SCperf: An inventory management package for R

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Supply Chain Management, i.e., the control of the material flow from suppliers of raw material to final customers, is a crucial problem for companies. If appropriately designed and executed, it may offer efficient business solutions, thereby minimizing costs and improving readiness or competitiveness. In this context, the use of mathematical inventory models can give a significant competitive advantage.

We have developed the **SCperf** package as the first package which implements different inventory models that can be used when developing inventory control systems. There are several basic considerations that must be reflected in the inventory model. For instance, models can be divided into deterministic models and stochastic models according to the predictability of demand involved. Our package presents functions to estimate the order quantity and the reorder point regarding different models. Also, other important variables like the safety stock level and the bullwhip effect are calculated. During the presentation, examples will be used to illustrate different inventory situations.

References

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