

Is the Problem Really That Your Forecast is Inaccurate?

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In early 2008 we met with a senior manager of a publisher of novels. During the meeting she disclosed the following information about the company.

- Printing is done by an external printer at two facilities.
- They have 15 large distribution customers, with the majority of titles going through 4.
- They publish over 100 titles per month in 10 different languages.
- They strive to print a title once, as re-print costs are much higher than initial print costs.
- They experience a high volume of returned titles – all at the cost of the publisher.

After providing us with this brief bit of information, she asked us if there was anything we could suggest to improve the accuracy of their forecast. “Clearly”, she said, “if we could forecast more accurately the quantity to produce, we would reduce costly re-prints and reduce the large amount of returns we get from our distributors”. Not willing to accept a client’s definition of the problem, we probed further and soon learned that:

- Most titles are shipped just once to the distributors.
- The publisher’s warehouse has very little current titles in it – mostly future titles and obsolete titles.
- The publisher makes two shipments per month to the 4 major distribution houses which equate to well over 500 ‘ship-to’ locations.
- The average product life cycle is at least 6 months.
- The publisher does not know if the original quantity produced is right or wrong - what they do know is that some distributors experience stock outs for a title while other distributors have overstock of the same title.
- All titles shipped to the distributor are on consignment.
- Unsold titles are usually shipped back from the wholesaler many months after the title has stopped selling.
- Exploring the possibility of smaller initial production runs is ‘off the table’.
- The publisher’s sales force encourages the distributors to place large orders through quantity discounts.
- Frequently, they have reprint requests today for the same title that they receive returns for many months later.

From the look on her face, we could see that she was growing impatient and frustrated by our line of questioning. She was expecting us to ask about their current forecasting methods, how they discern trends by genre, what tools they use to model demand, and how they aggregate a large amount of data into a usable forecast. So we decided to address the problem head on.

We began the dialogue with a controversial assertion: “We don’t believe your primary problem is a forecasting problem, but instead, it is a distribution problem.” Since our prospective client had allotted 30 minutes in her calendar for us, she decided to listen for 10 more minutes. We continued with the following explanation: Just like every other manufacturer that we have met, especially manufacturer’s that move their product through distribution, most of your people are trying to minimize costs (often at the expense of losing sales). We cited the following examples:

- A single production run.
- One primary shipment to each distribution location.
- Very little inventory of ‘current titles’ in the warehouse.
- Price discounts to encourage larger shipments.

We told her that we see a lot of companies doing the same thing and they all have the same negative outcomes that accompany these strategies:

- The company experiences high stock out rates.
- The company has too much of the wrong inventory (often obsolete or spoiled).
- The company is too often forced to re-ship and re-process product back to the warehouse.
- The company is constantly trying to improve the accuracy of its forecast.

Now that we had gained her interest, we chose to explain the Theory of Constraints' approach to Distribution.

- Distribution used to be based on the wisdom of holding inventories close to the consumption points (the distribution warehouses and the retail shops).
- The Theory of Constraints suggests that the more reliable place in the distribution system is the supply points; the further from the end consumption, the more reliable the forecast.
- Holding inventories closer to the supply point increases the in-stock position at the distribution warehouses and retail shops, if and only if, the replenishment frequency is increased.

Then we followed with a few questions for her to consider:

- Since you experience frequent returns and requests for second production runs for the same title, isn't it possible that the right quantity was produced, just shipped to the wrong locations? In other words, the production forecast is better than you think; it is the distribution approach that is broken.
- What would happen if you shipped a smaller initial quantity to distribution and re-supplied as their stock was depleted (due to actual retail consumption)?
- By shortening the time horizon over which you have to forecast, can you see how the forecast accuracy will dramatically improve?
- Can you see how your entire business system makes the distribution problem worse as your whole company is geared to 'pushing' product out to distribution?

Then we described the direction of our "pull" solution, called Consumption Driven Replenishment:

- Initial inventory shipped to Distribution needs to be sized according to the forecasted consumption over the re-supply time (2 weeks vs 6 months).
- Consumption needs to be communicated from Distribution back to the publisher, and re-supply (replenishment) needs to occur every two weeks. Since the distribution warehouses were already supplied twice per month, this practice would not result in any increase in transportation costs.

The benefits of this change in replenishment approach would be:

- Increased sales due to having the right quantity of titles at the right place and time.
- Significantly less returned titles reducing both transportation and destruction costs.
- Reduced printing costs due to less often having to re-print.
- Improved customer relations.

"I get it!" she said abruptly, "But how will we convince the Distributors to agree to this change?"
"Let us show you", we replied.

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