



FINANCIAL FAIR PLAY  
RULES AND  
COMPETITIVE BALANCE  
IN WORLD FOOTBALL

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# INTRODUCTION AND OBJECTIVES

- Background
- Club Level Breaches
- Methods
- Results for each league
- Main Findings
- Practical Implications
- Potential limitations

# BACKGROUND: FFP



- UEFA is the governing body of all soccer leagues in Europe
- Financial Fair Play Rules (FFP): “Clubs that exceed a certain limit of losses are subject to sanctions, which include fines, transfer bans, and disqualification from UEFA competitions” (Gaetano, 2019).
  - Clubs must both break-even and be transparent
- Break-even: “Requires clubs to balance their costs with their revenue”
- Transparency: “Requires clubs to publish financial statements publicly”

# CLUB LEVEL BREACHES

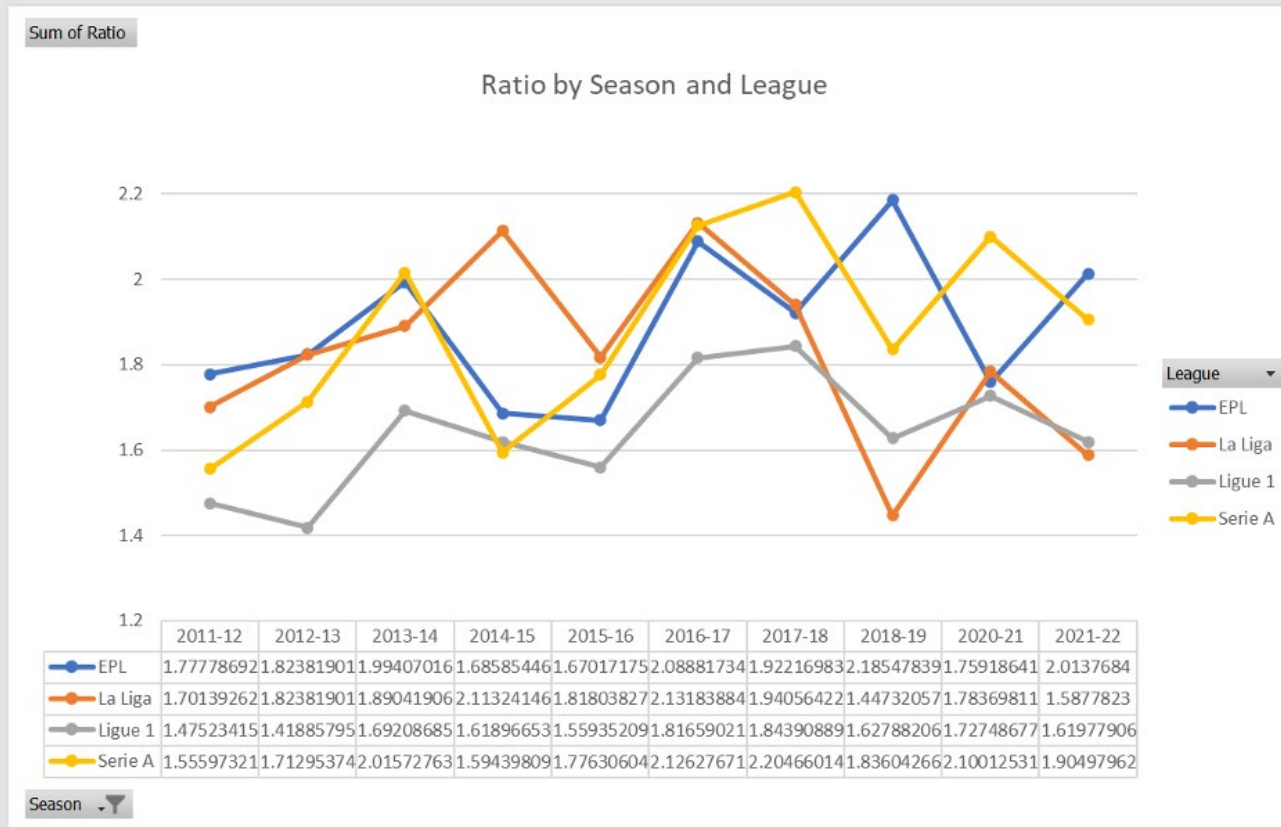


- Manchester City:
  - Sergio Aguero Goal to win EPL in 2012 season
  - Exceeded €45m threshold in losses with €180m
- Juventus
  - Lost 15 points in the table for violating FFP
  - Goes back to 2018, and losses over £200m
- Barcelona
  - Losses of over €1.35B despite spending €140M in transfer window last summer
  - Current Transfer Ban
- PSG
  - Violated Breakeven rules
  - Fines totaling €65M
  - Conflict of Interest in leadership?
- Also goes beyond the top teams in each league: Chelsea, Inter, Madrid

# METHODS

- Collection of standings for competitive balance ratio
- Ties were included in ratio calculations
  - Formula:  $Winning\ Percentage = \left( \frac{Wins + (0.5 \cdot Draws)}{Total\ Games} \right)$
- Expenditure data was collected from transfermarkt.us and top 4 finishes as well as number of titles were taken from standings data
  - Expenditure data encompasses the total amount each club has spent from 2011-2022
- Simple correlations were taken in each league between top 4 finishes, league titles, and expenditure
- Two simple linear regression models for each league were created to measure how much of the variance in the dependent variables can be explained by Total Expenditure

# COMPETITIVE BALANCE RESULTS



- EPL: Highest average Ratio with 1.89
  - 3 seasons above 2.0
- Serie A: Second highest average ratio with 1.88
  - 4 seasons above 2.0
- La Liga: Third highest ratio with 1.82
  - 2 seasons above 2.0
- Ligue 1: Most balanced league with ratio of 1.64
  - No seasons above 2.0
  - Note: 2020-21 season was shortened due to COVID and was left out of the study

# EPL RESULTS

- Top 4 in terms of expenditure won all of the league titles in this time: Manchester City with 6
  - 7 different teams finished in top 4, and 6 of them were the top 6 in expenditure
- Model 1: P-value for expenditure is significant as well as the model itself
  - R-squared: roughly 83% of the variance explained by Expenditure
- Model 2: Significant p-values
  - R-squared: roughly 50% of the variance is explained by Expenditure

SUMMARY OUTPUT								
<b>Regression Statistics</b>								
Multiple R	0.912635832							
R Square	0.832904161							
Adjusted R	0.825639125							
Standard Error	1.35992194							
Observations	25							
<b>ANOVA</b>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	212.0240833	212.0240833	114.6455582	2.07368E-10			
Residual	23	42.53591671	1.849387683					
Total	24	254.56						
<b>Coefficients</b>								
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-2.494096775	0.481487487	-5.179982538	2.98826E-05	-3.490129529	-1.49806402	-3.490129529	-1.49806402
Expenditure	0.006776167	0.000632857	10.70726661	0.00	0.005467003	0.008085331	0.005467003	0.008085331

SUMMARY OUTPUT								
<b>Regression Statistics</b>								
Multiple R	0.71364							
R Square	0.509282							
Adjusted R	0.487946							
Standard Error	0.902311							
Observations	25							
<b>ANOVA</b>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	19.43418	19.43418	23.87005	6.19E-05			
Residual	23	18.72582	0.814166					
Total	24	38.16						
<b>Coefficients</b>								
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.84795	0.319468	-2.65425	0.014173	-1.50882	-0.18708	-1.50882	-0.18708
Expenditure	0.002052	0.00042	4.885699	6.19E-05	0.001183	0.00292	0.001183	0.00292

# LA LIGA RESULTS

- Top 3 in expenditure over this time period won all league titles: Barcelona with the most with 5
  - 9 different teams finished in top 4, 6 of them were top 6 in expenditure
- Model 1: P-value for expenditure is significant as well as the model itself
  - R-squared: roughly 93% of the variance explained by Expenditure
- Model 2: Significant p-values
  - R-squared: roughly 77% of the variance is explained by Expenditure

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.968464							
R Square	0.937923							
Adjusted R Square	0.935224							
Standard Error	0.900676							
Observations	25							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	281.902	281.902	347.5052	2.23E-15			
Residual	23	18.65798	0.811217					
Total	24	300.56						
	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.59576	0.220042	-2.70749	0.01	-1.05095	-0.14057	-1.05095	-0.14057
Expenditure	0.008321	0.000446	18.64149	0	0.007398	0.009245	0.007398	0.009245

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.882654							
R Square	0.779077							
Adjusted R Square	0.769472							
Standard Error	0.621088							
Observations	25							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	31.28775	31.28775	81.10887	5.30E-09			
Residual	23	8.872251	0.38575					
Total	24	40.16						
	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.34482	0.151737	-2.27248	0.03	-0.65871	-0.03093	-0.65871	-0.03093
Expenditure	0.002772	0.000308	9.006046	0	0.002135	0.003409	0.002135	0.003409



# SERIE A RESULTS

- 3 of top 4 in expenditure over this time period won all league titles: Juventus with the most with 9
  - 9 different teams finished inside the top 4, 7 made up the top 7 in expenditure
- Model 1: P-value for expenditure is significant as well as the model itself
  - R-squared: roughly 84% of the variance explained by Expenditure
- Model 2: Significant p-values
  - R-squared: roughly 47% of the variance is explained by Expenditure

SUMMARY OUTPUT										
<b>Regression Statistics</b>										
Multiple R	0.919914									
R Square	0.846241									
Adjusted R	0.839556									
Standard Error	1.167807									
Observations	25									
<b>ANOVA</b>										
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>					
Regression	1	172.6332	172.6332	126.585	0					
Residual	23	31.36678	1.363773							
Total	24	204								
	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0</i>	<i>Upper 95.0</i>	<i>Lower 95.0</i>	<i>Upper 95.0%</i>
Intercept	-0.82844	0.330346	-2.5078	0.02	-1.51181	-0.14507	-1.51181	-0.14507	-1.51181	-0.14507
Expenditure	0.00672	0.000597	11.251	0	0.005484	0.007955	0.005484	0.007955	0.005484	0.007955

SUMMARY OUTPUT										
<b>Regression Statistics</b>										
Multiple R	0.694994									
R Square	0.483017									
Adjusted R Square	0.460539									
Standard Error	1.32546									
Observations	25									
<b>ANOVA</b>										
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>					
Regression	1	37.75261	37.75261	21.48889	0					
Residual	23	40.40739	1.756843							
Total	24	78.16								
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0</i>	<i>Upper 95.0</i>	<i>Lower 95.0</i>	<i>Upper 95.0%</i>
Intercept	-0.78916	0.374942	-2.10476	0.05	-1.56479	-0.01354	-1.56479	-0.01354	-1.56479	-0.01354
Expenditure	0.003142	0.000678	4.635611	0	0.00174	0.004545	0.00174	0.004545	0.00174	0.004545

# LIGUE 1 RESULTS

SUMMARY OUTPUT						SUMMARY OUTPUT						
<i>Regression Statistics</i>						<i>Regression Statistics</i>						
Multiple R	0.89874					Multiple R	0.842168					
R Square	0.807733					R Square	0.709247					
Adjusted R Square	0.799374					Adjusted R Square	0.696605					
Standard Error	1.287313					Standard Error	0.778967					
Observations	25					Observations	25					
<i>ANOVA</i>						<i>ANOVA</i>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	160.125	160.125	96.62529	0	Regression	1	34.04385	34.04385	56.10489	0	
Residual	23	38.11502	1.657175			Residual	23	13.95615	0.606789			
Total	24	198.24				Total	24	48				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.10148	0.305773	-0.33187	0.74	-0.73402	0.531062	-0.73402	0.531062				
Expenditure	0.007855	0.000799	9.829816	0	0.006202	0.009508	0.006202	0.009508				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.34765	0.185027	-1.87894	0.07	-0.73041	0.035102	-0.73041	0.035102				
Expenditure	0.003622	0.000484	7.49032	0	0.002622	0.004622	0.002622	0.004622				

- 3 of top 6 in expenditure over this time period won all league titles: PSG with the most with 7
  - 9 different teams finished inside the top 4, 8 of them made up the top 8 in expenditure
- Model 1: P-value for expenditure is significant as well as the model itself
  - R-squared: roughly 80% of the variance explained by Expenditure
- Model 2: Significant p-values
  - R-squared: roughly 70% of the variance is explained by Expenditure

# MAIN FINDINGS

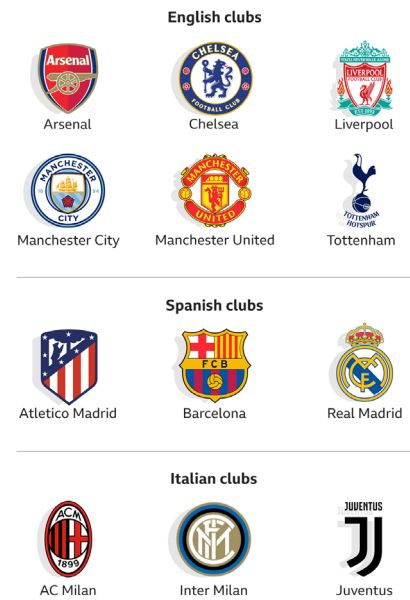
- Teams that spend more end up winning more
- FFP does not stop clubs from overspending, but instead causes bigger teams to spend more and smaller teams to spend less
- Violations seem to occur when teams report huge losses
- EPL is the least balanced league, according to calculations:
  - 5 teams spending upwards of 1 billion from 2011-2022
  - Manchester City: Before this time frame won 2 titles in its history
  - After violating FFP they have now won 6 titles



# PRACTICAL IMPLICATIONS

- Potential Restructuring of FFP rules and regulations
- Potential for more clubs continuing to overspend as more wealth gets pumped into the club with new ownership
- Steeper punishments
  - Barcelona is the harshest punishment with currently having a transfer ban
- World football isn't as competitively balanced as we once thought
- Super league?

Who was involved in the European Super League?



# POTENTIAL LIMITATIONS

- Landscape prior to the implementation of FFP:
  - Spending habits of clubs
  - How were clubs punished for overspending?
  - Ratios before FFP, potentially more competitive?
- Percentage of variance explained by the independent variable is incomplete
  - Portion of the variance is unexplained by expenditure
  - What other variables could affect the regression models?
  - Potential for multiple regression