

### ***Project assignment 3c***

In the task 3c I had to define a simulation experiment for comparing the two policies and run this experiment and answer the research questions: Which of them has lower costs? Which of them has a higher service level?

#### **Periodic replenishment policy**

With the periodic strategy, inventory is replenished at specific intervals. For example, every three days, we look at the levels to see if they need replenishing. If the inventory levels are still fine, then you don't reorder anything.

Even if our inventory runs out before that point, using a periodic replenishment policy, we would not re-order until the cycle ends. Replenishment orders are placed only at the pre-determined review points.

#### **Continuous replenishment policy**

If we use the continuous replenishment policy, we will select a stock level that signals when it's time to reorder inventory. For instance, if our stock has maximum 100 TVs, we set your reorder point to when 60 TVs remain in our inventory.

Now that we have our minimum, we need to set a maximum inventory level to prevent overstock. Inventory levels are continuously reviewed to trigger replenishment (either re-ordering or re-stocking) when inventory falls below the minimum threshold.

A continuous replenishment policy constantly updates as inventory sells and leaves the store. It keeps a running measure of the cost of TVs sold. That's not practical with periodic replenishment policy.

Effective and efficient of inventory management system can affect supply chain management significantly to improve cycle service levels and reduce costs.

In my experiments the lost sales by continuous replenishment policy was always better, like periodic replenishment policy. It was between 17 and 897 units by continuous replenishment policy, and between 64 and 1112 units by periodic replenishment policy. That means that continuous replenishment policy has a higher service level than periodic. But our goal is too that we have to minimizing inventory costs in the shop. The lower costs have in my experiments periodic replenishment policy.

This research resulted in the suggestion we should be used periodic policy in the future, if we want to minimizing inventory costs in the shop. Or we should be used continuous replenishment policy, if we want to have well service level.