Chapter 2
Supplier Integration in the Chinese Automotive Industry

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ABSTRACT

Supplier integration has become an important concept for improving supply chain performance in networked industries, such as the automotive industry. The aim of this chapter is to identify factors that facilitate and inhibit supplier integration in the context of the Chinese automotive industry. An inductive approach, based on grounded theory, was chosen as the research methodology, where data was collected through 30 case interviews conducted with automotive companies in China and through which data was collected accordingly. The results suggest that buyer-side leadership is an important antecedent for building motivation, trust and commitment among suppliers and for shaping their mindsets. This, in turn, facilitates strategic alignment and enables suppliers to build collaborative capabilities, which are shown to be a key enabler for successful supplier integration.

BACKGROUND

Supply Chain Integration (SCI) is defined by Bowersox et al. (1999) as the simultaneous orchestration of four critical flows: product/service, market accommodation, information, and cash within and across companies. Analogously, Supplier Integration (SI) is defined as a practice that links externally performed work of the supplier into a seamless congruency with internal work processes (Bowersox et al., 1999). SI, as a subset of SCI,

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belongs to the upstream part of the supply chain. Supplier Integration improves quality through joint sharing of the supplier's process capabilities and the buyer's design specifications, and it shortens cycle time for new product development through the use of inter-organizational information systems and active participation in development activities (Monczka et al.,1998). The composition of Supplier Integration is shown in Figure 1.

Both anecdotal and empirical evidence (Murray, Kotabe, & Zhou, 2004; Pyke, Robb, & Farley, 2000b; Wilkinson, Eberhardt, & Millington, 2005) indicate that many foreign companies in China are experiencing difficulties in sourcing strategic supplies from domestic suppliers and in forming long-term partnerships with them. The challenges of sourcing activity in China have their own features, which turn out to be more difficult than expected, such as low market transparency, ineffective legal enforcement, intellectual property protection, as well as the local suppliers' difficulty to meet the high requirements. Supplier-related challenges in China have repeatedly been investigated in the literature. Among them, the most notable challenges are poor quality of locally produced components, especially among second-tier suppliers (Sutton, 2004), delivery problems and unexpectedly high costs (Zhang & Goffin, 2001). Chinese suppliers have proven to be less suitable for JIT production and high-mix/low-volume production, due to their unwillingness to switch tooling and accept short production runs (Child, 1996; Kaiser, 1997).

In different parts of China, the supply market has different performance. Difficulties seem to be more frequent in industries characterized by high requirements for quality, delivery and intellectual property protection, such in as the automotive industry (Holweg, Luo, & Oliver, 2005b; Pesselhoy, 2005; Zhang & Chen, 2006).

Anecdotal evidence currently suggests that the level of supplier integration in the Chinese automotive industry is very low, and that the key bottlenecks are primarily related to a set of collaborative supplier capabilities needed to enable effective buyer-supplier collaboration. This is in line with the existing body of research which has acknowledged the importance of concepts such as early supplier involvement (Mikkola & Skjøtt-Larsen, 2003; Wagner & Hoegl, 2006), and concurrent engineering (Koufteros, Vonderembse, & Jayaram, 2005; Takeishi, 2001).

Despite the rapid growth of the Chinese automotive industry (Zhu, Sarkis, & Lai, 2007), the collaborative capabilities of domestic suppliers are still limited. In addition to lacking basic process management skills (Eberhardt, McLaren, Millington, & Wilkinson, 2004b), problems can be found in a historical shortage of R&D capabilities (Holweg, Luo, & Oliver, 2005a). As a consequence, key components are still predominantly designed outside China and are imported by, or sourced from, global suppliers with operations in China (Holweg et al., 2005b).

The efforts among automotive companies in China to find suitable domestic suppliers have to be seen both in the context of response to local content requirements, as promulgated by the Chinese central government, as well as within the context of the global sourcing strategy that the automobile companies want to pursue. Therefore, both original equipment manufacturers (OEMs) and their non-Chinese suppliers are currently trying to integrate more domestic suppliers to their supply chains in China. Consequently, this research has a high practical relevance. Suppliers extensively and directly influence competitiveness, in terms of quality, costs, and innovation. In a networked industry like the automotive industry, it is virtually impossible for individual firms to possess all the technical expertise and capabilities needed to develop and produce a complex product like a car (Binder, Gust, & Clegg, 2007a; Wagner, Bode, & Koziol, 2008; Wolters & Schuller, 1997). In these situations, it is crucial for players to work towards supplier integration.

Supplier integration is therefore a complex and multi-faceted phenomenon that requires a