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Rapid production ramp-up capability: a collaborative supply network perspective

Hui-Hong JK Li ✉, Yong Jiang Shi, Mike Gregory & Kim Hua Tan

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Abstract

This paper explores how technology intensive manufacturing firms operate to achieve rapid new product volume ramp-up capabilities within an international collaborative supply network. An exploratory multiple-case longitudinal research methodology was adopted involving three large Japanese Multinational Corporations and their respective international manufacturing supply networks comprising 19 factories in six countries. The findings suggest that a systematic ramp-up process is crucial to guide manufacturing operations in attaining a predictable initial production yield and rapid production volume ramp-up (time-to-volume). An empirically-based conceptual framework is then developed proposing linkages between critical elements within a manufacturing supply network and operational activities for a new product ramp-up. A structured ramp-up process is then proposed and pilot tested.

Keywords:

Notes

1. Wheelwright and Clark ([1992](#)) define time-to-volume of a new product as the time it takes for production to achieve acceptable production volume, cost and quality. Production volume ramp-up is also referred as time-to-volume and is the forefront part of a product lifecycles.

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