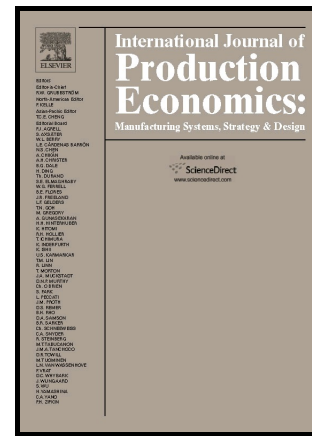


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Planning for Ramp-ups and New Product Introductions in the Automotive Industry: Extending Sales and Operations Planning

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Abstract

Sales and operations planning for ramp-ups and new product introductions in the automotive industry differs significantly from steady-state situations. We identify the ramp-up challenges in collaboration with a large European OEM. To support sales and operations planning for ramp-ups and new product introductions, we develop a mixed-integer linear programming model. In our numerical study, we show that it is necessary to consider complexity in sales and operations planning for ramp-up and new product introduction. Besides lost sales costs, complexity and demand volume are factors that need to be considered in the trade-off for the optimal sequence and timing of the start of production of variants. Furthermore, our analysis shows that rework quantities must be

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