

Developing manufacturing flexibility through supply chain activities:
Evidence from the motherboard industry

楊振隆, 林錦煌, Chwen Sheu

Technology Management

Management

clyang86@chu.edu.tw

Abstract

This study extends the knowledge of manufacturing flexibility regarding its integration with supply chain activities. Specifically, we investigate the relationship between supplier collaboration and manufacturing flexibility in the motherboard industry. Three motherboard companies were benchmarked to decipher the impact of supply chain activities on different dimensions of manufacturing flexibility. Our findings indicate that supplier collaboration plays a major role in the development of a firm's manufacturing flexibility. More importantly, we find that not all supplier collaborative activities contribute equally to the development of different types of manufacturing flexibility, and supplier collaboration could affect the interrelationships among new product, product mix, and volume flexibility. A causal-loop diagram is developed to align supplier involvement with various types of manufacturing flexibility. Accordingly, several research propositions and managerial implications are offered.

Keyword : Manufacturing flexibility, Supplier collaboration, Supply chain management, Case studies, High-tech industry