

Featured Article

CEO Corner

Market Basket Analytics: Ready for Prime Time

by Bill Robinson, Senior Advisor, [QuantiSense](#)



Surprisingly few retail managers, planners, and executives make business decisions based directly on information regarding their customers' purchasing behavior. This is a big problem for an industry whose very purpose is to fulfill the needs of their shoppers. In this edition of *Retailing with Insight*, we examine how customer transaction information is vital to everyone within the retail enterprise. Business Intelligence (BI) tools can reveal valuable insight by linking the Market Basket to performance data at every juncture and organization level. While Market Basket analysis

may previously have been viewed as appropriate only for the marketing department, it is now important for every chain and to every job function within the retail industry – Market Basket Analytics is ready for prime time.

What's a Market Basket?

The Market Basket is the manifestation of all of your strategies and operational execution. It shows:

- what the customer's main purchase was;
- how she paid;
- how she accepted delivery;
- and what other items she bought along with the main purchase.

That Market Basket also measures your effectiveness for winning and retaining good customers.

In short, the Market Basket is what shopping is all about, and it is the essence of the retail business at the most basic level.

How did the Market Basket become invisible?

Most of today's widely used ERP systems were conceived and developed when direct access storage was expensive. They typically summarize consumer transactions, keeping details for a few months and then dispatching



It may be only July, but in the retail world, preparations for the holiday season are well underway. Leading indicators are showing that, with hopes

to avoid overstocks and heavy markdowns, retailers may be planning to stock 15 to 20 percent less merchandise than in past holiday seasons.

But how do retailers know if they're pruning their assortments in the right places? In a recent article from Retail Systems Research, Paula Rosenblum stated that "without careful, timely and clinical business intelligence and reaction, this could put retailers in the worst of all possible worlds: lack of merchandise to satisfy demand driving down the top line ... and dissatisfied shoppers unable to find the products they want."

In this edition of *Retailing with Insight* Bill Robinson discusses Market Basket analysis, which can help retailers accurately develop the most efficient assortments for this lean holiday season.

Cheers,

Jeff Buck

Jeff Buck, CEO

them to offline files. Frequently, consumer transaction history is siloed for use exclusively within loss prevention and loyalty programs.

Valuable insight is hard to come by with the high-level metrics provided by these applications – and a lack of insight always means a lack of action. As a consequence, most buyers don't know if their particular category is serving 30 percent or 80 percent of their stores' customers.

During the past decade, software in the Business Intelligence and Data Warehouse world evolved as direct access storage became cheap. Together, these tools have the power to connect everything back to the customer transaction.

For the insight described below, it is now wise to keep customer transaction data for several years.

Insights gained from Affinity Analysis

Market Basket Analytics entered retail in the grocery sector with what is called Affinity Analysis. Marketers wanted to know which items tended to be sold together. In an oft-told story, a pioneering grocer discovered that young fathers often bought diapers and beer together. The story goes that the grocer began to merchandise beer near the diapers, and sales took off for both.

If you knew what customers tended to buy together, you could drive sales by promoting or merchandising them together: corn flakes and bananas, books and night lights, patio furniture and cocktail napkins. For example, if you run a men's apparel store, what percentage of ties are also sold with shirts, belts with pants, cumberbunds with tuxes? If the percentages start to fall, it is time for remedial training, promotion, or some other intervention.

Affinity Analysis can be especially valuable in laying out Planograms, pages for catalogs or Web sites. In fact, online affinity often translates to in-store marketing.

To prune or not to prune

As another example, one supermarket chain wanted to exploit its new inventory system to prune poor gross margin items. The computer quickly reported feta cheese as a likely candidate. Proud to be responding to apparent wants of his customers, the owner discontinued the line. Soon, the store was flooded with complaints from their most loyal and most profitable customers. Who do you think was buying all the Feta cheese? The Tier 1 customers.

The lesson here is that, without Market Basket Analytics, you risk collateral damage when you prune assortments.

How can you tell if promotions work?

Every retailer is looking to better understand the true value of promotions. You

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run a 20 percent off sale because you want to stimulate overall sales. Sales go up. But what is the impact on margin? Market Basket Analytics measures the pull of each item within a promotion. What gross margin did your store earn from the non-promotional items in the basket? What kind of customers did the promo attract? How did your best customers respond? The answers will inform your next promotion, and the ones after that.

“Everyone in the organization, not just the marketing team, can put the valuable insight of Market Basket Analytics to work.”

Cross selling and upselling

Merchants take great pains to assemble cross-promotions with signs, displays, and training. If you are in women’s fashion, you want to sell the outfit, as well as the garment. If you are in home, you want to supply a room, as well as a chair or table. Studying the market basket reveals whether your merchandising concepts are resulting in consistent cross selling. Measure the rate at which each item is sold with other items in the collection, group, or assortment. Which are the leaders and which are the followers?

Does your merchandise attract a value customer?

Value segmentation is useful to look at the size of the transactions, percentage of full price items, and gross margin achieved. For example, as a Planner for Women’s Sweaters, you’d want to know what percentage of customer transactions included a sweater – then, of those, what portion was high value, low value, etc. monitored over time. Similarly, Store Operations wants to see the value of transactions across geographical regions or at a specific time of day and week.

Repeat business

Customer frequency metrics are also very instructive to merchants and planners. What percentage of your

Women’s Sweaters customers are New, Gold, Platinum, “Flight risks” and Inactives? From each frequency segment, what is the likelihood these customers will purchase more sweaters? How do your numbers compare with other departments? What is the trend? Is the pattern consistent across regions and channels? Are multichannel customers more or less likely to shop frequently?

Store Operations and Space Planners need frequency information to inform them how best to promote and place merchandise. A Space Planner will want to understand shopping frequency by Planogram. If a Planogram is only attracting the occasional customer, there is something wrong.

Brand and Lifestyle

So it goes with Brand and Lifestyle segmentation. You can infer brand loyalty based on shopping behavior. Is your customer buying national brands? If so, are the brands good, better, or best? What percentage of your best customers buy your house brands, generic brands, national? These insights help you align your brand mix strategy to your preferred customer.

Bottom feeders

Price sensitivity segmentation separates bargain hunter transactions from those of higher margin shoppers. Buyers, Store Managers, Allocators, and Planners would gain more insight if their performance reports were segmented into bottom feeders, impulse purchasers and high margin customers. For example, if 50 percent of your business is from bottom feeders, you’ll want to take action on a range of activities.

It all boils down to listening to your customers – and realizing that everyone in the organization, not just the marketing team, can put the valuable insight of Market Basket Analytics to work with customer transaction data and the right BI tools. If you are not already doing so, now is the time to welcome Market Basket Analytics into prime time and make it part of your daily routine, no matter what your role in your retail enterprise.

About the Author:

As a Senior Advisor and Strategist for QuantiSense Bill draws from his 35 years of experience in providing technology-based solutions to retailers. Prior to joining QuantiSense, Bill served as Vice President of Marketing for STS Systems, a leading provider of retail technology solutions with more than 300 clients. Throughout his career Bill pioneered successful applications in all areas of retailing including Point of Sale, Business Intelligence, and Supply Chain Management. Bill's passion for the retail industry guides QuantiSense in delivering results-oriented business intelligence and data warehousing solutions for retail organizations. Bill is based in Baltimore, MD, where he pursues his passions of jazz piano, gardening and golf. Bill is also a Professor of Marketing at Towson University in Towson, MD.

Questions?

Questions, comments, or thoughts about our newsletter? Contact Bill and the rest of the QuantiSense team at retailinsight@quantisense.com.

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About QuantiSense

QuantiSense is the leading provider of business intelligence and data warehousing applications exclusively for specialty retailers. The company was formed in 2001 by a team of experienced data warehousing professionals who recognized the need for a retail-specific data warehousing and BI solution that was low risk, cost effective and could be quickly implemented.