

TRANSFER MARKET ECONOMICS – SOCCER'S GLOBAL MARKETPLACE

By

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ABSTRACT

This study focuses on the effects of committed fan support on the global soccer transfer market. Soccer supporters exhibit unique microeconomic decision-making, fueled by their passionate commitment and identity ties to their desired good. I examine this relationship and the effects it has on their club's business model, seeing how a team's loyal fan base can also have an influence in its purchases on the transfer market. Using work by economist Stephen Syzmanski as a basis, I explore a standard club (with influencing fans) optimization model, as well as offer alternative team business models of clubs free of fan influence. Finally, I explain a self-conducted experiment regarding player transfers after the most recent FIFA World Cup, hypothesizing that players will transfer to the higher ranked leagues, where the fan bases are the largest and teams are under the most pressure to be buyers on the market. After reviewing the regression analysis, I find that my hypothesis holds, and that the relationship between rank and transfers is negative.

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INTRODUCTION

Soccer is undoubtedly the most popular sport in the world. The game transcends race, gender, and socio-economic constraints to bring entertainment to the masses. Nearly every single country in the world is a member of the Fédération Internationale de Football Association (FIFA), and has professional or semi-professional clubs devoted to the beautiful game. Over one billion people worldwide tuned into the 2014 FIFA World Cup Final, with all eyes on the best of the best.¹ The game's unifying power is in part due to its fans, known worldwide as some of the most passionate, vocal, and loyal supporters in all of sports. As the popularity of soccer grows and the game has reached American shores, we can see that these fans have a unique impact on the clubs they support as well as their own decision-making, different from most American fan cultures we are familiar with. I aim to develop the causes behind these passionate fans, and how their commitment and identity forms their special microeconomic utility functions.

Next, I examine the impact of soccer's passionate fans on the clubs they support. Soccer's global transfer market, one of the largest global labor exchanges, operates on a unique system of transfer fees, or the price of an exchange. At any point during a player's contract, another team can pay a transfer fee to the club of ownership, independent of salary, to have the player's contract terminated and open for trade. For example, Tottenham Hotspur received a record €91 million to end their contract with star Gareth Bale, and allow the Spanish club Real Madrid to purchase him.² Practically any player in the world is able to be sold during any given transfer period, filling the market with top talent each year. However, what incentivizes a team to spend such large sums of money for players? I believe that soccer's loyal and vocal fans play a key part in clubs buying or

selling players, as they demand certain levels of success and pressure their teams when that level is not achieved. A team is forced into optimizing differently from conventional businesses and take into consideration success, driving them to the market to field the best possible teams. Alternatively, some clubs devoid of fan pressure (for various reasons) are free to focus on the profit side of transfer market decisions. Finally, I look to show how the transfer market is stimulated after major tournaments because of widespread fan exposure to potential transfers, through a self-conducted experiment regarding the 2014 FIFA World Cup. Using standard regression analysis, I am able to connect net transfers with the ranking of a domestic league, where the highest ranked leagues (with the largest fan bases) have high positive net transfers.

IDENTITY & COMMITMENT

Before the discussion of the soccer transfer market begins, we must first define one of the key forces driving the market: the supporters. Soccer fans exhibit a unique economic profile, different from any other major sports fans. Their fandom, fueled by passion and loyalty, intertwines their economic decision-making with their beloved teams so heavily that each is impacted by the other. At the heart of their support lies a deep rooted commitment, strong enough to suboptimally maximize their utility.

Soccer supporters are extremely influenced by their commitment to their favorite teams, defying normal rationality. Famous social choice economist Amartya Sen extensively profiles the economic preferences of the committed person in his paper “Rational Fools” (1977). According to classical economic theory, an individual makes decisions striving for Pareto efficiency, or the optimal allocation that has no better

alternative given their own preferences. Sen says that commitment to an entity, in this case a soccer team, influences a person to make unique, *consistent* decisions that seem irrational based on classical utility-maximizing theories. According to Sen, these individuals may seem inefficient to the “self-seeking egoist,” but the consistency of their decision making is what makes their irrational behavior “rational.”³ The committed person, advised by social norms of egotism to stray away from Pareto inefficient choices,⁴ can sometimes voluntarily choose lesser utility allocations as their decisions are swayed by external factors.⁵ Consistency in their irrationality, however, allows their quasi-irrational utility function to transcend said norms and act rational.⁶

Just as people in marriages purposely choose *personally* inferior allocations of time and money to appease the preferences of their partner, the committed fan’s relationship with their team forces a unique utility function, in which they choose to spend their resources (time, money, etc.) on a good that may not always return maximum utility. In his memoir *Fever Pitch*, author Nick Hornby recounts the misery and emotional distress he faced as a loyal fan of Arsenal FC. Hornby describes how his love for the team has impacted almost every aspect of his life, from finding a job and significant other that fit with match scheduling to spending his idle time recounting goals and games from years past. He also recounts that while a big team win would have him buzzing with joy for days, a bad defeat would leave him sick to his stomach for weeks.⁷ Relatedly, a survey done of the most passionate Israeli soccer supporters showed a similar dichotomy. When asked how they feel after a team win, the supporters responded with words such as “happiness,” “joy,” and “pride” (associating the win to their own identity, as described below). However, emotions after a defeat were described with

words like “lousy,” “failure,” “disappointment,” and “depression.”⁸ Why exactly would anyone voluntarily choose to consume these bundles of goods that could potentially lower their utility in the end?

One suggestion, as iterated in the study done in Israel mentioned above, relates the supporters love for their team to a drug addiction, where each match is a 90 minute escape from the real world.⁹ In the case of addiction, the consumer is unable (psychologically, physically, emotionally, etc.) to choose a different bundle, thus having an extremely inelastic demand function in regards to price.¹⁰ As the price (in this case, we can apply price to mean more than just monetary price, but also time and emotional investment price as well) of their good of choice increases or decreases, their consumption levels will stay constant.¹¹ Hornby watched his slide into “addiction” first hand, where he was willing to travel to different countries, spend higher prices on season tickets, and sacrifice work and social commitments for his Gunners.¹² However, the most prevalent theory for their actions relates a soccer supporter’s fandom to the construction of the roots of their identity – their regional, socio-economic, and ethnic background driving them to fall in love with the clubs that they do.

Supporter Identity

Soccer supporters, unlike many fans we are familiar with in America, are committed to their teams for reasons deeper than the game itself. Fans attach themselves to their clubs for more reasons than simply success alone. Many supporters begin their fandom at early ages, tied to their team because of geographical community, socio-economic association, or family heritage. For example, the city of Milan is home to two

prestigious soccer clubs, AC Milan and Internazionale. Inter Milan historically has represented the conservative, upper class of the city, while AC Milan has been supported by more of the working class.¹³ Fans can attach themselves to a club that is more aligned with their personal situation, making it easier for their deep relationship to blossom. Nick Hornby says he became an Arsenal fan simply because his father, whom he disliked, supported Arsenal's rival Tottenham Hotspur, and even admits that the personal connection he had with the team from the beginning helped his ascension to a dedicated supporter.¹⁴ The team one chooses becomes more than just a hobby; it represents an individual's background, social status, and, most importantly their identity.

Economic researchers have only just recently begun studying the effects of identity and yearning for belonging on a person's decision making. Behavioral economist George Akerlof, in his book *Identity Economics*, begins this discussion, saying that the individual's utility function is not only affected by the wanting of goods but also the desire to be a certain type of person, attempting to "fit in" with whichever social group they wish.¹⁵ Further, a person's fear of being labeled as an "outsider" can force them to consider taking actions in pursuit of acclimating to a group.¹⁶ The desire to shift their own view of the team from "them" to "us" drives their passion and choice in following.

Soccer supporters take great pride in being loyal to their clubs. One study done with fans of English Premier League clubs showed that over 87% of fans who attended more than ten games per season (out of 19 home matches) *strongly* considered themselves to be "loyal supporters."¹⁷ Just as consumers of a particular brand of clothing may build their identity around their favorite products, the soccer fan builds theirs around their consumption of the sport.¹⁸ They desire to be included in this group of like-minded

individuals, giving themselves more than just the game but a sense of “belonging” and “family.”¹⁹ In this case, spending hours creating and practicing songs, painting large “tifo” banners, and following the team wherever they go all helps build their personal and collective identity as a supporter. As Sen notes in *Rationality and Freedom*, fellowship and community can be “crucial” to one’s self-image and thus changes one’s economic decision making.²⁰ The identity that comes with being a supporter drives the fan to make their irrational decisions rational, voluntarily accepting a potentially sub-optimal choice bundle, where losses and disappointment are a possibility, for the perks of belonging and identity.

THE INTERNATIONAL TRANSFER MARKET

The Bosman Ruling

Soccer’s international transfer market, born from the European Court of Justice’s Bosman Ruling, is one of the world’s largest and most profitable exchanges of labor. Prior to 1995, each soccer league imposed strict regulations on clubs regarding domestic labor amounts. Teams were forced by their national soccer federations to hire domestically first and foremost, and were given strict quotas on how many foreign players they could employ.²¹ Furthermore, transfer fees (the cost of a labor exchange, independent from a player’s salary) were paid at all times, even when a player’s contract had expired. However, under these rules Belgian player Jean-Marc Bosman was refused a transfer because of an unpaid transfer fee, even when Bosman was out of contract with his club. Bosman, stuck out of contract but unable to transfer, filed suit in the European Court of Justice. In 1995, the Bosman Ruling was enacted, disallowing the European

leagues to use foreign player quotas and eliminating the use of transfer fees after a contract expires.²² This seemingly small alteration to the European soccer leagues' policies unknowingly sparked the birth of the grand transfer market as it is today.

The Bosman Ruling proved to be a paradigm shift for the world's most popular sport, turning a simple market for the exchange of players into a multi-faceted business venture, where teams could buy and sell players for either profit OR success. First, the ruling removed all quotas that leagues had placed on foreign players in an attempt to protect the domestic markets.²³ Clubs were now allowed to contract full rosters of foreign players if they so desired, balancing the transfer market out into a free market and equilibrating player prices amongst the different leagues. For example, English club Manchester United (and their large coffers) was, before the ruling, limited on how many non-English players they could contract each year. After the new rule, however, they are free to purchase whomever they would like, now able to buy the best players available instead of those fitting the criteria of their quotas. The English Premier League (EPL) in particular has become the pinnacle of diverse, highly skilled teams; with no more quotas to fill, the wealthy clubs in the EPL can buy the *best* players instead of focusing on nationality and domestic league requirements. Also, according to classical economic theory, with more teams in contention for the greatest international players demand for talent would rise, leading to an increase in price of the transfer fees.

Further, the Bosman Ruling helped ignite the soccer transfer market by eliminating transfer fees for players with expired contracts, changing player transfers from simple labor shifts to profit maximizing decisions for the owners. Teams were now incentivized to consider selling their players *before* their contracts were up, as their

transfer price became zero when it expired. The clubs now began modeling their investment decisions based on time, in order to maximize their utility and profits over the life of a player's contract.²⁴ Knowing that they would either be forced to sell their player for free or resign them at the end of their contract, the owners and boards of directors began to consider potential profits of selling a good player after gaining experience but before their terms were finished. The idea of "franchise players," or players that spend their entire careers with one team, started to dissipate, as every player had a good chance to be sold. For example, Real Madrid starlet Cristiano Ronaldo is reported to have a transfer fee of £1 billion (\$1.51 billion) attached to his head, and if a team desired to pay that fee he would be released from his contract and transferred.²⁵ However, when Ronaldo's contract expires in 2018, said transfer fee will not apply, and Real Madrid would lose the potential profits (They spent £80 million to bring Ronaldo to Madrid in 2009). As a player's contract approaches its end, they are either resigned or placed on the market, looking for the best possible offer in the free market. In Ronaldo's case, Real Madrid will most likely not resign a 33-year-old player and will place him on the market come 2017 (and his sale could potentially surpass Gareth Bale for the most expensive transfer fee ever paid²⁶). The Bosman Ruling turned independent profit and player utility questions into a combined maximization problem, with clubs looking to maximize the talent and service they get out of a player as well as the profit for selling them at the most opportune time.²⁷ The value of a given player now transcended simple match statistics, and now revolved completely around timing and skillset value in the market.

Club Modeling in the Contemporary Market

How exactly does this ruling connect to the unique fandom of soccer? Since the Bosman Ruling in 1995, clubs around the world have adopted different strategies in the buying and selling of their players. Most of these different business models are catered to the types of fans they have. Just as normal corporations have shareholders to answer to, soccer clubs must base their employment decisions on their primary stakeholders, their supporters. Teams receive a majority of their income on fan attendance, memorabilia purchases, and television contracts, and must cater to the utility of fans to ensure stable income and an overall successful business. Most supporters, as discussed in the previous section, usually consider team success to be the good of highest utility in regards to their fandom, and will push their clubs to make transfer decisions that yield success over profits. However, other clubs with less demanding supporters have mastered the buying and selling of players in the transfer market, and will forgo in some instances maximum success for profitable transactions. Ultimately, club business models can be differentiated in terms of *value*, or what each team perceives as valuable for their club, their fans, their finances, and their community.²⁸

According to Stefan Szymanski, one of the subject's leading economists, a soccer club has two primary objectives: match success and profits. Each club is unique in their balance of the two; some opting for spending more for wins and others attempt to maximize their dollars. Szymanski began his modeling work with analyzing sixteen English soccer clubs in the 1990's, when the clubs shifted from being privately owned to publically traded entities on the London Stock Exchange.²⁹ Using commonly known

business models, he hypothesized that the clubs, now burdened by shareholders, would shift towards profit-oriented objectives over success once changed. After analyzing expenditures and league rankings before and after the clubs becoming public, Szymanski concluded that soccer clubs operated differently than traditional businesses. Below is an example of the profit-success functions soccer clubs operate on.

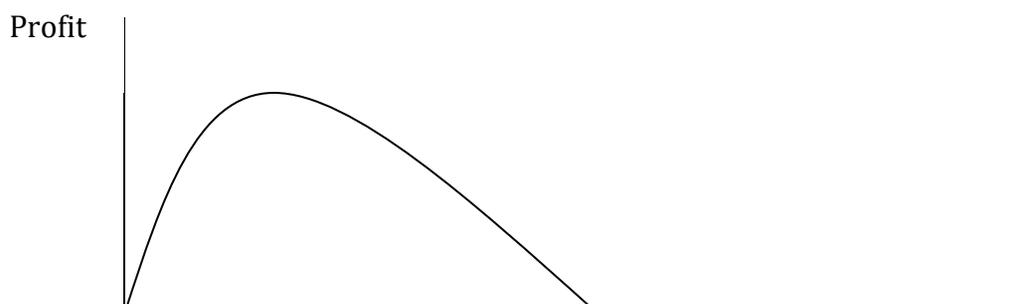


Figure 1: The Profit-Success Function graphed

Playing
Success

According to Szymanski's hypothesis, a profit-maximizing club, acting as a traditional shareholder driven business, would maximize utility with a horizontal indifference curve tangent to the maximum of the function.³⁰ The graph below shows that a profit-maximizing club's equilibrium point is on low (represented by PM*), and a purely profit-objective soccer team should expect lower levels of success to achieve that. However, after analyzing the English Premier League clubs, he found that the organizations did not change their spending patterns (and thus overall change their main objectives), but rather continued to sacrifice their profits for higher league rankings. Below is Szymanski's model graph, showing the profit maximization equilibrium (PM*) point versus the success maximization equilibrium point (U*^{*}).³¹ The bolded line,

Szymanski found, seemed to be the most widely desired indifference curve for the teams both before and after the selling of public shares.

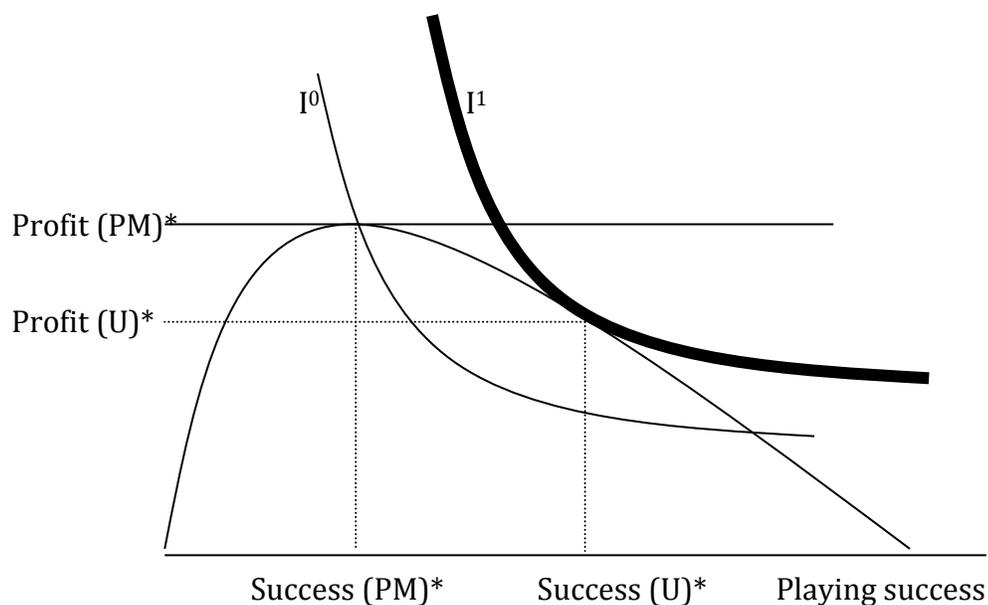


Figure 2: Szymanski's profit-success function with different club objective utility curves

Soccer clubs operate on profit models that differ from normal corporations because they do not solely operate for shareholder profits. They must also answer to their passionate fans, the lifeblood of their business. Around the world, teams with the most dedicated fans are praised and revered, and those clubs must cater to the wishes of their fans just as they would to a major stockholder or equity owner. The dedicated fans are often also the most vocal, and their demand for a certain level of success (usually based on expectations) applies consistent pressure on transfer decisions. Another spending incentive comes with continental "Champions League" tournaments. Teams in the top 2-

4 positions in each league are invited to their continent's Champions League, tournaments that add more television revenue and exposure to potential new fans. Often times, teams on the fringes of contention for these coveted spots will spend more in transfers to help make the final push. Even clubs with profit-oriented objectives must still maximize a certain level of success, in order to retain their standings in the top-flight leagues and prevent relegation. A large proportion of a club's revenue comes from their league's lucrative television contract, and in order to retain these earnings they must place 17th or better each year. Teams that fall out of the top flight are forced to sell their players because of their reduced budgets or release clauses in the contracts of their employees. Thus, there is a major incentive for clubs to obtain *some* level of success, even those with mainly profit objectives.³² These external factors and pressure help shape the unique business modeling of each club, and dictate how they spend their money and approach the transfer market each session.

Fans can have their voices heard in many different ways. In an age of social media, fan criticism can be expressed online directly to their teams. Often, if performance isn't up to the desired standard of the fans, fans will show up and mock their own teams, hanging up critical banners and posters or creating chants that demand player or management change. In some extreme cases fans can turn to more colorful displays of protest, such as the fans of Blackpool FC, who used flares, eggs, and smoke bombs to stage a demonstration outside of their stadium protesting their owner's greed after the club was relegated to the third tier of English soccer.³³ The press, as unbiased as it purports to be, does cater to a certain audience, and teams that fall short of their expectations can fall victim to harsh journalistic review. Although all clubs have an

element of consumer-supplier feedback, the smallest of clubs are pressured the greatest, as their small fan bases can feel the influence they have on their teams and their community.³⁴ The passion and fandom soccer supporters have for their clubs can often be a double edge sword, as the most devoted supporters are often the first to point out shortcomings. In the section above, a study was mentioned noting that over 87% of fans that attend more than ten games per year consider themselves “loyal supporters.” However, of these “loyal supporters,” only 2% were “very satisfied” with the performance of their team the previous season, with more nearly 60% either “dissatisfied” or “very dissatisfied.”³⁵ In an age of technology and global communication, team entities can be aware of their fan’s unhappiness in an instant, and can be prompted to consider the transfer market for change.

Most large soccer clubs, as a result of this pressure, are consistent buyers on the transfer market. Very few teams vying for success are able to turn a profit as well, as they spend money to keep fans happy, among other incentives. In his book *Soccernomics*, Syzmanski returns to this idea, showing the levels of profit that teams in the English Premier League, arguably the league with the most vocal (and most overall) fans, turned over a fifteen-year period. Teams near the top of the league vying for the EPL’s championship trophy averaged profits very close to zero, with some teams’ net profits reaching as low as -£140 million (\$208.5 million) per year.³⁶ For example, after a few uncharacteristically bad seasons, Manchester United fans demanded more star-power in the midfield. One of the only high caliber players available at the time was Juan Mata, contracted to league rivals Chelsea. To pry Mata from a rival, Manchester United spent over £37 million in transfer fees.³⁷ England’s passionate fans and national soccer culture,

from the working-class “scouse” of Liverpool to the wealthy upper-middle class fans of Chelsea, continuously drives teams to spend each year, paying premiums for the best players on the market. In the end, most soccer clubs are not profitable businesses.³⁸

Alternative Models

Despite most clubs opting to trade in their profits for success, teams with less demanding fan bases have found unique ways to maximize both profits and success. France’s Olympique Lyon has emerged as one of the most instructive examples of strong profit-based modeling.³⁹ Located in a wealthy city in central France, Olympique Lyon has one of the more “bourgeois” groups of supporters – fans that are simply present for the enjoyment of the game and the social outing that comes along with it. Without the added pressure of fan expectations, Lyon’s executive board has been freed to focus solely on making smart, profitable transfer market decisions. By adopting intricate player-worth models, the club prides itself on scouting relatively unknown players that have high potential, developing them in a pressure-free environment, and then selling them immediately when another team offers a price higher than their model suggests they are worth.⁴⁰ Even with a high turnaround rate, Lyon has managed to win France’s Ligue 1 seven times since the turn of the century by having good eyes for young talent. Very similar to the “Moneyball” methods Oakland Athletics general manager Billy Beane (who, ironically, was just hired by Dutch soccer club AZ Alkmaar as an advisor) used to groom a strong, profitable baseball team, Olympique Lyon has perfected their system of rating players and selling them at their peak value.⁴¹ All of this success can be traced back to the nature of their supporters. Without the pressure of intense, vocal fans

influencing decision making, Lyon is free to make unbiased, rational sales and purchases, and still field a strong team each year.

Another great example of a profitable club, Ajax FC of The Netherlands, is relieved of high fan pressure simply because they dominate their domestic leagues. The team plays in a much weaker league, and large ownership checkbooks allow them to compete for league titles practically every year. With their excess money the club has built one of the most successful youth leagues and development systems in the world, breeding top quality players from an early age and selling them for extremely high prices to the top European clubs when they mature. The club has now built a reputation for developing top quality youth players, and has been rewarded in the transfer market accordingly. For example, Ajax began training a boy named Wesley Sneijder at the age of seven, moving him up the ranks of youth teams before he eventually made it to the first team. After 5 years of playing for the club, the 23-year-old (considered the prime age of soccer players) Sneijder was sold to Spanish giant Real Madrid for €27 million.⁴² For Ajax, playing in a weaker overall league has allowed them to maximize their success at a much lower cost, thus keeping the fans utility maximized and supporter pressure to make poor financial transactions low.

Conclusions of the Market

Soccer's global transfer market is one of the most extensive and intricate labor markets in the world, spanning hundreds of nations and thousands of players to exchange labor amongst the best leagues. However, the passionate fans of the club are the driving forces behind team transfers, applying constant pressure (or lack thereof) to their beloved

teams to make certain types of transfers. Most soccer clubs must trade some level of profit-oriented objectives for supporter utility, and as a result very few are profitable businesses. However, certain organizations have mastered the craft of profitable transfer market decisions, taking advantage of already utility-maximized supporters to make smart, pressure-free sales and purchases in the market.

EXPERIMENT

Introduction

To help further illustrate the velocity of labor in soccer's transfer market, I created my own simple experiment, using data from the 2014 FIFA World Cup. Every four years, 32 nations send their very best players to what's considered the grandest tournament in soccer, the World Cup. With hundreds of millions of people around the world watching the month-long tournament, clubs and their fans get a great chance to weigh potential new additions to their teams. The World Cup acts as a tryout of sorts; players who perform well in their matches are rewarded with shiny new contracts from the best club teams. Even one goal or one clean sheet on defense can see a player's reputation skyrocket, and increase their salaries and/or the quality of domestic league that they practice their trade in. As noted in the previous section, players can move up the unofficial "tier" list of leagues, with English, Spanish, German, and Italian domestic leagues at the top.⁴³ My simple experiment sought to track these shifts of labor after the most recent World Cup, played this last summer in Brazil. The procedure was inspired by economist Peter Millwall, who used similar net migration data from the 1986, 1998, and 2010 World Cups to test hypotheses regarding domestic labor shifts in a growing

international market, most notably showing effects before and after the Bosman Ruling.⁴⁴ Although the data collected was similar, I aimed to use it in a different manner.

Hypothesis and Methods

This experiment was designed to test the hypothesis that large international tournaments, such as the World Cup, spark the transfer market and ultimately lead to players moving up the ranks of domestic leagues. Replicating Millwall's procedures, I was able to gather similar net labor movements for the most recent World Cup. The data, compiled by hand from the *Fédération Internationale de Football Association* (FIFA) Official Team Sheets for the 2014 World Cup,⁴⁵ first considers the club teams that each of the 736 players were contracted to at the start of the tournament. Because FIFA allows teams to make amendments to their official lists after the May deadline due to injury, the data was verified through actual match rosters to ensure swapped out players were not included⁴⁶ (for example, Germany's Marco Reus suffered a leg injury days *after* the official roster deadline, keeping him out of the tournament and was replaced by Shkodran Mustafi). Each player was matched to a country code, representing the domestic league they were under contract in before the first matches of the tournament. The data then records the club team that each of the players was contracted to on March 1, 2015. This is the day after the last European country's mid-season transfer window – one of two periods of time per year players can be bought and sold on the transfer market – concluded.⁴⁷ The time series was chosen to allow for two transfer windows to pass after the tournament's conclusion, one in the summer and one in the winter. Identical codes were applied to the new data set, and each player was now assigned to a pre-tournament

and a post-tournament country code (Figure 3). Finally, players with the same country codes for pre- and post-tournament were ignored, leaving 184 tournament participants (exactly 25%) who had changed their country of work since the finale.

Tim Howard	USA	ENG	ENG
DeAndre Yedlin	USA	USA	ENG
Omar Gonzalez	USA	USA	USA
Michael Bradley	USA	USA	USA
Matt Besler	USA	USA	USA
John Brooks	USA	GER	GER
Damarcus Beasley	USA	MEX	USA
Clint Dempsey	USA	USA	USA
Aron Johannsson	USA	NED	NED
Mix Diskerud	USA	NOR	USA

Figure 3 – An example of the country codes used in the data

To complete the experiment, the “transferred” players were used to compute each country’s net labor migration. Each country’s pre-and post-tournament totals were summed up and then inserted into the simple equation $net = post - pre$, calculating how many players each country’s domestic league gained or lost after the World Cup.

Country	Net Transfers	Country	Net Transfers	Country	Net Transfers
England	+17	Iran	0	South Korea	-1
Germany	+10	Belgium	0	Nigeria	-1
Qatar	+6	Brazil	0	Japan	-2
United States	+6	Chile	0	South Africa	-2
Argentina	+3	China	0	Sweden	-2
Italy	+3	Denmark	0	Ukraine	-2
Russia	+2	Kuwait	0	Australia	-3
Spain	+1	Scotland	0	Costa Rica	-3
Ghana	+1	Uruguay	0	Honduras	-3
Ireland	+1	Bulgaria	-1	Norway	-3
Isreal	+1	Colombia	-1	Switzerland	-3
Macedonia	+1	Croatia	-1	Turkey	-5
Poland	+1	Ecuador	-1	Mexico	-6
Portugal	+1	Greece	-1	France	-7
Saudi Arabia	+1	Hungary	-1	Netherlands	-7
United Arab Emirates	+1				

Figure 4 - Net Transfers per Country after the 2014 FIFA World Cup

As seen in the table above, England, Germany, Qatar, and the United States ended up claiming the highest positive net transfers, where Mexico, France, and the Netherlands claimed the least.

The net transfers were then regressed against the domestic league's ranking, using a basic ordinary least squares (OLS) regression. The set of league rankings used, taken from a study done in an issue of World Soccer magazine by the statistical analysis company Sporting Intelligence,⁴⁸ ranked the leagues based on their average attendance, salaries, competitiveness in regional competitions, and overall caliber of talent.⁴⁹ However, the study done did not include all of the domestic leagues the net-transfers analysis did. For the missing countries, a combination of UEFA coefficients⁵⁰ (a statistical ranking done by FIFA for just the European countries) and intuition helped organize the rankings and assign the same rank to similar leagues. Once a complete ranking system was devised, the regression was run using the simple equation $\mathbf{Transfers} = \hat{\beta}_0 + \hat{\beta}_1(\mathbf{Rank}) + \hat{e}$, where β_0 (C) represents the estimated net transfer change when rank is equal to zero (or in this case, the top ranked team), β_1 represents the slope coefficient, and e is the error term. Figure 3 is the completed regression.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RANK	-0.14362	0.077842	-1.845019	0.0718
C	2.466523	1.455118	1.695068	0.0971

Figure 5 – Regression Output

Using this output, the final regression equation with the eliminated error term turns out to be $\mathbf{Transfers} = 2.466523 - 0.14362(\mathbf{Rank})$, with both coefficients marginally significant at the 90% confidence level.

Analysis and Coefficient Interpretation

As predicted, England and Germany, ranked 2 and 1 respectively, had the most overall positive transfers after the World Cup concluded. It is no coincidence the two highest-viewed leagues⁵¹ also boasted the highest net transfer totals; teams in the English Premier League and German Bundesliga have the greatest average attendances and large television contracts, giving them a plethora of extra funds and allowing them to purchase the best players available each year on the transfer market. The third and fourth ranked domestic leagues, Spain and Italy, oddly found themselves very narrowly above zero net transfers. These leagues both share a similar characteristic in that their top three clubs (Atlético Madrid, Real Madrid, and FC Barcelona in Spain and Roma, Juventus, and AC Milan in Italy) dominate the league and the international transfer markets (especially the Spanish), but the bottom fifteen clubs are much lower in quality and tend to act as gateway teams, with their players attempting to be promoted to the top teams of their leagues or jobs in England or Germany. The true signs of transfer market stimulation, however, are seen at the bottom of the table, with Turkey, Mexico, France, and The Netherlands having the highest negative transfer rates. These leagues, ranked between 6 and 15, are mostly known as “intermediate” leagues, much like the lesser teams in Spain and Italy. They are decent quality leagues with less exposure than the top five, but strong performance in the tournament can attract the attentions of the fans and owners of the biggest clubs. A large percentage of the players that make up the 736 player field in this World Cup came from these four leagues (17.1%), with over a third of them changing their location of labor after the tournament. For example, 23-year-old Dutch defender Stefan de Vrij, contracted to Dutch side Feyenoord previously, was rewarded with a

move to the Italian club Lazio after scoring a goal in The Netherlands' (eventually the 3rd place team in the tournament) first match and being named to the FIFA "Team of the Tournament".⁵² Many of the transfer market labor shifts come from these "intermediate" teams and leagues, where players who normally do not receive a lot of attention finally have the spotlight on themselves. Almost all of the nations that had negative net transfers are due to this effect; previously unknown players in their smaller leagues being noticed by the largest and richest clubs.

Other interesting conclusions can be made from the data, independent of players moving up the ranks of domestic leagues. On first glance, it may seem strange that the United States, Qatar, and the United Arab Emirates all emerged with positive player gains. These leagues are attempting to grow their level of play and reputation globally, and use their clubs' large financial assets to attract successful players, rather than their league's quality. In the case of the United States, Major League Soccer clubs can use not only monetary incentives but location incentives as well to allure good players stateside. One of the most notable examples of this from the past World Cup is Spain's David Villa, who moved from Atlético Madrid to New York City FC for a reported \$18 million over three years, a large salary for someone of Villa's age.⁵³ Xavi, another world-famous Spaniard currently playing for FC Barcelona, is also reportedly in contract talks with Qatari club Al Saad.⁵⁴ Each domestic soccer league differs in their growth models, but these countries, especially Qatar ahead of hosting the 2022 World Cup, have opted to pay prices higher than market value to entice top talent.

The regression, although made with a small data set, does indeed show a negative linear relationship between net transfers and the ranking of a domestic league. Using the

linear regression equation calculated, it can be estimated that a domestic league independent from rank (impossible in practice, as the lowest rank a league can be is 1) would on average receive a positive 2.467 net transfers per World Cup, indicated by the intercept coefficient β_0 . It can also be estimated that for every increase in ranking, the amount of net transfers a league receives is -0.144 players, explained by the slope coefficient β_1 . Using this equation a league that is ranked 11th globally, such as Portugal, can estimate to receive .883 net transfers after the tournament, very close to the one player the league actually gained.

Limitations

Despite this simple experiment proving transfer market stimulations after a large tournament such as the World Cup, there were certainly some limitations that prevented the data from being flawless. Under this experiment, players that moved *internally* within their league to a better club were not calculated in the net transfers. For example, England's Ricky Lambert earned himself a transfer from middle-tier Southampton to Premier League giant Liverpool with a brief performance for his national team. This trend happens predominately in the lesser leagues, where a strong showing in a tournament can move a player from an average or below average squad to the league's elite. Further, this experiment only uses one tournament and the transfers after it. For a more complete and accurate regression equation, the experiment could be repeated for all the major tournaments (World Cups, European Finals, etc.) since 1995, when the Bosman Ruling legally opened the global transfer market. Finally, a question of "timing" of transfers could be posed, as not every transfer included was necessarily a direct result of

tournament performance. However, regardless of these limitations, the data still comfortably shows a correlation between average transfers and league ranking, and shows a high volume of activity after this most recent World Cup. By using “league ranking” as a proxy for the largest leagues with the largest fan bases, the assumption can be made there is a correlation between average transfers and fan involvement.

CONCLUSION

Although the matter is complicated and may be influenced by other forces, of the key influences in the soccer transfer market are the passionate, devoted fans that have defined the sport over the years. Their unique utility functions, defined by their deep rooted identities as fans of their team, create a complex relationship, devoted to their team but always the first to rise up when expectations are not met. As the stakeholders in their clubs, the supporters can influence decisions in the market and force their team to maximize not only profits but success as well. Finally, as the data from the 2014 FIFA World Cup suggests, there is a statistically significant relationship between player transfers and the ranking of a domestic league, where the highest ranked leagues also have the largest fan involvement. Ultimately, team ownership and management have the last say in transfer decisions, as any business would. However, the power and influence of the soccer supporter is not to be overlooked, as the most passionate supporters can find ways to make their voices heard and influence big decisions. As the game grows in the United States, we shall see if this fan culture can grow and flourish, and potentially impact other American sports.

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