

Comments on:
The Football Players' Labor Market:
Recent Developments and Econom(etr)ic Evidence

(by Bernd Frick)

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General Comments

- The 2 papers study the football industry, based on data from the Bundesliga:
 - *Salary Determination in the German “Bundesliga”*: A Panel Study
 - *Contract Duration and Player Performance*
- The scope of the findings goes beyond the football industry, as some of them may be affecting other important labour markets.
- Frick raises relevant questions and deals with them in an easy and convincing way. Some of the outcomes are particularly meaningful, encouraging further research.
- Each paper tackles different issues, although they connect with each other. The array of topics is broad, having chosen to stress only some of the most relevant aspects (without necessarily follow the order or structure of the papers).
- To focus on the main issues, technical aspects are left for later discussion.

Preliminary Comments

Main topics

- The determinants of player salaries in professional football.
- The influence of the length of contracts on performance (is shirking an issue?)

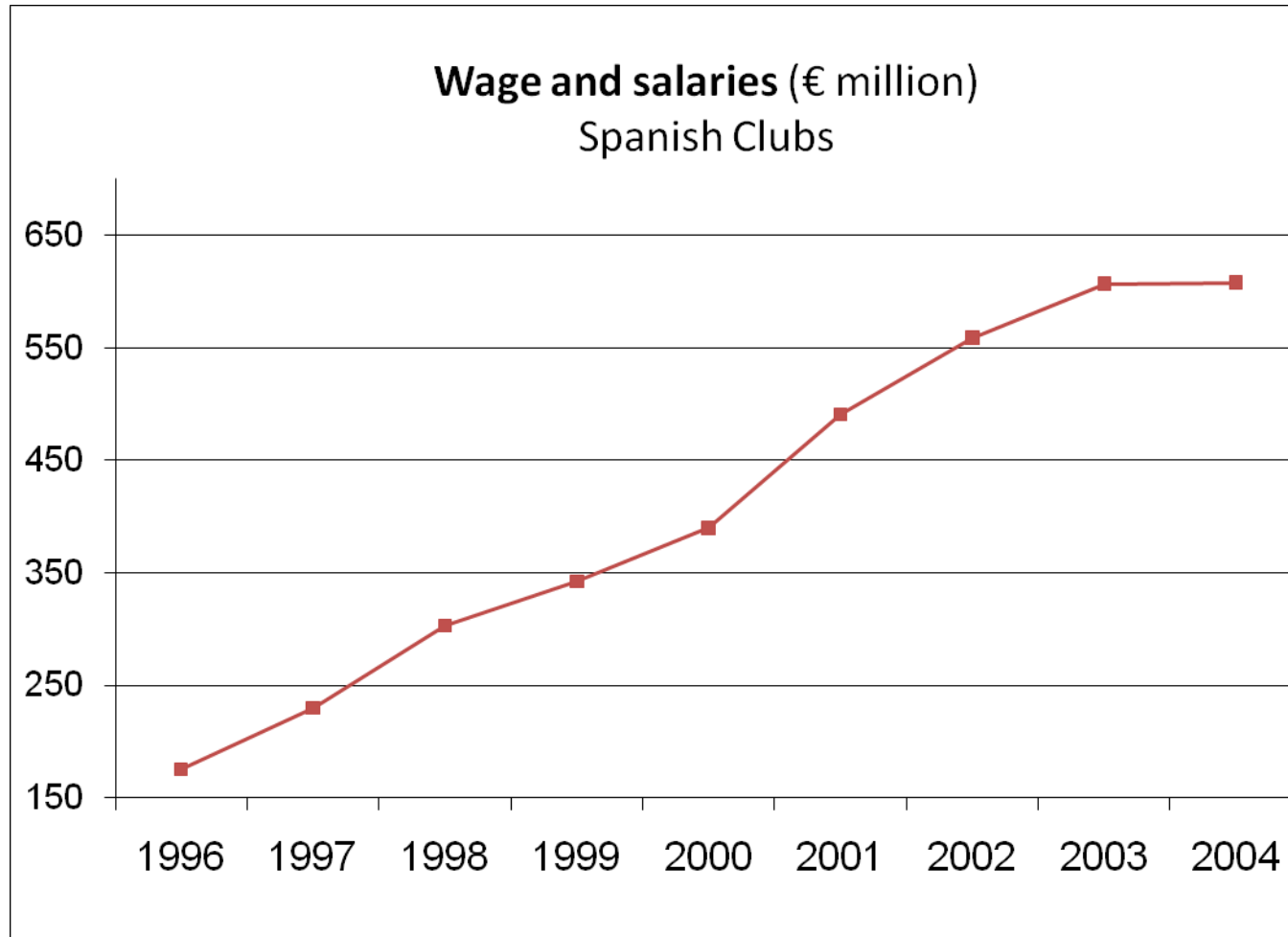
Escalating salaries of football players

- One challenging issue (mentioned in the motivation) is the debate about the appropriateness of the generous rewards received by football players (especially by superstars who are at the top of the earning distribution).
- But the analysis has eventually be constrained to examining salary determination.

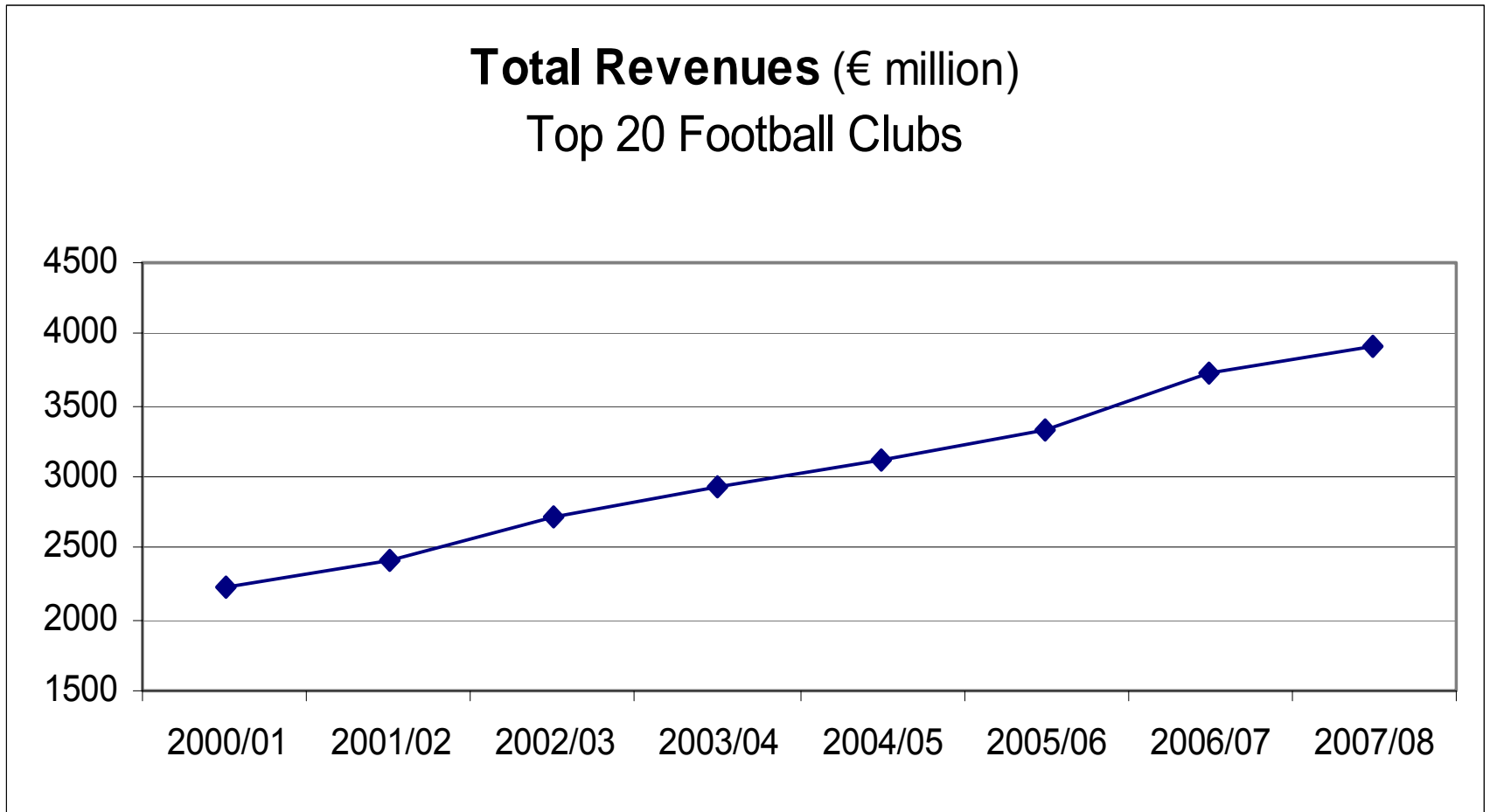
Thus, further research is desirable to tackle the question:

Should intervention be enforced in European sport leagues, for correcting the market failures (inefficiencies) that stem from market power situations?

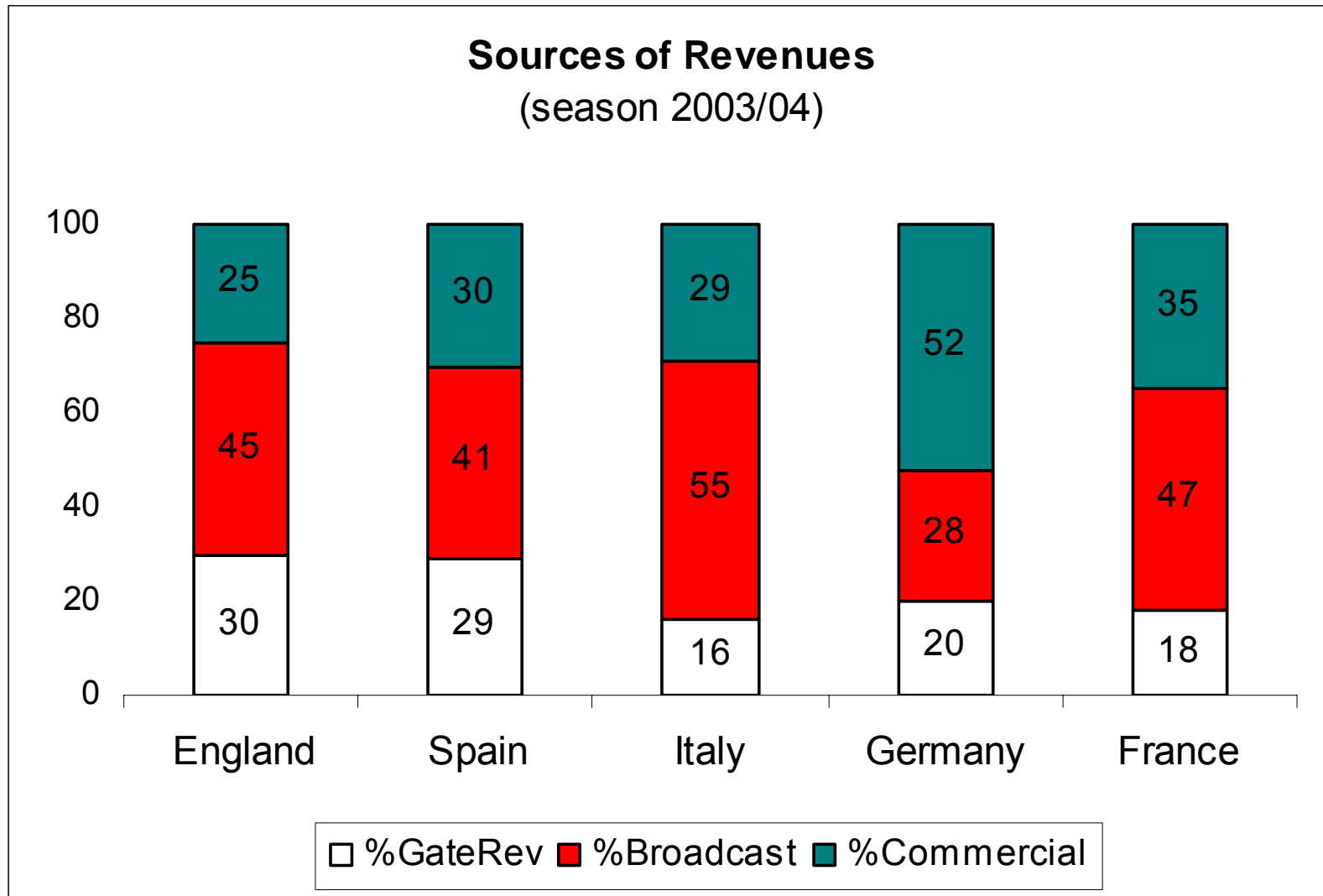
The rapid increase in **wages** is a common feature in other leagues.



The **size of the market** (revenues) has doubled in the last 8 or 9 years.

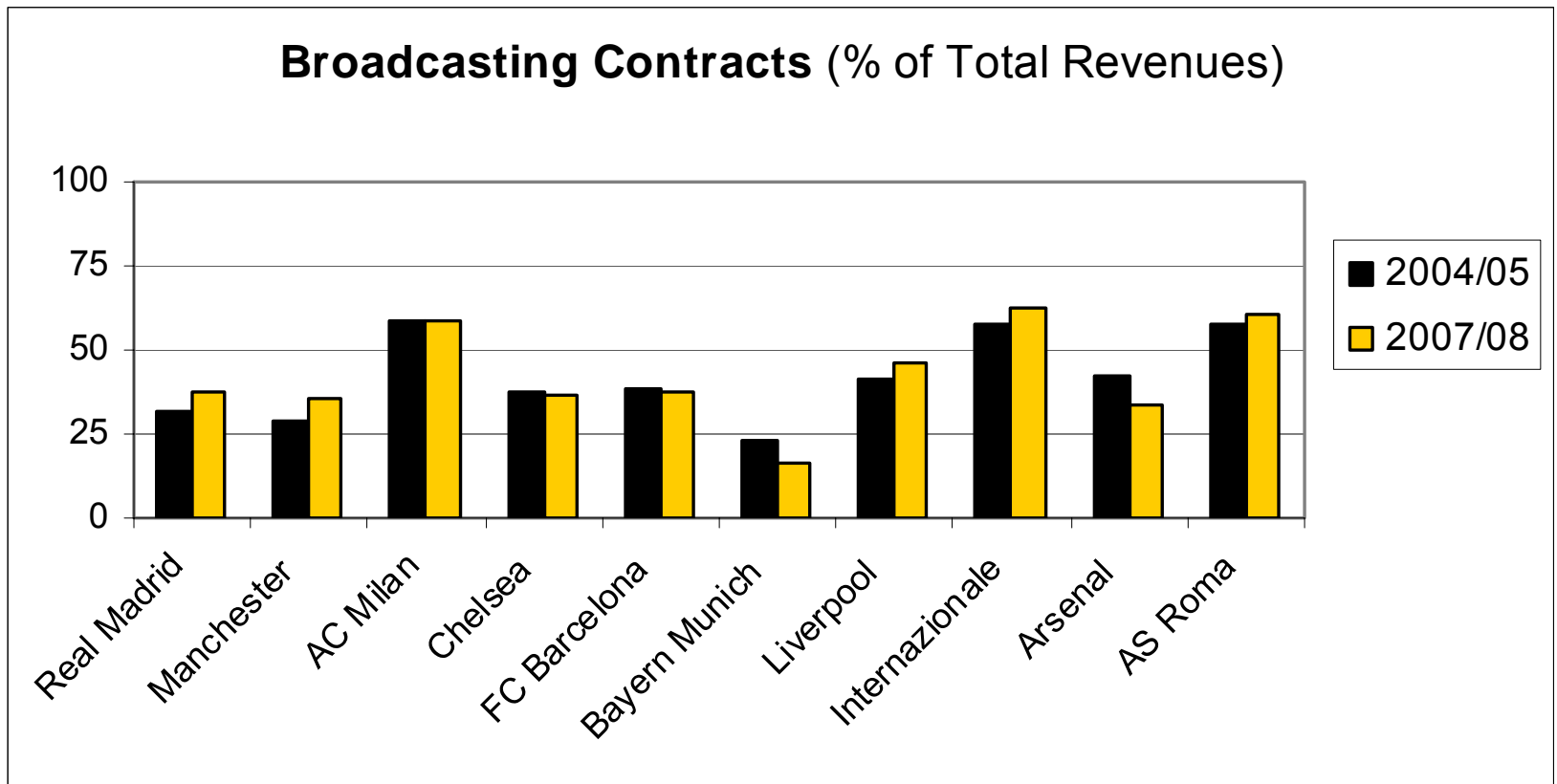


Broadcasting contracts represent the largest source of Revenues in the european football leagues.



The share of revenues coming from TV rights is the most important source of earnings.

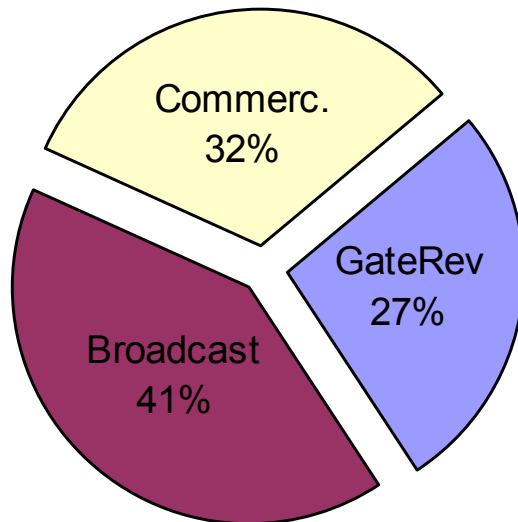
It varies across teams, representing more than 50% of total revenues for Italian Clubs.



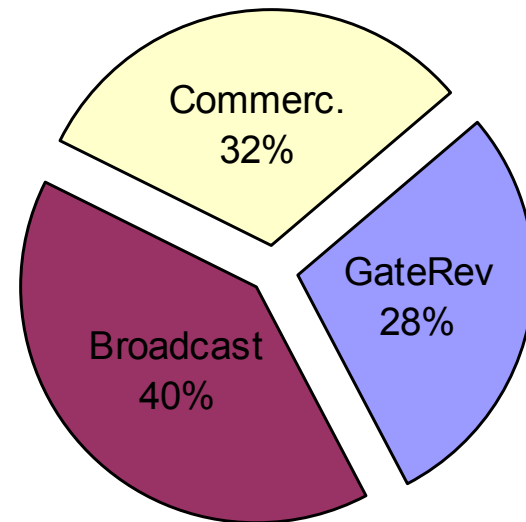
Broadcasting contracts are the most important source of revenues.

There have been not significant changes in the last years.

Source of revenues - Top 10 Clubs
(Season 2004/05)



Source of revenues - Top 10 Clubs
(Season 2007/08)



Structure of the professional soccer labour market

- Frick describes contract bargaining as a **bilateral monopoly** situation.
- It may be argued that such a market power situation is just affecting a little number of actors:
 - some renown teams, and
 - a few superstar players (endowed with outstanding talents).
- The paper by Rosen (1981) is the reference to examine the issue of superstars. But this feature is a widespread phenomenon in other labour markets, as stressed by **Frank and Cook** (1995).
- In winner-take-all markets, the few workers who are slightly better than others become the winners of the market, earning much larger earnings than the losers. (Skew distribution of earnings stem from small differences in performance).
- This type of situations can prevail in the market under some circumstances.
For instance, if the size of the market is enlarged by technological improvements.
(In the modern football, the scale of the industry allow for large prizes to be paid to the winners whose capacity to produce spectacle draws attention of many fans and

- According to Frank and Cook, there are many markets (like professional sports, pop culture, and arts) with similar reward structures among them, in which many individuals compete for a handful of big prizes at the top.
- The fact of affecting other markets, enhances the scope of the conclusions reached from studying sport markets. Hence, I suggest including **Frank and Cook (1995)** as an important bibliographical reference.
- A **dual labour market** structure is likely to be suitable to the case of European football labour market:
 - In **one segment**, the workers (the majority of them being mean-normal candidates) are mostly paid in accordance with their marginal productivity.
 - The **other segment** is driven by the share of market power of the bargaining agents (the arm rice phenomenon comes into scene). The market comprises a few outstanding workers (soccer superstars), who accumulate market power, and a number of clubs that fiercely compete for hiring them (the winner-take-all hypothesis undoubtedly applies).

Table 3. Explaining Soccer Players' Economic Valuation

Dep.var. MarketValue	Monopsony model		Winner-take-all model	
Variable	(1)	(2)	(3)	(4)
Winner-all-5			1.5360*** (9.21)	1.5850*** (9.12)
Winner-all-10			0.4818*** (3.08)	0.5444*** (2.89)
Winner-all-20			0.2206 (1.40)	0.0940 (0.58)
Team-winner			0.3473*** (2.65)	0.3997*** (2.78)
PuntosMarca	0.9207*** (8.01)		0.8351*** (7.45)	
LigaFantastica		0.2358*** (4.93)		0.2062*** (4.61)
FilteredGoogle	0.3837*** (7.21)	0.4106*** (7.64)	0.3205*** (6.26)	0.3444*** (6.65)
International	0.0155*** (4.14)	0.0171*** (4.41)	0.0158*** (4.65)	0.0173*** (5.02)
InternationSq	-0.0001 (-1.50)	-0.0001 (-1.20)	-0.0001*** (-3.52)	-0.0001*** (-3.27)
Europe	0.0965*** (3.84)	0.1001*** (3.81)	0.1099*** (4.44)	0.1147*** (4.41)
EuropeSq	-0.0031** (-2.35)	-0.0038*** (-2.70)	-0.0040*** (-3.13)	-0.0046*** (-3.40)

- In summary, there are three ingredients to explain the large monetary payments made to achieve services of football players:

A. the **structure** of the industry, which allows for market power situations.

B. the **arms race** phenomenon, affecting the clubs when hiring new players.

C. the prevalence in **football Clubs** of other aims different from **maximising revenues**.

- The query about the aims pursued by sport organizations is an old issue (Cf.: Sloane, 1971).

- Yet, it still attracts research efforts: Do football clubs behave as winning maximising firms or should they be treated as profit maximisers? According to Garcia-del-Barrio and Szymanski (2009), it seems that profit maximising clubs are very much the exception and not the rule.

- These 3 elements can help explaining how star players achieve huge rewards

(the rents that would have otherwise enriched the clubs do eventually revert to the few superstar players who enjoy strong bargaining power).

Table 1 Operating profits in the 'Big Five' European soccer leagues

Profits (million €)	1996	1997	1998	1999	2000	2001	2002	2003	2004
English Premiership	77	129	143	104	80	121	125	185	223
Spanish 1 ^a Liga	-23	19	-124	-170					
Spanish 1 ^a Liga *	-21	17	-101 ^a	-143 ^a	-152 ^a	-295 ^b	-511 ^b	-302 ^b	
Italian Serie A	-3	8	-36	-114	-46	-216	-404	-381	-341
German Bundesliga		37	27	47	35	87	100	138	52
French Ligue 1	5	-7	-46	-70	36	-41	-98	-61	-102

Source: Deloitte & Touche Annual Review of Football Finance (2003, 2005)

*Authors' calculations from clubs accounts. Out of the 20 teams competing in the LFP, we mark with 'a' the seasons in which 19 clubs' accounts were used, while 'b' implies that only 15 or 16 team' accounts were available

2. Determinants of player salaries: What are the factors affecting players' wages?

- The empirical findings by Frick go in line with previous studies, in which the wage is a function of talent, age, experience (tenure), etc.

- Among the factors involved in salary determination, the obvious one is **sport performance**. In this regard, a meaningful outcome is that:

“more recent performance has greater impact than career performance”

- Another finding, congruent with other studies, discloses that:

“the economic status of the clubs (and their ability to pay) is a crucial factor as well”

- Another important issue is the fact of using, as a proxy for **undisclosed salary**, the market valuations provided by “Kicker”. Apart from not being real wages:

Are not these valuations capturing the overall willingness of clubs to pay?

That is to say, the chosen proxy may be capturing the transfer fees paid to the selling team together with the wage bill agreed with the player.

Accuracy of the proxy variables

- Several proxies have been used for capturing **individual sport performance**:

- a) number of games played
- b) number of goals scored

(a) is very poor and bias depending the average quality of one's team.

- Including dummies to control for teams alleviates the problem,
- but a better approach is presumably to weight up the number of games by the average quality of the team.

(b) The second proxy is neither convincing, given the different meaning that scoring a goal has for individuals who play at different positions in the pitch.

- Again, the introduction of dummies for positions may help, but it is possibly better to experiment with multiplicative dummies:
 $\text{numbergoals} * \text{fieldposition}$.

- A major comment in this regard is:

why not using the subjective **overall player rating** provided by “Kicker”?

(the grades reported by the journalists throughout the season are added to compute an homogeneous individual ranking of performance).

- this rating is likely available, as has been used in the other paper
- it is a much better appraisal of sport productivity.

- The number of games played with the national team is used as proxy for popularity.

- Again, there are better ways to measure this feature; such as the number of news related to the player or his level of presence in the Internet.

- I invite you to see the home page of Economics, Sports and Intangibles (ESI) research group, to learn more about this point:

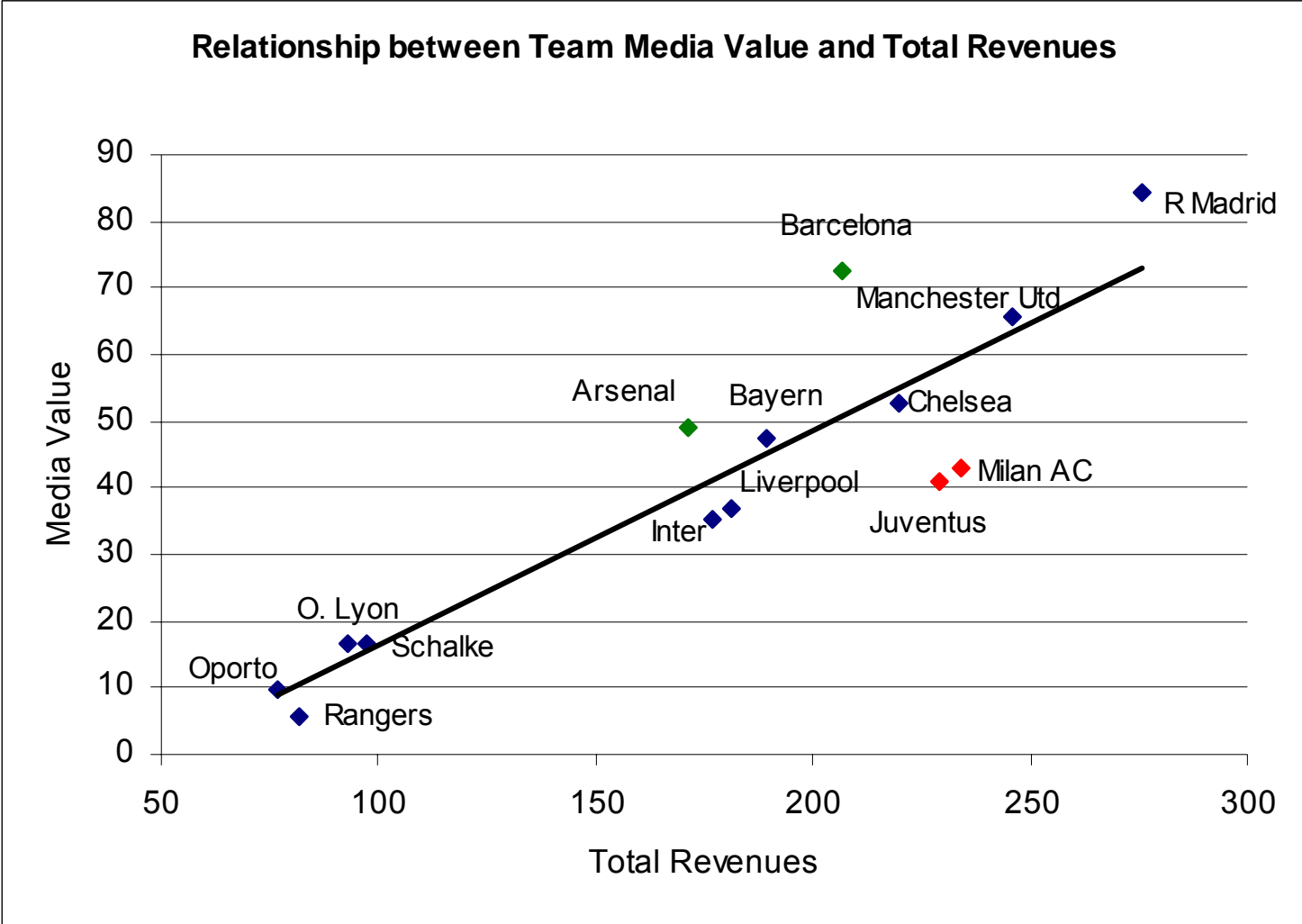
<http://www.unav.es/econom/sport>

Appraisal of the overall contribution of soccer players

Calculating the fair market value

- Running a soccer club involves economic issues, as in any other type of business.
- Economic organizations arrange their inputs in accordance with the principles of efficiency. Specialization of factors results in different tasks being entrusted to different individuals, in accordance to their comparative (relative) advantages.
- In the football industry, the nature of the business consists of delivering **spectacle**. Accordingly, the main sources of revenues are increasingly driven by broadcasting contracts. (Having into account the media value of players and teams is simply unavoidable).
- Soccer players contribute to their team mainly through their talent in two areas:
 - a) sport performance
 - b) capacity of attracting economic revenues
(through broadcast rights, merchandising contracts, etc.)

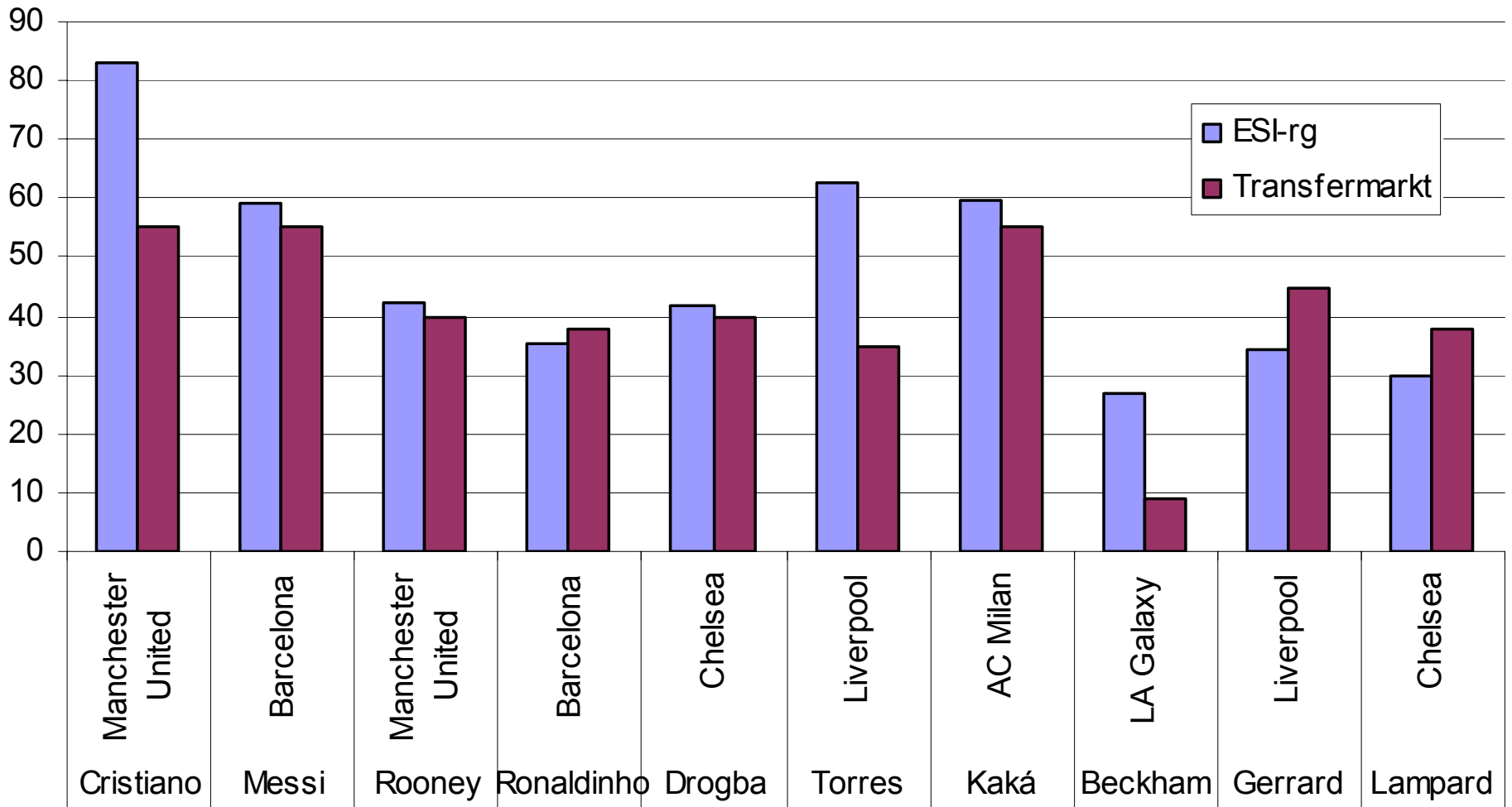
Relationship between Media Value and Total Revenues (season 2004/05)



Missing elements in the analysis

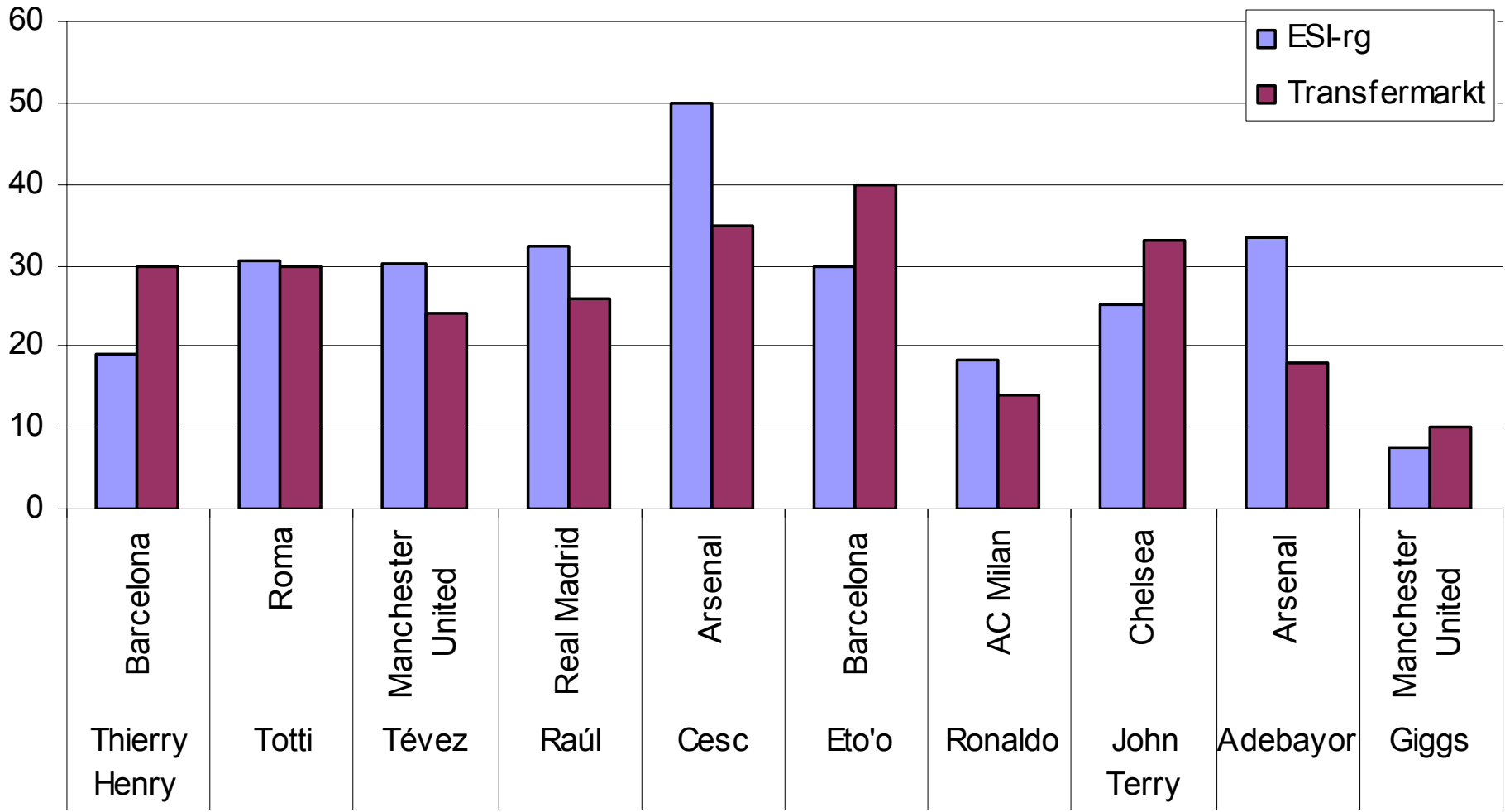
- Most of studies on player's compensation are mainly based on **sport** performance. This implies that crucial aspects are neglected when dealing with the football industry.
- I want to highlight that the players **economic capacity to attract revenues** is no less important than sport performance ,in order to determine the rewarding schemes.
- The players differ in sport talent but also in their economic contribution to the team. Both aspects are desirable for clubs, which will expect some players to contribute mainly through sport performance while others concentrate on increasing revenues.
- To mention just some findings in this regard, **Pujol** (2008) identifies the following factors as the essential elements to achieve the fair market value of the players:
 - media value of the player (which already accounts for the level of talent)
 - media value of the buying and selling team
 - relative rank of the player media value with respect to his team mates
 - some few individual characteristics, like the age.

Market Value of Top Players. ESlrg Vs Transfermarkt Estimations (millions of euro)



Market Value of Top Players.

ESlrg Vs Transfermarkt Estimations (millions of euro)



3. Contract Duration and Player Performance

Does the length of the contract influence performance? Is shirking an issue?

- The empirical evidence on shirking in professional sports is summarize in the paper, informing of contrasting evidence (at least for the NBA and MLB leagues).
- The issue is approach by evaluating productivity at different years of the contract.

Comments on the methodology

- The **moral hazard effect** does equally affect all the individuals in the sample.
- Instead, the **selection effect** (better players are signed to longer contracts) works differently the different sub-samples, given that:
 - The age interacts with the length of the contract
 - If the labour market is dual, a different behaviour in each segment (sub-sample) of the market is expected.
- Hence, it is advisable to experiment with sub-samples, grouping the individuals by their age and their superstar status.

Minor comments

- In my opinion, the contrasting evidence on shirking is not surprising, since:
 - the existence of psychological rents: players like recognition from fans, in addition to monetary rewards.
 - the fact that past career performance also influences the market value of a player, thereby affecting his career opportunities in the future.
- Exploring the interaction between player position and the number of goals scored is advisable. Through the inclusion of multiplicative goal-dummies by position, one can even capture keepers performance.
- As stated by Frick, contract status (cs) dramatically change with the age, since it affects the stage of player's professional career.
- Because the players behaviour changes at the end of his career, it may be also meaningful to explore the interaction between contract status and age.

TECHNICAL NOTES

Salary Determination in the German “Bundesliga”: A Panel Study

- The use of quantile regression is appropriate, as the estimators are more robust than OLS when analysing markets of superstar.
- The signs of the estimators for CGS (career goals scored in the Bundesliga) is certainly strange. I suggest investigating some potential correlation with GLS (goals scored last season in Bundesliga). I also wonder if you should explore the interaction of the number of goals with the pitch position of the players. For instance, you could tackle this issue by means of using multiplicative dummies gathering both aspects.
- Regarding the fixed effects and random effects estimations, it might be convenient to include some theoretical comments together with the statistical analysis. In principle, the element of individual heterogeneity, attached to each player, should be better treated as a fixed effect element than randomly. The Hausman test is the empirical argument that corroborates this feature, even if this choice would imply to abandoning the use of regional dummies.

Contract Duration and Player Performance

- Logical explanations for the estimated coefficient of yellow and red cards:

Yellow cards may be capturing commitment while red cards inform of lack of fairness and inappropriate behaviour (damaging also the interest of the Club).

- There might be contradictory arguments invoked for using the “censored” contract variable:

(p. 8): “Since it is plausible to assume that in the case of a multi-year contract a player’s incentives to perform well will not increase linearly...”

(p. 9): “players gradually start to deliver better performances in order to reach their optimal bargaining position”.

- It might also be an argument about the contract length for the dummy “Last Year Contract”.

(While this variable is meant to identify the players whose remaining contract are shorter than 12 months, the time spell is shortening along with the season in which sport performance is measured. In other words, it might be more accurate to include individuals with contracts expiring within the next 24 months).

- I am reluctant to believe that the empirical evidence, relating the length of the contract (and the players in each category) with team performance, permits achieving definite conclusions.

BIBLIOGRAPHICAL REFERENCES:

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- Pujol, F. (2008): "Informe sobre fichajes y valoración de futbolistas, temporada 2008/09", ESI-rg University of Navarra. (Diciembre 2008).
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- Sloane, P. (1971): The economics of professional football: the football club as utility maximiser. Scottish Journal of Political Economy 17: 121–146.

Table 1. Soccer players' opportunities to play (see Appendix B)

Dep. variable: $\log \frac{p}{1-p}$	Season 2001/2		Season 2002/3	
Variable	(1)	(2)	(3)	(4)
PMarca	2.981*** (8.00)		1.543*** (4.74)	
LFantast		0.707*** (5.59)		1.716*** (8.18)
marketValue	0.874*** (4.94)	1.179*** (7.29)	1.437*** (7.44)	1.359*** (7.30)
superStar	-0.577 (-0.70)	-0.692 (-0.93)	-1.674*** (-2.47)	-1.657*** (-2.49)
numbPlayers	-1.121** (-2.05)	-0.150** (-2.14)	-0.026 (-1.32)	-0.047*** (-2.59)
gamesEurope	-0.074*** (-3.00)	-0.101*** (-3.94)	-0.071*** (-2.65)	-0.066*** (-2.49)

Table 2. Soccer players' opportunities to play. Season 2002/3 (see Appendix B)

Dep. variable: $\log \frac{p}{1-p}$	Filtered googleValue		Filtered marketValue	
Variable	(5)	(6)	(7)	(8)
PMarca-0102	2.446*** (5.04)		2.592*** (5.51)	
PMarca	1.286*** (4.04)		0.932*** (2.90)	
LFantast-0102		1.041*** (3.60)		1.114*** (3.30)
LFantast		1.463*** (3.91)		1.246*** (3.56)
filteredMvalue			1.451*** (6.20)	1.398*** (6.58)
filteredGvalue	1.172*** (5.97)	1.076*** (4.88)		
superStar	0.414 (0.64)	0.470 (0.68)	0.558 (0.92)	0.524 (0.87)
numbPlayers	0.007 (0.31)	-0.036 (-1.58)	0.008 (0.33)	-0.031 (-1.32)
gamesEurope	-0.004 (-0.15)	-0.007 (-0.30)	-0.002 (-0.10)	-0.007 (-0.33)
extraCommun	0.155 (0.60)	0.025 (0.10)	0.150 (0.57)	0.038 (0.15)
communitEU	0.233 (0.85)	0.123 (0.50)	0.147 (0.52)	0.121 (0.49)
unfairGame	-0.289 (-0.51)	-0.257 (-0.44)	-0.208 (-0.37)	-0.258 (-0.47)
goalKeeper	0.632 (0.90)	1.993*** (2.84)	0.691 (1.08)	1.895*** (3.11)
midFielder	-0.418* (-1.90)	-0.298 (-1.40)	-0.407* (-1.81)	-0.323 (-1.52)
attacPlayer	-1.118 (-0.50)	-0.248 (-1.11)	-0.130 (-0.55)	-0.254 (-1.15)
age	-0.292 (-0.78)	-0.457 (-1.25)	-0.282 (-0.82)	-0.484 (-1.46)
age2	0.004 (0.75)	0.007 (1.21)	0.004 (0.78)	0.008 (1.39)
cons...	4.103 (0.75)	5.712 (1.08)	3.960 (0.79)	6.155 (1.29)
R-squared	0.374	0.415	0.382	0.456
No. of observations	236	236	236	236

Notes: Regressions with robust standard errors.

Estimates of team dummies are not reported here, but are available from the authors on request.

t-statistic in parenthesis.

*** Significant at 1 per cent; **at 5 per cent; and * at 10 per cent.

Table 1. Profits and Revenues in the 'Big Five' Soccer Leagues

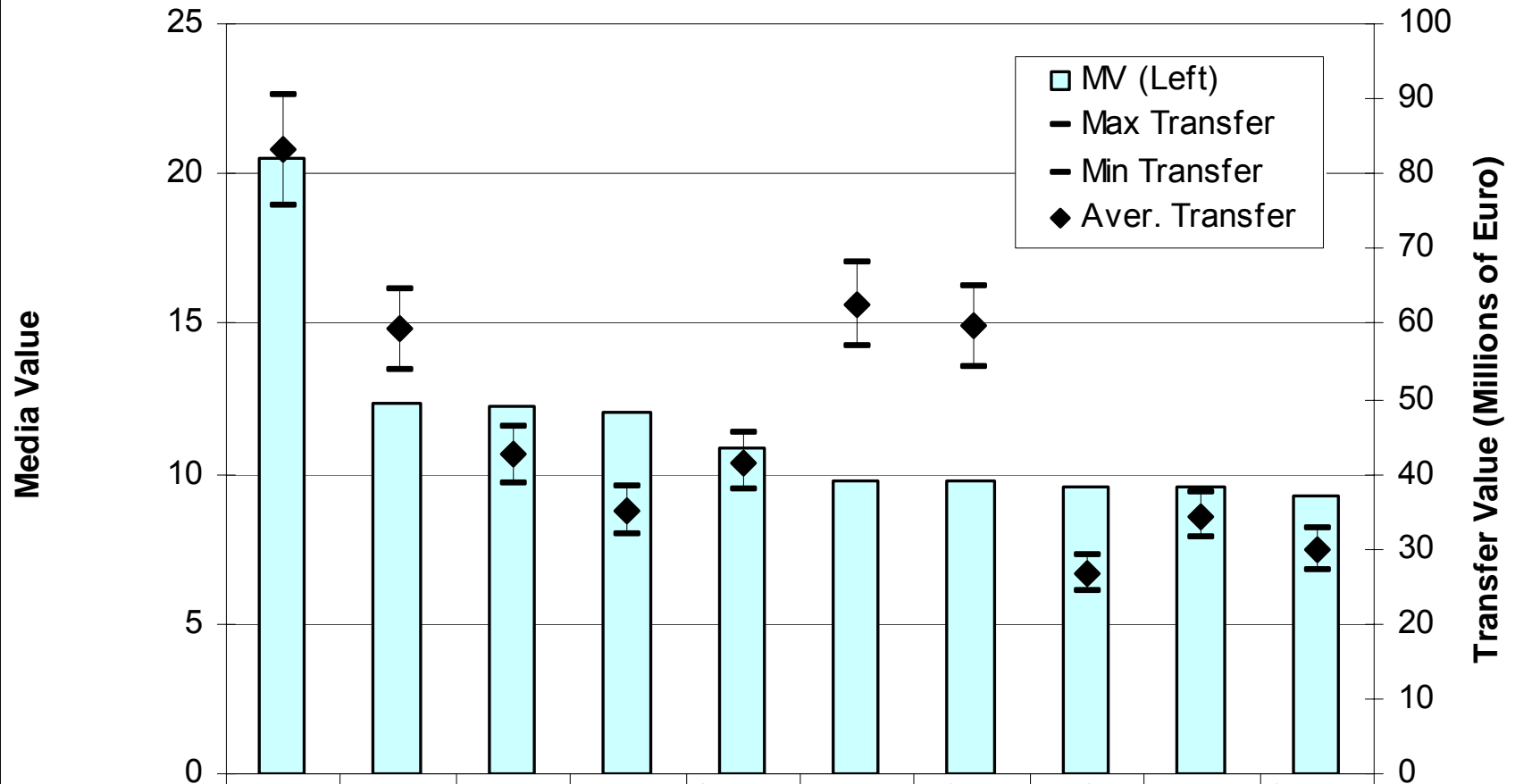
Profits (million €)	1996	1997	1998	1999	2000	2001	2002	2003	2004
English Premiership	77	129	143	104	80	121	125	185	223
Spanish 1 ^a Liga	-23	19	-124	-170					
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Italian Serie A	-3	8	-36	-114	-46	-216	-404	-381	-341
German Bundesliga		37	27	47	35	87	100	138	52
French Ligue 1	5	-7	-46	-70	36	-41	-98	-61	-102
Revenues (million €)									
English Premiership	534	716	898	1034	1192	1447	1748	1832	1949
Spanish 1 ^a Liga	366	524	569	612	683*	713* ^a	776	847	953
Italian Serie A	452	551	650	714	1059	1151	1127	1137	1126
German Bundesliga	373	444	513	577	681	880	1043	1114	1058
French Ligue 1	277	293	323	393	607	644	643	689	655
Revenues 2004 (million €)									
	Gate receipts	Broad-cast	Sponsor-ship	Com-mercial	Total	% GateRev	% Broad	% Spons.	% Com.
English Premiership	585	877	487 ^b		1949	30	45	25 ^b	
Spanish 1 ^a Liga	276	391	200	86	953	29	41	21	9
Italian Serie A	180	619	158	169	1126	16	55	14	15
German Bundesliga	212	296	328	222	1058	20	28	31	21
French Ligue 1	118	308	144	85	655	18	47	22	13

Source: Deloitte&Touche Annual Review of Football Finance (2003, 2005). *Authors' calculations from clubs' accounts.

^a Records extrapolated from a sample of 16 clubs' accounts. (The total number of clubs in the league is 20).

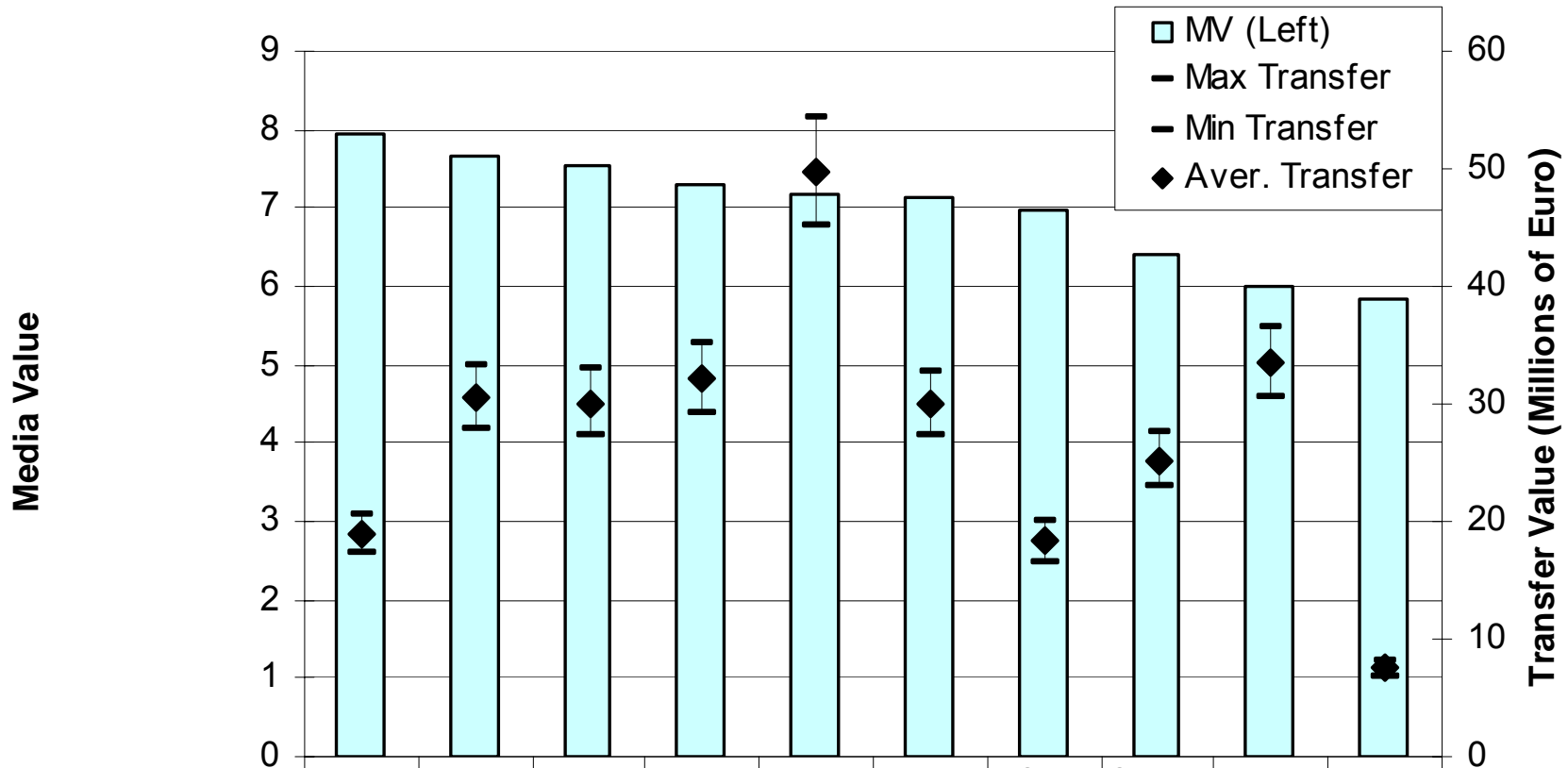
^b Sponsorship and other commercial income combined.

Fair Transfer Value (Millions of Euro, Right Scale)



	Manchester Cristiano	Barcelona Messi	Manchester Rooney	Barcelona Ronaldinho	Chelsea Drogba	Liverpool Torres	AC Milan Kaká	LA Galaxy Beckham	Liverpool Gerrard	Chelsea Lampard
□ MV (Left)	21	12	12	12	11	10	10	10	10	9
— Max Transfer	91	65	46	38	45	68	65	29	38	33
— Min Transfer	76	54	39	32	38	57	54	24	31	27
◆ Aver. Transfer	83	59	42	35	42	63	60	27	34	30

Fair Transfer Value (Millions of Euro, Right Scale)



□ MV (Left)	8	8	8	7	7	7	7	6	6	6
— Max Transfer	21	33	33	35	54	33	20	27	37	8
— Min Transfer	17	28	27	29	45	27	17	23	30	7
◆ Aver. Transfer	19	31	30	32	50	30	18	25	34	8

There are three major sources of revenues.

