

Goals in Tier 1 European Football: Are they all Equal?

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Problem of Context

All performance is
performance in a context

- Failing to account for the effects of context leads to biased evaluations of individual ability

- EPL recruit 50% of players from outside the UK
 - 60+ different nationalities
- How do we evaluate players who have not played in the EPL?

Recruitment Decisions

2004 - Risky Decision

- Age 21
- 15 Goals
- 61 Appearances (Feyenoord)
- Goals/90 0.37



2012 - No Brainer

- Age 29
- 96 Goals
- 194 Appearances (Arsenal)
- Goals/90 0.67



Problem

- Understand the different contexts in European first –tier football.
 - Do we have a level-playing field?
 - Is it easier to score in some leagues than others?

Sources of Information

- Conventional wisdom (Guru/expert)
- Official rankings
- Historical records
- Direct observation
- Analytics

Conventional Wisdom

- “[Damian] Comolli worked on his own rule of thumb
- with the exception of Ruud van Nistelrooy, strikers imported from Holland only score around a third of the goals in the Premier League.”
 - *Daily Mail, 17 September 2012*

Conventional Wisdom

- Garry Gelade's Rule of Thumb
- Don't trust anyone else's Rule of Thumb.

Official Rankings

- Club coefficients based on the results of all European clubs in UEFA club competition.
- Increasing number of points awarded for each stage reached.

Europa League	First qualifying round elimination	0.25	points
	Group stage win	2.0	points
	...etc	
Champions League	First qualifying round elimination	0.5	points
	Group stage participation	4.0	points
	..etc	






- Points aggregated over past five seasons.
- Clubs aggregated by country.

UEFA Association Rankings















UEFA ASSOCIATION RANKING

Select a country to see the national-team-ranking. To get more information on your team visit: [Ranking -> CL / EL Points](#)

Determination of national starters by performance of the past 5 years

	11/12	10/11				Teams	CL	CLQ	EL	07/08	08/09	09/10	10/11	11/12	Coefficient
▲	1	2	ESP		Spain	7	3	1	3	13.312	17.928	18.214	20.857	13.857	84.168
▼	2	1	ENG		England	7	0	0	0	15.000	17.928	18.357	15.250	10.714	77.249
●	3	3	GER		Germany	7	3	1	3	12.687	18.083	15.666	15.250	12.214	73.900
●	4	4	ITA		Italy	6	2	1	3	11.375	15.428	11.571	11.357	13.083	62.814
●	5	5	FRA		France	6	2	1	3	11.000	15.000	10.750	10.500	12.416	59.666
●	6	6	POR		Portugal	6	2	1	3	6.785	10.000	18.800	11.833	8.750	56.168
▲	7	8	UKR		Ukraine	6	1	1	4	16.625	5.800	10.083	7.750	9.833	50.091
▲	8	9	NED		Netherlands	7	1	1	5	6.333	9.416	11.166	13.600	4.071	44.586
▼	9	7	RUS		Russia	6	1	1	4	9.750	6.166	10.916	9.750	7.083	43.665

Historical: Erd → EPL Transfers

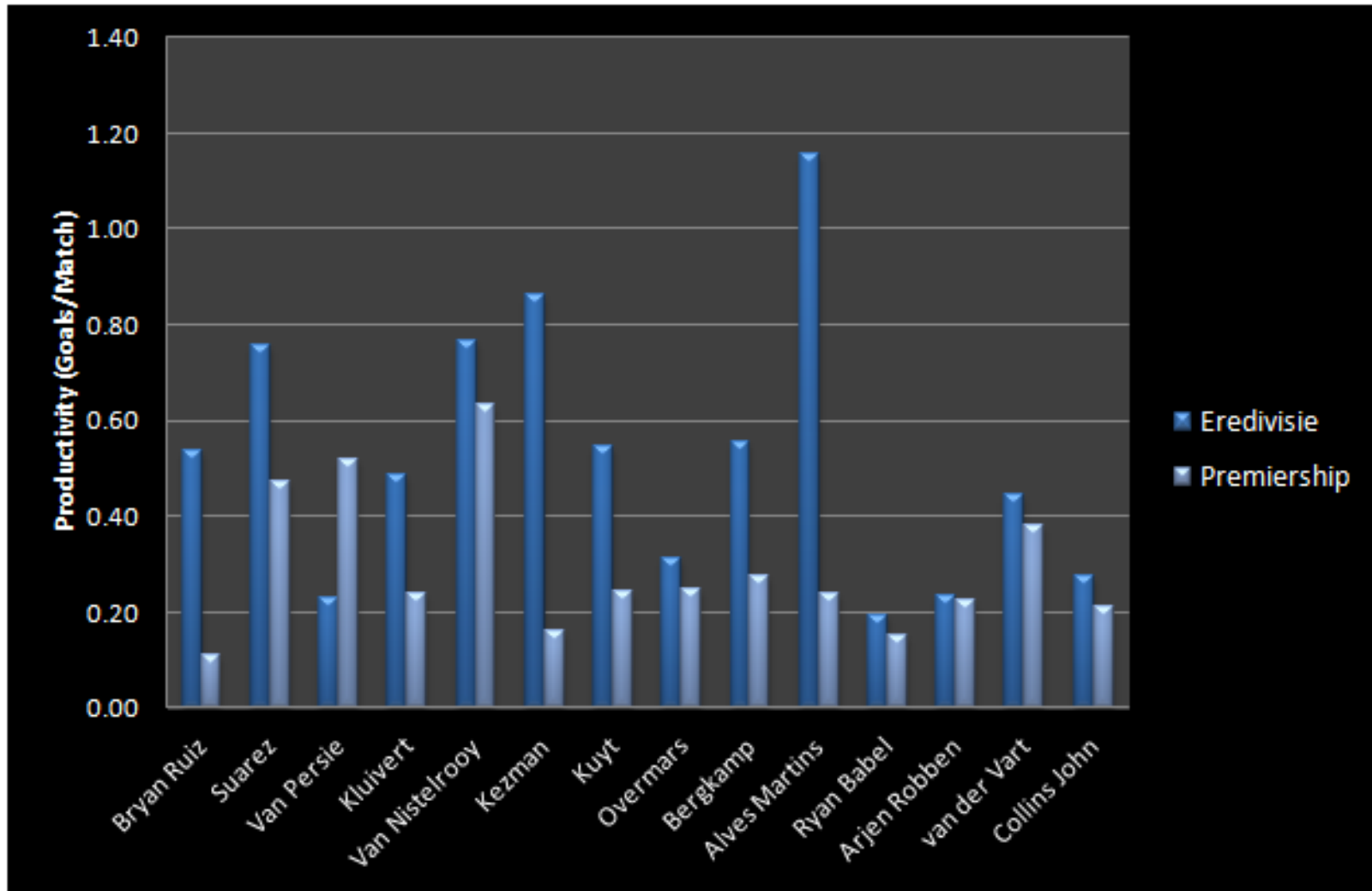
Eredivisie		Premiership	
Player	Productivity	Team	Productivity
Bryan Ruiz	0.54	Fulham	0.11 
Suarez	0.75	Liverpool	0.47 
Van Persie	0.23	Arsenal	0.52 
Kluivert	0.49	Newcastle	0.24 
Van Nistelrooy	0.77	Man United	0.63 
Kezman	0.86	Chelsea	0.16 
Kuyt	0.55	Liverpool	0.25 
Overmars	0.31	Arsenal	0.25 
Bergkamp	0.56	Arsenal	0.28 
Alves Martins	1.15	Middlesboro'	0.24 
Ryan Babel	0.19	Liverpool	0.15 
Arjen Robben	0.24	Chelsea	0.22 
van der Vart	0.44	Spurs	0.38 
Collins John	0.28	Fulham	0.21 

Average Productivity

Erd = 0.53 gm

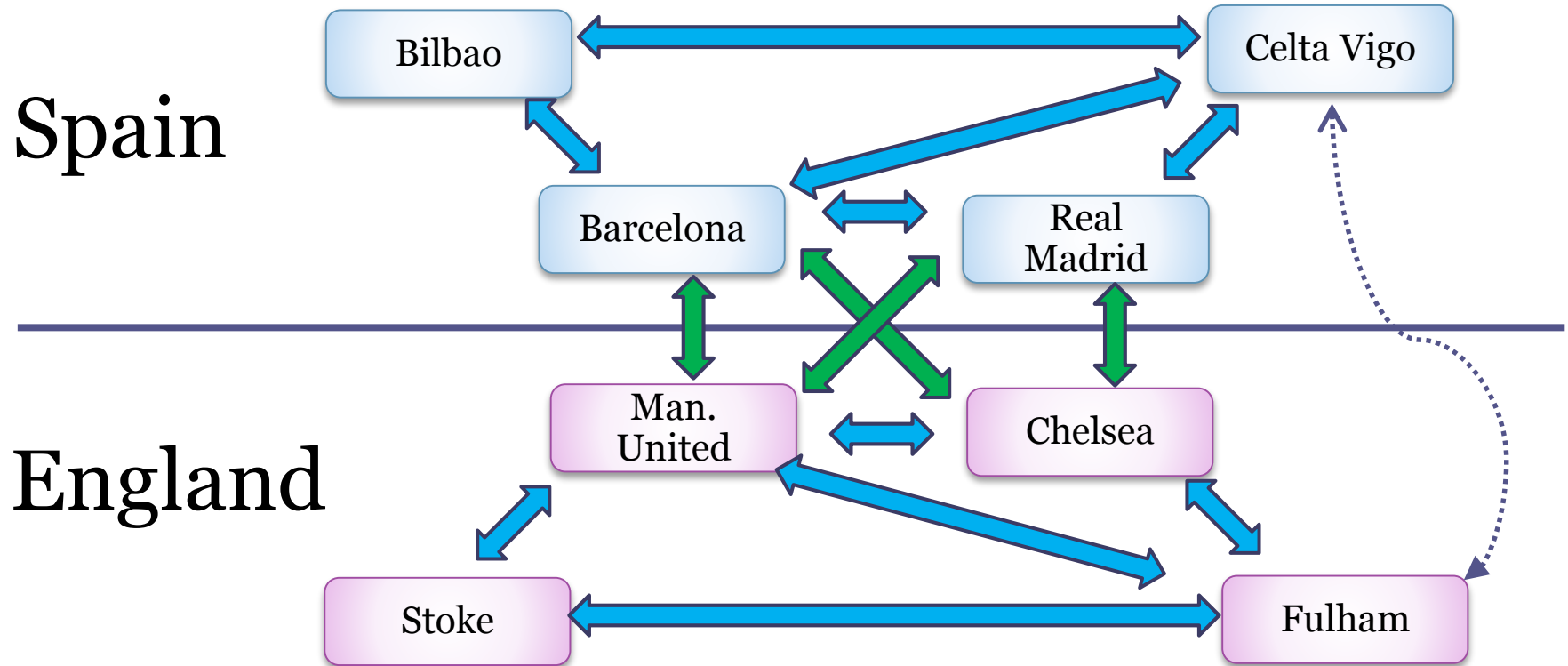
EPL = 0.33 gm

Historical: Erd → EPL Transfers



Analytics

European connections



Data

Seasons 2006/7 – 2011/12

171 teams

13,291 matches

Competition	No. Matches
English Premiership	2,280
Dutch Eredivisie	1,836
Italian Serie A	2,280
German Bundesliga	1,836
Spanish La Liga	2,242
French Ligue 1	2,280
Champions/Europa League	537

Model

$\text{Goals}_{HOME} \equiv \text{Attacking Strength}_{HOME}, \text{Defensive Strength}_{AWAY}$

$\text{Goals}_{AWAY} \equiv \text{Attacking Strength}_{AWAY}, \text{Defensive Strength}_{HOME}$

Model

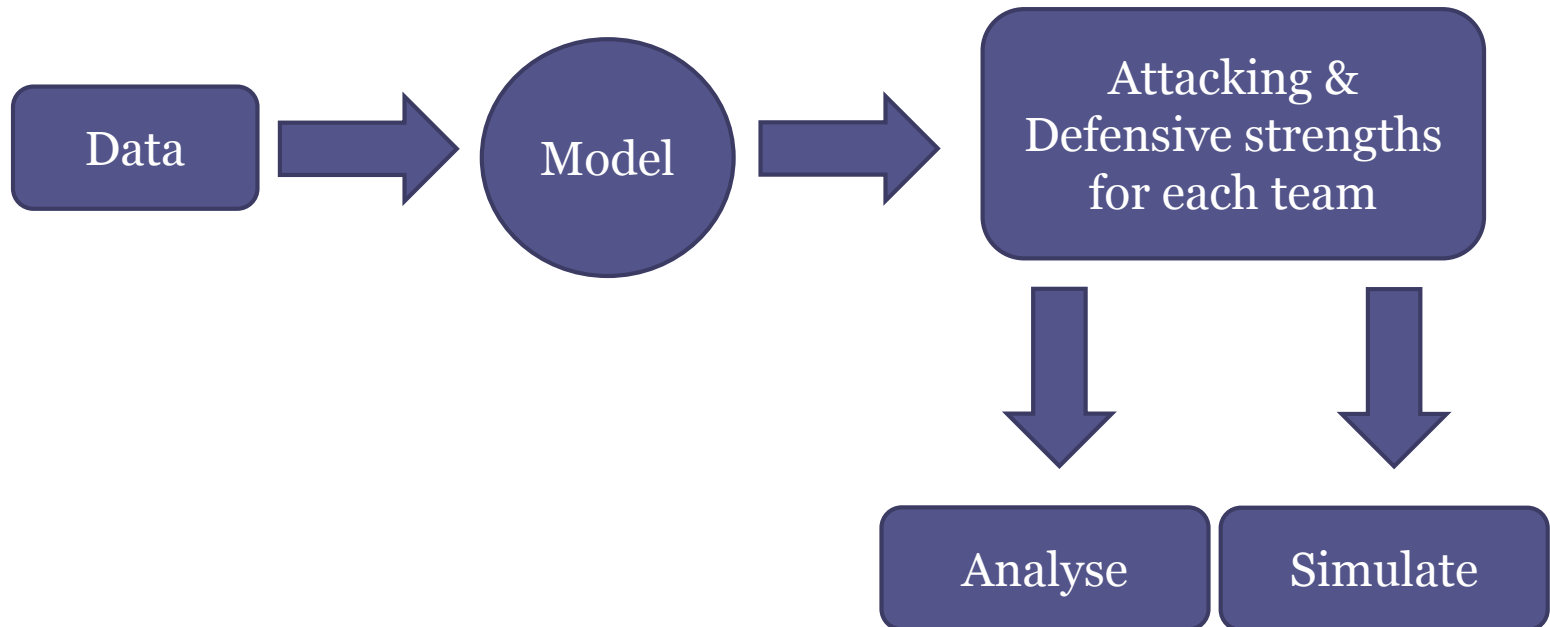
Diagonally inflated Bivariate Poisson

More draws

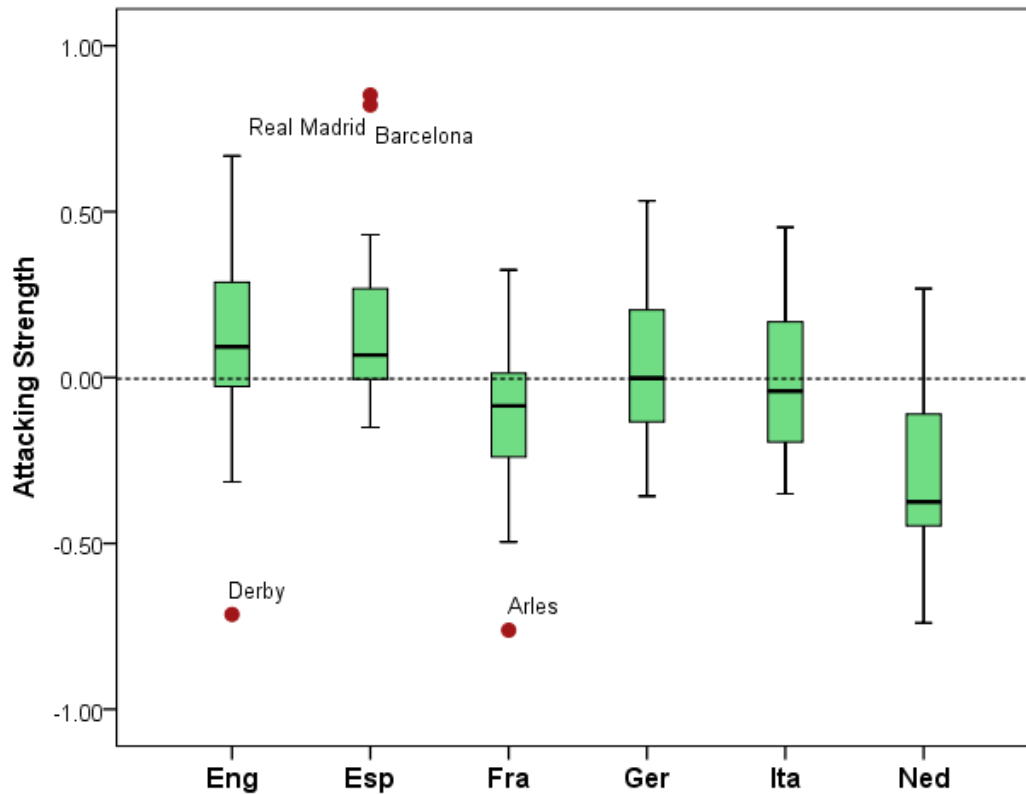
Goals For and
Goals Against

Goals are Events

Modelling process



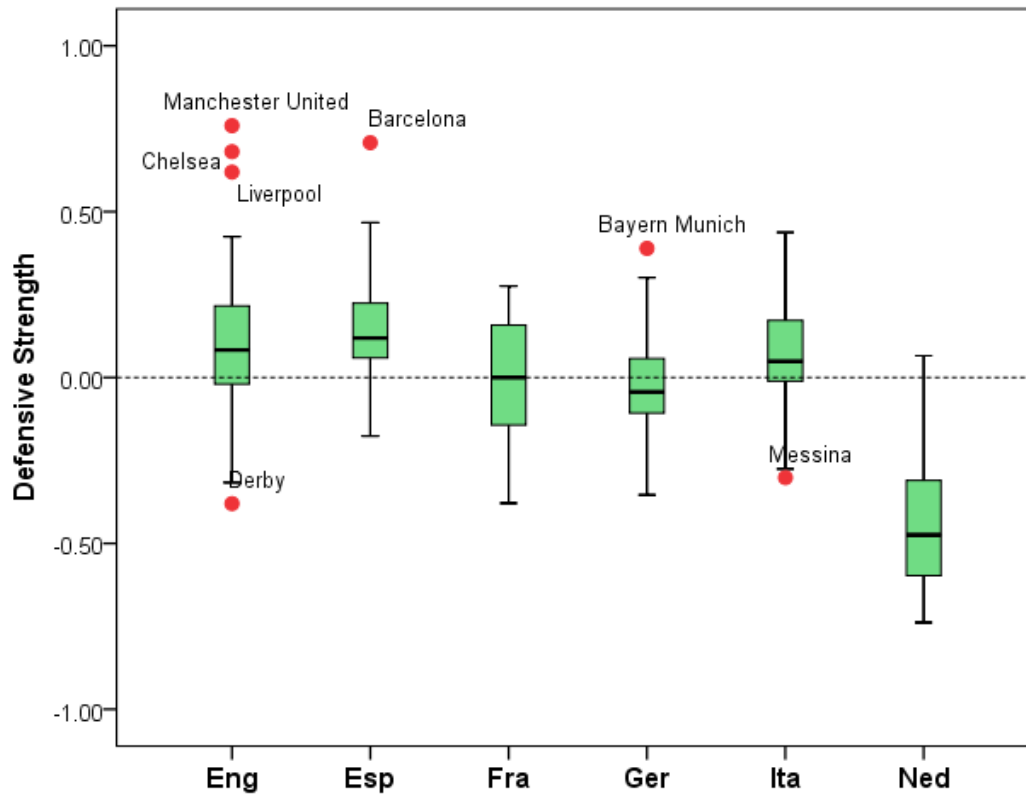
Attacking Strength by Country



Top Ten Attacks

Team	Attacking Strength
Barcelona	.85
Real Madrid	.82
Manchester United	.67
Arsenal	.58
Chelsea	.58
Bayern Munich	.53
Internazionale	.45
Werder Bremen	.44
Atlético de Madrid	.43
Liverpool	.43

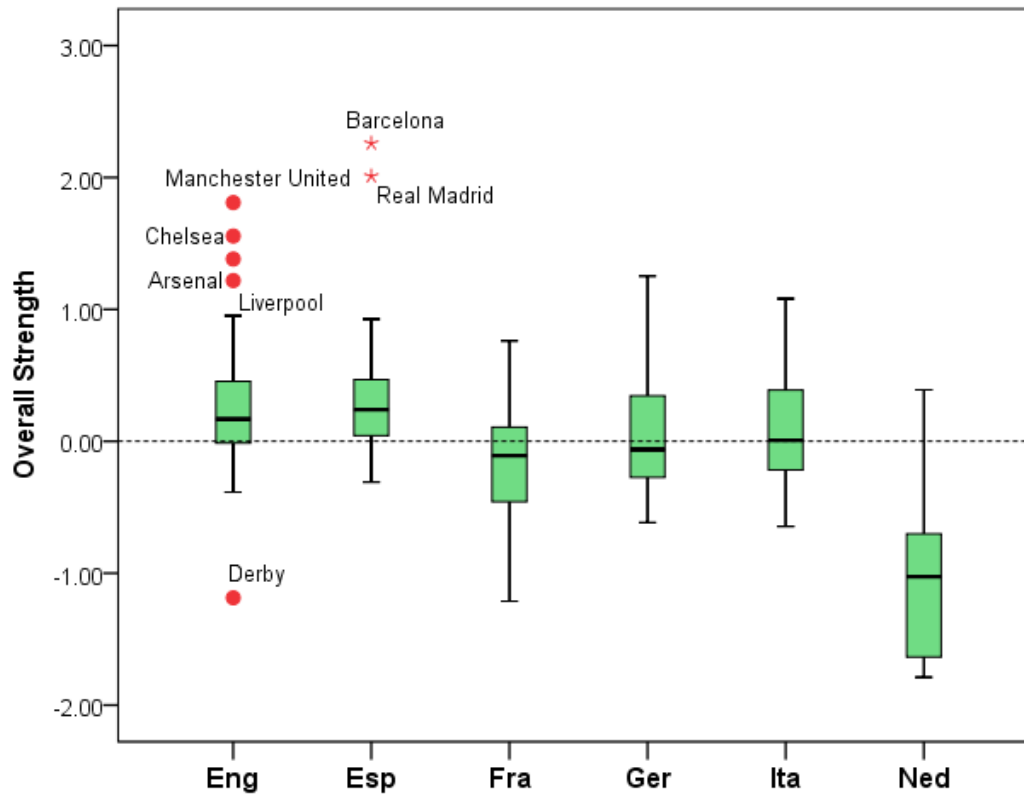
Defensive Strength by Country



Top Ten Defences

Team	Defensive Strength
Manchester United	.76
Barcelona	.71
Chelsea	.68
Liverpool	.62
Real Madrid	.47
Milan	.44
Arsenal	.42
Everton	.42
Bayern Munich	.39
Internazionale	.37

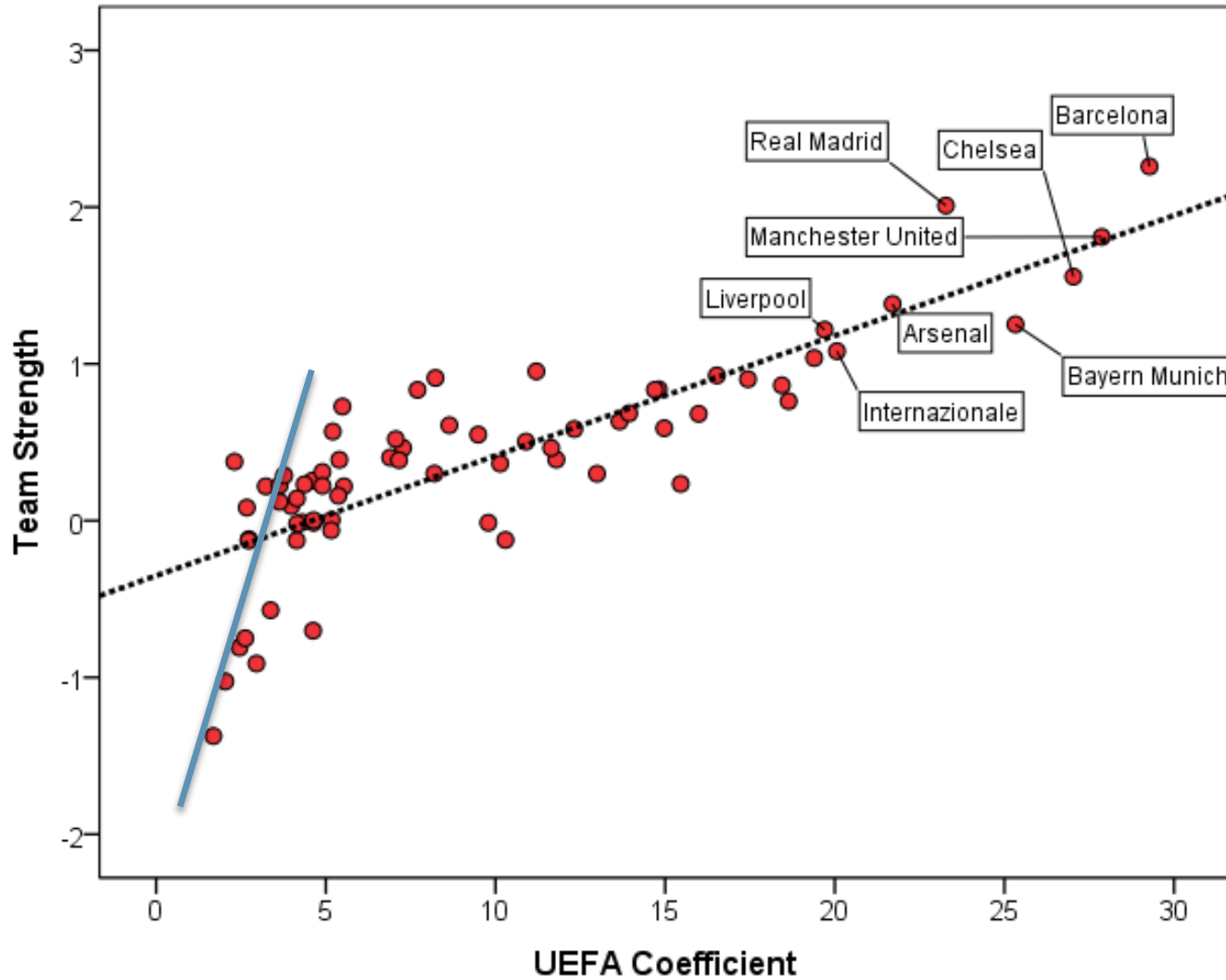
Overall Team Strength by Country



Top Ten Teams

Team	Strength
Barcelona	2.26
Real Madrid	2.01
Manchester United	1.81
Chelsea	1.56
Arsenal	1.38
Bayern Munich	1.25
Liverpool	1.22
Internazionale	1.08
Milan	1.04
Manchester City	.95

Validation check



Correlation = .83

RESULTS

- Use Attack & Defensive Strengths to calculate number of goals scored by the average Dutch team
 - a) Playing in the Erd
 - B) Playing in the Premiership

	Eredivisie	Premiership
Goals scored per match	1.35	0.80

- 17 Goals in Erd == 10 Goals in EPL

Comparison with Historicals

Team Strength Analytics

- Average Dutch Team

	Eredivisie	Premiership
Goals scored	1.35	0.80

10 goals in EPL \Leftrightarrow 17 in Erd

- Average French Team in France: 1.07 goals
- Average French Team in the Premiership: 0.95goals

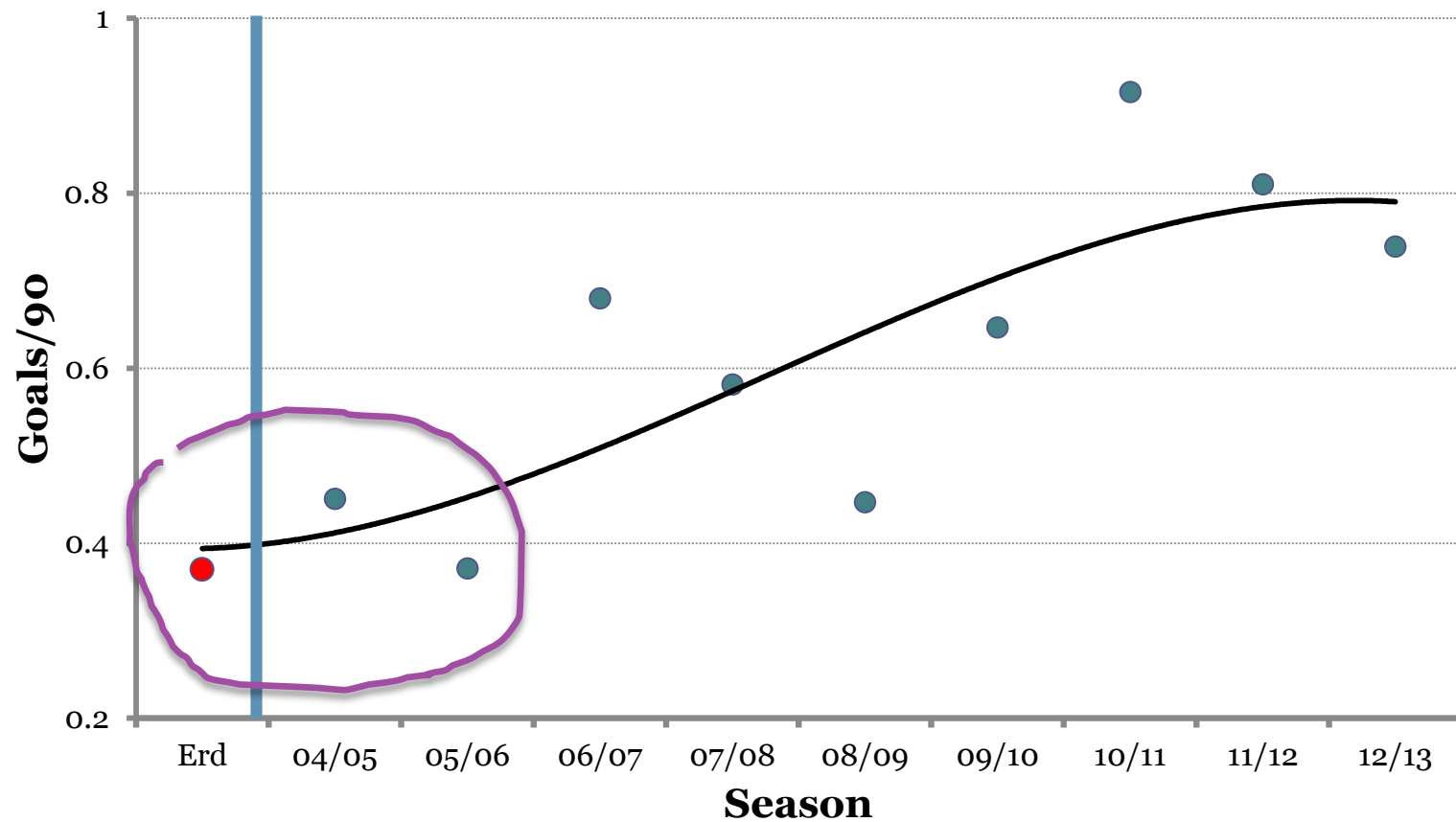
10 goals in PL == 11.3 in France

Historical Data (Individuals)

	Eredivisie	Premiership
Goals/Match	0.53	0.33

10 goals in EPL \Leftrightarrow 16 in Erd

Is RvP an outlier?



Thanks for Listening.

Any questions - I'll be around to chat.

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