Methodology

To determine which teams overachieve and which teams underachieve, I created a scatterplot comparing the ability of each team to their observed outcome.

Note:

- The data presented is the average ability and outcome from 2010-2014 for all Division 1 programs. Logos represent Power Five Conference Teams.
- Outcome is measured by computerized, standardized Massey Ratings.
- Ability is a function of Rivals recruiting rankings. Each year of data weighs the previous five recruiting classes by their contribution to team success as estimated by a current MSU football coach.
- The fitted trendline is expected performance given the ability input.
- Teams above the trendline overachieve relative to expected performance.
- The distance from a point to the trendline is the residual. This is a measure of the over- or under-performance of a team.

Results

The results from the scatterplot show:

- There is a strong, linear relationship between ability and performance.
- Ability is a strong indicator of success, but does not entirely explain the over- and under-performance of teams relative to the trendline.

What is the relationship between coaching/system stability and the relative performance of teams?

- The dot plot below compares expected performance to observed performance using the average residuals from 2010-2014 for Power Five Conference Teams.
- The color coded bar represents the degree of stability from 2010-2014. There are four measures of stability:
  1. Complete Stability. Head Coach and system remained unchanged.
  4. Major Disruption. Multiple new Head Coaches hired externally.

Conclusions & Recommendations

- Stability is a significant factor in team success. Teams with at least system stability are more likely to overachieve than programs experiencing disruption.
- Overachieving teams should look to replace coaches internally when possible. According to Allison, administrators look to select the first adequate solution to a problem and minimize short term uncertainty in the process. I believe this is best done by retaining the existing SOPs if they have been proven effective.
- Underachieving teams may benefit by hiring externally, provided they are allowed adequate time to implement their system. Disruptions have a slightly negative effect on program outcomes, however, it may be beneficial in the long run if the new hire can instill a lasting set of SOPs.
- If internal hiring is not feasible, administrators in any field should look to find a system that closely resembles that already in place to minimize the shock to existing SOPs.
- Public bureaucracies and other like organizations should avoid disruption to SOPs when possible, especially if they are already in a favorable situation. Promoting internally seems to be a better route for growth than an eternal overhaul. Maintain culture when possible. Avoid the Sculley at Apple dilemma.

Case Studies

Below examine specific teams that have experienced differing degrees of stability since the 2006 season and explain why their expected performance (black) differed from their observed Massey performance.

- Michigan State
- Oregon
- TCU

Advisors: Dr Josh Saponeta, Dr. Tom Hammond, Dr. Cory Smalt