



Knowledge Is The B

HOME

MAGAZINE

LIVE! EVENTS

WEB GUIDE

ARCHIVE

NEWSLETTERS

CUSTOMER

[Try a Free Issue of Business 2.0](#)

SEARCH

[Expanded Search](#)

## WHAT WORKS

### The Power of Optimal Pricing

By: Amy Cortese

Issue: September 2002

Print Article | [Email This Article](#)

#### New software calculates precisely how much you should charge to squeeze maximum profit from every product, at any time.

Muzak hummed in the background as shoppers filled their baskets with shampoo, aspirin, and other items on a recent day at a Longs drugstore in Walnut Creek, Calif. Just another afternoon in suburbia. But Terry Burnside wasn't there to stock up on Pampers or squeeze the Charmin. The chief operating officer of Longs Drug Stores ([LDG](#)) was doing one of his regular walk-throughs. And what he saw as he glanced down at the shelves almost stopped him in his tracks.

Prices that normally ended in the usual digits -- .99 or .95 -- flashed random amounts like \$2.07 and \$5.84. Had Burnside done another walk-through at the Longs store in Seattle, he'd have noticed something even more bizarre: An item priced at \$2.07 in Walnut Creek might be going for \$1.86 at the Seattle store. "You'd see these strange price points, and it would make you wince," Burnside says.

Burnside has stopped wincing. The oddball numbers are the product of so-called price-optimization software, which is designed to generate the ideal price for every item, at each individual store, at any given time. After testing the program for just eight months, Burnside and Longs CEO Harold Somerset were so impressed that, during their earnings call in May, they singled out the new software and its maker, DemandTec, based in San Carlos, Calif. The software helped Longs maintain overall profit margins even as the retailer increased special promotions. Burnside claims that the technology has also triggered a "category-by-category increase in sales and margins," particularly in non-pharmacy sales, which generate most of Longs's profits. That's part of the reason that DemandTec's algorithms, and not manufacturers' suggested retail prices, now govern pricing in all 390 Longs stores in the continental United States.

Longs isn't the only retailer giving the new technology a serious try. Last December, New York-based supermarket chain D'Agostino's launched in all of its 23 stores a price-optimization system similar to that used by Longs -- and it enjoyed similar success. During an eight-week test, D'Agostino's revenues jumped nearly 10 percent, unit volume 6 percent, and net profit 2 percent. ShopKo Stores ([SKO](#)) rolled out similar optimization software in its 141 stores after seeing a 24 percent spike in gross margins during a six-month test. And a recent study by Gartner and Retail Information System News found that nearly half of retailers using price-optimization software expect it to bring a payback within 12 months.

Behind each of these experiments is a persuasive theoretical argument: It's time that retailers applied as much science to the front end of their business as they typically do to the back. Economists have argued that while most big retailers have engineered their inventory and supply chain to a fare-thee-well, many routinely underprice or overprice the merchandise on their shelves. They generally set prices by marking up from cost, or by benchmarking against the competition's prices, or simply by hunch.

A price-optimization program, on the other hand, plugs reams of data from checkout scanners, seasonal sales figures, and so on into probability algorithms to come up with an individual demand curve for each product in each store. From that, retailers can identify which products are most price-sensitive. Then they can adjust prices up or down according to each store's priorities -- profit, revenue, or market share -- to achieve a theoretically maximum profit margin for their goals.

The key insight the software helps to provide, Burnside says, is "the crossover point between driving sales and giving away margin unnecessarily." The software's roots lie in the yield management programs that were pioneered by the airline industry in the 1980s and have since made inroads in financial services, consumer electronics, and transportation. Casinos are even considering such programs to find the optimal payout for slot machines.

The biggest and most immediate market, however, is retailing, where the catalyst is [Wal-Mart \(WMT\)](#). With its lower cost structure and massive buying power, the giant discounter has put pressure on everyone from purveyors of produce to toy makers. Many retailers have fought back by slashing prices across the board -- a foolhardy move, as many have found out (Blue Light special, anyone?). "You can't out-Wal-Mart Wal-Mart," Burnside says. "We'd lose that game."

All the more reason, argues DemandTec's founder Michael Neal, to focus on better demand forecasting and pricing. One DemandTec client, Neal explains, began bargain-pricing what it thought was a very price-sensitive product -- diapers -- to generate store traffic. But after running sales data through the pricing software, the client discovered that was not the case: Most price-conscious diaper shoppers had long since abandoned the store for bulk purchases at discounters such as Wal-Mart. As a result, the client raised prices on diapers, fattening margins without hurting sales or traffic. Studies by McKinsey and others show that proper pricing can have a far greater impact on profits than corresponding improvements in fixed or variable costs.

All of this has the pricing-software pioneers dreaming big. "We think the market for price-optimization software could dwarf the market for supply-chain management," boasts DemandTec CEO Dan Fishback. Whether that's true or not, the stalwarts of the \$5 billion supply-chain market -- i2 ([ITWO](#)) and Manugistics ([MANU](#)) -- are now hotfooting it into demand forecasting too.

Considerable obstacles stand in the way of broader adoption. First, the software is not cheap. A DemandTec rollout costs \$1 million to \$10 million, depending on the number of stores and the complexity of the inventory. That limits price optimization to large retailers. Another problem is psychological: The software requires users to accept, on faith, pricing recommendations that are sometimes counterintuitive. "You have to trust it," Burnside says. "That's probably the toughest thing initially." Finally, what made Burnside wince for one reason -- the oddball numbers -- might make consumers wince for another. Wouldn't you feel gyped to discover that your favorite retailer is charging customers at the store across town less than it's charging you? But as long as the software keeps fattening margins, that risk is one price retailers may be willing to pay. ♦

[Return to Web Version](#)

[About Us](#) | [Advertise](#) | [Press Room](#) | [Contact Us](#) | [Customer Service](#) | [Privacy Policy](#) | [Terms of Service](#)

©2002 Business 2.0 Media Inc. All rights reserved. Reproduction in whole or in part without permission is prohibited.