

# COMPARISON OF THREE SUPPLIER POLICIES IN JIT MANUFACTURING

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## ABSTRACT

We compare three vendor-buyer policies or operating relationships and show that the total system (vendor and buyer) ordering, set-up, and inventory related costs for a loosely coupled JIT system based on the exchange of holding and set-up cost information between vendor and buyer is superior to a joint single lot sizing policy or an independent lot sizing policy. The emphasis is on a total system perspective and a non-adversarial, long-term relationship between the vendor and the buyer. The commencement of supplier's production and the time of the first delivery need not be rigidly dependent on the buyer's production and inventory cycle.

### The Three Policies Compared

It is in the best interest of both the buyer and supplier that the total system costs for set up, inventory holding as well as delivery be minimized. However, the supplier-manufacturer relationships and policies continue to be one of secrecy and independence of operations. We examine three possible policies or relationships:

- Completely independent lot sizes and operations;
- Rigid same lot size co-ordination strategy;
- Loosely coupled model, with independent lot sizes and exchange of cost information.

The independent lot size with exchange of information is superior to the other two policies in the sense that it leads to lower total costs. When the timing of the first delivery by the vendor is not constrained, then all three models show increase in cost savings, but again, the information exchange policy is superior.

## REFERENCES

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