



FOOTBALL
OBSERVATORY



CIES FOOTBALL OBSERVATORY

ANNUAL REVIEW

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2013

optapro

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CIES Football Observatory

The CIES Football Observatory is a unique project initiated in 2005 by Drs Raffaele Poli and Loïc Ravenel under the name of the Professional Football Players Observatory (PFPO). Since 2011, it is one of the cornerstones of the broader Sports Observatory project, dedicated to the statistical analysis of sport in all its diversity.

The Sports Observatory employs a permanent team of five researchers: the two founders, Dr Roger Besson, Andrea Pessina and Elias Georgiou. During the first semester of 2013, mandates were carried out for prestigious sports governing bodies such as FIFA, UEFA, IOC, IIHF and FIBA.

Two annual reports are published for football. In January, the Demographic Study presents an in-depth analysis of club composition and players characteristics in 31 top division leagues of UEFA member countries. In June, the Annual Review analyses clubs and players in the big-5 European leagues from a demographic, economic and pitch performance perspective.

Methodological rigour coupled with a deep knowledge of football guarantee high quality analyses at competitive rates.



OptaPro

Powered by the most comprehensive and detailed databases in sport, OptaPro has developed a suite of analytical products and services that help professional clubs fine tune their performances, proficiently scout their opponents and effectively recruit new talent. By utilising expertise built up over two decades of sports data collection, OptaPro's extensive and consistent dataset combined with advanced analytical products helps club professionals work more efficiently and make smarter decisions more quickly.



Foreword

Times are changing. Traditional printed publications tend to be replaced by more flexible, interactive, easily diffusible and updateable documents. The CIES Football Observatory also innovates by anticipating the publication of its Annual Review, which usually comes out in September. The eighth edition is composed of four chapters reviewing the 2012/13 season of the big-5 European leagues.

The first chapter compares leagues according to the thematic areas of competitive balance, home advantage and pitch production. It notably reveals that the spread in points between clubs within a league showed an overall increase over the last decade. In each championship analysed, transfer fees spent by clubs to make up their squad are strongly correlated to results achieved. This should be food for thought for football governing bodies at national and international level.

The second chapter compares clubs according to the age structure of players, length of contract remaining and pitch performances. This latter aspect is analysed from the brand new perspective of three complementary indicators: grip on the game, attacking incisiveness and defensive solidity. It notably shows that the key success factor for Bayern Munich last season was the perfect balance between these three areas of the game. Coaches and technical personnel of teams should find this worthy of interest.

The third chapter highlights the most productive players for five key performance indicators: shooting, chance creation, take on, distribution and recovery. The general index ranks footballers according to their impact on the global performances of their team. The analysis of players' productivity with respect to teammates allows us to bring to the fore skills of very promising talents such as, among other players, Idrissa Gueye, Hiroshi Kiyotake and Josip Iličić. This should attract the attention of sports directors and scouts.

To conclude, the fourth chapter discloses for the first time the economic value of big-5 league players using our exclusive econometric model. The latter is based on the detailed analysis of the characteristics of players transferred by big-5 league clubs since the 2009/10 season. The development of such a statistical model marks a crucial step in the CIES Football Observatory's evolution. This should whet the appetite of leading actors of the football industry such club officials, agents, journalists, bankers, investors, courts, etc.

If you want to know to what extent the pitch production in England is different compared to Italy, assess the strengths and weaknesses of your favourite team, detect the most decisive players or have an objective estimate of the economic value of big-5 league footballers, this publication is for you!

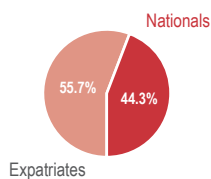
Raffaele Poli, Head of the CIES Football Observatory

SAMPLE

PREMIER LEAGUE



QPR	20	19	39
Sunderland	19	16	35
Tottenham	17	17	34
Newcastle	15	19	34
Liverpool	16	17	33
Fulham	8	25	33
Reading	22	10	32
Aston Villa	14	18	32
Norwich	23	9	32
Man. City	8	23	31
Wigan	6	24	30
West Ham	13	17	30
Swansea	17	13	30
Man. United	14	16	30
Southampton	17	13	30
West Bromwich	12	17	29
Arsenal	5	24	29
Stoke City	14	14	28
Chelsea	8	20	28
Everton	8	16	24



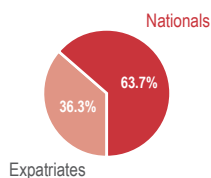
Sample definition: players fielded during the season and unused first-team squad members who played in adult leagues during the seasons 2010/11 and 2011/12.

Expatriates: players employed by a club outside of the national association in which they began playing, from where they departed for football-related reasons. Welsh and English players in Swansea are not considered as expatriates.

LIGA



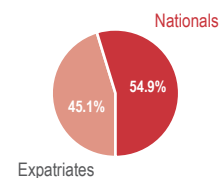
Zaragoza	23	12	35
Betis	25	8	33
La Coruña	17	14	31
Osasuna	25	6	31
Sevilla	18	13	31
Real Madrid	14	17	31
Levante	17	13	30
Granada	16	14	30
Rayo Vallecano	22	7	29
Mallorca	18	11	29
Celta Vigo	21	8	29
Málaga	10	19	29
Getafe	24	5	29
Atlético Madrid	14	14	28
Espanyol	15	12	27
Barcelona	19	8	27
Athletic Bilbao	25	1	26
Valencia	10	14	24
Valladolid	17	7	24
Real Sociedad	17	6	23



BUNDESLIGA



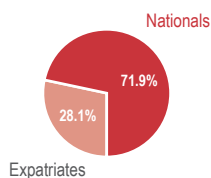
Hoffenheim	23	16	39
Fürth	26	11	37
Wolfsburg	10	26	36
Düsseldorf	17	15	32
Freiburg	20	11	31
Augsburg	16	15	31
Stuttgart	14	16	30
Mainz	19	10	29
Frankfurt	17	12	29
Schalke 04	14	15	29
Bremen	17	11	28
Hannover	12	15	27
Nürnberg	14	13	27
Dortmund	18	9	27
Hamburg	11	15	26
Bayern	12	13	25
Leverkusen	19	6	25
M'gladbach	13	11	24



LIGUE 1



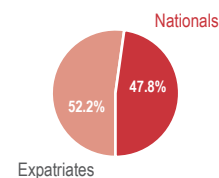
Brest	31	4	35
Nice	25	10	35
Lyon	25	9	34
Lorient	25	8	33
Rennes	20	12	32
Paris SG	17	15	32
Bastia	27	4	31
Nancy	21	10	31
Valenciennes	22	8	30
Troyes	25	5	30
Ajaccio	24	6	30
Sochaux	20	10	30
Evian Thonon	18	12	30
Marseille	20	9	29
Bordeaux	18	10	28
Montpellier	22	6	28
St-Etienne	19	9	28
Reims	21	6	27
Lille	15	11	26
Toulouse	19	6	25



SERIE A



Siena	27	17	44
Pescara	29	15	44
Parma	19	20	39
Lazio	14	24	38
Palermo	15	23	38
Atalanta	26	12	38
Chievo Verona	17	21	38
Genoa	20	17	37
Internazionale	10	27	37
Torino	21	14	35
Milan	15	19	34
Bologna	19	15	34
Udinese	12	22	34
Fiorentina	10	23	33
Catania	12	19	31
Sampdoria	12	18	30
Juventus	18	12	30
Napoli	15	15	30
Cagliari	15	12	27
Roma	7	19	26



HIGHLIGHTS

The analysis of the economic value of big-5 league players reveals that Lionel Messi would largely break the 94-million euro transfer fee record. Estimated on the basis of an exclusive econometric model, his value is between 217 and 252 million euro. With an estimated value between 102 and 118 million, Cristiano Ronaldo would also break his own record. With only two seasons of contract remaining and aged 28, Real Madrid probably has the last opportunity to sell him at a profit. This makes his transfer more probable than that of Messi. The list of the players with the highest economic value is presented on pages 83 and 86.

At club level, our analysis shows that Barcelona holds the greatest assets from a player economic value perspective: 658 million euro. This figure is three times higher than that spent on signing the players used during the 2012/13 season. This reflects the extraordinary ability of the Catalan side to train, launch and add value to home-grown players. The second club in terms of players' economic value is Real Madrid: 500 million euro. This figure is 7 million lower than that spent to recruit last season squad members. The full list of players' economic value per club is to be found on pages 73 to 82.

Lionel Messi is not only the most expensive big-5 league player, but also the most decisive one for the 2012/13 season. The ranking is based on the performances for five key indicators: shooting, chance creation, take on, distribution and recovery. The Argentinean outranks Champions League winner Franck Ribéry and Cristiano Ronaldo. The most decisive young player was Mario Götze. The new Bayern Munich signing is followed by two very promising Belgian footballers belonging to Chelsea: Kevin de Bruyne and Romelu Lukaku. They definitively both deserve to have a chance to play for the London club.

Our analysis also highlights the best performing players compared to teammates. This notably allows us to identify underestimated footballers in bottom and middle-ranked teams. For example, no player in Germany has had a greater impact on the performances of his team than Szabolcs Huszti (Hannover). The other best performing footballers compared to teammates were Romelu Lukaku in England, Gaëtan Courtet in France and Josip Iličić in Italy. In Spain, Lionel Messi also tops this ranking. This confirms that the Argentinean superstar is really unique. The rankings of the best performing players are presented on pages 54 to 69.

The performance analysis at club level shows that Bayern Munich's fantastic season was the result of the unmatched balance between attack, distribution and defence. The Champions League winner tops the German Bundesliga rankings for the three key team performance indicators covered by our analysis: defensive solidity, grip on the game and attacking incisiveness. No other champion was able to do so.

While Juventus and Paris St-Germain outranked their rivals above all due to their greater defensive solidity, Manchester United's league title was mainly the result of greater attacking incisiveness. Finally, Barcelona's victory is primarily related to its incomparable strength in keeping a grip on the game. Club performance analyses are to be found on pages 33 to 51.

Big-5 league clubs not only differentiate themselves by their pitch performances, but also for squad management policies. The best performing clubs usually sign longer contracts with their players. The average length of contract remaining varies from 38.9 months at Liverpool to only 6.2 for Siena. Long-term squad management policies were a key factor for the top level results achieved by clubs such as Real Sociedad, Udinese, Bayer Leverkusen and Southampton. Conversely, teams such as Fulham, Rayo Vallecano, Bastia, Hannover and Bologna will probably struggle to maintain good performance standards next season.

Big-5 league teams also have divergent strategies concerning players' age. German Bundesliga clubs fielded players aged 25.7 on average. At the opposite end of the table is Italy (27.4). The highest percentage of minutes played by U22 footballers was measured for Sochaux (33%). Conversely, five clubs never fielded players in this age category (Norwich, Stoke, West Ham, Valladolid and Osasuna). The average age of players fielded varies from 30.5 years at Fulham to 24.2 for Aston Villa and Toulouse. The average age on the pitch for all champions was approximately 27 years (from 26.2 for Bayern to 27.9 for Juventus). The analyses on age structure and contract policies are presented on pages 25 to 32.

The comparison of leagues according to pitch production reveals the particularity of the French top division. Ligue 1 teams both score and shoot the least. This holds true regardless of shots on target, off target and blocked. French clubs also make the least passes and tackles. All these figures reflect the lower intensity of games in France. The gaps between the four other major European championships are lower. Our analysis also shows that teams make more shots and passes in Champions League group stage matches than at big-5 league level. This confirms the excellence of this competition. More information is to be found on pages 20 to 23.

The analysis of home advantage over the last decade indicates that the percentage of home wins was higher in Latin countries than in England and Germany. Generally speaking, the proportion of away wins is increasing to the detriment of that of draws. Only in France and Italy, do the latter still tend to be more numerous than the former. In 2012/13, only five clubs out of 98 achieved more points away than at home: four in Germany (Fürth, Wolfsburg, Stuttgart, Bayern Munich), one in England (Aston Villa) and none in Spain, France and Italy. Home advantage analyses are presented on pages 13 to 19.

Finally, the study investigates the evolution in competitive balance within leagues since 2003/04. With the exception of Italy, point gaps between teams are on the increase. This trend is particularly marked in Spain and Germany. During last decade, the three most successful clubs achieved more than 60% of podium ranks in all the leagues, up to 80% in Spain and England (24 out of 30). Moreover, the two most successful teams won at least 60% of the last 10 league titles in all championships, up to 90% in Spain. All these figures reveal the persistent domination of a handful of clubs in the five major European leagues.

In 2012/13, money spent in transfer fees to sign first team players was highly correlated to club results in all the leagues. All the champions were the biggest (Paris St-Germain and Bayern Munich), second biggest (Barcelona and Juventus) or third biggest (Manchester United) spenders in their respective league. This confirms the strong influence of money on success. Without new regulatory mechanisms to improve income distribution, competitive balance will be further jeopardised by the transformation of top level clubs into global brands, their regular participation in the increasingly lucrative Champions League and investments made by wealthy owners. The analysis of competitive balance is to be found on pages 9 to 12.



PART I

LEAGUE COMPARISON



COMPETITIVE BALANCE



HOME ADVANTAGE



PITCH PRODUCTION

COMPETITIVE BALANCE

In all big-5 leagues, the transfer expenditure of clubs is highly correlated to results. In England, the money spent in transfer fees to sign first team squad members accounted for 60% of the gaps in points between teams. This percentage is at least 32% in all the championships. Five English clubs are among the 10 teams that spent the most on recruiting players employed during the 2012/13 season. However, the biggest spender overall was Real Madrid: 507 million euro. This figure is more than twice as high as that of title winner Barcelona. Manchester City also invested more to make up its squad than English champion Manchester United. The same holds true for Inter compared to Juventus. The two remaining champions were the top spenders in their respective league: Paris St-Germain and Bayern Munich. These data confirm the strong influence of money on success.

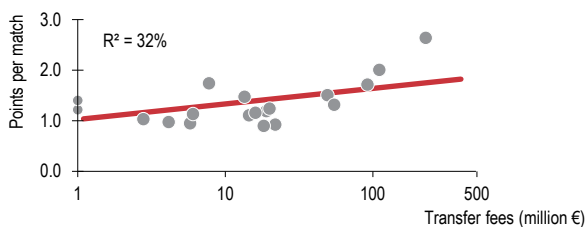
Highest transfer expenditure for squad members

	Value (million €)	Rank 12/13
1. Real Madrid (ESP)	507.3	2nd
2. Manchester City (ENG)	442.0	2nd
3. Chelsea (ENG)	396.0	3rd
4. Manchester United (ENG)	343.2	1st
5. Paris St-Germain (FRA)	290.5	1st
6. Liverpool (ENG)	265.7	7th
7. FC Barcelona (ESP)	228.8	1st
8. FC Bayern München (GER)	228.3	1st
9. Internazionale Milano (ITA)	204.6	9th
10. Arsenal (ENG)	197.2	4th

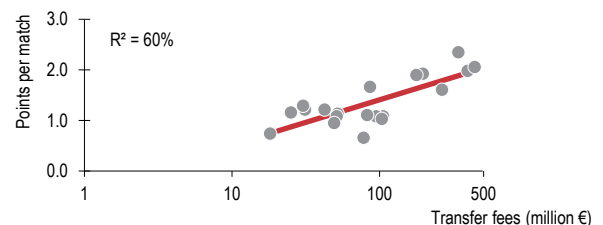
	Value (million €)	Rank 12/13
11. Juventus (ITA)	179.9	1st
12. Tottenham Hotspur (ENG)	178.1	5th
13. Olympique Lyonnais (FRA)	136.5	3rd
14. SSC Napoli (ITA)	134.7	2nd
15. Milan AC (ITA)	113.3	3rd
16. VfL Wolfsburg (GER)	113.2	11th
17. Atlético de Madrid (ESP)	111.1	3rd
18. SS Lazio (ITA)	110.1	7th
19. Aston Villa (ENG)	105.9	15th
20. Sunderland (ENG)	104.2	17th

Transfer expenditure and points per match (2012/13)

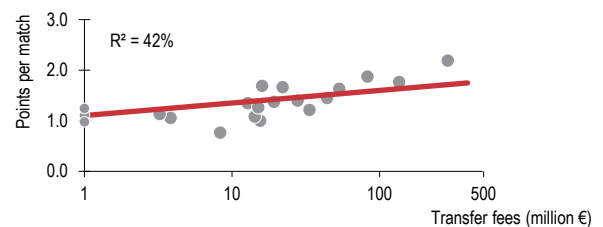
Liga



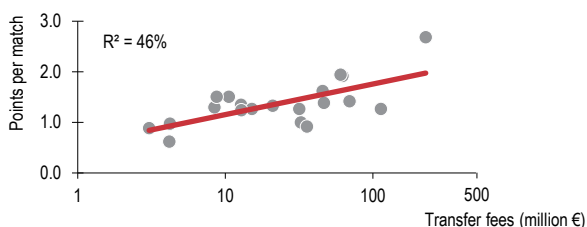
Premier League



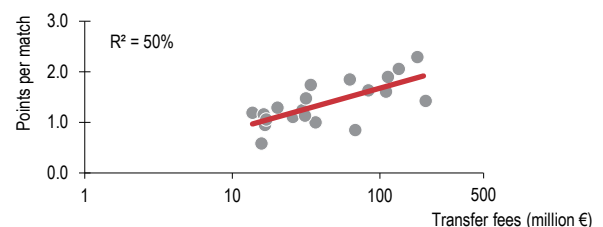
Ligue 1



Bundesliga



Serie A





PART II

CLUB COMPARISON

- ■ ■ **AGE STRUCTURE**
- ■ ■ **CONTRACT POLICY**
- ■ ■ **PITCH PRODUCTION**
- ■ ■ **PERFORMANCE RANKINGS**

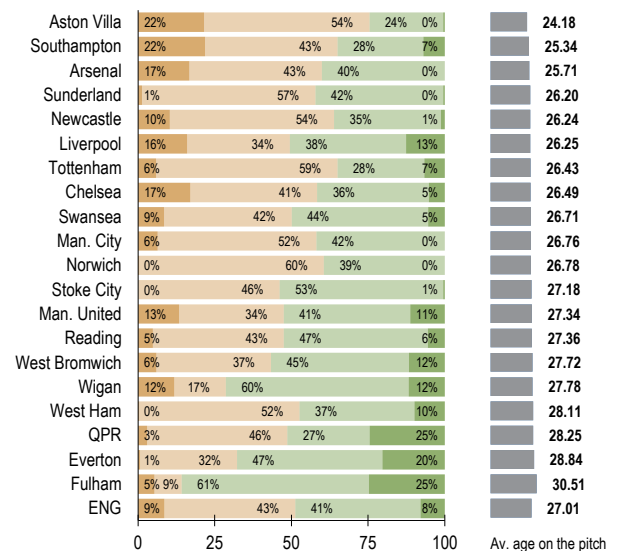
AGE STRUCTURE

German Bundesliga teams fielded players aged on average 25.7. The second lowest figure at big-5 league level was measured in France (26.4 years). At the opposite end of the table is Italy (27.4). However, the percentage of minutes played by footballers under 22 years of age in the Italian Serie A was relatively high (12%). This figure was only 8% in Spain and up to 15% in Germany. The highest percentage of minutes played by under-22 footballers was at Sochaux (33%). Conversely, five clubs never fielded players in this age category. Fulham is the only big-5 league club whose average age on the pitch was greater than 30. Players fielded by the London-club were on average 6.3 years older than those fielded by the youngest team in the English Premier League: Aston Villa (24.2). At big-5 league level, the team having fielded the least seasoned players is Toulouse. The average age on the pitch for all champions was around 27 years: from 26.2 for Bayern to 27.9 for Juventus.

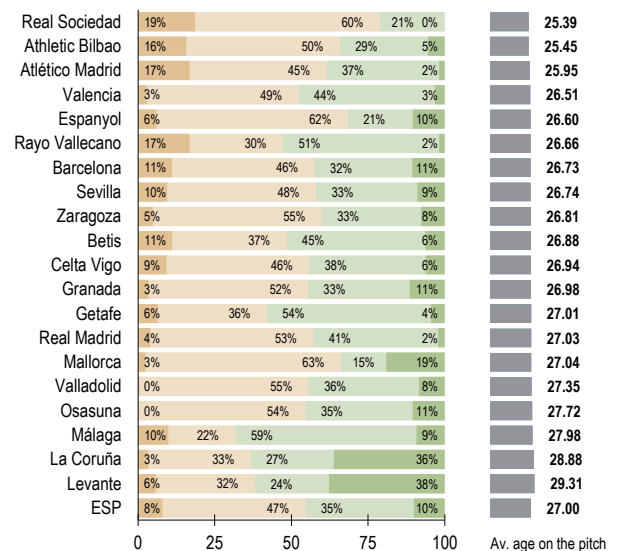
% of minutes per age category



Premier League



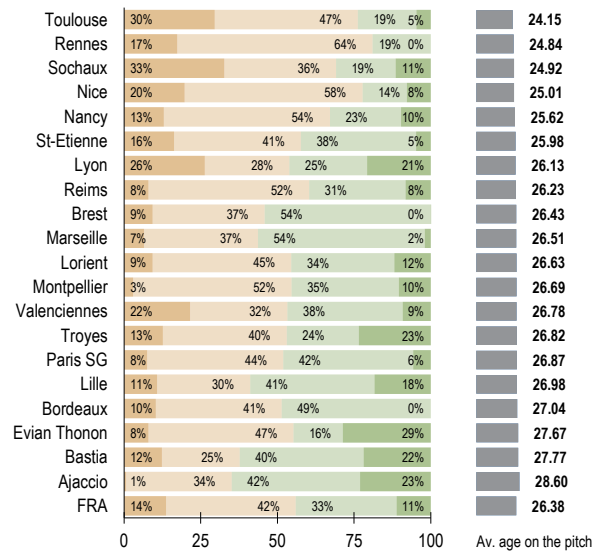
Liga



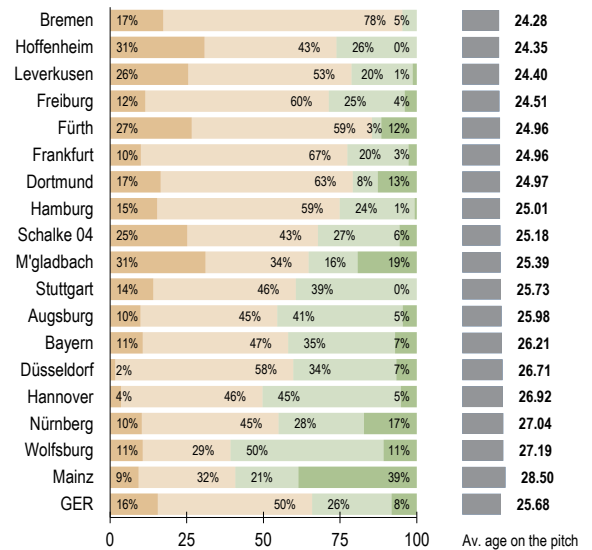
% of minutes per age category



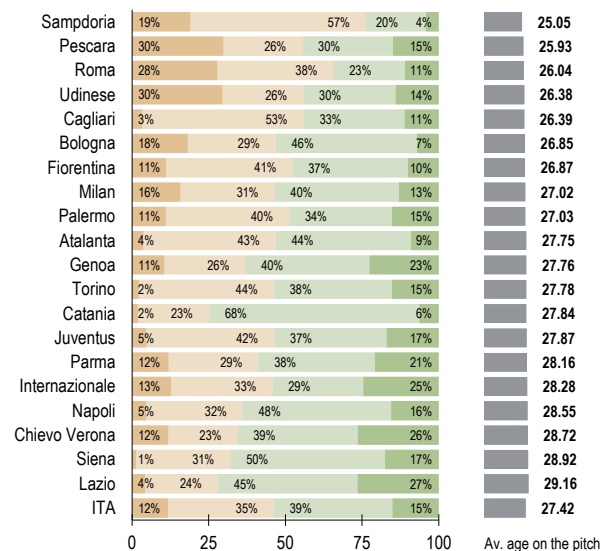
Ligue 1



Bundesliga



Serie A





PART III

PLAYER COMPARISON



BEST PERFORMING PLAYERS

BIG 5 LEAGUES

CHAMPIONS LEAGUE

MOST DECISIVE PLAYERS

The general index aggregates the indicators related to five specific areas of the game, weighted according to their impact on club results at big-5 league level (see previous page). Lionel Messi tops the table, followed by Franck Ribéry and Cristiano Ronaldo. These three players were already in the top 10 positions last season (1st Messi, 3rd Ronaldo and 7th Ribéry). Ten of the 12 top ranked players belong to clubs that qualified for Champions League semi-finals: 3 for Bayern and Barcelona, 2 for Borussia Dortmund and Real Madrid. There are only two players in the top 20 who are not part of a club having participated in the 2012/13 edition of the Champions League: Luís Suarez (Liverpool) and Szabolcs Huszti (Hannover). This confirms that this competition brings together almost all the best footballers. It also suggests that Champions League experience allows players to further improve their skills.

GENERAL INDEX

1. Lionel Messi (Barcelona).....	100.0	31. Philipp Lahm (Bayern).....	49.1
2. Franck Ribéry (Bayern).....	82.1	32. Robin van Persie (Man. United).....	48.5
3. Cristiano Ronaldo (Real Madrid).....	66.7	33. David Silva (Man. City).....	48.4
4. Mesut Özil (Real Madrid).....	64.4	34. Lorenzo Insigne (Napoli).....	48.3
5. Mario Götze (Dortmund).....	61.8	35. Erik Lamela (AS Roma).....	48.1
6. Andrés Iniesta (Barcelona).....	61.2	36. Bastian Schweinsteiger (Bayern).....	47.8
7. Francesc Fàbregas (Barcelona).....	61.1	37. Miralem Pjanić (AS Roma).....	47.3
8. Toni Kroos (Bayern).....	60.3	38. Theo Walcott (Arsenal).....	47.0
9. Thomas Müller (Bayern).....	59.2	39. Max Kruse (Freiburg).....	46.4
10. Luis Suárez (Liverpool).....	58.9	40. Dimitri Payet (Lille).....	46.3
11. Arturo Vidal (Juventus).....	58.2	41. Paul Pogba (Juventus).....	46.2
12. Marco Reus (Dortmund).....	57.8	42. Kwadwo Asamoah (Juventus).....	46.0
13. Szabolcs Huszti (Hannover).....	57.6	43. Eden Hazard (Chelsea).....	45.8
. Zlatan Ibrahimović (Paris SG).....	57.6	44. Stefan Kiessling (Leverkusen).....	45.7
15. Santi Cazorla (Arsenal).....	57.3	45. Koke Resurrección (Atlético Madrid).....	45.6
16. Jacob Blaszczykowski (Dortmund).....	56.1	. Steven Gerrard (Liverpool).....	45.6
17. Juan Mata (Chelsea).....	55.1	47. Carlos Tévez (Man. City).....	45.1
18. Karim Benzema (Real Madrid).....	54.8	48. Rodrigo Palacio (Internazionale).....	43.9
19. Wayne Rooney (Man. United).....	54.3	49. Patrick Ebert (Valladolid).....	43.7
20. Gonzalo Higuaín (Real Madrid).....	53.4	50. Mathieu Valbuena (Marseille).....	43.6
21. Lukas Podolski (Arsenal).....	51.7	51. Julien Féret (Rennes).....	43.5
22. Rémy Cabella (Montpellier).....	51.6	. Robert Lewandowski (Dortmund).....	43.5
23. Gareth Bale (Tottenham).....	51.5	53. Romelu Lukaku (WBA).....	43.3
24. Andrea Pirlo (Juventus).....	51.4	. Ivan Rakitić (Sevilla).....	43.3
25. Francesco Totti (AS Roma).....	50.4	. Edin Džeko (Man. City).....	43.3
26. Xavi Hernández (Barcelona).....	50.2	. Diego Costa (Atlético Madrid).....	43.3
27. Jefferson Farfán (Schalke 04).....	50.0	. Javi Martínez (Bayern).....	43.3
. Marek Hamšík (Napoli).....	50.0	. Éver Banega (Valencia).....	43.3
29. Kevin de Bruyne (Bremen).....	49.8	59. Clément Grenier (Lyon).....	42.7
30. Antonio Cassano (Internazionale).....	49.6	60. José Antonio Reyes (Sevilla).....	42.2

Data adjusted with 100 for the highest value at big-5 league level

Except for page 57, all the rankings for big-5 leagues in this section only include footballers who have played at least half of championship minutes

CHAMPIONS LEAGUE

MOST DECISIVE PLAYERS

Xavi Hernández outranked his teammate Lionel Messi as the most decisive player in the 2012/13 Champions League group stage. Another Spanish player, Juan Mata, is on the podium. The only other nation with two representatives in the top 10 is Brazil: Willian and Oscar. Different reasons explain the absence of future finalists in the very top positions of the ranking. For Bayern, it shows that little effort was needed to qualify for the last 16 round. However, Philipp Lahm is the best ranked defender (7th). For Borussia, it rather reflects the strength of rivals to which they were opposed in the group stage. The best ranked player, Robert Lewandowski, is only 14th. Three quarters of footballers in the 60 first positions played for clubs that qualified for the last 16. Juan Mata is the best ranked player of teams that did not make it to this stage.

Only group stage matches - At least 400 minutes played

GENERAL INDEX

1. Xavi Hernández (Barcelona).....	100.0	31. Christian Fuchs (Schalke 04).....	51.9
2. Lionel Messi (Barcelona).....	98.0	32. Selçuk Inan (Galatasaray).....	50.5
3. Juan Mata (Chelsea).....	88.5	33. Sacha Kljestan (Anderlecht).....	49.7
4. Arturo Vidal (Juventus).....	84.8	34. Yaya Touré (Man. City).....	49.6
5. Willian Borges (Shakhtar Donetsk).....	82.6	35. Klaas-Jan Huntelaar (Schalke 04).....	49.4
6. Oscar dos Santos (Chelsea).....	82.3	36. Charlie Mulgrew (Celtic).....	49.1
7. Philipp Lahm (Bayern).....	79.3	37. Xabi Alonso (Real Madrid).....	49.0
8. Cristiano Ronaldo (Real Madrid).....	77.2	38. Miguel Veloso (Dynamo Kyiv).....	48.9
9. Zlatan Ibrahimović (Paris SG).....	75.2	39. Mario Götze (Dortmund).....	48.8
10. Andrea Pirlo (Juventus).....	74.3	40. Urby Emanuelson (Milan).....	48.5
11. João Moutinho (Porto).....	73.9	41. Rúben Micael (Braga).....	47.5
12. Bastian Schweinsteiger (Bayern).....	70.8	42. James Rodríguez (Porto).....	47.1
13. Alan Osorio (Braga).....	69.4	43. Marco Reus (Dortmund).....	46.9
14. Robert Lewandowski (Dortmund).....	66.8	44. Hulk Givanildo (Zenit St Petersburg).....	46.6
15. Lewis Holtby (Schalke 04).....	66.1	45. Marco Verratti (Paris SG).....	45.9
16. Claudio Marchisio (Juventus).....	65.5	46. Mikel Arteta (Arsenal).....	45.8
17. Luiz Adriano (Shakhtar Donetsk).....	64.5	47. Leonardo Bonucci (Juventus).....	44.5
18. Toni Kroos (Bayern).....	64.1	48. Pedro Rodríguez (Barcelona).....	44.4
19. Lucho González (Porto).....	63.5	49. Silvestre Varela (Porto).....	43.7
20. Rafael Bastos (Cluj).....	62.7	50. Siem de Jong (Ajax).....	43.5
21. Christian Eriksen (Ajax).....	62.0	. Benedikt Höwedes (Schalke 04).....	43.5
22. Lukas Podolski (Arsenal).....	61.6	52. Lucas Biglia (Anderlecht).....	42.7
23. Burak Yilmaz (Galatasaray).....	61.5	53. Henrikh Mkhitaryan (Shakhtar Donetsk).....	42.2
24. Eden Hazard (Chelsea).....	59.6	. Roman Neustädter (Schalke 04).....	42.2
25. Sofiane Feghouli (Valencia).....	58.0	55. Thomas Müller (Bayern).....	41.5
26. Luiz Fernandinho (Shakhtar Donetsk).....	57.1	56. Rémy Cabella (Montpellier).....	41.3
27. Darijo Srna (Shakhtar Donetsk).....	56.0	57. Niklas Moisander (Ajax).....	41.2
28. Eliseu Pereira (Málaga).....	53.5	. Roman Shirokov (Zenit St Petersburg).....	41.2
29. Alex Teixeira (Shakhtar Donetsk).....	53.1	59. Alex da Costa (Paris SG).....	41.1
30. Blaise Matuidi (Paris SG).....	52.2	60. Eduardo Salvio (Benfica).....	40.7

CHAMPIONS LEAGUE

BEST PERFORMING PLAYERS

Xavi's first position in the general ranking is mainly due to his incredible productivity in distribution. The Barcelona midfielder was twice as productive as the second ranked player: João Moutinho. Lionel Messi is the only player present in the top 10 positions for three specific rankings: shooting, take on and distribution. Seven other footballers are in the top 10 for more than one key performance indicator: Xavi, Mata, Ibrahimović, Verratti, Lahm, Schweinsteiger and Hazard. The majority of the best performing players belongs to clubs participating in the five major European championships. Ukrainian champion Shakhtar Donetsk is the non-big-5 league team with the most footballers in the top 10: Willian and Luiz Adriano in shooting, as well as Kucher and Fernandinho in recovery. Four other Brazilians playing in leagues outside the big-5 are in the rankings: Alan, Bastos, Hulk and Sammir.

Only group stage matches - At least 400 minutes played

SHOOTING

1. Burak Yilmaz (Galatasaray)	100.0
2. Robert Lewandowski (Dortmund).....	95.1
3. Cristiano Ronaldo (Real Madrid).....	90.0
4. Oscar dos Santos (Chelsea).....	83.8
5. Lionel Messi (Barcelona).....	74.9
6. Alan Osorio (Braga)	74.6
7. Willian Borges (Shakhtar Donetsk)	69.1
8. Luiz Adriano (Shakhtar Donetsk)	68.9
9. Lukas Podolski (Arsenal)	62.2
10. Juan Mata (Chelsea).....	55.4

DISTRIBUTION

1. Xavi Hernández (Barcelona).....	100.0
2. João Moutinho (Porto).....	49.9
3. Marco Verratti (Paris SG).....	47.0
4. Mikel Arteta (Arsenal).....	46.8
5. Niklas Moisander (Ajax)	46.0
6. Lionel Messi (Barcelona).....	46.0
7. Bastian Schweinsteiger (Bayern).....	44.4
8. Xabi Alonso (Real Madrid)	43.4
9. Pedro Rodríguez (Barcelona)	43.2
10. Lucas Biglia (Anderlecht)	42.8

CHANCE CREATION

1. Zlatan Ibrahimović (Paris SG).....	100.0
2. Juan Mata (Chelsea).....	88.3
3. Christian Eriksen (Ajax).....	87.8
4. Andrea Pirlo (Juventus).....	85.1
5. Xavi Hernández (Barcelona).....	83.1
6. Rafael Bastos (Cluj)	79.0
7. Philipp Lahm (Bayern).....	77.1
8. Lewis Holtby (Schalke 04).....	74.5
9. Charlie Mulgrew (Celtic).....	69.9
10. Eden Hazard (Chelsea).....	67.1

RECOVERY

1. Arturo Vidal (Juventus).....	100.0
2. Bastian Schweinsteiger (Bayern).....	80.1
3. Leonardo Bonucci (Juventus)	75.9
4. Olexandr Kucher (Shakhtar Donetsk)	72.9
5. Lewis Holtby (Schalke 04).....	72.1
6. Roman Neustädter (Schalke 04).....	72.0
7. Alex da Costa (Paris SG).....	67.9
8. Luiz Fernandinho (Shakhtar Donetsk)	65.2
9. Marco Verratti (Paris SG).....	64.4
10. Giorgio Chiellini (Juventus).....	64.4

TAKE ON

1. Eden Hazard (Chelsea).....	100.0
2. Lionel Messi (Barcelona).....	92.0
3. Hulk Givanildo (Zenit St Petersburg).....	83.1
4. Zlatan Ibrahimović (Paris SG).....	79.5
5. Eduardo Salvio (Benfica)	78.1
6. Philipp Lahm (Bayern).....	76.8
7. Urby Emanuelson (Milan).....	75.1
8. Jorge Sammir (Dinamo Zagreb).....	70.5
9. Milan Jovanović (Anderlecht).....	69.5
10. Ramires Santos (Chelsea).....	67.9



PART IV

ECONOMIC VALUE

- ■ ■ **LEAGUE COMPARISON**
- ■ ■ **CLUB VALUATION**
- ■ ■ **PLAYER VALUATION**

PLAYER RANKINGS

HIGHEST ESTIMATED VALUES

If Lionel Messi was transferred, he would certainly break the record for the highest transfer fee ever paid. The economic value of the Argentinean superstar is close to his buyout clause: 250 million euro. All the key parameters generally increasing the value of a player converge for Messi: top performing employer club, consistently outstanding performances, above all in terms of goals, high level of national A-team represented, attacking position, middle career age and recently extended long-term contract. In case of transfer, Cristiano Ronaldo would also probably break his own record of the highest fee (94 million). With only two seasons of contract remaining and at 28 years of age, Real Madrid has probably the last opportunity to sell him for a profit. Our analysis also suggests that without the 37-million euro buyout clause, Bayern Munich should have invested even more money to sign Mario Götze.

OVERALL RANKING

(million €)

1. Lionel Messi (FC Barcelona).....	217.4 - 252.6	31. Pedro Rodríguez (FC Barcelona).....	28.7 - 33.3
2. Cristiano Ronaldo (Real Madrid CF).....	102.2 - 118.7	. Toni Kroos (FC Bayern München).....	28.7 - 33.3
3. Edison Cavani (SSC Napoli).....	58.3 - 67.8	33. Claudio Marchisio (Juventus FC).....	28.1 - 32.6
4. Eden Hazard (Chelsea FC).....	55.5 - 64.5	34. André Schürrle (Bayer 04 Leverkusen).....	27.8 - 32.3
5. Sergio Agüero (Manchester City FC).....	48.6 - 56.4	35. Vincent Kompany (Manchester City FC).....	27.6 - 32.1
6. Radamel Falcao (Club Atlético de Madrid).....	46.3 - 53.8	36. Daniel Sturridge (Liverpool FC).....	27.6 - 32.0
7. Mario Balotelli (Milan AC).....	45.5 - 52.9	37. Marek Hamšík (SSC Napoli).....	27.3 - 31.8
8. Wayne Rooney (Manchester United FC).....	45.1 - 52.4	38. Gonzalo Higuain (Real Madrid CF).....	27.3 - 31.7
9. Gareth Bale (Tottenham Hotspur FC).....	43.5 - 50.6	39. Ángel Di María (Real Madrid CF).....	26.9 - 31.3
10. David Silva (Manchester City FC).....	43.5 - 50.5	40. Marco Reus (Borussia Dortmund).....	26.8 - 31.2
11. Mario Götze (Borussia Dortmund).....	42.0 - 48.9	41. Arturo Vidal (Juventus FC).....	26.6 - 30.9
12. Karim Benzema (Real Madrid CF).....	41.6 - 48.4	42. Shinji Kagawa (Manchester United FC).....	26.4 - 30.6
13. Sergio Ramos (Real Madrid CF).....	41.4 - 48.1	. Javier Hernández (Manchester United FC).....	26.4 - 30.6
14. Andrés Iniesta (FC Barcelona).....	41.2 - 47.9	. Oscar dos Santos (Chelsea FC).....	26.4 - 30.6
15. Francesc Fàbregas (FC Barcelona).....	40.4 - 47.0	45. Yaya Touré (Manchester City FC).....	26.3 - 30.5
16. Robin van Persie (Manchester United FC).....	39.4 - 45.8	46. David de Gea (Manchester United FC).....	26.1 - 30.4
17. Sergio Busquets (FC Barcelona).....	38.9 - 45.2	47. Manuel Neuer (FC Bayern München).....	25.9 - 30.1
18. Thomas Müller (FC Bayern München).....	38.5 - 44.8	48. Jordi Alba (FC Barcelona).....	25.4 - 29.6
19. Santi Cazorla (Arsenal FC).....	37.3 - 43.3	. Luka Modrić (Real Madrid CF).....	25.4 - 29.6
20. Luis Suárez (Liverpool FC).....	37.2 - 43.2	50. Joe Hart (Manchester City FC).....	25.2 - 29.3
21. Juan Mata (Chelsea FC).....	36.7 - 42.6	51. Jack Wilshere (Arsenal FC).....	25.0 - 29.1
. Mesut Özil (Real Madrid CF).....	36.7 - 42.6	. Danny Welbeck (Manchester United FC).....	25.0 - 29.1
23. Gerard Piqué (FC Barcelona).....	34.2 - 39.8	53. Stevan Jovetić (AC Fiorentina).....	24.9 - 28.9
24. Stephan El Shaarawy (Milan AC).....	31.4 - 36.5	54. Marouane Fellaini (Everton FC).....	24.5 - 28.5
25. Franck Ribéry (FC Bayern München).....	31.0 - 36.0	55. Mats Hummels (Borussia Dortmund).....	24.3 - 28.3
26. Lucas Moura (Paris St-Germain FC).....	30.5 - 35.5	56. Phil Jones (Manchester United FC).....	24.0 - 27.9
27. Bastian Schweinsteiger (FC Bayern München).....	30.1 - 34.9	57. Robert Lewandowski (Borussia Dortmund).....	23.1 - 26.8
28. Erik Lamela (AS Roma).....	29.6 - 34.4	58. Jan Vertonghen (Tottenham Hotspur FC).....	22.7 - 26.3
29. Theo Walcott (Arsenal FC).....	29.2 - 33.9	59. Isco Alarcón (Málaga CF).....	22.6 - 26.3
30. Thiago Silva (Paris St-Germain FC).....	29.1 - 33.9	60. Romelu Lukaku (Chelsea FC).....	22.5 - 26.1