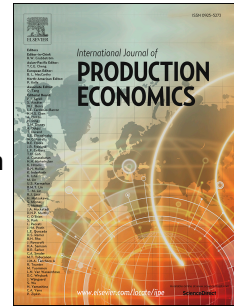


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Management of inventory under market fluctuations the case of a Canadian high tech company

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# Management of inventory under market fluctuations

## The case of a Canadian high tech company

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### ABSTRACT

The study develops a hybrid inventory management model, which can be used to synchronize the supply of critical purchased components with the output rate of the end product manufactured to the level production strategy. The model combines the demand driven delivery of a “pull” strategy with forecasting techniques used by “push” systems. It consists of a “Pull Signal” (PS) and two cost effectiveness formulas (CEFs).

PS triggers purchasing and determines the quantity and timing of supplies that are pulled by production. It is an inventory ordering algorithm, which determines “When and how many critical components should be ordered”. Inventory management can become expensive if PS is used to manage the low cost components so CEFs is required to determine “Which components should be managed as critical”.

The hybrid model is most useful in situations where production lead time is short, purchasing lead time is long and demand patterns vary. It was successfully implemented by a Canadian firm from a computer industry and generated a 27% reduction in a total value of inventory within just 11 months. Additionally, the customer service, cycle times, and even warehouse handling were all significantly improved.

**Keywords:** Inventory Management, Kanban, Push/Pull systems, Case Study

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