The Impact of the Euro 2012
on Popularity and Market Value of Football Players

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Abstract

High popularity and a high market value are important for a footballer's regular wage as well as advertising and sponsor contracts. Yet how can a football player improve his popularity and market value? The aim of this study is to examine whether a good performance during the 2012 European Football Championship has an impact on the increase of popularity in different online media and on market value and if so which specific performance variables are relevant for this. This study finds out that different Euro 2012 performance variables significantly influence the increase of popularity in selected online media and of market values. However, these performance variables mostly do not have the highest impact on the dependent variables.

Der Einfluss der EM 2012
auf Popularität und Marktwert von Fußballspielern

Zusammenfassung

Eine hohe Popularität und ein hoher Markenwert sind wichtig für das reguläre Gehalt eines Fußballers sowie für seine Werbe- und Sponsorenverträge. Doch wie kann ein Fußballspieler seine Popularität und seinen Markenwert steigern? Das Ziel dieser Studie ist es zu untersuchen, ob gute Leistung während der Fußballeuropameisterschaft 2012 einen Einfluss auf die Popularität in verschiedenen Onlinemedien und den Markenwert hat und, falls ja, welche spezifischen Leistungsvariablen dafür relevant sind. Diese Studie kommt zu dem Ergebnis, dass verschiedene Leistungsvariablen einen signifikanten Einfluss auf den Anstieg an Popularität in den untersuchten Onlinemedien und Markenwert haben. Aber diese Leistungsvariablen haben meistens nicht den höchsten Einfluss auf die abhängigen Variablen.

Im Internet unter:

http://www.wiwi.uni-muenster.de/io/forschen/downloads/DP-IO_11_2012.pdf

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1. Introduction

Football players earn their money with playing football for a football club but also with advertising and sponsor contracts. Market value and popularity of football players are important for their regular wages and for advertising and sponsor contracts. For example, the global popularity of the football player David Beckham helped him to become a favoured endorser for different products (see Vincent, Hill, & Lee 2009, pp. 175-176). Today he earns more money with advertising than with playing football (see Handelsblatt 2012).

Moreover, popularity and market value of football players are also a popular topic in the media. The New York Times, for instance, published "the top world cup players on Facebook" on their website[1] every day during the 2010 FIFA World Cup (see New York Times 2010). Another example is the popularity statistic on the website of the UEFA during the 2012 UEFA European Football Championships (Euro 2012). The UEFA published a statistic for each day that showed the popularity of the participating football players for this day[2] (see UEFA, 2012). Also market values of football players are a favoured topic for newspapers and journals. Especially before and after big football events one can find a lot of articles about market values of football players and their changes.

Which indicators influence the increase of popularity and market value of football players? Simmons and Deutscher (2012) state: "A player who appears in the winning team in the World Cup finals can expect both national adulation for a long time to come and immense off field-earnings prospects in the form of endorsement and lucrative after-dinner speaking engagements" (p. 459). Also any good performance of a player like goals or assists at a big sporting event is value enhancing. Past big sporting events show that performance has a great impact on the market value of participating football players. For instance, the market value of the German football player Thomas Müller was, thanks to his good performance, more than twice as high after the 2010 FIFA World Cup in South Africa than before. In contrast, the

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[1] To identify the top world cups players on Facebook they counted the numbers of mentions on Facebook.

[2] The most popular player in this statistic is the player who was most tweeted on Twitter.

market value of the German attacker Mario Gomez decreased from 27.5 Mio Euro to 22.2 Mio Euro most likely due to his disappointing performance there.[3]

The purpose of this study is to analyse whether the performance can influence the increase of popularity and market value of participating football players and if so which specific performance at the Euro 2012 is exemplary for this. Moreover, the study wants to examine which indicators are important for the different player positions. Therefore, the study examines the increase of popularity during the Euro 2012 on the social network page Facebook, on the search engine Google and on the website uefa.com as well as changes of market value.

The paper is organised as follows. Section two presents related literature and the research questions of this study. The third section explains the empirical framework including the dependent and independent variables. Empirical results are presented in the fourth section before conclusions are drawn in the fifth section.

2. Literature Review and Research Questions

In the field of sport economics popularity and performance are often examined by using the theories of superstardom. Two different theories of superstardom try to explain why superstars earn much more than their competitors. The first theory is the approach of Rosen (1981), which explains this phenomenon with marginal talent differences. In contrast, the explanation of Adler (1985, 2006) holds that media coverage and network effects are responsible for the huge earning differences. According to Prinz, Weimar and Deutscher (2012), there is a consensus in the existing literature that network effects and media coverage together can represent "popularity effects" (pp. 791-792). Several sports economists analysed whether the explanation of Rosen or the explanation of Adler is the main reason for differences in wages or market values in sports (see e. g. Lucifora & Simmons 2003, Garcia-del-Barrio & Pujol 2007, Lehmann & Schulze 2008, Franck & Nüesch 2008, 2012, Kuethe & Motamed 2010, Prinz, Deutscher & Weimar 2012). The study of Lucifora & Simmons (2003) differs from the other studies mentioned because it only used performance indicators to check the theory of Rosen. Most of these studies measured media coverage by Google hits, homepages and citations in newspapers or in professional journals (for an overview see Prinz, Weimar and Deutscher 2012, p. 793). The study of Prinz, Weimar and Deutscher (2012) is the

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[3] Market values and their change were collected from the website www.transfermarkt.de.

first one that tries to measure Adler's network effects. Therefore, they counted Facebook likes because the fans of a player's profile can communicate with each other about the star but also with the star him- or herself on the pin board (p. 795).

Lucifora and Simmons (2003) examined football players in the Italian football league and found evidence for the approach of Rosen for some performance variables of attackers and midfielder. These performance variables are assists and strike rates for the attackers and goals for the midfielder. Moreover, they found out that a football player who plays in the national team gets a large salary premium.

Garcia-del-Barrio and Pujol (2007) showed that performance, popularity and other control variables influence the market value of superstars in the Spanish professional football league. The performance variables in this study are indices of performance measured by journalists. Google hits describe the popularity variable.

Lehmann and Schulze (2008) tested the superstar theories for the German Bundesliga. Therefore they used measures for individual players' performance (goals, assists and tackles) and media presence (mentions of a player's name on kicker.de). They came to the conclusion that goals scored by a forward, assists made by a midfielder, and tackles made by a defender have a highly significant influence on the players' salaries. Moreover, Lehmann and Schulze came to the result that the age has a positive impact on the players' salaries. The variable age squared shows that the impact follows an inverted U-shape and peaks at the age of 25.4 years. However, they did not find any evidence for the theories of Rosen and Adler.

Franck and Nüesch (2008) examined also the German Bundesliga and found out that the following sport performance variables have a significant influence on the average market value: number of goals scored, number of opponent's goal per game for a goalkeeper, average match grade by the Kicker sports magazine, and "proxies for past consumption".[4] However they could not find the same effect of the variables number of goals scored and number of opponent's goal per game for a goalkeeper for the top 10 %, 5 % or 2 % quantiles. Further-more, they came to the conclusion that a national team membership has a significant influence on the market value of players who are playing in the German Bundesliga. The age of a football player has a significantly increasing influence in all regression models.

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[4] Proxies for past consumption are appearances in the season 2004-2005 and the accumulated appearances prior to the 2004-2005 season (Franck & Nüesch 2008).

Kuethe and Motamed (2010) analysed the salaries of football players in the U.S. Major League Soccer. The number of years in the U.S. Major League Soccer and the designated player status have significantly positive impacts on players' salary as well. In addition, they showed that experience in a national team has a significantly positive impact on players' salaries in the U.S. Major League Soccer. In contrast to the above mentioned studies Kuethe and Motamed found a significantly decreasing impact for age on the salaries of players in the U.S. Major League Soccer.

Prinz, Weimar and Deutscher (2012) tested the superstar theorie for the professional basketball league NBA by using a quantile regression. In this study proxies for talent significantly influence salaries of superstars. However, they could not find a significant impact of popularity. Simmons and Deutscher (2012) concluded that participation in World Cup finals has positive impacts on the salary of players and on the probability of a transfer to a better football club.

Brandes, Franck and Nüesch (2008) examined whether local heroes and superstars attract fans more by field performance or popularity. They come to the conclusion that local heroes attract their fans by their popularity only in their home stadiums. In contrast, superstars attract fans by their performance in the home stadium as well as out of town.

Not many studies examined the determinants of popularity. Since Franck and Nüesch (2012) wanted to identify a non-performance-related popularity measure, they regressed their popularity variable[5] on on-field performances. The results of the regression show that goals, assists, shots off target, clearances, blocks and interceptions, saves to shots ratios of the goalkeepers, numbers of red cards and yellow cards significantly influence the popularity.

Garcia-del-Barrio and Pujol (2011) evaluated the media value of female and male tennis players. They made the assumption that the media value consists of two components: popularity and notoriety. Moreover, they analysed which sport performances increases popularity and notoriety. They come to the conclusion that mostly past and current sport performance explains the media value of tennis players. Moreover, the study claims that the current sport performance is more important for notoriety than for popularity. Conversely, past performance is more important for popularity than for notoriety. Another important factor is the number of tournaments which the tennis players played in the examined season.

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[5] They used the logarithm of press citations as popularity variable.

Kiefer and Scharfenkamp (2012) came to the result that sport performance of female tennis player has a highly significant impact on their popularity in different online media.[6] They used the prize money that each female tennis player has earned during her former career as the indicator for the career performance. Moreover, physical attractiveness significantly influences the online media Facebook, kicker.de, wta.com, Google and tennislife.com. The control variable age has a significant impact on the online media kicker.de, si.com and tennislife.com.

The aim of this study is to analyse whether the performance during the Euro 2012 had an impact on the increase of player's popularity and market value. Consequently the research questions of this study are:

RQ1: Did the performance during the Euro 2012 have an impact on the increase of popularity of participating football players in selected online media?

RQ2: Did the performance during the Euro 2012 have an impact on the increase of market value of participating football players?

3. Empirical Framework

In this study the logarithm of popularity in three different media and the logarithm of the market value is regressed against different performance and control variables. These variables are introduced in the following subsections. Due to the fact that performance of goalkeepers has to be measured in a different way (see Lucifora & Simmons 2003, p. 38) goalkeepers are not included in this study. Because only 18 goalkeepers played during the Euro 2012 there is no independent regression for them.

3.1 Dependent Variables

This study concentrates on media coverage on Google, on the website uefa.com, and on network effects on Facebook. To quantify the increase of a player's popularity during the Euro 2012, the relevant data were collected on two different days. The first collection was started one day before the Euro 2012 (June 7th 2012) and the second collection was finished one day after the Euro 2012 (July 1st 2012). The increase of the dependent variable in this period represents increase of popularity.

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[6] They examined the online media Facebook, Google, wta.com, tennislife.com and kicker.de.

The general media coverage of a football player is measured by the logarithm of the increase of hits in the most popular search engine Google (LNGOOGLE). The criterions for the search job were the given name, the last name, the word "football" and the name of the corresponding national team.

The growth of popularity in international respectively European online sport journalism is measured by the logarithm of the increase of mentions on the website uefa.com (LNUEFA). Therefore, the given and the last name of each participating football player were put in the search option of the website uefa.com.

The third examined online media is the social network Facebook. Facebook represents the popularity with and the interest of private persons. Corporations or popular persons are able to create a fan page on Facebook. They have thereby the possibility to publish content or to communicate with fans on their online pin board. Moreover, they can upload pictures and videos in order to share them with their fans. With other words, interested fans have the chance to connect themselves with their favourite stars respectively with the fan page by clicking on a button named "like" (see e.g. Weinberg 2010, Hellmueller, & Aeschbacher 2010). The popularity on Facebook is measured by the logarithm of the increase of *likes* (LNFACEBOOK).

Moreover, the increase of market value will be analysed in this study, too. The data source for the market value is the German website www.transfermarkt.de. The Market value before and after the Euro 2012 were collected for each participating player. The dependent variable for this is the logarithm of the increase of the market value (LNMVALUE).

Due to the fact that only the increase of popularity is examined in this study players who had no popularity change or even a popularity decrease in one of the three media are excluded from the sample for the affected media. The same is applied for the market value. This means the dataset includes only players who experienced an increase in popularity or market value.

3.2 Independent Variables

The independent variables are based on three different groups. The first group is made up of individual sport performance variables for each player during the Euro 2012. The second group consists of performance data of the team and the last group is composed of control variables in order to eliminate alternative explanations. The independent variables were collected after the Euro 2012 from www.uefa.com and www.transfermarkt.de.

The first indicators for individual player performance are GOALS and ASSISTS of each player who participated in the Euro 2012. These indicators "are clearly identifiable and measurable by the spectators without requiring significant specialized knowledge" (Franck & Nüesch 2008, p. 152). Other indicators are also visible for spectators. The longer a player is present on the football field the larger are the chances that the player will be noticed from spectators. How long a player played during all matches and consequently was in the possible focus of spectators is measured by the variable MINPLAYED. The variable YCARDS counts the numbers of each player's yellow cards, which they received in all Euro 2012 games. The numbers of committed and suffered fouls are measured by the variables COMFOULS and SUFFOULS.

Whether the player's popularity increased due to the team performance is examined by the variable ROUND. This variable shows in which round the corresponding national team exited the Euro 2012.

Moreover, the study includes different control variables in relation to experience and past performance in order to control for it. These variables are AGE, logarithm of a player's market value before the Euro 2012 (LNVALUE) and the number of international matches before Euro 2012 (INTMATCH). In addition, control variables of the logarithm of internet users (LNIUSER) and internet penetration (IPENE) for the corresponding country of each national player are included in this analysis. The variables LNIUSER and IPENE were collected from the website www.internetworldstats.com. The variable TRANSFER checks whether a player changed the club in the summer 2012.

The control variables LNVALUE, LNIUSER and IPENE are only included in the popularity regression models in contrast to the control variable TRANSFER that is only included in the market value regression. An overview of all variables and some descriptive statistics are presented in Table 1.

Table 1: Variables and Descriptive Statistics

Variable	Description	Obs.	Mean	SD	Min	Max
Dependent variables						
LNGOOGLE	Logarithm of a player's Google hits increase	279	11.50	1.94	7.90	17.59
LNUEFA	Logarithm of a player's mentions increase on uefa.com	313	3.19	0.77	0	5.86
LNFACE	Logarithm of a player's likes increase on Facebook	315	6.68	2.96	0	14.06
LNMVALUE	Logarithm of a player's market values increase	144	14.22	1.08	8.52	16.12
Independent variables						
Individual performance						
GOALS	Goals during Euro 2012	320	0.23	0.59	0	3
ASSISTS	Assists during Euro 2012	320	0.20	0.52	0	3
MINPLAYED	Minutes played during Euro 2012	320	177.13	159.42	0	570
YCARDS	Number of yellow cards during Euro 2012	320	0.38	0.65	0	3
COMFOULS	Number of committed fouls during Euro 2012	320	2.74	3.10	0	17
SUFFOULS	Number of suffered fouls during Euro 2012	320	2.60	3.53	0	20
Team performance						
ROUND	Round in which the corresponding team exited	16	1.94	1.20	1	5
Control variables						
AGE	Player's age (in years)	320	26.80	3.62	18	36
LNVALUE	Market value before Euro 2012	320	15.66	1.04	13.12	18.32
INTMATCH	Number of internat. matches before Euro 2012	320	35.43	29.91	0	130
LNIUSER	Logarithm of internet users per country	16	16.50	1.08	14.79	18.03
IPENE	Internet penetration per country	16	67.15	17.27	33.90	92.90
TRANSFER	Player changed the club	284	0.11	0.32	0	1

4. Empirical Results

For the estimation of the impact of performance variables during the Euro 2012 on the increase of popularity and market value OLS regressions are used (a methodological introduction is given by e. g. Cameron & Trivedi 2009). The following regression function is estimated:

LNPOPULARITY[7] = constant + b1·ROUND + b2·GOALS + b3·ASSISTS + b4·MINPLAYED + b5·COMMFOULS + b6·SUFFFOULS + b7·YCARDS + b8·AGE + b9·LNVALUE + b10·INTMATCH + b11·LNIUSER + b12·IPENE

LNMVALUE = constant + b1·ROUND + b2·GOALS + b3·ASSISTS + b4·MINPLAYED + b5·COMMFOULS + b6·SUFFFOULS + b7·YCARDS + b8·AGE + b9·INTMATCH + b10·TRANSFER

In sum, four regressions per medium differentiated by different player types and one regression for the market value are estimated. The results follow in the forthcoming subsections.

4.1 Google

The results of the regressions concerning Google are shown in Table 2. The overall model fits the data with an adjusted R^2 of 0.622. The factors ROUND, GOALS, SUFFFOULS, LNVALUE, INTMATCH, LNIUSER and IPENE have a significant impact on the dependent variable (LNGOOGLE). Each of these significant factors influences the increase of Google hits positively. However, none of the performance variables during the Euro 2012 has the highest impact on the increase of Google hits. The market value before the Euro 2012 (LNVALUE) is the most important factor with a standardised regression coefficient of 0.375. In the regression model for the attackers the following variables are significant: GOALS, ASSISTS, LNVALUE, LNIUSER and IPENE, whereas ASSISTS is only weakly significant on the 10 per cent level. Also in this model LNVALUE is the factor with the highest impact on LNGOOGLE. The number of assists is the only significant variable which has a negative impact on the increase of the popularity on *Google* for this regression model. The results of the midfielder regression show that ROUND, GOALS, SUFFFOULS, AGE, LNVALUE and IPENE have a significant increasing impact on LNGOOGLE. Similar to the overall model and the attacker model none of the performance variables during the EURO 2010 has the highest impact on the dependent variable, but LNVALUE has (0.432). The factor with the second highest impact is SUFFOULS (0.216). The factors MINPLAYED and LNVALUE have a significant impact on the increase of Google hits in the defender model. All significant variables have a positive impact. The played minutes are the most influencing factor with a standardised regression coefficient of 0.401.

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[7] Popularity means increases of popularity for the media Google, uefa.com or Facebook.

Table 2: Estimates of the Logarithm of a Player's Popularity on Google

	Overall Model	Std. Coeff.	Attacker	Std. Coeff.	Midfield	Std. Coeff.	Defender	Std. Coeff.
Constant	-4.868*		.-6.825		-8.110**		1.455	
ROUND	.175*	.112	.193	.112	.226⁺	.139	.122	.095
GOALS	.766***	.247	.529*	.230	.656**	.183	.640	.090
ASSISTS	.064	.018	-.655⁺	-.154	.281	.095	-.281	-.049
MINPLAYED	.001	.063	.004	.241	.000	-.024	.004**	.401
COMMFOULS	.017	.028	.086	.144	-.037	-.051	-.017	-.035
SUFFFOULS	.066*	.123	-.028	-.048	.117*	.216	-.019	-.041
YCARDS	-.082	-.028	.051	.011	.114	.039	.018	.008
AGE	.026	.048	-.003	-.005	.094*	.179	-.014	-.029
LNVALUE	.702***	.375	.528*	.256	.806***	.432	.512**	.316
INTMATCH	.009**	.147	.012	.180	.000	.006	.012	.194
LNIUSER	.132⁺	.073	.448*	.214	.134	.074	.006	.004
IPENE	.019***	.169	.022*	.193	.020**	.170	.009	.094
Significance	.000		.000		.000		.000	
N	279		65		121		93	
Adjusted R²	.622		.693		.613		.519	

*Note: ⁺, *, **and *** denote significance at the 10 per cent, 5 per cent, 1 per cent and 1 per mill levels respectively.*

4.2 Uefa.com

The results of the OLS-regressions for uefa.com are shown in Table 3. The overall regression model is significant and explains almost 61 % of the observed variation in the dependent variable (LNUEFA). Following variables are significant and have an increasing impact: ROUND, GOALS, ASSISTS, MINPLAYED LNVALUE and LNIUSER, whereas LNIUSER is only weakly significant on the 10 per cent level. In this model the performance variables GOALS, ROUND and MINPLAYED have the highest impact on the increase of popularity on the website uefa.com (0.329, 0.275, 0.231). The variables GOALS, MINPLAYED and LNVALUE are significant in the model for attackers. The played minutes (MINPLAYED) of an attacker have the largest effect with a standardised regression coefficient of 0.437 in this model. The factors ROUND, GOALS, ASSISTS, MINPLAYED and YCARDS have a significant impact on the dependent variable (LNUEFA) in the midfielder model. In other words, in the midfielder model only performance variables influence the increase of popularity on the website uefa.com. Considering the standardised regression coefficients of the independent variables it can be seen that GOALS and ROUND influence the dependent variable most (0.323, 0.322). The results of the defender regression show that ROUND, GOALS, MINPLAYED, YCARDS, LNVALUE and LNIUSER have an influence on the

dependent variable LNUEFA and that ROUND has the highest impact with a standardised regression coefficient of .400.

Table 3: Estimates of the Logarithm of a Player's Popularity on Uefa.com

	Overall Model	Std. Coeff.	Attacker	Std. Coeff.	Midfield	Std. Coeff.	Defender	Std. Coeff.
Constant	1.323[+]		1.236		1.855		2.118*	
ROUND	.179***	.275	.115	.164	.231***	.322	.198***	.400
GOALS	.429***	.329	.225[+]	.231	.515***	.323	.540**	.170
ASSISTS	.140*	.091	-.038	-.023	.231*	.171	.012	.005
MINPLAYED	.001***	.231	.003*	.437	.001*	.222	.001**	.287
COMMFOULS	.009	.037	-.001	-.005	.007	.026	.020	.102
SUFFFOULS	.003	.012	.001	.004	.011	.048	-.021	-.115
YCARDS	.083	.070	-.313	-.158	.221*	.179	.118[+]	.146
AGE	-.003	-.013	-.006	-.025	-.003	-.013	-.013	-.073
LNVALUE	.138**	.183	.305**	.358	.010	.013	.134*	.218
INTMATCH	.001	.023	1.358E-005	.000	-.001	-.047	.002	.091
LNIUSER	-0.055[+]	-.077	-.168[+]	-.198	.027	.036	-.092*	-.167
IPENE	-.001	-.021	-.007	-.133	-.001	-.030	.000	.008
Significance	.000		.000		.000		.000	
N	313		70		132		111	
Adjusted R^2	.608		.566		.632		.678	

*Note: [+], *, **and *** denote significance at the 10 per cent, 5 per cent, 1 per cent and 1 per mill levels respectively.*

4.3 Facebook

Table 4 shows the estimation results for the Facebook models. The results of the overall model regression show that the variables ROUND, GOALS, LNVALUE, INTMATCH, LNIUSER and IPENE have an increasing influence on the dependent variable LNFACE. Only the AGE has a decreasing influence on the increase of popularity on Facebook. That means the older a football player is the lower is the increase of likes on Facebook. The variable LNVALUE has the highest standardised regression coefficient (0.347) in the overall model and thus the highest impact on the increase of Facebook likes. The overall model fits the data with an adjusted R^2 of 0.667. The following variables are significant in the model for attackers: ROUND, LNVALUE, GOALS and INTMATCH, whereas GOALS is only weakly significant on the 10 per cent level. The result shows that only the performance variables ROUND and GOALS have a significant impact on the increase of likes for attackers. A similar observation can be made for the midfielder model. In this model the variables ROUND, AGE, LNVALUE, INTMATCH and IPENE are significant, whereas INTMATCH

is only weakly significant on the 10 per cent level. In these both models the LNVALUE has the largest effect (0.412 and 0.346). In the defender model the performance variable of played minutes (MINPLAYED) is significant besides the variable ROUND. In contrast to the other Facebook models, ROUND is the most important factor (0.334).

Table 4: Estimates of the Logarithm of a Player's Popularity on Facebook

	Overall Model		Attacker		Midfield		Defender	
		Std. Coeff.		Std. Coeff.		Std. Coeff.		Std. Coeff.
Constant	-13.272***		-17.890**		-11.272**		-9.463*	
ROUND	.624***	.260	.479*	.192	.702***	.284	.780***	.334
GOALS	.712***	.142	.595^{+}	.172	.335	.061	.218	.016
ASSISTS	.244	.041	.292	.050	.276	.062	-.409	-.040
MINPLAYED	.002	.089	.003	.130	.001	.053	.005**	.285
COMMFOULS	.019	.021	.035	.41	-.038	-.036	.005	.005
SUFFFOULS	.022	.027	-.023	-.026	.045	.056	-.015	-.018
YCARDS	.179	.039	.042	.006	.258	.058	.423	.111
AGE	-.159***	-.196	-.117	-.134	-.196**	-.250	-.131*	-.163
LNVALUE	1.017***	.347	1.249**	.412	.952***	.346	.686**	.243
INTMATCH	.018***	.190	.026*	.266	.015^{+}	.154	.011	.102
LNIUSER	.245**	.100	.287	.095	.243	.090	.203	.079
IPENE	.025***	.145	.014	.081	.030**	.171	.031**	.192
Significance	.000		.000		.000		.000	
N	315		70		134		111	
Adjusted R^2	.667		.710		.630		.660	

Note: $^{+}$, *, **and *** denote significance at the 10 per cent, 5 per cent, 1 per cent and 1 per mill levels respectively.

4.4 Market Value

The results of the OLS-regressions for the logarithm of the market value increase are shown in Table 5.[8] The regression model is significant and explains almost 31% of the observed variation in the dependent variable (LNMVALUE). The factors ROUND, GOALS, MIN-PLAYED, AGE and TANSFER have a significant impact on the dependent variable, whereat the variable TRANSFER is only weakly significant on the 10 per cent level. Thus all significant performance variables have a positive impact on the increase of the market value. The minutes played and the round in which the corresponding national team exited the tournament have the highest impact (0.367 and 0.320). In contrast, the age of a football player has a decreasing influence on LNMVALUE. In other words, the older a football player is the lower is the increase of his market value.

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[8] There are no separate regressions for the different player positions because of the limited number of observations.

Table 5: Estimates of the Logarithm of the Market Value Increase

	Overall Model	
		Std. Coeff.
Constant	15.714***	
ROUND	.251***	.320
GOALS	.412**	.262
ASSISTS	-.091	-.049
MINPLAYED	.002**	.367
COMMFOULS	-.015	-.045
SUFFFOULS	-.030	-.119
YCARDS	-.141	-.094
AGE	-.094***	-.278
INTMATCH	.004	.076
TRANSFER	-.151^{+}	-.130
Significance	0.000	
N	143	
Adjusted R^2	.306	

Note: $^{+}$, *, **and *** denote significance at the 10 per cent, 5 per cent, 1 per cent and 1 per mill levels respectively.

5. Conclusions

The aim of this paper was to examine whether the performance during the Euro 2012 influenced the increase of popularity and market values of participating players significantly and if so which specific performance at the Euro 2012 is exemplary for this. In every popularity regression model at least one of the Euro 2012 performance variables has a significant impact on the increase of popularity in the selected online media. With other words, the first research question can be answered with "yes". However, not in every regression model the Euro 2012 performance variables have the highest impact on the popularity increase. Moreover, the study shows that there are differences in the influencing indicators for the selected online media and for different player positions.

In the overall Google model as well as in the attacker and midfielder Google models the market value before the Euro 2012 has the largest effect on the increase of Google hits. Only in the Google model of the defenders the played minutes influence LNGOOGLE most. A similar pattern can be seen in the Facebook regressions. The LNVALUE has the highest impact on the increase of Facebook likes in the overall, attacker, and midfielder model and ROUND has the largest effects for defenders. This means that the value-enhancing performance before the Euro 2012 plays an important role in increasing the popularity on Facebook and Google during the Euro 2012.

It is furthermore noticeable that especially on uefa.com the performance during the Euro 2012 has the highest impact on the increase of popularity on this website. In the overall model goals have the highest impact on the increase of mentions on uefa.com. The played minutes have the largest effects on LNUEFA in the attacker model whereas in the midfielder and defender model the round in which the corresponding team exited is the most important factor. The reason why the performance variables have the highest impact in all uefa.com models could be that the UEFA is the official organiser of the Euro 2012 and consequently their homepage reported on the Euro 2012 regularly. In addition, it is striking that the players' age has only a significant (and decreasing) impact on the popularity in the Facebook overall, midfielder, and defender model. An explanation for this could be that 40 % of all Facebook users are under 25 years and that this group is also more active on social network sites than older users (futurebiz 2011).

Due to the fact that the variables ROUND, GOALS and MINPLAYED have a significant impact on the increase of the market value the second research question can also be answered with "yes". The played minutes have the highest impact on the increase of market value and are followed by ROUND, AGE and GOALS. Different studies came to the conclusion that the age of a football player has a positive impact on his market value (up to a certain age). In contrast to those studies, this study finds that the age of a football player during the Euro 2012 has a negative impact on the increase of his market value. One reason for this could be that younger players still have more potential for upward development. Finally, committed and suffered fouls do not really play an important role for the increase of popularity and market value. Only the suffered fouls are significant in the overall and midfielder Google model.

The empirical results in this study can lead to several managerial implications to increase the popularity in online media and the market value of the football players. The results show that a large sporting event like the Euro 2012 is a good possibility to increase the popularity by good performance. This means that the time after a large sporting event is probably good to start a marketing campaign (online) because the gained popularity during the Euro 2012 can be exploited. Moreover, the gained popularity is a good negotiation basis for new advertising or sponsor contracts. The decreasing impact of the age on the increase of popularity on Facebook may indicate that this media is a marketing instrument that fits better with younger football players. In addition, especially young players can strongly use the chance to increase their market value by showing a good performance because the younger a football player is the higher is the increase of his market value.

The estimations and results of this study have some limits that suggest directions for further research. For example, this study does not include goalkeepers and examines only the impact of the Euro 2012. Further analysis could be complemented by the consideration of goalkeepers and other large football events. Moreover, the impact of performance on the popularity on additional online media or also non-electronic media like newspapers and magazines could be investigated, too. This study does not use all performance indicators of the Euro 2012. Therefore, further analysis could consider more variables. This study could also be replicated for other sports and sporting events like the Olympic Games.

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