

Predicting Green Innovation Levels Among Automobile and Earthmoving Sectors

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Abstract

With a growing concern for environment and mounting pressure from stakeholders in the manufacturing ecosystem, there has been a movement for the manufacturing firms to take the route of green manufacturing and green innovation. Green manufacturing innovation involved developing a green awareness, having green manufacturing systems in place, developing a green manufacturing culture and continuous improvement towards excellence. Automobile and Earthmoving sectors being one of the large contributors to manufacturing economy in India clearly lacked a framework to pursue green manufacturing practices. To understand the green manufacturing practices, to differentiate the 'leaders' and 'followers' in green manufacturing innovation, and to predict green innovation index (score), this research surveyed 70 predominantly small and medium manufacturing firms and a few large firms of automobile and earthmoving sectors in Karnataka, comprising both ancillaries and assemblers. Multiple Linear Regression was employed with a 'green innovation index' of a firm as the dependent variable and factor scores (from exploratory factor analysis) as independent variables. Key factors that determined the green innovation index were - ability to recycle, recovery management, green stakeholder support, green commitment of employees, green value chain, cost and resource assessment, green design, strategic alignment towards green manufacturing, Reuse and implementation of 3R's.

Keywords

Green innovation, Automobile, Earthmoving.

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