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Using R, Terminal, Python, and SQL

**Which club is the most efficient?**

Condition & Purpose:

Soccer has always been my Greatest interest I want to analyze on, and I even want to consider a future job that has to do with soccer analysis/agent. To become more knowledgeable (and also just for fun), I try to seek interesting results out from soccer markets. Research based on a few different countries (cannot do all the clubs and divisions) for the purpose of convenience/timing issues.

Of course, each country (and even each team) has different philosophy, so I understand it makes more sense to analyze with all the teams in every country around the world. However, it is almost impossible. (That is, why we find the good samples in the population) I decided to work on the countries I have been interested in: Spain, England, Germany, France, and Italy. (I can say that they are not good samples; however, they are in my interests, and I have some deep knowledges on those leagues, so it might be easy for me to analyze them.)

I will only consider the First division for each country.

Reference:

<https://www.whoscored.com/>

<https://www.statbunker.com/>

<http://www.transfermarkt.com/>

Criteria & Method:

1. Each team’s 10 years of trophies and rankings
2. Transfer money spent/Transfer revenue
3. Which country/team has the good players
4. Where do they usually transfer from/to
5. How age/positions affect the price

So, here is the thing. For any team and any agent, they have one goal. They try to spend less money, but try to get the highest profits out of the players. (I know soccer is not just about money, but in one perspective, it is about money.) Many people say that there are a few teams that have been good fits in the markets for the past few years such as AS Monaco, Sevilla, Dortmund, etc. On the other hands, there are many teams that have had loss for the past few years: Manchester United, Manchester City, Barcelona, etc. What makes these team have profit and loss? I try to find which clubs are successful with less money. Will there be answers for these questions? There will be so many factors that affect this question, but there should be some reasons behind the story.

The easiest standard I can say the team has been successful is their trophies (how many times they win the cup and leagues?) and their official UEFA rankings.

I am sure many people actually tried to find reasons, and they came up with some answers. However, I believe no one actually tried to find the unobservable reasons: trends.

Also, I believe soccer has trends. Like we have fashion trends, soccer has trends as well. I believe possession, tactics, and transfer markets are trends, and these trends let some teams/countries to produce better players than the others. These trends let players decide which team/country they should transfer to.

One last thing, I want to find the statistics distribution to model (i.e. normal, gamma, etc) to predict the future values. If I have solid models that has great correlations, these can be really helpful for sports agents/team to decide how they should lead the team, what players to buy, whether/which players they should sell, and whether they should spend/save money.

I am sure there has been really no one trying to analyze their budgets with trends and statistical distributions before. This makes my proposal unique even if there has been many people researching similar topics.