Organisations are increasingly applying green business principles. According to a recent study, electronics manufacturing companies in Taiwan that practice green supply chain management (GSCM) have a better business performance than companies that do not. Those with a strong green marketing focus performed the best, successfully competing with their rivals.

Economic development around the world has led to increased pollution from high levels of industrialisation, with concerns about environmental impacts. The EU, for example, has passed legislation to ban six hazardous materials (Restriction of Hazardous Substances Directive) in the manufacture of electrical and electronic products for sale in the EU, with implications for manufacturers around the world.

GSCM aims to ensure that each link of the supply chain, from the raw material stage to the end-user, addresses environmental concerns and complies with environmental regulation. It covers product design, material sourcing, manufacturing processes, delivery to the consumer and end-of-life management. Green marketing, for example, promotes products based on both the product and company’s environmentally-friendly merits.

Based on responses to a questionnaire survey, the researchers investigated the relationship between different dimensions of GSCM and the business performance of 167 electronics-manufacturing firms in Taiwan. The questionnaire asked respondents to indicate the level of the firm’s implementation of essential GSCM practices or strategies and to rate the firm’s performance relative to its competitors.

The top three strategies used by the companies to successfully implement GSCM were: design of products to avoid or reduce hazardous products and manufacturing processes; substitution of polluting and hazardous materials/parts; and using a manufacturing process to reduce noise pollution.

These strategies were grouped into six key green supply chain dimensions: green manufacturing and packaging, environmental participation, green marketing, green suppliers, green stock, and green eco-design. Four groups of companies were then identified according to their performance in these dimensions: those weakly oriented towards practicing GSCM, those oriented towards green marketing, a green supplier oriented group and a green stock oriented group.

Overall, the group with stronger green marketing performed better than the other three groups. For example, they proactively provided information on environmental management to their customers on their websites, among other promotional activities. These companies had the best performance in terms of corporate image improvements, environmental regulation, profit, market share, sales, customer satisfaction and customer loyalty. As firms that were strongest in green marketing had the highest business performance, the researchers emphasise the importance of green marketing for electronics-related manufacturing firms.

Firms in the green supplier group demonstrated strength in corporate image improvements, customer satisfaction and customer loyalty, while those in the green stock oriented group were strongest in environmental regulation. Firms in the weakest GSCM oriented group were best at developing market share and sales, although not to the same extent as the companies with the strongest performances.


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