**An Economic Analysis of the UK Football Transfer Market Since 1992**

Programming for Business Analytics

24BSB014

Investigating the Impact of Inflation and Economic Growth on Transfer Spending

**Introduction**

Football transfer spending in the United Kingdom has attracted global attention, particularly with the dramatic escalation observed since the inception of the Premier League in 1992. At first glance, nominal transfer fees have increased exponentially as seen in figure 1, yet this raw growth figure does not tell the full story. The central question arises: **Is the surge in transfer fees merely a product of general inflation, or does it reflect a fundamental, real increase in clubs' spending power?**

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Figure 1

The aim of this report is to analyse how UK football transfer expenditure has evolved in real terms, adjusted for inflation using a constructed Consumer Price Index (CPI) and to assess its relationship with UK GDP over time. This allows for a more accurate picture of market behaviour by distinguishing between nominal and real growth.

To do this, historical transfer data was merged with economic indicators such as yearly inflation rates and quarterly GDP figures. The data was cleaned and transformed, enabling comparisons between seasons, clubs and broader financial trends. The study also focuses on the “Big Six” clubs to ensure consistency in club presence across seasons.

While the analysis is robust, some limitations remain. Not all financial data is available, and this report does not account for revenues from broadcasting or commercial deals. Still, the findings provide valuable insights into the drivers behind football’s ever-increasing spending.

**Data Collection**

To investigate whether the growth in football transfer fees reflects true market expansion or is primarily influenced by economic factors such as inflation and GDP, several datasets were sourced and processed for analysis.

**Premier League Transfer Dataset**

The core dataset, “premier\_league.csv” from Kaggle (Bhavik, 2022), contains over 22,000 individual Premier League transfer records from the 1992/93 season onward. Key columns include “club\_name”, “transfer\_movement”, “season”, and “fee\_cleaned”, which represents the actual numerical transfer value.

Data cleaning involved several key steps:

* Removing missing values to retain only complete entries.
* Dropping irrelevant columns like “fee” and “transfer\_period”, as these were either redundant or not useful for the analysis.
* Filtering only positive transfer values to exclude loans, free transfers, and youth promotions that could distort spending trends.

The cleaned dataset enabled a focused examination of how much clubs spent acquiring players, suitable for trend and comparative analysis.

**Inflation and CPI Dataset**

Inflation data was sourced from Kaggle (Beckett, 2022) and provided annual percentage changes in the Consumer Price Index (CPI). However, these were not absolute CPI values, so a transformation was required.

Steps taken:

* The dataset was chronologically ordered to preserve sequence across seasons.
* A CPI index was constructed by compounding each year’s inflation on a base value of 100 for 1992. For instance, the inflation in 1993 was 2.6%, CPI was calculated as 100 \* (1 + 0.026) = 102.6.

This new CPI series enabled the conversion of nominal transfer fees into real (inflation-adjusted) values. Without this step, comparisons over time would ignore the impact of changing prices, skewing the economic insights.

**GDP Dataset**

UK GDP data, sourced from Kaggle (originally from the Office for National Statistics)(Gaye, 2023), was available in quarterly format. To align it with the seasonal structure of the transfer and inflation data, aggregation was needed.

Data preparation involved:

* Extracting the year from each quarterly entry.
* Calculating annual GDP as the average of that year's four quarters.

This provided a consistent economic reference point to assess whether changes in club spending correlate with broader macroeconomic indicators. By converting quarterly GDP to annual figures, data merging was simplified and analytical consistency maintained.

**Challenges and Limitations**

It is important to understand that the dataset primarily focuses on financial transactions and lacks contextual details such as player positions, age, contract length, or market value at the time. This limits the depth of the analysis, as we cannot assess the quality or value-for-money of transfers.

**Data Analysis**

Before diving into visualisations, I first built an integrated dataset that combines Premier League transfer activity, UK inflation rates, and GDP figures. I split the data into two parts: incoming transfers (expenditure) and outgoing transfers (income), then adjusted each for inflation using the Consumer Price Index (CPI). This allowed me to convert nominal transfer fees into real, inflation-adjusted values, making comparisons over time more meaningful.

After adjusting for inflation, I merged in UK GDP data to provide a broader economic context. I then aggregated the data by season and club to calculate total, average and maximum spending figures, giving a clearer view of financial activity across the league.

For the Big Six clubs - Manchester United, Chelsea, Arsenal, Liverpool, Manchester City, and Tottenham - I filtered the dataset to isolate their transfer activity. These clubs were chosen due to their financial strength and consistent presence in the Premier League, offering stable and comparable data across seasons. I calculated each club’s total spending and income per season and merged this into a single dataset. This gives a detailed look at their net spending, helping to assess their financial strategies over time.

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Figure 2

To better understand the impact of inflation, I began by comparing nominal and real transfer fees across all Premier League clubs. Figure 2 reveals a sharp rise in spending since 2011/12, peaking in 2017/18. Notably, real-term spending has consistently exceeded nominal values, highlighting that transfer outlays have grown faster than inflation—especially in the last decade.

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Figure 3

Figure 3 compares the average and maximum inflation-adjusted transfer spending per Premier League season, highlighting financial disparities between clubs. While the average spending line reflects general market trends, the spikes in maximum spending reveal seasons where top clubs, likely the Big Six, outspent others significantly. From 2008 onwards, the growing gap between average and maximum spending signals an increasing imbalance, with a few clubs consistently pushing financial limits. This trend suggests rising ambition and greater resource access among top clubs, emphasizing the need to consider both average and extreme spending when analysing the transfer market.

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Figure 4

By contrasting transfer spending with UK GDP growth, Figure 4 reveals that football operates in a financial sphere of its own. While GDP has fluctuated modestly over time, transfer spending has escalated sharply, especially from the early 2000s onward. Even during economic downturns like the COVID-19 pandemic, spending remained high, highlighting how factors such as broadcast revenue and club ambition drive investment in players more than national economic conditions.

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Figure 5

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Figure 6

Finally, to understand the financial behaviours within the Premier League's most dominant teams, Figures 5 presents a heatmap visualisation of transfer expenditure by the “Big Six” over time. I found that the use of Seaborn for this heatmap was appropriate as it enables the clear identification of temporal and cross-club variations in spending intensity. This visualisation immediately reveals that high levels of expenditure are concentrated within these six clubs, particularly from the mid-2010s onward with Manchester City and Chelsea consistently leading spending efforts.

Figure 6 builds on these insights by tracking the Big Six’s collective income and expenditure in real terms showing a clear gap between money spent and money earned from transfers. Despite occasional spikes in income - notably in 2017/18 - overall expenditure continues to outpace revenue even during tough economic periods.

Together, these visuals indicate a structural shift in spending behaviour among elite clubs - suggesting that the rise in transfer fees is not just a product of inflation but is also underpinned by a growing financial capacity within the top tier of English football.

**Conclusion**

Transfer fee growth within the Premier League cannot be solely attributed to general inflation. While rising prices in the economy have undoubtedly played a role, the consistent and significant growth in real-terms transfer spending—especially among the top clubs—indicates a deeper structural shift in the financial dynamics of football. By incorporating inflation-adjusted figures, GDP trends, and club-level income versus expenditure, the findings show a clear divergence between national economic patterns and the football transfer market. The fact that clubs continued to spend aggressively even during periods of economic downturn, such as the COVID-19 pandemic where Premier League clubs collectively ran a £700 million transfer deficit suggests that football's top institutions are operating under a distinct financial logic - one driven by global broadcasting deals, increased commercial revenue and a growing emphasis on competitive dominance.

Ultimately, this report concludes that the sharp rise in transfer fees reflects a real increase in clubs' spending power, underpinned by an evolving and commercialised football economy where revenue streams are unique to the modern game. Practitioners can use these findings to benchmark transfer strategies more realistically, focus on sustainable commercial growth, and anticipate market shifts beyond inflation. Looking ahead, whether this trend continues will depend on how football generates and distributes revenue. potential financial regulation from UEFA - such as enhanced squad cost rules or spending caps - could challenge the sustainability of this direction and reshape how clubs operate financially.

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**Appendix**

