Bigger is better: Size up and sell well

An empirical study from IESE finds that sell-through rates depend chiefly on store size and the week of the season, two factors out of managers' control.

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Matching demand and supply at the point of sales is key for retail companies, as it mitigates the cost of stock clearances and reduces the opportunity costs of lost sales.

But since demand is usually highly uncertain and supply-chain lead times are traditionally long, matching demand and supply is a challenge. Retail chains look at sell-through rates -- the percentage of a product ordered that is finally sold over a set period of time -- as a tool to assess store management performances. The idea is that shops with better sell-through rates have better matched demand and supply.

Yet empirical research by IESE's Juan Enrique Flores, Pol Boada and **Philip Moscoso** suggests that sell-through may not be the best measure of management performance at the store level. They found that store size in particular had a much stronger influence on sell-through than did factors that might be under managers' control, such as their replenishment or sales policies. That is, bigger stores achieve high sell-through rates much more easily than smaller ones.

In practice, size matters

Collaborating with a Spanish retailer with over 50 stores in Spain, France and Portugal, the co-authors obtained stock and sales data from its fall-winter 2011-12 season. This retail chain used the sell-through rate for performance evaluations. The metric was dubbed "sales effectiveness" and management incentives were partly based upon it. That turned out to be unfortunate for the managers of smaller stores.

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Analyzing this data, the authors conclude that management performance may affect sell-through, by about 15 percent (statistically). However, store size had a much greater effect, accounting for about 65 percent of sell-through fluctuations. Store size and the week of the season together account for about 77 percent of sell-through variance.

Not only bad news: Modeling a better metric

In the end, sell-through data is far from a fail-safe measure of management styles, but it can be applied -- with controls. For example, it could be used to compare different inventory policies in the same store. It could also be used to compare replenishment policies for different products with similar sales, again within in the same store. Stores with similar dimensions could also be compared over the same period of time.

Likewise, sell-through can be used on an aggregate level, to compare total shipments from the warehouse with total sales. In any case, knowing the limits of the metric is important. It's not one-size-fits-all.

Furthermore, while analyzing the limits of the sell-through metric, the co-authors make another contribution: They offer a model to estimate what "normalized sales" would be for a particular store in a retail chain, with the number adjusted for store size and the week of the season. Once refined, this model may be used to better compare performances from store to store.

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