



Production Batches: the logistics new frontier

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Until today, we have all observed customers being increasingly demanding on their suppliers. Actually, when we think for a while about this trend, from Quick Response, through Continuous Replenishment Program, to Vendor Managed Inventory, one thing seems to stand out: customers demand flexibility, placing greater requirements to their suppliers.

However, if to the customers, becoming more flexible means centralizing operations, improving IT systems or increasing order frequency, to the suppliers this is a lot more complex. There is a production system between raw materials and finished products, and this system could have technical characteristics that penalize frequent batch setups and do not comply with any negotiation pressures, which makes suppliers consider changes as more costs to them.

Although this attitude has some truth in it, after all negotiation power exists and has its impacts, we believe this is often excessive, as in our opinion suppliers have been focused on the wrong problem solution.

Most suppliers have tried, until today, to gain flexibility by building inventory. This tactic is obviously a fallacy, since a positive relationship does not exist between flexibility and inventory. Practice shows that logistics systems holding fewer inventories seem to be the most efficient and flexible.

Alternatively, suppliers should search for their flexibility within their own production system, by reducing the batch size for their products. But if we are going to talk about production batches, the conversation must start from the beginning, at the efficiency of the production system.

Excluding maintenance related stoppages, the strict efficiency of a production system is closely related to batch setups. Therefore, to maintain the efficiency of the production system, companies have been adopting

the solution of long batches, avoiding batch setups. Frequently, Production Director does not have among their responsibilities, any issue that balances the setup cost. Variable costs of inventory are, most often under the responsibility of the Sales Director.

From an integrated point of view, however, longer batches create higher levels of inventory, as well as more frequent stock outs and, consequently, more frequent changes to the production plan. The result is a very efficient production system (even though this is only apparent sometimes) at the expense of the overall company efficiency. These issues are visible when we discuss the true costs of stock outs, the inventory and the changes to production plan.

In this context, it is very important to change the management paradigm, giving the production batch its fair importance. Companies must keep in mind that the flexibility, as well as efficiency, of a production system is directly related to its batch size.

In order to facilitate the paradigm switch, setup cost reductions must be searched and achieved. It is not infrequent to achieve 50% reductions in setup costs after an initial analysis of the setup process. After successive investigations of new setup reduction opportunities, greater reductions can be achieved.

If this paradigm switch is successfully achieved, then operations costs and stock outs can be reduced together with the flexibility increase. The subject of batch size becomes strategic to companies, as it can be used as a competitive advantage.

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