The Economic Value of Professional Athletes: Empirical Evidence from Professional Football Players

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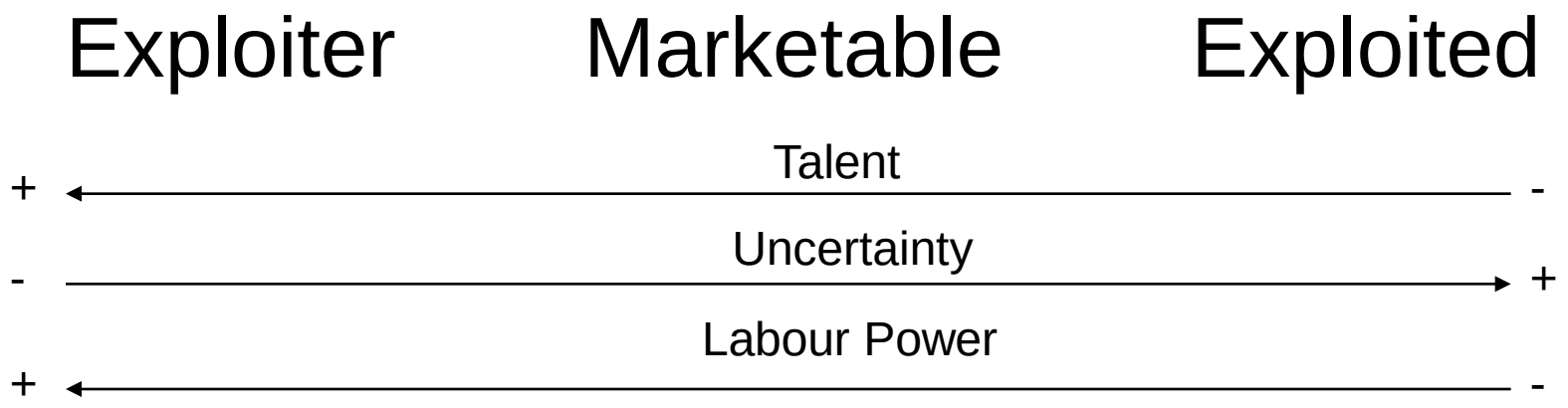
Preliminary work

- Bryson, A., Simmons, R., Rossi, G. (2012)

  “Why migrants are paid more? Evidence from Italian football”, NIESR Discussion Paper.

Professional Football Players

- “Just another number”
- “Piece of meat”
- “Commodities”



Football Players as Assets

- “the right to future economic benefits arising from transfers and enforceable by the entity”
- Football players generate revenues and have a transfer value as intangible assets.
- “non-financial fixed assets that do not have physical substance but are identifiable and are controlled by the entity through custody or legal rights”

Resource Based-View Theory

- Appropriability
- Transferability
- Replicability
- Durability

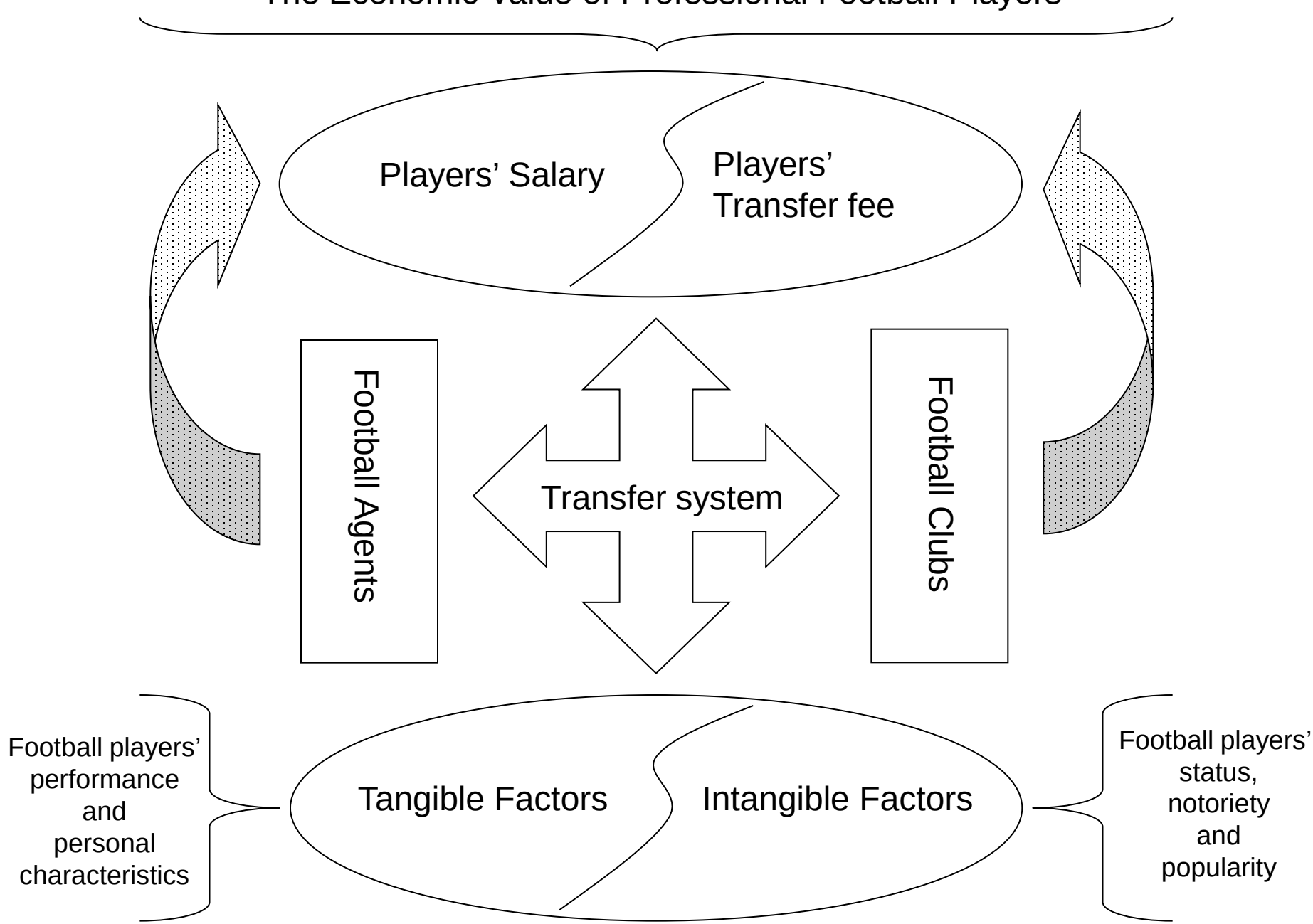
  Football players are strategic resources characterised by their specific human capital which generates competitive advantage.

The Players' Labour Market Structure

HIGH	Monopoly: "Star Model"	Bilateral monopoly: "bargaining over rents"
LOW	Perfect competition: "Just wage"	Monopsony: Exploitation of players
Player power/ Club power	**LOW**	**HIGH**

Research Questions….

- *How can the economic value of a player be defined?*
- *Which observable factors are significant for the economic evaluation of player?*
- *How would an improved evaluation of players' as assets effect management and financial decision making?*


The Economic Value of Professional Football Players
Players' Salary
Players' Transfer fee
Football Agents
Transfer system
Football Clubs
Football players' performance and personal characteristics
Tangible Factors
Intangible Factors
Football players' status, notoriety and popularity

Research structure

- This research is structured in 3 different parts:
  1) Determinants of players' salaries;
  2) Determinants of players' transfer fees;
  3) Assessments of players' performance in relation to contract duration

Part 1: Determinants of players' salaries

- Sample of 2201 observations requiring data on individual soccer players of Serie A from 2000 to 2010.
- Dependent variables: players' net annual salary.
- A semilog specification is adopted with the natural logarithm of the dependent variable avoiding any heteroskedasticity problem in the estimated regression.
- Simple OLS estimators have been chosen:

$$lnY=c_0+c_1X_1+c_2X_2+.....+c_nX_n+\varepsilon$$

Y= independent variable

X (1, n) = dependent variable

Data statistics: all players

Variable	*Description*	*Obs.*	*Min.*	*Max.*	*Mean*	*Sta. Dev.*
Dependent variable						
Ln_Salary	Ln (Net salary)	2201	-3.89	2.637	-.456	1.01
Independent Variables						
Players' experience						
Age	Age in years	2201	16	42	26.599	4.194
AgeSq	Quadratic term in age	2201	256	1764	724.84	226.61
Exp A	Average number of Serie A matches played per season prior to (t-1)	2201	0	37	17.76	10.454
Exp Asq	Quadratic term in Exp A	2201	0	1369	424.69	328.47
Match_Sea	Matches played in Serie A in season (t-1)	2201	1	38	22.477	9.782
Players' performance						
Go_A	Career goals scored per game in Serie A prior to season (t-1)	2201	0	1	.077	.121
Goal_Sea	Goals scored per game in Serie A in season (t-1)	2201	0	1	.089	.1401
Ass	Assists provided per game in Serie A in season (t-1)	2201	0	3.167	.568	.515
IVG	Index of player's performance in season (t-1)	1574	12	28.35	18.292	1.556
Players' reputation						
U21	Under 21 National team players	2201	0	1	.079	.27
Int_Ita	Italian Players with an international status	2201	0	1	.523	.499
Int_For	Foreign Players with an international status	2201	0	1		
Ita	Italian players	2201	0	1	.648	.477
UEFA_EU	European Union	2201	0	1	.083	.276
UEFA_ExEU	Extra European Union	2201	0	1	.059	.235
Sou_Ame_T	South American players Top	2201	0	1	.125	.147
Sou_Ame_N	South American players Normal	2201	0	1	.049	.217
Afri	African players	2201	0	1	.022	.147
Asia	Asian players	2201	0	1	0.1	.101
Year Contr	Contractual remaining years	2201	1	5	2.597	1.175
Gkp	Goalkeeper	2201	0	1	.085	.279
Def	Defender	2201	0	1	.327	.469
Mid	Midfielder	2201	0	1	.394	.488
Fwd	Forward	2201	0	1	.192	.394
Control Variables						
Seasons 2000-10	Season 2000-01 (Dummy)	2201	0	1	.129	.336
Clubs	Serie A club (Dummy)	2201	0	1	.065	.247

Data statistics: goalkeepers

Variable	*Description*	*Obs.*	*Min.*	*Max.*	*Mean*	*Sta. Dev.*
Dependent variables						
Ln_Salary	Ln (Net salary)	188	-2.302	2.484	-.015	1.071
Independent Variables						
Players' experience						
Age	Age in years	188	18	42	28.877	5.019
AgeSq	Quadratic term in age	188	324	1764	858.98	287.97
Exp A	Average matches played in Serie A prior to season (t-1)	188	0	35	16.293	10.634
Exp Asq	Quadratic term in Exp A	188	0	1225	377.96	336.58
Match_Sea	Matches played in Serie A in season (t-1)	188	1	38	19.319	13.32
Players' performance						
Cat_G	Catches made per game in Serie A season (t-1)	188	1	15	6.842	1.795
Sav_G	Saves made per game in Serie A season (t-1)	188	0	11.5	3.215	1.256
Sh_Ag_G	Shots against per game in Serie A in season (t-1)	188	1	16.5	4.857	1.748
Us_Pu_G	Useful punts per game in Serie A in season (t-1)	188	0	8.66	1.702	1.771
Go_Ag_G	Goals conceded per game in Serie A in season (t-1)	188	0	71	23.606	17.325
IVG	Index of player's season evaluation in season (t-1)	114	13.66	28.35	18.36	1.707
Players' reputation						
Year Contr	Contractual remaining years	188	1	5	2.313	1.152

Data statistics: defenders

Variable	*Description*	*Obs.*	*Min.*	*Max.*	*Mean*	*St. Dev.*
Dependent variables						
Ln_Salary	Ln (Net salary)	721	-2.525	2.339	.069	.948
Independent Variables						
Players' experience						
Age	Age in years	721	16	38	27.009	4.041
AgeSq	Quadratic term in age	721	256	1444	745.14	221.17
Exp A	Average matches played in Serie A prior to (t-1)	721	0	36.833	17.76	10.454
Exp Asq	Quadratic term in Exp A	721	0	1356.6	431.51	310.21
Match_Sea	Matches played in Serie A in season (t-1)	721	1	38	21.871	9.255
Players' performance						
Go_A	Career goals scored per game in A prior to (t-1)	721	0	.2	.077	.121
Go_Sea_D	Goals scored per game in Serie A in season (t-1)	721	0	.4	.031	.051
Ass_D	Assists provided per game in Serie A in season (t-1)	721	0	1.551	.298	.286
Tac_D	Tackles per game in Serie A in season (t-1)	721	0	4.889	1.938	.763
Int_D	Interceptions per game in Serie A in season (t-1)	721	0	38.3	11.17	3.474
Us_Pu_D	Useful punts per game in Serie A in season (t-1)	721	0	1.9	.333	.236
Ant_D	Anticipations made per game in SerieA in season (t-1)	721	.52	.5	.039	.142
Us_Dr_D	Useful dribbles per game in Serie A in season (t-1)	721	0	2.2	.318	.319
Suc_Pa_D	Successful passes per game in Serie A in season (t-1)	721	0	78.761	26.233	9.402
Us_Th_Pu_D	Useful through passes per game in Serie A in season (t-1)	721	0	4.272	.79	.694
Lo_Ba_D	Lost balls per game in Serie A in season (t-1)	721	0	39.593	14.15	4.394
Re_Ba_D	Recovered balls per game in Serie A in season (t-1)	721	0	38.444	15.622	6.251
Fo_Co_D	Fouls committed per game in Serie A in season (t-1)	721	0	5	1.488	.584
IVG	Index of player's season evaluation in season (t-1)	521	14	22.6	18.232	1.543
Players' reputation						
Year Contr	Contractual remaining years	721	1	5	2.439	1.131

Data statistics: midfielders

Variable	*Description*	*Obs.*	*Min.*	*Max.*	*Mean*	*St. Dev.*
Dependent variables						
Ln_Salary	Ln (Net salary)	869	-2.525	2.484	.136	.986
Independent Variables						
Players' experience						
Age	Age in years	869	17	38	26.085	3.826
AgeSq	Quadratic term in age	869	289	1444	694.94	202.06
Exp A	Average matches played in Serie A prior to (t-1)	869	0	37	17.68	10.678
Exp Asq	Quadratic term in Exp A	869	0	1369	426.5	335.06
Match_Sea	Matches played in Serie A in season (t-1)	869	1	38	23.142	9.264
Players' performance						
Go_A	Career goals scored per game in A prior to (t-1)	869	0	1	.065	.086
Go_Sea_M	Goals scored per game in Serie A in season (t-1)	869	0	1	.069	.093
Us_Dr_M	Useful dribbles per game in Serie A in season (t-1)	869	0	4.838	.806	.652
Sh_Tar_M	Shots on target per game in Serie A in season (t-1)	869	0	2.322	.329	.291
Suc_Pa_M	Successful passes per game in Serie A in season (t-1)	869	0	66.55	26.1	11.88
Us_Th_Pa_M	Useful through passes per game in Serie A in season (t-1)	869	0	8	1.163	5.346
Lo_Ba_M	Lost balls per game in Serie A in season (t-1)	869	0	34	14.166	5.346
Re_Ba_M	Recovered balls per game in Serie A in season (t-1)	869	0	22.93	8.662	5.241
IVG	Index of player's season evaluation in season (t-1)	639	13.8	24.6	18.275	1.543
Players' reputation						
Year Contr	Contractual remaining years	869	1	5	2.652	1.182

Data statistics: forwards

Variable	*Description*	*Obs.*	*Min.*	*Max.*	*Mean*	*St. Dev.*
Dependent variables						
Ln_Salary	Ln (Net salary)	423	-3.218	2.772	.415	1.061
Independent Variables						
Players' experience						
Age	Age in years	423	16	39	25.943	4.36
AgeSq	Quadratic term in age	423	256	1521	692.02	227.78
Exp A	Average matches played in Serie A prior to (t-1)	423	0	37	17.785	10.679
Exp Asq	Quadratic term in Exp A	423	0	1369	430.09	340.73
Match_Sea	Matches played in Serie A in season (t-1)	423	1	38	23.546	9.51
Players' performance						
Go_A	Career goals scored per game in A prior to (t-1)	423	0	1	.219	.179
Go_Sea_F	Goals scored per game in Serie A in season (t-1)	423	0	.774	.219	.179
Ass_F	Assists provided per game in Serie A in season (t-1)	423	0	3.167	.835	.48
Dr_Us_F	Useful dribbles per game in Serie A in season (t-1)	423	0	4.468	.9207	.722
Sh_Tar_F	Shots on target per game in Serie A in season (t-1)	423	0	2.642	.872	.497
Suc_Pa_F	Successful passes per game in Serie A in season (t-1)	423	0	37	11.81	5.321
Us_Th_Pa_F	Useful through passes per game in Serie A in season (t-1)	423	0	3.21	.368	.39
Lo_Ba_F	Lost balls per game in Serie A in season (t-1)	423	0	48.54	13.6	5.808
Re_Ba_F	Recovered balls per game in Serie A in season (t-1)	423	0	7.57	3.146	1.543
Fo_Ag_F	Fouls against in Serie A in season (t-1)	423	0	5.774	1.817	.995
IVG	Index of player's season evaluation	300	12	25.3	18.407	1.566
Players' reputation						
Year Contr	Contractual remaining years	423	1	5	2.881	1.178

OLS results: all players

VARIABLES	OLS
Age	.281***(.063)
AgeSq	-.004***(.001)
Exp_A	.037***(.009)
Exp_ASq	-.0007***(.0002)
Match_Sea	.005**(.0017)
Go_A	1.151***(.214)
Go_Sea_F	.339*(.194)
Go_Sea_M	.619*(.458)
Go_Sea_D	1.762***(.67)
Ass_F	1.019**(.414)
Ass_M	1.24***(.333)
Year_Contr	.13***(.014)
U21	.383***(.06)
Int_Ita	.79***(.039)
Int_For	.859***(.065)
UEFA_EU	.16*(.085)
UEFA_ExEU	-.06 (.0908)
Sou_Ame_T	.217***(.053)
Sou_Ame_N	-.199*(.085)
Afri	-.371***(.123)
Asia	-.277*(.162)
Sav_G	.04*(.024)
Ant_D	.04**(.017)
Dr_Us_F	.082*(.048)
Us_Th_Pa_M	.141***(.022)
Us_Th_Pa_D	.205***(.038)
Lo_Ba_M	-.011**(.0044)
Lo_Ba_D	-.012***(.0047)
2001-2	-.104**(.052)
2003-4	-.385***(.056)
2004-5	-.55***(.055)
2006-7	-.454***(.054)
2008-9	-.21***(.056)
2009-10	-.139**(.055)
Constant	-6.073***(.833)
Observations	2201
Adj. R-squared	.5853

QR results: players

VARIABLES	.10 Quantile	.25 Quantile	.50 Quantile	.75 Quantile	.90 Quantile
Age	.266***(.093)	.333***(.065)	.346***(.058)	.32***(.063)	.323***(.081)
AgeSq	-.004***(.001)	-.0054***(.0011)	-.0057***(.0011)	-.005***(.0011)	-.0049***(.0014)
Exp_A	.036***(.009)	.032***(.0058)	.034***(.0064)	.039***(.0067)	.029***(.011)
Exp_ASq	-.00068**(.0002)	-.00068***(.0001)	-.0006***(.0001)	-.0008***(.0002)	-.00048 (.0003)
Go_A	.669***(.339)	1.21***(.287)	1.558***(.315)	1.192***(.216)	1.345***(.306)
Match_Sea	.0094**(.0026)	.0043**(.002)	.0031 (.002)	.0027 (.0024)	.0044 (.003)
Go_Sea_F	.58*(.372)	.713***(.282)	.194 (.277)	.112 (.234)	-.261 (.284)
Go_Sea_M	.0067 (.529)	.27 (.494)	1.184**(.591)	1.041**(.352)	.451 (.455)
Go_Sea_D	1.49**(.67)	1.93***(.61)	1.454**(.71)	2.006***(.48)	1.628**(.654)
Ass_F	.926 (.829)	.218 (.464)	1.212**(59)	1.514**(.58)	1.243**(.624)
Ass_M	.888 (.631)	1.038***(.345)	1.044***(.397)	1.339***(.482)	.54 (.629)
Year_Contr	.079***(.025)	.097***(.019)	.114***(.017)	.141***(.018)	.166***(.025)
U21	.238**(.097)	.228***(.076)	.367***(.078)	.459***(.075)	.55***(.103)
Int_Ita	.535***(.058)	.581***(.047)	.758***(.054)	1.015***(.063)	1.137***(.083)
Int_For	.542***(.141)	.71***(.092)	.9***(.085)	1.191***(.081)	1.149***(.127)
UEFA_EU	.02 (.135)	-.141 (.112)	.036***(.078)	.274**(.117)	.39**(.18)
UEFA_ExEU	-.115 (.176)	-.196 (.135)	-.121 (.16)	-.047 (.117)	-.005 (.15)
Sou_Ame_T	.133 (.091)	.141**(.066)	.195***(.065)	.147**(.062)	.142 (.128)
Sou_Ame_N	-.25 (.177)	-.302*(.143)	-.269**(.124)	-.222**(.093)	-.177 (.137)
Afri	-.526**(.246)	-.426***(.163)	-.56***(.147)	-.564***(.203)	-.232 (.21)
Asia	-.412 (.309)	-.312 (.29)	-.347*(.212)	-.531**(.246)	-.39 (.371)
Sav_G	.0015 (036)	.019 (.026)	.045 (.033)	.079***(.028)	.068 (.156)
Ant_D	.021 (.028)	.056 (.025)	.024 (.019)	.077***(.023)	.071***(.024)
Dr_Us_F	.205 (.092)	.106 (.066)	.064 (.056)	.106 (.078)	.148**(.057)
Us_Th_Pa_M	.116***(.035)	.127***(.02)	.122***(.032)	.126***(.034)	.158**(.061)
Us_Th_Pa_D	.088 (.082)	.188***(.05)	.233***(.054)	.158***(.05)	.136*(.073)
Lo_Ba_M	-.0046 (.0067)	-.0054 (.0047)	-.01**(.005)	-.012**(.005)	-.0108**(.089)
Lo_Ba_D	.0027 (.0065)	-.0025 (.0059)	-.008*(.005)	-.019***(.006)	-.021**(.0058)
2001-2	-.097 (.092)	-.119 (.076)	-.104 (.072)	-.092 (.061)	-.038 (.085)
2003-4	-.46***(.12)	-.458***(.061)	-.44***(.071)	-.348***(.06)	-.313***(.104)
2004-5	-.573***(.091)	-.216***(.067)	-.669***(.067)	-.466***(.066)	-.414***(.091)
2006-7	-.424***(.091)	-.458***(.061)	-.487***(.066)	-.376***(.075)	-.333***(.091)
2008-9	-.088 (.094)	-.216***(.067)	-.237***(.069)	-.242***(.08)	-.094*(.089)
2009-10	-.115 (.098)	-.126**(.062)	-.118*(.064)	-.054 (.073)	-.0177 (.094)
Constant	-6.171***(1.284)	-6.774***(.89)	-6.7***(.764)	-6.346***(.825)	-6.219***(1.092)
N. of Players			823		
Observations	2201	2201	2201	2201	2201
Pseudo R-squared	.3407	.3438	.3696	.4175	.4164

OLS results (IVG): all players

VARIABLES	OLS *a*	OLS *b*
Age	.241***(.085)	.241***(.079)
AgeSq	-.0037**(.0015)	-.0037***(.0014)
Exp_A	.0308***(.0061)	.03***(.0061)
Exp_ASq	-.0005***(.0001)	-.0005***(.0002)
Go_A	1.254***(.256)	1.433***(.161)
Match_Sea	-.0008 (.0028)	
Go_Sea_F	.293 (.237)	
Go_Sea_M	1.06***(.367)	
Go_Sea_D	1.68***(.505)	
Ass_F	1.01***(.538)	
Ass_M	1.295***(.374)	
Year_Contr	.133***(.017)	.141***(.017)
U21	.342***(.082)	.335***(.083)
Int_Ita	.796***(.044)	.783***(.044)
Int_For	.902***(.085)	.904***(.085)
UEFA_EU	.157 (.106)	.159 (.108)
UEFA_ExEU	-.1 (.12)	-.096 (.122)
Sou_Ame_T	.182***(.069)	.188***(.07)
Sou_Ame_N	-.308**(.119)	-.303**(.119)
Afri	-.39**(.161)	-.422***(.16)
Asia	-.504**(.209)	-.436**(.211)
Sav_G	.091***(.3)	
Ant_D	.043**(.019)	
Dr_Us_F	.082 (.052)	
Us_Th_Pa_M	.153***(.024)	
Us_Th_Pa_D	.228***(.041)	
Lo_Ba_M	-.015***(.005)	
Lo_Ba_D	-.012**(.005)	
2001-2	-.104*(.064)	-.112**(.064)
2003-4	-.432***(.066)	-.449***(.066)
2004-5	-.504***(.064)	-.583***(.061)
2006-7	-.4***(.063)	-.532***(.057)
2008-9	-.205***(.068)	-.383**(.059)
2009-10	-.065 (.066)	-.254***(.058)
IVG		.097***(.012)
Constant	-5.22***(1.16)	-6.807***(1.103)
Observations	1576	1576
Adj. R-squared	.5405	.5300

QR results (IVG): all players

VARIABLES	.10 Quantile	.25 Quantile	.50 Quantile	.75 Quantile	.90 Quantile
Age	.153 (.117)	.293***(.109)	.352***(.106)	.272***(.099)	.289***(.106)
AgeSq	-.002 (.0021)	-.0047**(.0019)	-.0056***(.0014)	-.0041**(.0017)	-.0044**(.0019)
Exp_A	.0309***(.0089)	.029***(.0068)	.029***(.0084)	.027***(.0083)	.016***(.012)
Exp_ASq	-.0005**(.0002)	-.0005***(.0001)	-.0006***(.0002)	-.0005**(.0002)	-.0002 (.0004)
Go_A	1.112***(.342)	1.483***(.26)	1.657***(.193)	1.595***(.235)	1.346***(.252)
Year_Contr	.096***(.026)	.127***(.019)	.134***(.02)	.132***(.027)	.154***(.027)
U21	.0006 (.125)	.185 (.129)	.388***(.094)	.519***(.115)	.601***(.14)
Int_Ita	.51***(.072)	.555***(.052)	.724***(.052)	1.043***(.077)	1.216***(.09)
Int_For	.607***(.132)	.791***(.132)	.975***(.119)	1.144***(.133)	1.246***(.190)
UEFA_EU	-.159 (.134)	-.142 (.148)	.062 (.143)	.371**(.157)	.333 (.237)
UEFA_ExEU	-.368*(.211)	-.336*(.196)	-.219 (.188)	.045 (.157)	-.118 (.214)
Sou_Ame_T	.0306 (.098)	.057 (.096)	.134 (.086)	.205**(.103)	.123 (.182)
Sou_Ame_N	-.541***(.228)	-.377**(.18)	-.389**(.166)	-.208 (.203)	-.226 (.205)
Afri	-.529*(.27)	-.545***(.198)	-.527***(.201)	-.482***(.25)	-.343 (.305)
Asia	-.692**(.304)	-.535 (.39)	-.457 (.292)	-.347 (.331)	-.198 (.38)
2001-2	-.157 (.104)	-.209**(.103)	-.127 (.087)	-.079 (.083)	.193 (.123)
2003-4	-.623***(.124)	-.579***(.091)	-.45***(.1)	-.377***(.083)	-.162 (.133)
2004-5	-.626***(.094)	-.704***(.068)	-.653***(.074)	-.529***(.073)	-.353***(.097)
2006-7	-.465***(.0809)	-.593***(.065)	-.577***(.081)	-.429***(.096)	-.283***(.107)
2008-9	-.215**(.093)	-.392***(.071)	-.468***(.077)	-.399***(.095)	-.126 (.12)
2009-10	-.14 (.096)	-.25***(.075)	-.229***(.076)	-.175**(.082)	-.077 (.089)
IVG	.066***(1.625)	.078***(.016)	.094***(.014)	.108***(.0179)	.085***(.018)
Constant	-5.139***(1.625)	-7.255***(1.531)	-8.222***(1.432)	-7.243***(1.32)	-6.896***(1.471)
N. of Players			823		
Observations	1574	1574	1576	1574	1574

OLS and QR results (IVG): goalkeepers

VARIABLES	OLS	.10 Quantile	.25 Quantile	.50 Quantile	.75 Quantile	.90 Quantile
Age	.184 (.16)	.177 (.254)	.297 (.216)	.353 (.311)	-.0408 (.372)	-.073 (.338)
AgeSq	-.0037 (.0028)	-.004 (.0042)	-.006 (.037)	-.0066 (.0055)	-.00002 (.006)	.0006 (.006)
Exp_A	.046*(.023)	.046 (.053)	.034 (.0404)	.04 (.043)	.049 (.0408)	.095**(.039)
Exp_ASq	-.0003 (.0006)	.0003**(.0015)	.0007 (.001)	.0005 (.0012)	.0003 (.0012)	-.0008 (.0011)
Year_Contr	.212***(.0701)	.126 (.104)	.186*(.094)	.22**(.094)	.114 (.109)	.249**(.113)
Int_Ita	.548***(.175)	.512 (.361)	.284 (.289)	.516***(.273)	.632*(.389)	.404 (.328)
Int_For	.523***(.192)	.429*(.241)	.433***(.284)	.518 (.374)	.285 (.299)	.648*(.375)
2001-2	-.053 (.261)	.209 (.441)	-.253 (.478)	-.109 (.423)	-.012 (.385)	.094 (.344)
2003-4	-.194 (.26)	-.253 (.513)	-.048 (.464)	-.366 (.341)	-.105 (.338)	-.028 (.359)
2004-5	-.374 (.253)	-.051 (.465)	-.483 (.476)	-.61 (.441)	-.063 (.372)	.126 (.361)
2006-7	-.541**(.273)	.114 (.479)	-.437 (.459)	-.809**(.408)	-.416 (.334)	-.679 (.411)
2008-9	-.479*(.262)	-.233 (.539)	-.684 (.483)	-.71*(.423)	-.265 (.388)	-.413 (.328)
2009-10	-.252 (.253)	-.274 (.546)	-.332 (.509)	-.508 (.442)	.105 (.423)	.369 (.385)
IVG	.076*(.04)	.017 (.0803)	.071 (.092)	.13*(.082)	.145*(.086)	.113 (.093)
Constant	-5.38**(2.364)	-4.726 (3.876)	-6.825*(3.566)	-8.64*(4.703)	-2.843 (5.55)	-2.298 (5.167)
Observations	114	114	114	114	114	114
Pseudo R-squared	.6287	.3758	.3778	.4168	.4696	.4988

OLS and QR results (IVG): defenders

VARIABLES	OLS a	OLS b	.10 Quantile	.25 Quantile	.50 Quantile	.75 Quantile	.90 Quantile
Age	.196***(.088)	.181**(.085)	.154 (.131)	.0803 (.141)	.201*(.108)	.254**(.115)	.305***(.107)
AgeSq	-.0026*(.0016)	-.0023 (.0015)	-.0022 (.0023)	-.0006 (.0026)	-.0027 (.0019)	-.0035*(.0021)	-.0045**(.0019)
Exp_A	.027***(.0077)	.0194**(.0091)	.028**(.0139)	.022**(.01)	.0213***(.0103)	.035***(.012)	.0205 (.014)
Exp_ASq	-.0004*(.0002)	-.0002 (.0002)	-.0005 (.0004)	-.0004 (.0002)	-.0003 (.0003)	-.0007*(.0003)	-.0001 (.0004)
Go_A	2.432***(.681)	2.076***(.778)	1.922**(1.046)	2.832***(.804)	2.024**(.888)	1.179 (1.07)	2.124*(1.224)
Match_Sea	.0042 (.0028)		.0058 (.0038)	.0079**(.0035)	.0053 (.0035)	-.0002 (.0046)	-.0018 (.0045)
Go_Sea_D	1.399***(.469)		1.551*(.825)	1.15***(.64)	1.755**(.825)	1.424**(.599)	1.17*(.701)
Year_Contr	.117***(.025)	.146***(.029)	.112**(.048)	.105***(.033)	.092***(.03)	.144***(.0342)	.152**(.072)
U21	.323***(.09)	.253***(.11)	.182 (.156)	.125 (.121)	.281**(.129)	.479***(.122)	.379***(.14)
Int_Ita	.81***(.061)	.82***(.071)	.492***(.09)	.595***(.086)	.799***(.088)	1.077***(.103)	1.091***(.115)
Int_For	1.114***(.101)	1.213***(.106)	.794***(.228)	.918***(.16)	1.131***(.161)	1.515***(.13)	1.439***(.13)
UEFA_EU	-.165 (.119)	-.2 (.131)	-.536*(.304)	-.233 (.167)	-.131 (.187)	-.141 (.144)	-.295 (.213)
UEFA_ExEU	-.300*(.16)	-.318*(.192)	-.227 (.275)	-.525**(.259)	-.327 (.289)	-.283 (.213)	-.206 (.14)
Sou_Ame_T	.035 (.09)	.045 (.089)	-.01 (.168)	.049 (.144)	.067 (.134)	-.019 (.11)	-.165 (.135)
Sou_Ame_N	-.344**(.16)	-.381**(.168)	-.538*(.286)	-.644**(.306)	-.367 (.252)	-.267 (.183)	-.205 (.155)
Afri	-1.046***(.229)	-1.291***(.31)	-.906***(.308)	-1.114***(.268)	-1.306***(.36)	-1.273**(.558)	-.733 (.491)
Asia	-1.554***(.224)	-1.7***(.28)	-1.02**(.456)	-1.384***(.459)	-1.749***(.541)	-1.811***(.628)	-2.106***(.659)
Us_Th_Pa_D	.208***(.046)		.163*(.093)	.177***(.051)	.18***(.063)	.179***(.062)	.152**(.072)
Dr_Us_D	.163*(.083)		-.107 (.141)	.068 (.107)	.17 (.122)	.198 (.128)	.399***(.128)
Lo_Ba_D	-.0203***(.006)		.0017 (.0087)	-.0027 (.085)	-.0157 (.0096)	-.022**(.009)	-.028***(.007)
Ant_D	.0695***(.019)		1.43e-06 (.033)	.0097 (.0306)	.0347 (.028)	.125***(.027)	.137***(.024)
2001-2	.063 (.08)	.009 (.096)	.043 (.146)	-.055 (.113)	.093 (.115)	.019 (.111)	.078 (.089)
2003-4	-.245**(.1)	-.422***(.112)	-.622***(.182)	-.514***(.146)	-.231*(.129)	-.217*(.128)	.048 (.132)
2004-5	-.379***(.099)	-.559***(.101)	-.465***(.134)	-.721***(.122)	-.488***(.127)	-.282***(.126)	-.18 (.129)
2006-7	-.18*(.099)	-.445***(.096)	-.276*(.156)	-.412***(.12)	-.207 (.142)	-.041 (.128)	.089 (.137)
2008-9	-.0502 (.099)	-.419***(.102)	-.045 (.155)	-.284*(.145)	-.035 (.143)	.032 (.126)	.166 (.135)
2009-10	.153 (.1)	-.14 (.096)	.146 (.175)	-.0475 (.133)	.212 (.156)	.286**(.136)	.365***(.116)
IVG		.0703***(.017)					
Constant	-5.168***(1.175)	-5.728***(1.255)	-4.787***(1.697)	-3.531*(1.872)	-5.072***(1.473)	-5.886***(1.549)	-6.22***(1.469)
Observations	721	521	721	721	721	721	721
R-squared	.623	.5716	.3729	.3694	.4081	.4625	.4884

OLS and QR results (IVG): midfielders

VARIABLES	OLS a	OLS b	.10 Quantile	.25 Quantile	.50 Quantile	.75 Quantile	.90 Quantile
Age	.419***(.077)	.452***(.109)	.487***(.108)	.455***(.089)	.51***(.091)	.447***(.122)	.32**(.158)
AgeSq	-.0069***(.0014)	-.0075***(.002)	-.0085***(.002)	-.0076***(.0016)	-.0087***(.0017)	-.0073***(.0022)	-.0054*(.0028)
Exp_A	.0422***(.0079)	.035***(.0095)	.0278**(.012)	.041***(.009)	.037***(.0107)	.035***(.0126)	.0279**(.0139)
Exp_ASq	-.0009***(.0002)	-.0008***(.0002)	-.0003***(.0003)	-.0008***(.0002)	-.0008***(.0003)	-.0008**(.0003)	-.0005 (.0004)
Go_A	1.309**(.467)	1.729***(.525)	.615 (.568)	.932*(.502)	2.084**(.831)	2.187**(.632)	2.571***(.698)
Match_Sea	.0011 (.003)		.0104**(.0046)	.0027 (.0038)	-.0001 (.0034)	-.0005 (.005)	-.006 (.0051)
Go_Sea_M	.656*(.379)		.233 (.537)	.595 (.571)	.923*(.574)	.673 (.448)	.643 (.411)
Ass_M	1.221***(.347)		1.067*(.61)	1.139***(.39)	1.447***(.426)	.887*(.536)	-.175 (.583)
Year_Contr	.128***(.022)	.152***(.0249)	.0529 (.036)	.0904***(.032)	.115***(.026)	.1203***(.033)	.134***(.042)
U21	.383***(.096)	.379***(.128)	.323*(.178)	.391***(.132)	.446***(.119)	.449***(.164)	.613***(.204)
Int_Ita	.732***(.061)	.751***(.068)	.48***(.096)	.539***(.0708)	.683***(.088)	.932***(.087)	1.106***(.114)
Int_For	.848***(.096)	.947***(.134)	.625***(.219)	.753***(.131)	.916***(.128)	1.06***(.163)	1.078***(.184)
UEFA_EU	.193 (.128)	.224 (.164)	-.039 (.2209)	-.221 (.167)	-.062 (.203)	.457**(.199)	.612***(.229)
UEFA_ExEU	.099 (.144)	.104**(.192)	-.057 (.259)	-.174 (.221)	.126 (.252)	.177 (.192)	.254 (.234)
Sou_Ame_T	.196***(.074)	.115 (.094)	.242**(.109)	.072 (.094)	.093 (.083)	.217 (.151)	.273 (.175)
Sou_Ame_N	-.329**(.122)	-.469***(.185)	-.378 (.288)	-.333 (.202)	-.409**(.164)	-.311 (.195)	-.399*(.235)
Afri	-.341**(.187)	-.294 (.213)	-.168 (.348)	-.474**(.22)	-.571**(.28)	-.298 (.377)	-.144 (.3)
Asia	-.097 (.2)	-.112 (.241)	-.071 (.368)	-.249 (.284)	-.392 (.267)	-.169 (.347)	.0604 (.378)
Us_Th_Pa_M	.155***(.025)		.097**(.042)	.139***(.023)	.133***(.043)	.145***(.043)	.158***(.053)
Lo_Ba_M	-.0112*(.0056)		-.014 (.0087)	-.013*(.0075)	-.011 (.007)	-.0061 (.008)	-.0034 (.011)
2001-2	-.097 (.084)	-.241**(.101)	-.0704 (.154)	-.255**(.126)	-.074 (.108)	-.148 (.095)	.059 (.128)
2003-4	-.415***(.0842)	-.481***(.1)	-.398**(.187)	-.517***(.116)	-.452***(.108)	-.406***(.101)	-.097 (.115)
2004-5	-.517***(.086)	-.559***(.09)	-.535***(.175)	-.659***(.12)	-.622***(.105)	-.549***(.102)	-.161 (.152)
2006-7	-.41***(.084)	-.494***(.088)	-.33**(.148)	-.521***(.118)	-.504***(.108)	-.442***(.123)	-.0909 (.146)
2008-9	-.096 (.09)	-.36***(.089)	-.018 (.177)	-.207*(.121)	-.147 (.104)	-.139 (.137)	.244**(.121)
2009-10	-.056 (.088)	-.224***(.086)	-.1 (.182)	-.112 (.136)	-.0609 (.109)	-.121 (.116)	.235*(.139)
IVG		.095***(.015)					
Constant	-7.825***(1.013)	-9.701***(1.498)	-7.825***(1.013)	-8.299***(1.187)	-8.81***(1.157)	-7.909***(1.6)	-5.842***(2.16)
Observations	869	640	869	869	869	869	869
Adj. R-squared	.5921	.5501	.3589	.3588	.3749	.4227	.4398

OLS and QR results (IVG): forwards

VARIABLES	OLS a	OLS b	.10 Quantile	.25 Quantile	.50 Quantile	.75 Quantile	.90 Quantile
Age	.45***(.082)	.448***(.125)	.217 (.162)	.346***(.129)	.506***(.111)	.506***(.157)	.448***(.14)
AgeSq	-.007***(.0015)	-.0081***(.0023)	-.0033 (.003)	-.006***(.0024)	-.0091***(.0021)	-.0087***(.0029)	-.0071**(.0027)
Exp_A	.0053 (.011)	-.0207 (.015)	.0179 (.022)	.032*(.0185)	-.0052 (.013)	.013 (.021)	.022 (.025)
Exp_ASq	-.0004 (.0003)	.00013 (.0004)	-.0005 (.0006)	-.0009 (.0005)	-.00007 (.0003)	-.0006 (.0005)	-.001 (.0008)
Go_A	2.516***(.302)	3.003***(.337)	1.814**(.727)	2.267***(.461)	2.629***(.395)	2.317***(.524)	2.101***(.645)
Match_Sea	.00004 (.004)		-.0025 (.007)	-.0033 (.0051)	-.0038 (.0055)	-.0042 (.007)	.0054 (.009)
Go_Sea_F	.626***(.219)		.85*(.4407)	.766***(.263)	.35 (.274)	.694*(.394)	.207 (.461)
Ass_F	1.823***(.43)		2.114***(.738)	1.509**(.657)	2.535***(.549)	1.366*(.701)	1.202 (.755)
Dr_Us_F	.165***(.053)		.307***(.106)	.175**(.083)	.062 (.049)	.206***(.076)	.158**(.088)
Year_Contr	.088**(.033)	.0906**(.04)	.092 (.063)	.126**(.039)	.049 (.038)	.0306 (.063)	.128*(.071)
U21	.484***(.125)	.483***(.183)	.278 (.239)	.511***(.187)	.479***(.125)	.498***(.179)	.632***(.241)
Int_Ita	.553***(.095)	.642***(.113)	.446***(.167)	.594***(.131)	.513***(.095)	.677***(.168)	.692***(.205)
Int_For	.596***(.084)	.568***(.11)	.35**(.169)	.569***(.147)	.559***(.099)	.71***(.171)	.923***(.156)
2001-2	-.274**(.12)	-.11 (.161)	-.384*(.231)	-.444**(.189)	-.202 (.123)	-.205 (.189)	-.092 (.214)
2003-4	-.517***(.13)	-.496***(.163)	-.633***(.232)	-.614***(.188)	-.389**(.16)	-.489**(.243)	-.201 (.245)
2004-5	-.684***(.122)	-.638***(.15)	-.928***(.189)	-.699***(.173)	-.635***(.154)	-.622***(.21)	-.385 (.284)
2006-7	-.629***(.124)	-.568***(.156)	-.616***(.162)	-.747***(.151)	-.581***(.144)	-.604***(.175)	-.564**(.217)
2008-9	-.254**(.117)	-.223 (.146)	-.34**(.165)	-.229 (.143)	-.207 (.147)	-.213 (.194)	-.268 (.302)
2009-10	-.301**(.119)	-.187 (.15)	-.491**(.207)	-.239 (.189)	-.148 (.143)	-.187 (.19)	-.308 (.216)
IVG		.0706***(.022)					
Constant	-7.75***(1.056)	-8.12***(1.717)	-5.49**(2.139)	-6.84***(1.61)	-8.18***(1.388)	-7.94***(1.939)	-7.56***(1.71)
Observations	423	301	423	301	301	301	301
Adj. R-squared	.6454	.533	.4304	.4012	.4384	.4368	.4119

Results

- Age and average career games played per season in Serie A all have a statistical significant impact. Except for goalkeepers, the impact of age is stronger for forwards and midfielders respect to defenders. Generally, the maximum income is reached at the age of 32 years and the variable is significant along the entire distribution.
- Career goals scored last season and games played last season have a significantly positive influence on players' remuneration. In particular, goals scored are significant for all positions but the coefficient of forwards is smaller than those of midfielders and defenders.
- The remaining years of contract have a positive influence on salaries. The impact twofold on the top of the income distribution respect to the bottom. Players probably request higher wages for longer contracts and clubs try to renew before the player becomes free agent, if the club want either to keep the player or can sell him later.
- Players with an international status are rewarded for their experience at the highest football levels in line with the previous literature. International status for Italian and foreign players have a much stronger and increasing influence on the salaries of the players from the bottom of their income distribution.
- European players from EU and South American players (Brasil, Argentina and Uruguay) receive a considerable pay premium. Other South American, Asian and African players are negatively discriminated against Italian players.

- Players are remunerated according to their specific playing positions and their required skills and abilities at aggregate and disaggregate levels. In line with the offensive abilities and skills, forward's income is affected by the rate of goals, assist and useful dribbles. Midfielders tends to earn more if they score and provide goal assists. Moreover, midfielders with a higher rate of useful through passes and a lower rate of lost balls receive a salary premium. Defenders that control to the opponents' game and help teammates to construct the game are highly rewarded. Their rate of anticipations is positively significant. Finally, also goalkeepers with a good rate of saves deserve a higher salary.
- The significance of the IVG index performance is important – individual positive performances that impacts on team success are rewarded by a higher salary premium. Nevertheless, this index does not capture any intangible aspects of player personality such as the leadership or the charisma.
- Few of the coefficients retain their magnitude across all the different quantiles of the salary distribution.
- While the impact of games played last season is significant only for players at the bottom of the income distribution, average career games played per season are much stronger for players in the lower quantiles.
- Last season goals scored do have a random impact on the players' earning distributions according to players' position.
- All the specific performance variables are significant only from the 90^{th} quantile.
- According to season dummy, the impact of the crisis in Italian Serie A has had a bigger impact on the bottom players of the income distribution.

Part 2: Determinants of players' transfer fees

- Sample of 190 observations requiring data on individual soccer players of Serie A from 2000 to 2005.
- Dependent variables: players' transfer fees.
- A semilog specification is adopted with the natural logarithm of the dependent variable avoiding any heteroskedasticity problem in the estimated regression.
- Simple OLS estimators have been chosen:

$$lnY=c_0+c_1X_1+c_2X_2+.....+c_nX_n+\varepsilon$$

Y= independent variable

X (1, n) = dependent variable

OLS results

VARIABLES	OLS
Age	.397***(.156)
AgeSq	-.008***(.003)
Exp_A	.0004 (.0008)
Match_Sea	.0043 (.0071)
Nprcl	-.073***(.021)
Int_Ita	.182*(.108)
Int_For	.146 (.099)
Gkp	-1.745**(.679)
Def	-1.264***(.324)
Mid	-.771***(.252)
Go_Sea_D	1.157 (.74)
Go_Sea_M	1.264*(.722)
Go_Sea_F	1.119**(.576)
Sav_G	.479**(.217)
Int_D	.072***(.021)
Rec_Ba_M	.023***(.013)
Us_Dr_D	.458*(.253)
Us_Dr_M	.292***(.078)
SChpl	.638***(.174)
SUefa	.722***(.123)
SSerA	.403***(.094)
BChpl	.629***(.144)
BUefa	.719***(.124)
BSerA	.256**(.109)
2001-2	-.329**(.13)
2002-3	-.951***(.153)
2003-4	-.065 (.143)
2004-5	-.296 (.136)
Constant	-3.131**(1.992)
Observations	190
R^2 Adj.	.7295
F-Value	14.85***

Results

- Of the players' characteristics, age (*Age* and *AgeSq*) is positively significant and the expected negative sign of the square term confirms that age affects player's transfer fee but with a decreasing effect. The turning point of 23-24 is quite low in line with Carmichael et al. (1999).
- Neither player career experience, *Exp_A*, nor players' appearances in the previous season (t-1), *Match_Sea*, are statistically significant.
- Regarding players' reputation, a good proxy is the number of clubs a player played. For the OLS model, the variable *Nprcl* is negatively significant and the more a player is transferred the more his transfer fee depreciates in line with Dobson and Gerrard (1999).
- International players can command a higher premium in the transfer market respect to non-international players (Carmichael et al., 1999). In the model, this empirical evidence is confirmed with the significance of the variable *Int_Ita*. International Italians costs 20 percent more than non-international players.
- Goalkeepers, defenders and midfielders respectively command a lower transfer fee premium of 174 percent, 126 percent and 77 percent than forwards. Hence, offensive positions are highly rewarded and rated in the transfer market.
- All players' direct performance measures are interacted with the respective positional categories. goals scored have a positive explanatory impact on players' transfer fees. Except for defenders, this finding is valid for midfielders and forwards whose variables, *Go_Sea_M* and *Go_Sea_F,* are respectively significant at 10 percent and 5 percent. Goal assists (*Ass_F, Ass_M* and *Ass_D*) do not significantly affect players' transfer fees and these measures were excluded from the final model.

- Specific performance variables interacted with players' positions. Beginning with forwards, none of the other specific passing abilities are significant. The evidence suggests that forwards' transfer fees are mainly determined by scoring goals.
- Midfielders with a higher rate of recovered balls (*Rec_Ba_M*) are highly rated in terms of transfer fees as this variable is significant at 1 percent. This empirical evidence also highlights midfielders' ability to dribble (*Us_Dr_M*) which has a positive impact on their transfer fees.
- Defenders' useful through passes (*Us_Th_Pa_D*) are not positively significant, whereas defenders' ability to dribble (*Us_Dr_M*) positively affects their transfer fees. The only specific performance measure for defenders that is positively significant is the rate of interception (*Int_D*).
- For goalkeepers, the sole specific defensive performance collected for goalkeepers is the rate of saves per game (*Sav_G*). This variable is significant at 5 percent and positively related to their transfer fees.
- According to the model estimations, all selling clubs are statistically significant respect to clubs relegated to Serie A in the current season (t-1). Clubs competing for Champions League and UEFA Cup, *SChpl* and *SUefa*, and clubs, which avoided relegation, *SSerA*, have stronger bargaining power respect to clubs demoted to Serie B, (*Srel*). Analogously, buying clubs that plays in Champions League and UEFA Cup for the next season, *BChpl* and *BUefa*, are willing to pay significantly more for comparable players than clubs which avoided the relegation *BSerA*, and clubs just promoted to Serie A, *Bprom*.
- The IVG index does not affect players' transfer fee as opposed to net salaries.

Part 3: Assessment of players' performance in relation to contract duration

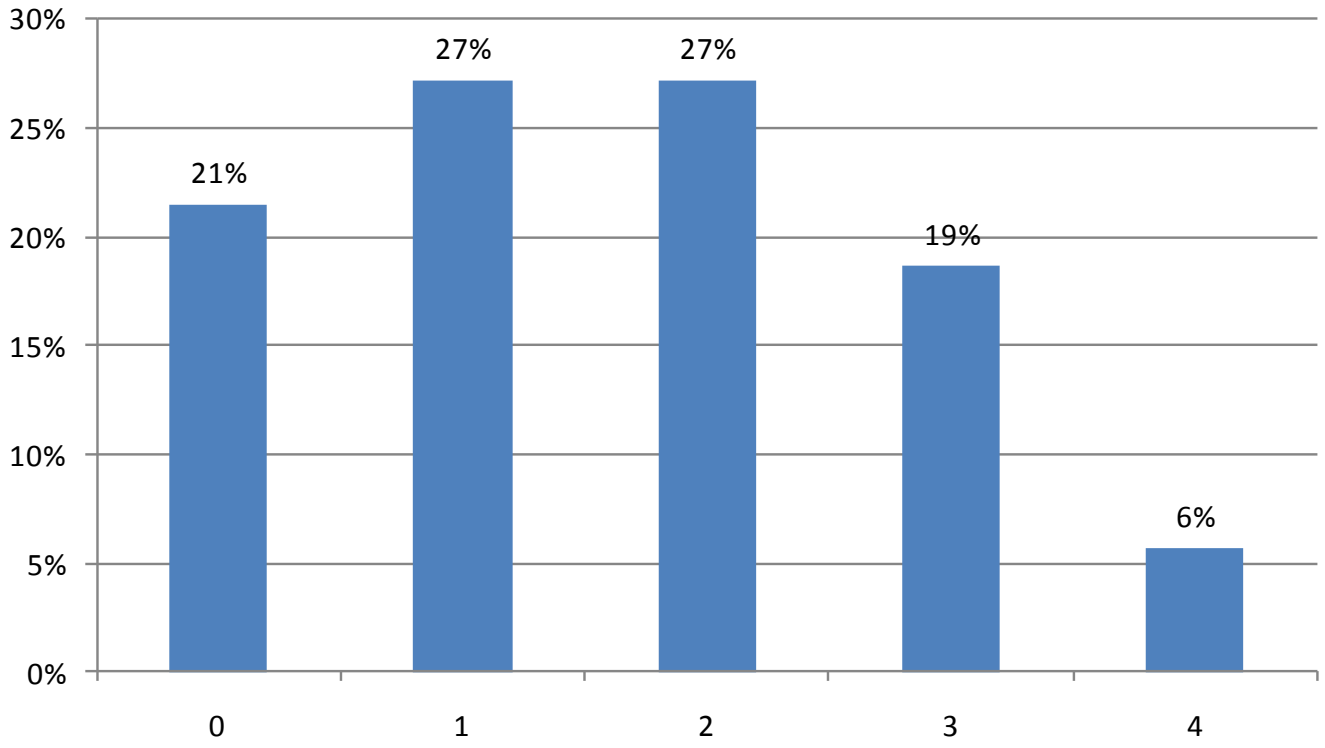
- The hypothesis investigated that a player with an expiring contract is more productive than a player with a long-term contract and a player with a long-term contract takes advantage of the guaranteed salary and shirks during the initial years covered by the contract.
- Sample of 908 observations requiring data on individual soccer players of Serie A from 2000 to 2010.
- Dependent variables: players' performance.
- Objective index of players performance in contrast to the literature.
- Simple OLS estimators have been chosen:

$$Y=c_0+c_1X_1+c_2X_2+.....+c_nX_n+\varepsilon$$

Y= independent variable

X (1, n) = dependent variable

The distribution of remaining contract duration



Data statistics

Variable	Definition	Mean	Std. Dev.
YC1	Remaining Contract Years	1.597	1.175
YC2	Recoded Number of Remaining Years	1.298	.799
YC3	Last Year of Contract	.214	.4108
IVG	Player's performance index	18.292	1.556
AGE	Age	26.95	3.849
AGESQ	Age squared term	740.826	211.512
CGP	Career games played	98.503	91.963
CGPSQ	Career games played squared term	18154.88	32009.2
MPR	Manager's point ratio in Serie A	.368	.205
CGS	Career goals scored	.084	.124
DEF	Defender (Dummy variable)	.33	.47
MID	Midfielder (Dummy variable)	.406	.491
FWD	Forward (Dummy variable)	.19	.393
INTITA	Italian international players (Dummy variable)	.278	.448
INTFOR	Foreign international players (Dummy variable)	.282	.45
2001-02	Season 2001-02 (Dummy variable)	.126	.332
2003-04	Season 2003-04 (Dummy variable)	.125	.331
2004-05	Season 2004-05 (Dummy variable)	.154	.361
2006-07	Season 2006-07 (Dummy variable)	.157	.364
2008-09	Season 2008-09 (Dummy variable)	.143	.35
2009-10	Season 2009-10 (Dummy variable)	.161	.367

OLS results

Variable	Model 1	Model 2	Model 3
	Remaining years on contract measures by:		
	Remaining Years	Remaining Years (censored at)	Final Years-Dummy
YC1	.103**(.0357)		
YC2		.171***(.056)	
YC3			-.352***(.104)
AGE	-.0983 (.073)	-.119*(.072)	-.134*(.071)
AGESQ	.0018 (.0013)	.0022*(.0013)	.0025*(.0013)
CGP	-.001 (.011)	-.001 (.0011)	-.001 (.0011)
CGPSQ	2.74e-06 (2.8e-06)	2.64e-06 (2.8e-06)	-2.74e-06 (2.8e-06)
MPR	.713***(.197)	.706***(.196)	.708***(.196)
CGS	2.85**(.447)	2.849**(.445)	2.862***(.441)
DEF	-.178 (.168)	-.172 (.167)	-.178 (.168)
MID	-.284*(.169)	-.276 (.169)	-.274 (.17)
FWD	-.753***(.201)	-.745***(.201)	-.736***(.201)
INTITA	.687***(.111)	.692***(.11)	.702***(.11)
INTFOR	.661***(.087)	.665***(.087)	.677***(.087)
2001-02	-.571***(.179)	-.574***(.179)	-.58***(.178)
2003-04	-.594***(.136)	-.602***(.136)	-.617***(.137)
2004-05	-.462***(.135)	-.463***(.136)	-.475***(.136)
2006-07	-.527***(.13)	-.522***(.13)	-.515***(.129)
2008-09	-.35***(.132)	-.344**(.132)	-.33**(.132)
2009-10	-.328**(.13)	-.339**(.13)	-.337**(.13)
Const.	19.183***(1.015)	19.322***(.998)	20.006***(.98)
N. of Obs.	1574	1574	1574
N. of Players	908	908	908
F-Value	20.17***	20.28***	20.38***
Adj. R^2	.188	.1889	.1897

Results

- The hypothesis investigated that a player with an expiring contract is more productive than a player with a long-term contract and a player with a long-term contract takes advantage of the guaranteed salary and shirks during the initial years covered by the contract (Frick, 2011). The empirical evidence rejects this hypothesis; a player at the end of his contract is more productive than a player with a longer contract. According to the results, player's performance improves as he approaches renegotiation at least one year before the end of the contract. The differential between YC1 and YC2 is positive. On the contrary, player's performance decreases when he enters in the last year of his contract.
- The direction of causation could also be debated; a player's productivity together with his talent determines contract length. According to our results, this direction of causation is more likely for Serie A players. How well a player who performs during his contract, particularly the last year, should have a considerable impact on the next contract he will be offered. But the data and model are not able to capture this effect.
- A possible explanation is given by the common practice of "tapping up" which refers to a process, often facilitated by agents, whereby players are offered to sign for other clubs without the knowledge and the consent of the club with whom the player is registered (Parrish, 2007). According to FIFA regulations, players whose contract is expiring are allowed to negotiate and sign with other clubs six months before the contract expiration. It is possible that a player starts their negotiation before the six-month limit.

- Furthermore, a player with an expiring contract is able to capture the entire economic rent of his transfer fee and it is likely he knows in advance during the last contract season for which club he will sign. Hence, he might perform under his usual level recognised in the previous seasons in order to avoid injuries. For the new club, the fact that the player will be signed without the payment of a transfer fee is an opportunity that put in second order the decreasing performance during the last year of contract.
- Nevertheless, every club hardly allows a player to have only one remaining year of contract, if the player in question is really worthy or talented and if the club does not want to leave the player for free in the transfer market. Consequently, a player in the last year of contract might be an ordinary player, an old player and a player that the club wants to release for other reasons.
- Finally, the fact that a player with longer contracts has higher performance could not be surprising as nowadays his bargaining power is extremely prevailing and he is likely to impose his willingness over the club whenever there are possibilities of being transferred. This means for the player to increase his remuneration. As a final outcome, in general, players might have incentives to perform better even though they have long contracts.