and agency problems, strengthen relationships with primary stakeholders (e.g., increased employee commitment and customer satisfaction), and establish organization's trustworthiness (Clarkson, 1995; Jones, 1995; Maignan and Ferrell, 2004). Moreover, the engagement of CSR is strongly linked to the creation of corporate reputation, which is considered to be an intangible resource for corporate sustainable development (Russo and Fouts, 1997). Obviously, if a buying firm intends to influence a supplier's ethics management practices and performance, it could focus on influencing the supplier to implement CSR. However, although the OM and supply management literature has been replete with ideas on supplier management, suggestions on how a buying firm can influence its suppliers to implement CSR have been lacking.

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