



## **POS DEMAND & SEWN PRODUCT MANUFACTURING RESPONSE**

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Innovators in strategic decision analysis use dynamic process simulation to develop appropriate responses to demand. This research contributes a quantitative understanding of exact replenishment of sewn products and provides apparel manufacturers with unique tools for maintaining competitive advantage through expeditious management of time, quantity, and cost.

A model describing the sewn product manufacturer's requirements to produce at the rate demanded by point-of-sale emerges as an important production strategy for manufacturers that produce garments close to the market where they are purchased. Features of sewn product manufacturing systems central for manufacturers and affecting their selection of manufacturing system emerge. Data representative of point-of-sale (POS) demand is obtained from Sourcing Simulator and manufacturing response dynamically simulated, using SIMProcess software. Results show low unit processing times characteristic of Line, Modular, and UPS manufacturing systems of advantage only when operating in response to low demand volumes. Matches between incoming order size and manufacturing batch size prove essential in preventing erratic release of manufacturing batches. The research simulates and quantifies flexibility of capacity required by manufacturing systems replenish changing demand volumes. Batch order quantity to demand volume ratio is observed to affect degree of variability experienced in manufacturing response.