

## **Numbers Never Lie: An Observation on Sports and Analytics**

**By John Healy**

As a businessman and avid sports enthusiast, it recently occurred to me that my job and my passion have something in common. While watching the baseball playoffs, and also speaking to companies who are now looking to close out their final quarter of 2009, I realized that successful organizations in sports and in other industries are increasingly turning to analytics to improve their performance.

Over the last decade, analytics has become more important in sports, especially baseball. In 2003 the bestseller "Moneyball" chronicled how the Oakland A's use advanced analytics to improve their chances of winning talent against competitors that seemingly have unlimited funds to purchase the biggest names in the game. Early work conducted by the Society for American Baseball Research (SABR) in the 1970s has evolved into the current study of "sabermetrics". According to Wikipedia "... Sabermetrics is the analysis of baseball through objective evidence, especially statistics." Red Sox Sr. Advisor of Baseball Operations, Bill James, who is widely considered the "father of sabermetrics" has been praised for his role in their recent post season successes - including winning the 2004 and 2007 world series.

Through advanced analytics, teams are now better able to choose players, balance talent, pick lineup matches, and even make tactical field decisions. While statistics have been around since baseball started, it was not until 1977 when The Bill James' Baseball Abstract came to light that the sport started looking at non-standard metrics to measure success. For example, up until Bill James, a person's "batting average" was considered the best metric to determine a batter's ability. It was James who introduced "on base average" as a more important measure to determine a batter's worth. He contended that it did not make a difference whether a person got a walk or a hit, the important part was that he got on base. Bill proved this and other methods such as runs created, win shares, etc., which are all now common place in baseball.

Theo Epstein, general manager of the Boston Red Sox who hired Bill James in 2002 credits James' observations, insights and suggestions as playing an important role in the Red Sox's recent successes. While statisticians have been around for years, the Red Sox were the first organization to bring this position from the back office to front office.

Similarly, corporations have been using metrics to drive pricing decisions for years. Companies in the hospitality and airlines industries have been using analytics to provide more profitable pricing decisions for over two decades. But it wasn't until the last five or ten years, when organizations started using pricing analytics for business-to-business pricing decisions, that you began to see senior-level positions like VP of Pricing crop up. Today, sophisticated technology solutions are helping companies choose which products to sell, how to sell them and at what price point. These systems are used for strategic as well as tactical decisions. Organizations like Gartner, AMR, Forrester Research, McKinsey, etc. all agree that improving pricing within an organization pays large dividends. According to the Gartner Group "...

on average enterprises will miss the equivalent of 10% of total annual sales in lost opportunity revenue due to weak analysis of customer, market and internally available information.”

To further illustrate my point on the parallels between business and baseball, I’ve outlined a few areas where both are focusing significant resources in terms of new people, processes and technology to produce better analytics and information that can give them a leg up against their competition.

For sports executives, creating a team of players that fill all open positions, complement each other, fit within the allotted budgetary constraints, etc. are the most basic and critical part of their jobs. Teams spend hundreds of millions of dollars drafting players, building farm teams, trading players (up and down within their franchise as well as across teams) and releasing players. The decisions made in this area are critical to the success of the organization, as they can either provide a competitive advantage or handcuff the team for the rest of the season.

All of these choices need to be made within the context of the competitive landscape. Having a team with the fewest errors will not win you games if you cannot hit. While the New York Yankees tend to “buy” their players, teams like the Philadelphia Phillies invest more in their farm system to accomplish their goals. In the Corporate world, companies are trying to figure out their product portfolio and how it competes within their market space. Do they invest in depth or breadth of product or do they grow organically or through acquisitions? These are all key decisions that cannot be made in a vacuum. Being able to understand their own strengths and weaknesses, what the customer wants, what their competitors are offering and optimizing prices for each customer segment is critical to making these strategic decisions.

Even in the midst of executing a well thought out strategic plan, events will occur that force organizations to react and/or adapt to new situations. In sports you have internal issues like injuries, slumps, disgruntled and/or disgraced athletes, or outside influences such as team standings, free agents, arbitration, etc. that all affect your plans. It is critical that a team plans for these adjustments and is prepared to react quickly to adversity and to quickly capitalize on opportunities that present themselves. In the business world you have similar issues with product delays, key personnel leaving, cost increases, etc., as well as outside influences like the introduction of competitive products and economic changes. It is critical that organizations prepare thorough “what if” analysis to develop contingency plans for these unplanned events.

On a tactical level, organizations need to make quick decisions based on the situation at hand. For example, in baseball the manager is often faced with a pitching change decision. The decision process entails who is next in the line-up, the score, the inning, the on base situation, the batters’ strengths and weaknesses, the pitcher’s strengths and weaknesses, the history with that batter, the health of pitcher, etc. While the manager can’t predict what will happen, if armed with right information on a timely basis, he will make better decisions more often, increasing his overall winning percentage. In business, particularly in the area of deal negotiations, there is a plethora of unexpected events such as customer financial constraints, competitive threats and contractual requirements. All require fast action and

response, perhaps through concessions, but without the proper analytical tools and insight it is difficult to base these decisions on the long-term impact they will have on the organization.

Whether in business or sports, those organizations that leverage advanced and real time analytics have a significant advantage over those organizations that do not. So whether you are looking to win the World Series or improve shareholder value ... keep your eye on the "pi" for the numbers never lie.