

Score a tweet and post a goal: Social media recipes for sports stars^{*†}

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Abstract

Sports performance is not the unique antecedent of a sports star’s market value. Some gifted players are undermined by weak media exposure, while some less talented players who actively engage in social media and attract fans in millions, benefit from exorbitant contracts. This research conceptualizes the effect of social media in the sports business and analyzes the recipes that lead to high sport star’s market value. This study uses qualitative comparative analysis (QCA) on a sample of 95 soccer top-players in Europe. The empirical results reveal that sports performance and social media activity are both necessary, but insufficient conditions for a high market value condition. This research provides a roadmap for sports managers to navigate in the social media arena.

Keywords: Social media, Twitter, Facebook, Sport business, Sport stars, market value, qualitative comparative analysis

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1 World's Highest-Paid Athletes on Social Media

In November 2014 Forbes published a list of the World's Highest-Paid Athletes. Floyd Mayweather, an American professional boxer, heads the list. He is followed by Cristiano Ronaldo, a Portuguese soccer player who plays for the Spanish club Real Madrid. However, on social media Ronaldo is the unquestionable leader with 110 million followers (Badenhausen, 2014a). In the top five in the list of highest-paid athletes is Kobe Bryant, an American professional basketball player for the Los Angeles Lakers of the National Basketball Association (NBA). Born in 1978, Bryant is close to the end of his basketball career, but his salary is almost eight times higher than any other basketball player (Badenhausen, 2014b). Interestingly, he also takes the fifth place on the list of the most popular players on social media where he regularly updates on Facebook and tweets on Twitter. Derrick Rose, another basketball player who plays for the NBA's Chicago Bulls, born in 1988, has less than half the number of social media followers of Kobe Bryant and only 46 tweets compared with Bryant's 871 (as of March 2015). Rose ranks no. 13 among the 100 highest-paid athletes.

Additionally, SM is an excellent pension plan for retired stars. Old athletes (at least in soccer terms) can still profit from advertisement contracts if they stay young and engaged in social media. Dewhurst (2015) reports that David Beckham is the most popular person on Instagram ever. The retired English captain earned 1M followers in his first day, faster than anyone else and was the fastest account ever to reach 5M followers in just 3 days.

Social media presence ensures soccer players a global reach. Similar to large corporations, athletes are able to use online networking platforms such Facebook, Twitter and Instagram to interact with their current fans as well as to attract new ones. Sanderson (2011) argues that the role of social media in the business of

sports needs further research and better understanding. A majority of athletes, managers and media advisors have a long way to go before they can develop an effective social media strategy.

This study addresses the relevance of social media and sports performance in the market value of global sports stars. We present an empirical analysis to reinforce our argument that social media and professional performance are both relevant for the contract value of public figures. As soccer is a global sport, it is also one of the most popular discipline on social media. We have analyzed a sample of approximately 100 world-wide soccer players with respect to their media activity (number of Twitter and Facebook followers), professional attitudes (assists and goals), and contact value (dollars).

The malleable nature of social media proves standard regressions analysis insufficient to unravel the complex relationships it contains. Regression analysis provides hardly any practical hints for field practitioners. In today's interconnected world, the paths of the social media labyrinth are often inscrutable. Different and often contradictory data lead to similar outcomes. This phenomenon is palpable in sports, and it is not exclusive to sports management. Less talented players are often media darlings, and averages CEOs compensate for their corporate weakness with active social engagement. This paper focuses on sports, specifically soccer. However, the lessons learned from our study may be easily translated to a more general business horizon.

This investigation contributes to a new perspective on social media. The present study provides practical recipes for social media management in sports business. To do so, we lean on complexity theory through fuzzy set qualitative comparative analysis (fsQCA) to study the role of social media in value creation. Sports value is often subjective, asymmetrical, and complex, leading to equifinal

solutions. Equifinality means that there are multiple paths to the same solution. Some excellent players are poorly paid, while some mediocre players gain high contracts. QCA allows for explaining an outcome with various complex solutions. This qualitative analysis complements the one-size-fits-all solutions of traditional regression analysis.

2 Three Powers of Social Media

Kaplan and Haenlein (2010) state that social media (SM) serve as a branding tool not only for large corporations, but also for small and medium-size companies, non-commercial organizations, and governmental institutions. However, some researchers have already noticed that social media plays an important role for individuals who build their personal brand through online social networking (OSN) (Harris and Rae, 2011). SM experts argue that it is crucial to control online identity (Schawbel, 2009). Thank to SM platforms, a post, tweet or comment published in an online network and easily popularized by a number of users, may influence one's image and sometimes even cause damage for a business or professional or social marginalization. It is possible to find many examples that demonstrate how quickly a reputation built for years may be undermined or lost with a single tweet. There are likely even more examples of individuals that stay in the shadows of others because they are not engaged in OSN. Kietzmann et al. (2011) argue that OSN platforms support seven functional areas: identity, conversations, sharing, presence, relationships, reputation, and groups. Parent et al. (2011) refer to the six levels of progressive participation: viewing, forwarding, commenting, creating, moderating, and arbitrating. Drawing on these concepts, we have developed a framework of three powers of social media that can be used by

leaders, influencers and also global athletes.

2.1 Power of Informing on Social Media

As our study concerns global stars, virtual settings should serve as a very good tool to show where these actors are and what they will do in the near future. For example, on Ronaldo's Facebook profile, posts about past meetings with fans and future events in which Ronaldo participates collect the highest number of likes (usually more than 1 million).

Top sport stars need to find a balance between protecting their identity and sharing interesting news from their private lives. Scholars point that that information about athletes' personal lives is expected by fans on Twitter (Frederick et al., 2014, Pegoraro, 2010). SM serves as a primary informal channel; it transmits private information about the player and magnifies the news from traditional platforms. Unfortunately, to satisfy the fans' desire to get personal information about their favorite players, paparazzi and gossip columnists sometimes spread unsolicited information about athletes. Thus, football players need to monitor SM and respond quickly in such cases. In the case of top athletes, information about doping is the most harmful to their reputation in both online and offline settings (Ehrnborg and Rosén, 2009). However, experts underline that, while it is necessary to be careful about the posts of other users, it is even more important to be cautious about texts, photos and video that are published by sports celebrities themselves.

2.2 Power of Interacting on Social Media

Pronschinske et al. (2012) have found that interacting with fans and engaging in discussion on Facebook has a positive influence on the number of

follower or likes. Neymar, a Brazilian professional footballer playing for the Spanish club FC Barcelona and valued at 80 million Euro, is a good example of a player who participates in online discussion (approximately 40000 tweets on his Twitter profile) and posts frequently (approximately 2600 updates on Instagram). It is very likely that his 67 million followers on Twitter and Facebook can be attributed to his high online activity. When searching for a similar footballer in terms of football statistics, one could mention Karim Benzema, a French footballer playing for the Spanish club Real Madrid and valued at 50 million Euro, or Gonzalo Higuain, an Argentine professional footballer who plays for S.S.C. Napoli in Italy and is valued at 35 million Euro. However, neither Benzema (20 million followers) nor Higuain (7 million followers) are as active on Twitter and Facebook as Neymar.

On Twitter, athletes can also follow other Twitter accounts, using @replies and mentions. Soccer stars usually follow other players from their teams, corporate profiles of their sponsors or other celebrities. Every third tweet on Neymar's Twitter account contained @replies or mentions during January and February 2015. On the other hand, Paul Pogba, a French footballer who plays for the Italian club Juventus and is valued at 50 million Euro, does not have high activity on his Twitter account, and his posts from the last year had very few @replies or mentions. Hopkins (2013) states that SM enables companies to develop relationships with fans. Twitter provides a mechanism for real-time interaction, while Facebook provides a channel to enrich fans' experiences. On the one hand, it is very likely that it is not as necessary for top sports stars as for companies to show relationships with other users. On the other hand, this could be a potential way for sports stars to distinguish themselves.

2.3 Power of Inspiring on Social Media

The power of inspiring fans in football on SM refers to the extent to which followers are energized and encouraged to undertake activities in offline and online settings. In the offline world, inspiring athletes can motivate fans to go to their football matches. In the online environment, he or she could influence fans to exchange the content of a player's SM profile. The master of influence on sharing is Cristiano Ronaldo, with approximately 600,000 shares in January and February 2015. During these two months, he posted 25 updates on his Facebook profile. These updates contained photos from football matches, trainings, meetings and events. Moreover, we observed several photos on Ronaldo's profile that served as clothing advertisements, as well as some textual notes, such as apologies for bad plays, and personal photos with family and friends. A short video of a football match had the highest number of shares. Another player, Diego Costa, a Spanish footballer who plays for the English club Chelsea and is valued at 50 million Euro, added only 3 updates in January and February and had approximately 100 shares on his Facebook profile (6000 times fewer shares than Ronaldo).

However, even Diego Costa increased his average number of shares three times over when he added a video in March 2015. The importance of video content is mentioned by a number of social media experts. Demers (2014) explains that videos enable professionals to reach new audiences in new ways with powerful messaging. Rozgonyi (2014) emphasizes that 90% of information transmitted to the brain is visual, and visual information is processed 60,000 times faster in the brain than text.

However, the power of inspiring is not only the result of media richness. The strength of this power also depends on the previous powers (i.e., informing and interacting), because an athlete is able to energize his or her fans by staying in

touch with them through regular updates about his or her professional and private life.

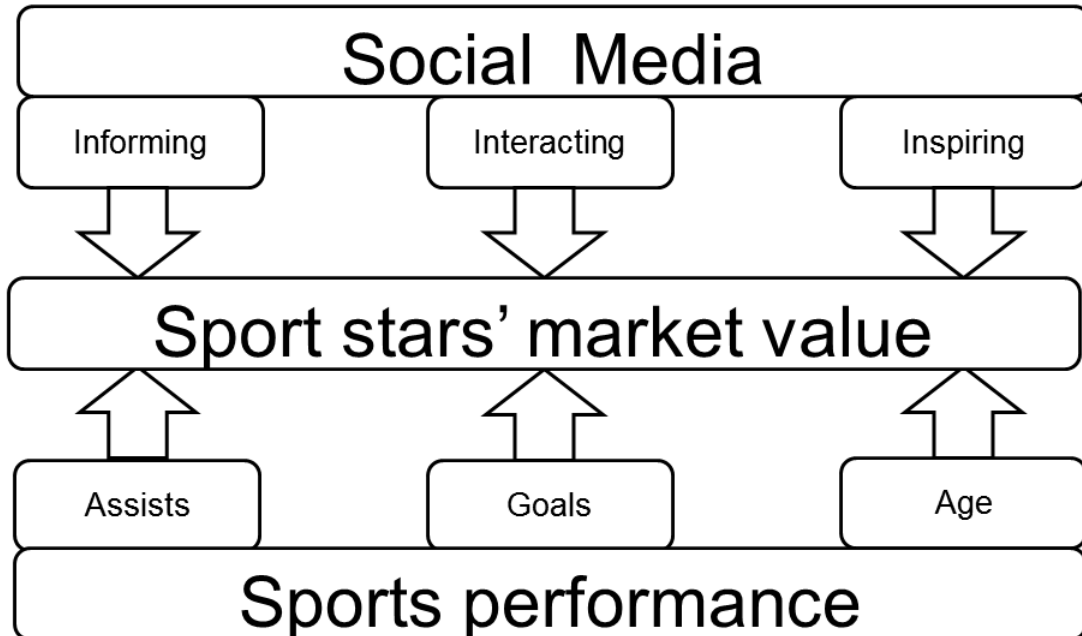
3 Social Media and Superstars' Market Value

The concept “superstar phenomenon” is applied to managers, artists, celebrities and professional athletes (Franck and Nüesch, 2012). In the business literature, there are two basic concepts explaining the value of superstars. The first points to the role of talent in explaining value (Rosen, 1981), while the second refers to the positive network externalities of popularity as the main proxy for value (Adler, 1985). More recent theories explain that players' salaries are determined by several factors such as performance (goals scored, assists, tackles), number of games, player position, contract duration and age. Herm et al. (2014) argue that apart from talent reflected by simple statistics, the number of press citations translates into athletes' market value.

Current researchers specializing in SM underline the crucial role of fans on OSN platforms and suggest that the number of fans may serve as an indicator of success (Shih et al., 2014) or performance (Paniagua and Sapena, 2014). As the majority of top footballers are registered on major OSN platforms such as Twitter and Facebook, we can argue that their market value is positively associated with both sports performance and number of fans on SM. Moreover, players' generated content mediates the effect of OSN data on contract value.

SM serves as a future investment for sports stars. Retired national captains David Beckham (United Kingdom), Zinedine Zidane (France) or Raúl (Spain) engage actively in SM. These sports pensioners stretch their sports and business life to unprecedented ages with the help of million followers. The social media exposure

Figure 1: Conceptual map



is an asset to negotiate advertisement and sponsorship contracts even when their most successful athletic career is over.

Figure 1 shows a conceptual map to summarize our arguments. Sport star's market value is influenced by the three powers of social media and the athletic performance. In the next section we present the logical recipes which maximize market value of sport stars.

4 A Simple Method for a Complex Solution

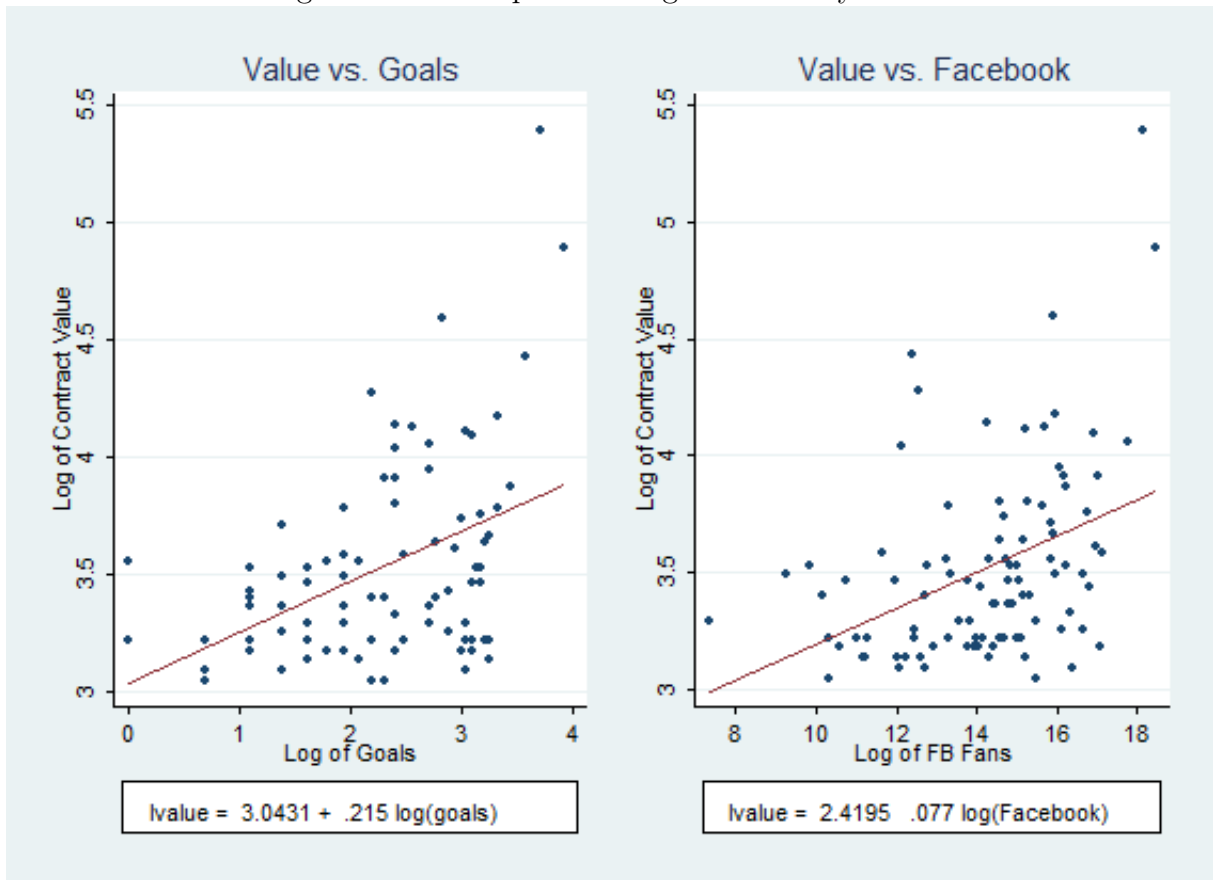
We have collected data for the top 95 European soccer players in the Appendix. For each player, we collect the value of the club contract, and two sets

of data: sports performance data (goals scored in last season (2013/2014); assists to goal in the last season (2013/2014)), social media activity (Facebook fans, Twitter followers). Age is a control variable.

Sir Francis Galton coined the term “regression” in the XIX century while studying growth pattern in the industrial revolution. Two centuries later, scholars are still wearing an old and sophisticated suit to study the social media revolution. The complexity the interaction between business and social media calls for new set of analytical tools.

In line with these arguments, Armstrong (2012) advocates against the use of multiple regression analysis in complex situations. Additionally, QCA is extremely efficient when the sample size is small (Fiss, 2011, Lijphart, 1971). Sports business is particularly complex and well suited for QCA. Business studies have used QCA as a tool to clarify previous puzzling results(Fiss, 2007, Hsu et al., 2013). However its interest as a standalone analysis tool is growing in the business literature as well (Woodside, 2014). Furthermore, QCA provides simple and direct recipes for practitioners. QCA involves the analysis of necessary and sufficient conditions to produce a given outcome. Necessary conditions are those required to produce the outcome; however, a necessary condition might not be sufficient by itself to produce the outcome. Sufficient conditions, on the other hand, are those that always lead to the desired outcome. However, sufficient conditions may not be the only conditions that lead to the outcome. For example, in our context, high values of sports performance (goals, assists) may be necessary but not sufficient for high market value (i.e., highly valued contracts occur only with high values of goals, but other variables are needed to produce high contracts). Alternatively, high values of sports performance may be sufficient but not necessary for a high market value (i.e., high values of contracts may occur with both low and high performance values).

Figure 2: Scatter plot and regression analysis

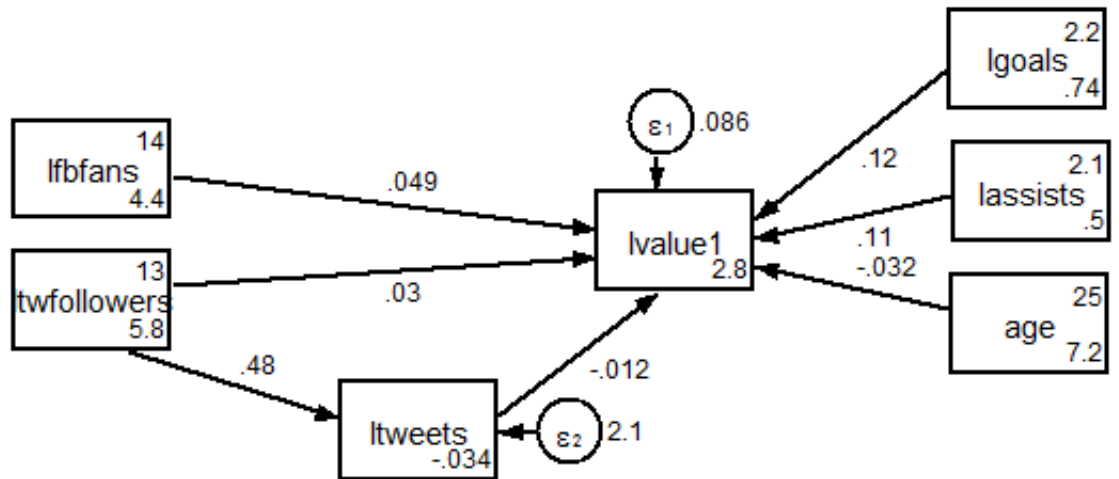


4.1 Results

Figure 2 contains the scatter plot and a standard ordinary least squares (OLS) double log regression. Both sports performance and social media activity positively influence contract value. The standard interpretation of these results is that a 1% increase in goals scored would lead to a contract value increase of 0.215% on average. In contrast, a 1% increase in Facebook fans increases contract value by 0.077% on average.

The standard regression analysis normally includes variables that mediate in the relationship between antecedents and outcome. In line with our previous discussion, we believe that the player's social media activity positively mediates in

Figure 3: SEM mediated model



the relationship between followers and contract value. The relationship between the variables are depicted in Figure 3.

Player-generated content (tweets) indeed increases the number of followers (as seen by the positive and significant coefficient of 0.479). The effect of tweeting is fully and positively mediating the effect of Twitter followers on contract value. The total effect of 0.023 (and significant to the 10% level) is basically the result of the effect of TW followers on the number of tweets (0.479 and significant to the 1% level).

Table 1: QCA results

Set	Raw Coverage	Unique Coverage	Solution Consistency
G*A*o*F	0.382	0.031	0.932
G*A*T*F	0.442	0.092	0.903
A*o*T	0.454	0.104	0.925
Total Coverage = 0.577			
Solution Consistency = 0.890			

4.2 New Qualitative Analysis for New Media

Although regression analysis is favored by most academics, it gives no clear direction for action to managers of sports stars. That is, they shed no light on which conditions are necessary for high contract value. We therefore turn to the QCA results reported in Table 1. Following the method developed by Longest and Vaisey (2008) and present the minimum configuration set using the Quine–McCluskey algorithm (Ragin, 2014) to logically reduce the configurations. We present only those combinations significant at the 95% level with a cut-off consistency of 0.700 (Ragin, 2006).

We achieve a total coverage of 0.577 and solution consistency of 0.890. Consistency ranges from 0 to 1 and represents the extent to which the combinations lead to a given outcome. Coverage represents how many cases are represented by the conditions. These consistency and coverage values are considered as acceptable to interpret the results (Ragin, 2006).

The full solution is as follows:

$$\begin{aligned}
 V &= G * A * o * F + G * A * T * F + A * o * T = \\
 &= A * (G * o * F + G * T * F + o * T)
 \end{aligned} \tag{1}$$

where capital letters indicate a high value of value (V), Assists (A), Goals (G),

Facebook (F) and Twitter (T), while lowercase letters indicate a low value of age (o) or young players.

Sports performance (assistance) is a necessary but not sufficient condition for high value. It is the only necessary condition, since it is common to all solutions. However, it is not enough by itself to produce a high contract value.

We group Twitter and Facebook into one unique social media condition: SM=Twitter or Facebook We then we achieve a second necessary but not sufficient condition for high market value:

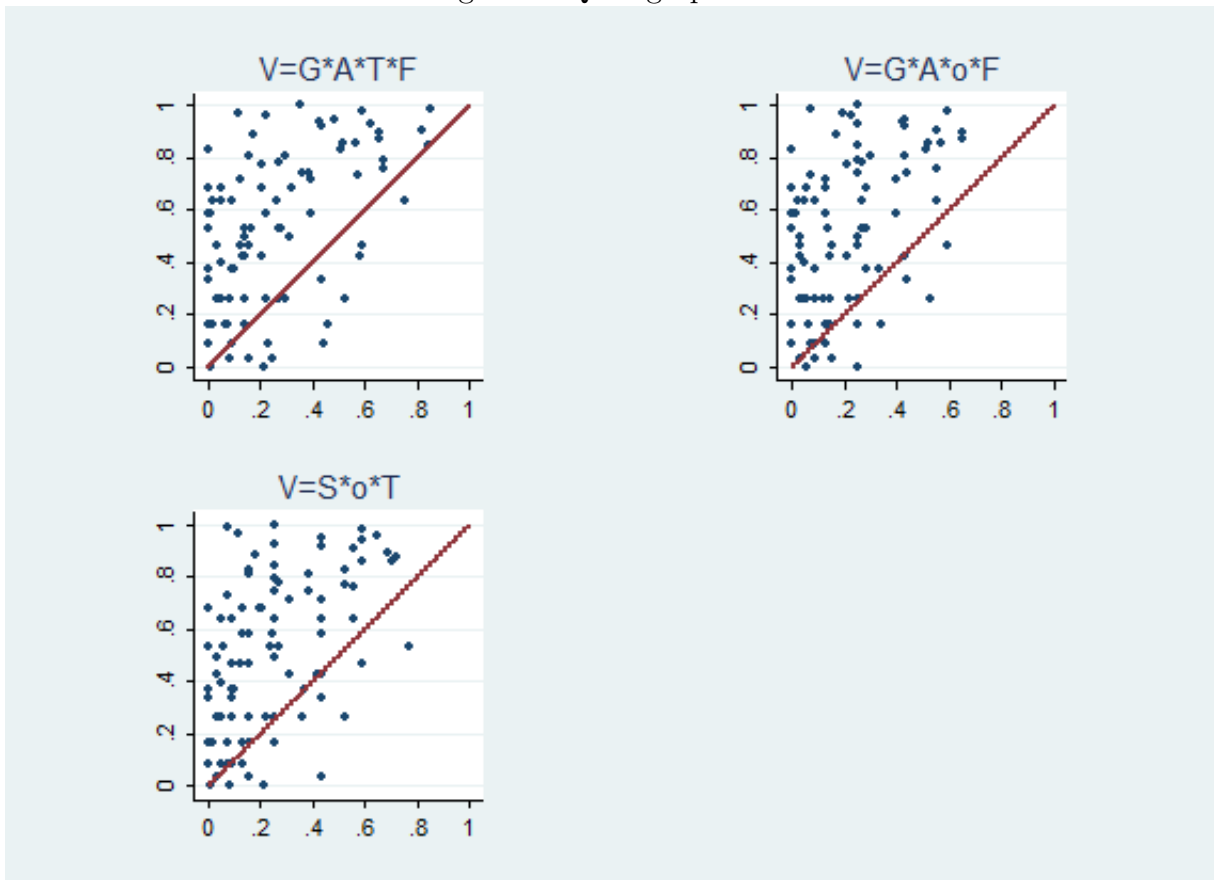
$$V = A * (SM) (G * o + G + o) \quad (2)$$

Equation (2) reveals that players need both high athletic results and high social media engagement (Facebook or Twitter) for high contract values. However, various recipes are possible. In particular, there are three possible combinations leading to a high contract value. These can be categorized into two groups:

- Young players:
 - High Sports Performance* High Facebook activity
 - Average Sports Performance* High Twitter activity
- Old players:
 - High Sports Performance* High Facebook & Twitter activity

Figure 4 represents graphically the three solutions. The vertical axis gives the standardized values of goals and each horizontal axis represents the three combinations that lead to high outcome, where each point is a soccer player.

Figure 4: QCA graph



Perfect consistency is achieved when all points are above the diagonal. Our solutions, therefore, work well to explain market value.

5 Lessons learned

The lessons learned from this research extend their reach outside the sports arena. Our study focuses on soccer players; nonetheless, the insights regarding social media and performance are relevant for general management (Korzynski, 2014). A large number of firms hire star CEOs with media coverage similar to that of sports stars. Our study opens the path to study the success of people such as Mark Zuckerberg, Richard Branson and Bill Gates who engage constantly with

social media.

Sports managers, SEOs, media advisers and stars themselves can profit from the lessons learned in this study. Excellence in sports is a necessary condition to negotiate a valuable contract, but it is not the only ingredient for a success recipe. In addition to a particular athletic skillset, sport stars need to use the powers of SM to maximize their market value. First, they can share with their fans some details of their private lives (power of informing). Second, they can support discussion among fans and show relationships with players from their teams (power of interaction). Third, they can post regular and inspiring updates on SM using text, graphic and video content, thus having a positive influence on their fans (power of inspiring). Finally, social media is an excellent investment for retirement.

The results of our qualitative analysis provide useful hints for athletes' career path development. Young players may disguise mediocre performance with high social media activity and still sign valuable contracts. However, towards the end of their career, soccer players should attain high performance in both sports and social media realms in order to succeed in signing a high-value contract. This insight can prove useful for clubs and media advisors in contract negotiations.

This study sets a path for a wide range of research possibilities. We focus on soccer, which is very widespread globally, especially in Europe, South America and Asia. However, soccer is not as popular as American football or basketball in North America. Therefore, the results might not be directly applicable to the American sports market. An interesting future application of our methodology could focus on other sports (e.g., basketball, American football and baseball).

Furthermore, research that applies and extends our framework towards non-sports business presents exciting prospects. Studying the weight of social media in star CEOs' remuneration is one interesting application. Moreover, most

personal interviews today include a candidate’s social media screening. The relevance of social media profiles in corporate salaries and positions would also make for a noteworthy extension of our work.

A Technical Appendix

The statistical methods to analyze social media tend to rely on symmetrical relationship between variables; these methods include simple regression analysis (Asur and Huberman, 2010, Ettredge et al., 2005, Gilbert and Karahalios, 2009); autoregressive time-series analysis (Choi and Varian, 2012, Tirunillai and Tellis, 2012) and non-linear fixed effects panel regression (Paniagua and Sapena, 2014).

Standard regression analysis has limitations when the relationships are asymmetrical and complex (Woodside, 2013). Regression analysis assumes normality in the data, that is, a perfectly symmetrical relationship between variables. The results of regression analysis report mutually exclusive mean effects (positive or negative) of an independent variable on a target or dependent variable. However, real-life relationships are often asymmetrical (Ragin, 2008). Furthermore, the same cause may produce different effects and several paths might lead to same outcome (Urry, 2005). Moreover, in a complex world, the researcher’s tools are not neutral and the choice often influences the outcome (Gigerenzer and Brighton, 2009).

Summary statistics are reported in Table 2. The standard correlation and regression analysis for the data are reported in Table 3, which shows that the variables of interest are correlated positively.

We use a mediated structural equation model (SEM) (Baron and Kenny, 1986). This method fits a series of linear regression models to distinguish between

Table 2: Definition of variables.

	Symbol	mean	sd	min	max
Value	V	37.76	25.66	21	220
Goals	G	11.85	10.18	0	51
Assists	A	9.33	6.24	0	26
Tweeter	T	1593385	1989071	413	8970000
Facebook	F	7118974	1.51e+07	1516	1.07e+08
Age	O	24.96	2.88	19	31
Crisis	R	.5	.51	0	1

$N = 95$

Table 3: Definition of variables.

Outcome	Antecedents Conditions					
	Value	Goals	Assists	Tweeter	Facebook	Age
Value	1					
Goals	0.552***	1				
Assists	0.370***	0.571***	1			
Tweeter	0.111	0.0381	0.131	1		
Facebook	0.705***	0.460***	0.285**	0.319**	1	
Age	0.0330	0.315**	0.141	0.120	0.200	1

$N = 95$
 $* p < 0.05$, $** p < 0.01$, $*** p < 0.001$

direct and indirect effects. The results are presented in Table 4.

Table 4: SEM mediated model

	Direct Effects		Indirect effects	Total effects
	(1) Log(Value)	(2) Log(Tweets)	(3) Log(Value)	(4) Log(Value)
Log(tweets)	-0.012 (0.02)			
Log(fbfans)	0.049*** (0.02)			
Log(twfollowers)	0.030 (0.02)	0.479*** (0.07)	-0.005 (0.01)	0.023* (0.01)
Log(assists)	0.114** (0.06)			
Log(goals)	0.121*** (0.05)			
Age	-0.032** (0.01)			
Constant	2.815*** (0.37)	-0.034 (0.88)		
Observations	82			82

$* p < 0.05$, $** p < 0.01$, $*** p < 0.001$
Standard errors in parenthesis

B List of players

Lionel Messi, Cristiano Ronaldo, Eden Hazard, Diego Costa, Paul Pogba, Sergio Aguero, Raheem Sterling, Francesc Fabregas, Alexis Sanchez, Gareth Bale, Neymar Junior, Angel Di Maria, Mario Gotze, James Rodriguez, Oscar dos Santos, Luis Suarez, Thibaut Courtois, Isco Alarcón, Robert Lewandowski, Koike Resurrección, Karim Benzema, Antoine Griezmann, Toni Kroos, Thomas Muller, Romelu Lukaku, Edinson Cavani, Wayne Rooney, Christian Eriksen, Mesut Ozil, Jerome Boateng, Manuel Neuer, Miralem Pjanić, David Silva, Philippe Coutinho, Gonzalo Higuain, Vincent Kompany, Marco Reus, Sergio Busquets, Willian Borges, Sergio Ramos, Marco Verratti, Juan Mata, Mateo Kovacic, Alexandre Lacazette, Lucas Moura, Yaya Toure, Jack Wilshere, Arturo Vidal, Andres Iniesta, Danny Welbeck, Andre Schurrle, Aaron Ramsey, Alex Oxlade-Chamberlain, David Alaba, Santi Cazorla, Radamel Falcao, Jordan Henderson, Alvaro Morata, Ivan Rakitic, Carlos Vela, Mario Balotelli, Gerard Pique, Luke Shaw, Cesar Azpilicueta, Wilfried Bony, Daniel Carvajal, Kevin de Bruyne, Roberto Firmino, Adnan Januzaj, Gervinho, Iker Muniain, Mats Hummels, Arjen Robben, Daniel Sturridge, Samir Nasri, Leonardo Bonucci, Marek Hamsik, Julian Draxler, Olivier Giroud, David Luiz, Thiago Silva, Marquinhos, Calum Chambers, Edin Džeko, Diego Godin, Raphael Varane, Medhi Benatia, Luiz Fernandinho, Radja Nainggolan, Carlos Tevez, Marcelo Vieira, Roberto Pereyra, Arda Turan.

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