

How to Thrive with Inaccurate Forecasts

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The problem with forecasts is that they are guaranteed to be wrong. Many companies throw millions of dollars into fancy systems and software only to find little, if any improvement in the forecast, much less the bottom line. Sound familiar? It is possible for companies to thrive in the world of inaccurate forecasting. This paper illustrates why forecasts don't work, the negative effects of forecasts and at what point in the supply chain consumer demand is most predictable. The best way to take care of your customers is to move away from sophistication and towards a much simpler solution.

Why Forecasts Don't Work

When it comes right down to it, a forecast is merely a guess. Despite the best computers, systems and software, forecasts vary from actual demand. Consumer demand varies widely from one geographic location to another. In some cases, it can fluctuate from extraordinary one day to nothing the next at any given retail location. It can be shown that predictability of consumer demand decreases as you move closer to the consumption point. In traditional approaches to managing inventories across the supply chain, reduced predictability contributes to consumers not finding the products they are looking for at a particular retail location, while simultaneously, at another location, the same product is in abundance.

Since the average life of a product in many industries is less than 6 months, what consumers want today is likely different from what they wanted six months ago.

A lag exists between a change in consumer trends and the time it takes for the supply chain to recognize and address the change. Larger inventory levels in the supply chain have the effect of increasing this time frame. With months of inventory tied up at the retail and wholesale level, it takes manufacturers and distributors several months to see consumer demand changes reflected in orders they receive.

Side-Effects of Inaccurate Forecasts

The negative side-effects of inaccurate forecasts can do immense damage throughout the supply chain. Manufacturing products not truly in demand results in high inventories, obsolescence, asset disposals, and increased carrying costs. When a forecast is too low, not only may the customer resort to a competitive product, they may resort to a competitive retailer. A supplier could lose both sales and shelf space at that retail location forever if their predictions continue to be inaccurate. The tolerance level of the average consumer for product outages is quite low. How many times do you think the average consumer will put up with not finding what they want, where they want it, before they are lost to you forever?

Predictability of Demand

If we add up the consumption of all retail locations the total demand fluctuates less than at an average individual retail location. According to Gerald Kendall, "Predictability decreases as you move from national to regional and from regional to city and city to individual location."¹ The demand at a distribution center is the aggregated consumption of all the retail locations which that distribution center feeds. Statistical fluctuations in consumption average out over many retail locations, and the variability in demand at the distribution center is less. This variability will decrease even more at a centralized warehouse feeding the distribution centers. In other words, the more consumption points you consolidate, the more predictable the demand.

Since every location within a supply chain must stock to some level, their question remains "How much of each item should I carry, given forecast inaccuracy, given the fact that a supplier may introduce a new product at any time, given that stocking out too frequently may chase customers away, but carrying too much stock may force me into bankruptcy?" If there were some way to take advantage of the increased predictability of consumption at aggregated levels, could it prevent many of the negative effects described above from occurring?

The Solution

Our goal is to thrive despite inaccurate forecasts. This requires a solution that does not depend on sophisticated software and systems. Let's face it; these tools cannot make customers react more predictably or rationally. Instead we suggest a simpler solution.

Where there is less variability in demand, we can hold less safety stock because we don't need to protect ourselves as much from unpredictability. It makes sense to pool most of the inventory where demand is most steady. Hence, we keep more at the manufacturing plant's warehouse or a central warehouse, less at the distribution centers, and even less at the retail level. This leads to less inventory and more responsiveness in the supply chain.

Using frequent replenishment based on consumption data, inventories are kept in an amount equal to the maximum consumption within the average replenishment time. System wide inventory levels drop while service levels increase. Now the manufacturer has much less mismatch between what they produce and what consumers need. Excess and unused inventories are no longer pushed out into the supply chain and held up at the distribution and retail locations. There are fewer stock-outs and urgent orders, less markdowns and a decrease in obsolescence.

Unfortunately, companies rarely follow this practice. Cost accounting and measurements that focus on local efficiencies cause each link of the supply chain to push inventory to the next link as soon as possible; they are eager to record sales and profits on their books. However, Kendall says that "unless the end consumer has bought, no one in the supply chain has sold."²

In Conclusion

^{1,2} **Gerald I. Kendall, *Viable Vision: Transforming Total Sales into Net Profits*, J. Ross Publishing, Boca Raton, 2005.**



In order to avoid further erosion in the relationships between the consumer, retailer, and supplier, a paradigm shift is required. It isn't that the changes are particularly difficult in themselves. And, it is certain that the whole supply chain improves as a result. The companies and divisions of those companies that make up the supply chain must agree to give up local measurements, which put the links at odds, for global thinking. The block that keeps supply chains in their current state is that the people at various links must change their way of thinking together. It can be done. However, the process requires education, training and most of all coordination. It is well worth the effort. The pay off is the ability to thrive with inaccurate forecasts.

IDEA'S WAY OF THINKING

- *Neither an accurate forecast nor changing vendors is required for success*
- *There is a way to both increase sales and reduce inventory*
- *Supply chains sell less when clogged with inventory*
- *In the long term, unless the supply chain sells more no link can sell more*
- *We must help clients gain buy-in internally and with supply chain partners*
- *The majority of our fees are based on improved return on inventory*

IDEA'S METHOD

- *Verify the existence of inventory imbalances and the benefits of moving from a "Push" to a "Pull" system*
- *Gain top management buy-in to the assessment and support of the approach*
- *Build knowledge and understanding across the supply chain, at all levels*
- *Utilize systems that deliver actionable information, integrated with existing software*
- *Work with you until expected results are achieved*
- *Share the tools and know-how to continually improve results*

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