Journal of Media Economics

The Media as a Policy Instrument in Influencing the Business Model of Professional Soccer: Evidence From Italy

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Available online: 15 Jun 2012

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Italian soccer clubs in the first division have individually sold broadcasting rights for their home matches, until new laws imposed pooling and joint-selling those rights through the league and established a mandatory sharing rule to redistribute revenues in order to improve on-the-pitch competitive balance (CB). This article compares the two institutional designs. While reducing revenue inequality, the new regime distorts allocative efficiency and informational rent appropriation, opens up costly *ex post* renegotiations and antitrust litigations, and does not improve CB.

People's interest in the media is related to their influences on beliefs and on public opinion formation, to their well-established role as outlets for exposing policies to constituencies, or as watchdogs in the political arena. Rarely has the whole media industry been made an instrument of industrial policy in which state intervention is aimed at influencing the competitive equilibrium and rivalry of firms of another industry—without recurring to the usual levers of regulation and antitrust policies.

We present here a case study in which the institutional redesign of professional soccer's business model has been enacted by the legislator to pursue principles of distributive justice, using the rebalancing of the clubs' contractual power against the broadcasters to control the

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rivalry among clubs. The Italian legislator has imposed cartelization among clubs (a) to improve the competitive balance (CB) of the championship—namely, more match uncertainty, more season uncertainty, and the possibility that more clubs alternate in winning the title or at least enter into the elite group; and (b) to tighten up solidarity mechanisms, such as mutualization—namely, a more consistent funnelling of money from the major to the minor league. The Italian legislator has imposed a change in the model of television rights management. Deploying Andreff and Bourg's (2006) terminology, Italy switched from individual clubs' ownership (ICO) to television rights pooling by the league (RPL) with a sharing rule.

Our motivating example, in which the media has become an instrument in policy interventions in Italy, must be contextualized within the European Union, where soccer is, by far, the most-followed sport and, consequently, commands the most relevant share in television rights when compared to the others (Hammervold & Solberg, 2006). On the one hand, escalation of wages has generated concerns on the financial stability of professional soccer clubs all over Europe, where it is also taken for granted that financial disparity implies talent disparity. The relation among players' payroll, market size, and winning is one of the most important questions in CB studies (Sanderson & Siegfried, 2003, p. 259), but the issue still remains open (Schmidt & Berri, 2001).

Although there is no conclusive empirical evidence, the common claim is that the increased weight of revenues from selling broadcasting rights in soccer (Andreff & Staudohar, 2000; Gratton & Solberg, 2007; Solberg, 2007) may cause distributional inequalities and alter CB. A study commissioned by the Presidency of the European Union (Arnaut, 2006) underlined the need for the centralized selling of media revenues to foster CB and mutualization in soccer. It was followed by a report (Belet, 2006) that recommended joint-selling to build a financial solidarity model for European soccer. The Commission of the European Communities (2007) later issued a White Paper on sport, whose action plan was endorsed by the European Parliament in May 2008.

Italy offers an interesting case study for several reasons (for an overview on Italian soccer, see Baroncelli & Caruso, 2011). First, soccer is considered a national pastime with such a great social relevance that is considered cultural heritage—a merit for which clubs have received tax breaks and allowances. Second, the dire financial situation of soccer clubs in the Italian first division (*Serie A*) originated major concerns on their stability: Estimated debts for the 2010 through 2011 season (the season runs from late August–late May) amounted to €2.3 billion (Bellinazzo, 2011), whereas estimated revenues were around €2 billion. Third, it has served as a laboratory for several switches in the regime to sell media transmission rights; in Andreff and Bourg's (2006) words, "[O]ne of the most interesting observations to follow up in the coming years is the value of television rights in Italian football" (p. 53).

The clubs have always collectively sold free-to-air broadcasting rights, before and after the advent of encrypted television technology in the 1990s. In 1996, the monopolist satellite broadcaster, Tele+, paid €325 million to the league, which acted as an intermediary on behalf of the clubs, for a package of games in the three seasons: 1996 to 1997, 1997 to 1998, and 1998 to 1999. However, after Law No. 78 of March 29, 1999, clubs have been allowed to individually negotiate encrypted broadcasting rights. Clubs immediately cashed in; for the three seasons—1999 to 2000, 2000 to 2001, and 2001 to 2002—the two satellite companies (Stream and Tele+) paid €1,278 million. Revenues rose even further when a merger between Tele+ and Stream gave birth to SKY Italia; clubs earned €1,350 million for the following

three seasons: 2002 through 2003, 2003 through 2004, and 2004 through 2005.[1] This evidence contrasts with theoretical predictions. Andreff and Bourg (2006) pointed out that individual negotiation is assumed "to yield lower revenues if the demand side concentration of pay-TV broadcasters diminishes economic competition" (p. 42). Nevertheless, in commenting on the Italian case, they noted that "empirical evidence conflicts with the economic common sense that a (league) cartel negotiation with television channels should yield higher rights than an individualised negotiation by each club" (p. 53).

Finally, Law No. 106, passed on July 19, 2007, activated another switch in regime. With the aim to foster the CB of the tournament and mutualization, the Council of Ministers was allowed to present a decree-law in which the collective selling by the league of television and electronic media rights was reintroduced, effective as of the 2010 through 2011 season. The subsequent decree-law (*Decreto Legislativo*) No. 9 of January 9, 2008 imposed the following sharing rule for the Serie A League to calibrate media revenues, and was valid for the first season of the new regime. First, 10% was subtracted from total media revenues and diverted to Serie B clubs (for mutualization) and to investments in social activities (for home-grown players and stadium security investments). Second, €15 million was subtracted as a parachute for the three clubs to be relegated from Serie A to Serie B. Third, the remaining sum was distributed as follows: 40% equally to each of the 20 clubs, 25% according to fan-base, 5% according to the census population of the town, 10% according to the club's sporting results history (from season 46/47 to 5 seasons before), 15% according to more recent achievements (last 5 seasons), and 5% on the basis of the end-of-season positions. As for the next seasons, the league is free to fix the sharing rule, approved with a majority rule of 75% of the members, but within the boundaries that 40% be spread equally, 30% according to fan-base, and 30% according to sporting results.

Although it is common opinion shared by politicians, fans, and commentators that financial disparity is the main reason for competitive imbalance, there is no conclusive evidence on that relation (Sanderson & Siegfried, 2003; Szymanski, 2001). Theoretical propositions on CB and revenue-sharing heavily depend on the complexities of institutional settings (Gerrard, 2006; Késenne, 2005; Palomino & Rigotti, 2000), and revenue-sharing can improve CB, leave it unchanged, or worsen it (Szymanski & Késenne, 2004).

Although it is clear that revenue-sharing rules improve the equality of revenue distribution, it is not clear how they alter CB on the pitch; and, in any case, there are many ways in which CB can be modified without revenue-sharing (Fort, 2001; Sanderson & Siegfried, 2003). Therefore, the premise of the law that reducing financial disparity will lead to improved CB is not clear-cut, at best. We doubt that giving power to a cartel (the league) to negotiate broadcasting rights is a means to that end, and we test this hypothesis.

On a theoretical level, we interpret the intentions of the legislature as follows. Whereas the championship is a unitary product, bigger clubs earn a larger portion of the joint product owing to their ability to hire more talented players; these economic inequalities affect the CB. Because

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[1]This evidence appears counterintuitive, but is justified on two accounts: (a) Eager as it was to enter the Italian market, SKY invested a lot in sports, making them the centerpiece of its subscription packages; and (b) SKY adopted a more effective scrambler device that made illegal decryption of the signal more difficult, thus securing its revenues. In 2003, SKY inherited from Stream and Tele+ a market of around two million subscribers. By the end of September, 2011, SKY reached five million subscribers.

investments by clubs are chosen non-cooperatively, they tend to overinvest in an activity that is considered socially wasteful (from the efficiency standard fixed according to the principle of CB). Hence, the legislature would like clubs to write an enforceable contract specifying the level of investment each one of them must undertake, but such a contract is unfeasible, and there is no credible threat of punishment for the noncompliant club. The culprit for inducing inequalities, first in the revenues and as a consequence in championship rankings, is the revenue from the sale of the broadcasting rights because (a) it is the most relevant share for any club (on average, two-thirds of the total), compared to either stadium or commercial revenues; and (b) its distribution is very skewed toward bigger clubs.

A fixed sharing rule avoids the need for the clubs to commit to a contract of that kind because the laws make the rule fully enforceable. Thus, a centralized system of coordination would improve on a decentralized one in reducing inequality in revenues and on the field; the league will heal all torts thanks to more contracting power against the media and to the mandatory sharing rule that imposes more equal treatment among clubs; in any case, the renegotiation will be assured within the cartel at arm's length.

We compare two institutional settings that belong to the category of bilateral nonexclusive contracts in the presence of externalities (Bolton & Dewatripont, 2005, section 13.3): (a) the downstream media buying from clubs having network externalities and (b) the league auctioning-off the contract and then distributing the revenues to the 20 clubs according to an already fixed scheme. Note that, in both cases, the environment is characterized by multilateral, private information.

Note also that the legislature turned secret bilateral contracting into a publicly observable contract. As Bolton and Dewatripont (2005) clearly stated, "[I]n general the ranking of the two contracting outcomes in terms of efficiency is ambiguous. That is, in general it is not possible to say whether the nonobservability of bilateral contracts results in greater or less efficiency" (p. 620). A potential theoretical drawback is that the theory "unfortunately predicts outcomes that tend to be sensitive to fine institutional details" (p. 612). These drawbacks justify our empirical analysis with a case study.

As for the efficiency standard, the simple criterion on which to judge one market structure over the other should be based on whether the mechanism is working impartially in applying the rule that clubs earn according to their contribution to the joint product. We shall argue that, although the legislature strives to control expenditure on athletes (talent), the meter with which the media measure the contribution depends on private information on clubs' fan-bases, upon which the media outlet is a better informed party than the league. Bolton and Dewatripont (2005, pp. 26–27) clearly stated that with one-sided, hidden information, the trade-off is between allocative efficiency and extraction of informational rents. If the objective is a Pareto-efficient outcome, then "there appears to be a simple solution when there is only one-sided hidden information: simply give all the bargaining power to the informed party" (p. 27). Laffont and Tirole (1993) advocated a new theoretical approach in regulation that detaches action/effort to invest in innovation by the regulated firm from the issues concerning the information sets on demand and technology available to the contracting parties. Our case study fits well beneath this regulatory scheme.

The theoretical and practical implications of this article derive from evaluations on an industrial policy. Our research questions (RQs) concern whether there is an economic motive for preferring the RPL model (collective sale of pooled media rights by the league/cartel) to

the extant ICO model (individual ownership and marketing by clubs). Tonazzi (2003) showed that turning from revenue-sharing to individual selling does not necessarily have a negative impact on CB. What about the reverse switch, from individual selling to revenue-sharing?

Although the law is aimed at improving CB, we suggest that before passing the law with that aim, the legislator should have answered to the following question: Does the cartel improve distributional efficiency among its members upon the situation in which each seller bargains individually? Our main aim is to test the following hypothesis (as far as Italy is concerned):

H1: The presence of a monopsonist does not require soccer clubs to form a cartel to improve the efficiency in revenue distribution.

Our hypothesis is that switching from a monopsonistic market in satellite television to a bilateral monopoly is unnecessary because the monopsonist already adopts an impartial pricing strategy based on sound economic and sport variables, thus respecting simple allocative efficiency and which works at least as well as the rule imposed by the cartel upon its members. Furthermore, the issue of informational rents, which causes the inequality in media revenues, will not be properly tackled by the league, and many other occasions for post-contractual renegotiations and litigations may arise.

RQ1: Using publicly available information, does the media apply the same criteria in negotiating with the best clubs as with the worst?

An indication of impartiality would be the absence of a strategy of price discrimination. On the contrary, detecting price discrimination beneath the ICO regime would support the idea that the tournament cannot be considered a unique specimen produced by a group of peers, so cartelization of the seller clubs (and the consequent switch to a bilateral monopoly in satellite TV) would improve efficiency.

RQ2 is a preliminary investigation into different market structures across technologies, which could give us a hint as to the eventual impact of structural changes. Satellite television in Italy is, by far, the biggest buyer of media rights, and is a pure monopsony. The other markets (digital terrestrial television and cellular phones) are more populated–that is, there are two or three buyers:

RQ2: Do more competitive markets treat each club in a different way from the monopsony in the satellite market?

A result showing that in the other media markets the clubs are treated in the same impartial way would add robustness to the answer to RQ1. This would be the preliminary evidence that changing the market structure is irrelevant.

RQ3 checks whether the regime switch affects the distribution of clubs' revenues and if this new distribution is preserving the group of elite clubs:

RQ3: Does the law modify the likelihood of clubs entering the highest-ranked positions after reducing revenue inequality?

TABLE 1
Descriptive Statistics of the Variables

Variable	M	SD	Minimum	Mdn	Maximum	Source
Dependent variable						
CELL	1,774.950	2,749.443	310.000	412.500	9,283.000	G
DTT	1,377.500	831.922	320.000	1,150.000	2,800.000	G
SAT	22,217.500	23,675.970	6,100.000	10,800.000	77,000.000	G
STAD	7,728.487	6,178.206	581.573	5,242.452	21,483.120	G
REVENUES	33,098.440	32,328.940	8298.656	17,544.490	105,566.100	
MEDIA	25,369.950	26,985.740	7,410.000	12,117.500	88,535.000	
LAW	22,832.950	13,992.290	11,311.000	17,845.000	62,731.000	
Regressors						
FANS	1,424.693	2,315.481	118.587	433.777	9,119.013	V
WAGE	39,616.650	45,651.150	5,293.628	19,944.480	145,327.200	A
RATIO	4.849	9.219	0.451	2.943	43.286	C
HISTORY	354.000	428.439	1.000	144.000	1,272.000	C
GOALS	49.550	15.683	24.000	46.500	85.000	C
POINTS	51.600	19.258	21.000	45.000	91.000	C
DSTOCK	0.150	0.366	0.000	0.000	1.000	

Note.   Twenty observations, season 2005 through 2006. *STAD, SAT, CELL, DTT,* and *WAGE* are in thousands of Euros; *FANS* are in thousands. Sources: A = Aida—Bureau van Dick; C = Almanacco del Calcio (Soccer Yearbook); G = "Series A's Money" (2005); V = StageUp.com and Tns Abacus (Uggeri, 2003) and Customized Research and Analysis (CRA)–Monitor Calcio (Pistone, 2007; Valdiserri, 2006). *HISTORY* is an index—the sum of the following points: (a) final position in *Serie A* from season 1954–1955 (when TV broadcasting began) to season 2004–2005: Points are attributed to the club according to position gained at the end of the season, in reverse order (e.g., the 2nd classified in a 20-teams season gains 19 points, and last obtains 1 point); +1 for participation to season 2005–2006; (b) national titles and cups won: *Serie A* Champion = +5; Italian League Cup = +16, +18, or +20 (depending on the number of participants in *Serie A*); Italian SuperCup (match between winners of *Serie A* and of Italian League Cup) = +5; (c) international cups won: Intercontinental Cup (now it is known as the World Cup Tournament) = +40; Champions' League and equivalent = +35; UEFA (and European League) Cup = 16 + 5, 18 + 5, or 20 + 5 (depending on the number of participants in *Serie A*); European SuperCup (match between winners of Champions' League and UEFA Cup) = +5.

We present a counter-factual experiment on the effects for the *status quo ante.* We unveil how the aims of fostering CB in the soccer industry are pursued by calibrating media revenues; but, although the industrial policy is effective in reducing revenue inequality, it is, nevertheless, ineffective in ameliorating CB in the first season of application.

METHOD

Our sample includes all 20 Italian Serie A clubs that participated in season 2005 through 2006, a round-robin tournament of 38 games; descriptive statistics of the variables are in Table 1.[2]

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[2]We do not directly address another issue central to the literature on CB—the number of competitors—but note that a championship with 20 clubs is preferred by all clubs to the alternatives with 16 or 18 clubs because there are more matches and they earn more from the media. On the contrary, a championship with 16 clubs would be less demanding on the players and perhaps even more interesting from a sporting point of view because it is more balanced.

Although the sample might appear small, note that this is the whole population of clubs and encrypted media.

We applied quantile regression on a series of cross-section equations, each representative of a media technology. Quantile regression treats outliers in small samples in a better way than ordinary least squares (OLS), but we also present OLS results for comparison.

In our article, the media sell sport content to audiences; therefore, we turned to models of sport demand: Dobson and Goddard (2006, pp. 318–334) presented an extensive overview of the rich literature on modelling demand for sport events (see also Borland & Macdonald, 2003; Downward & Dawson, 2000). As Johnsen and Solvoll (2007) pointed out, "[T]here is every reason to believe that many of the sporting and team specific variables that have been applied in such studies are equally applicable to a study of television ratings" (p. 319).

Usually, in those models, the dependent variable is *attendance at the match.* In this article, the response variable representing attendance has been replaced by *media revenues,* earned by clubs for allowing the transmission of the match to encrypted broadcasters (for the ultimate benefit of audiences and subscribers). The contracts were individually signed by clubs at the expiration of the preceding round of contracts (June 30, 2005) and deemed valid for the subsequent 3 years, so the contracts were meant to be effective for seasons 2005 through 2006, 2006 through 2007, and 2007 through 2008. We obtained complete data for the first season (2005–2006) only, but aside from minimal adjustments for inflation (through an indexation clause) and for the clubs' attrition due to relegation and promotion, data could be considered as if they are the average of three seasons (one has to accept that the promoted clubs share the same characteristics with the relegated ones they substitute).[3]

SAT, a total of €444.5 million, includes revenues from pay-service TV satellite (Sky Italia, a subsidiary of BSkyB) and foreign broadcasts. *CELL,* a total of €28 million, includes revenues from 3G mobile phone companies (H3G, Telecom Italia's TIM, and Vodafone) that provided short messages and highlights of goals on mobile telephones. *DTT,* a total of €36 million, counts pay-per-view revenues from (a) digital terrestrial TV (Mediaset Premium and Telecom Italia's La7), (b) ADSL Internet (Telecom's Rosso Alice), and (c) Asymmetric Digital Subscriber Line (ADSL)-to-television, including fiber-optics and cable (Fastweb and Telecom Italia's Alice Home TV). We did not consider free-to-air, analogue technology, whose rights on highlights and news releases were still sold collectively.

The explanatory variables in sport demand are usually divided into three broad categories: (a) demographic and geographic, (b) sporting and competition, and (c) a residual category that contains variables addressing specific issues of interest (such as managerial or cultural factors, the league's rules of functioning, racial discrimination, the effects of live broadcasting, etc.).

The fan-base, *FANS,* is a demographic and geographic variable proportional to a county's population; it indicates the local monopolistic power of clubs. Only the bigger teams have a nationwide fan-base; in this case, it is calculated by agencies as a mixture of populations and surveys. We used *FANS* not only as a proxy for audience, but also for the club's media appeal (i.e., the attractiveness from the advertiser's point of view). Our variable is public information

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[3]The 2005 through 2006 season is the only one for which we have a complete dataset on all the media, and that is why we prefer a cross-section to the alternative of working with a panel dataset on satellite TV only. Note also that with a panel dataset, the relegation process would cause the bottom quantile to be full of missing values because, once relegated to *Serie B,* the club will probably stay out for a long time—for sure, in the next season.

for all participants, whereas the media have private information on clubs' fan-bases. This is a more accurate assessment than what is publicly available on the real desire to subscribe to watch one's favorite team on TV. *WAGE* includes cast-and-crew wages, paid to players and managers; it is a sporting variable, and serves as a proxy for the attractiveness of the team in the entertainment industry (as defined by the sporting talent and commitment of the players) and as a predictor of the managerial capabilities of the club. *RATIO* is a proxy for a supporter's loyalty (an important motive for stadium attendance), for broadcaster subscription, and for the real interest of fans on CB (Szymanski, 2001). Openly available, it was calculated as the ratio between season tickets and gate tickets (whose sum gives *STAD*). The index *HISTORY* was homemade to measure the winning and achievement history of the team (final positions in Serie A plus national and international titles and cups won; see Table 1), which reveals the attractiveness of a team as determined by its sporting success, winning streaks, and the spectacular events this may create (see Noll, 2007, p. 413). *HISTORY* reflects cultural factors because "Clubs with a proud history tend to be more popular than clubs without a history, even if they hail from the same city" (Johnsen & Solvoll, 2007, p. 320). *HISTORY* has a role akin to education in Spence's (1973) signalling model; although it does not affect future productivity, it allows more productive clubs to distinguish themselves. *GOALS* and *POINTS* are competition variables measuring during-season performance—a proxy for the attractiveness of the team and the match. We included them whenever there were plausible explanatory variables and when contemporary with the dependent variable. Thus, *GOALS* appears in the regression for *CELL* because the content of the short message received by the subscriber consists of updates on goals scored, and *POINTS* appears only in the pay-per-view equation *DTT* because more points may encourage fans to watch more games after the season starts. *DSTOCK* signals better managerial practices as deriving from the club being listed at the Milan Stock Exchange (= 1 for Juventus, Roma, and Lazio, and 0 otherwise). Among these practices, we considered the possibility of having a better assessment of the fan-base because it is the more dedicated fans who become shareholders. *RATIO* and *DSTOCK* are proxies for the effectiveness of strategies to increase market share.

We ran three quantile regressions for cellular companies (*CELL*), digital terrestrial (*DTT*), and satellite (*SAT*). Let $Q_q(y_C|\mathbf{x}_C)$ be the conditional quantile function, y_C denote the media dependent variable ($y_C = CELL, DTT, SAT$), C be the club, $\mathbf{x}_C$ be the vector of explanatory variables, and $F^{-1}\varepsilon$ be the distribution function for the error terms for each broadcaster category. The quantile regression equations are as follows (Angrist & Pischke, 2009, chap. 7; Cameron & Trivedi, 2005, section 4.6; Cameron & Trivedi, 2009, chap. 7):

$$Q_q(CELL_C|\mathbf{x}_C) = \beta_{CELL,0} + \beta_{CELL,1}FANS_C + \beta_{CELL,2}WAGE_C$$
$$+ \beta_{CELL,3}GOALS_C + \beta_{CELL,4}DSTOCK_C + F^{-1}\varepsilon_{CELL,C}(q)$$

$$Q_q(DTT_C|\mathbf{x}_C) = \beta_{DTT,0} + \beta_{DTT,1}FANS_C + \beta_{DTT,2}WAGE_C$$
$$+ \beta_{DTT,3}RATIO_C + \beta_{DTT,4}HISTORY_C + \beta_{DTT,5}POINTS_C$$
$$+ \beta_{DTT,6}DSTOCK_C + F^{-1}\varepsilon_{DTT,C}(q)$$

$$Q_q(SAT_C|\mathbf{x}_C) = \beta_{SAT,0} + \beta_{SAT,1}FANS_C + \beta_{SAT,2}WAGE_C + \beta_{SAT,3}RATIO_C$$
$$+ \beta_{SAT,4}HISTORY_C + \beta_{CELL,5}DSTOCK_C + F^{-1}\varepsilon_{SAT,C}(q).$$

The quantiles of interest are fixed at relevant cutoff points in the ranking. The lowest quantile is 0.15 because the last three clubs were relegated to Serie B (0.15 = 3/20). On the other end, the top quantile is 0.65, fixed by the top seven clubs (the highest 35%; 7/20). First, we considered the top six in ranking based on (in order of priority) winning the title, obtaining the right to participate in the European Champions' League (from which they earn more revenue), and achieving the right to participate in the Union of European Football Associations (UEFA) League (again, more revenues). Second, we also included the seventh place in the ranking, due to the concurrent effect of (a) the rule that the winner of the Italian League Cup (*Coppa Italia*) participates in the UEFA League and (b) the fact that the cup is usually won by a club already among the top six in the tournament, so another club is added to the lot.[4]

RESULTS

Estimation results are reported in Table 2. To account for heteroschedasticity, we ran bootstrap standard errors (1,000 replications) in quantile regressions and robust standard errors for OLS.

To assess media impartiality, we formulated RQ1 as follows: Do the media treat the best seven clubs in the same manner as the worst three? As underlined by Sen (1992, chap. 1), all ethical proposals concerning inequality depart from a common idea that impartiality is foundational to any criterion to be adopted. For Sen, impartiality is so relevant a principle that it becomes the reason why people feel the urge of finding some criterion of equality in the first place.

We looked for impartiality (absence of price discrimination) by the media against the clubs, which is the mirror image of detecting inequality in the bargaining power of the clubs after individual negotiations. Did the media monopsonist treat the clubs impartially according to their sporting and commercial value, or did it discriminate against lower-order clubs? Was the most relevant asset—the talent of the players—weighted in the same way across clubs? Was the unitary price per fan the same across clubs? We deem significant differences in the quantile coefficients proof of discriminatory (partial) behavior. The set of hypothesis tests for equality on the regression coefficients at the two conditional quantiles (see the *p* values at the bottom of Table 2) did not reject the null of equality for any regressor.

This is evidence that the media dealt with the clubs with impartial and consistent criteria, which is to say that less-important clubs retained their bargaining power when dealing with the media companies and, comparatively, with regard to their more imposing club peers. Evidence supports the idea that the broadcasters beneath the individual-buyer structure did not pursue partial, discriminatory policies, which may impact upon sports results. The media acknowledge what is already fact—inequality in talent distribution and fan-base—and pay accordingly. The bigger clubs hire more talented players, who are paid more because they entertain more (wages are significant in *SAT*), and clubs with more fans and in more populated areas collect more money (fans are significant in the OLS version of *SAT* and *CELL* and in the lower

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[4]A finer partition at the top, by adding the .70 and the .80 quantiles, would have been more respectful to track the admissions to the European Cups, but would have meant moving just two clubs. We ran quantile regressions with that specification, too, but differences were even more negligible than those in Table 2.

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TABLE 2
Quantile and Ordinary Least Squares (OLS) Regression for *CELL*, *DTT*, and *SAT*

Dependent Variable	CELL			DTT			SAT		
	Quantile			*Quantile*			*Quantile*		
	q = .15	*q* = .65	*OLS*	*q* = .15	*q* = .65	*OLS*	*q* = .15	*q* = .65	*OLS*
Regressors									
FANS	0.61**	0.32	0.44**	−0.08	−0.07	−0.05	2.48	1.97	2.44***
	(0.28)	(0.48)	(0.20)	(0.64)	(0.50)	(0.04)	(2.45)	(2.53)	(0.32)
WAGE	0.01	0.04	0.03	0.03	0.01	0.02**	0.38***	0.41***	0.38***
	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)	(0.01)	(0.13)	(0.12)	(0.03)
RATIO				30.30	14.40	14.30**	147.00	94.00	120.40***
				(114.30)	(86.60)	(6.50)	(420.00)	(235.00)	(23.40)
HISTORY				−0.70	0.20	−0.50	1.50	0.07	1.26
				(1.50)	(1.50)	(0.90)	(6.70)	(5.36)	(2.80)
GOALS	−18.00	−14.00	12.00						
	(19.00)	(29.00)	(32.00)						
POINTS				−9.70	0.80	9.30			
				(25.40)	(17.70)	(13.10)			
DSTOCK	2,201.00	1,680.00	1,036.00	1,174.00	480.00	597.00***	2,574.00	3,734.00	2,929.00**
	(1,271.00)	(1,564.00)	(901.00)	(1,553.00)	(1,213.00)	(142.00)	(7,575.00)	(6,717.00)	(1,203.00)
CONST	433.00	321.00	−755.00	438.00	933.00	313.00	1,160.00	3,157.00***	2,112.00***
	(555.00)	(984.00)	(1,195.00)	(969.00)	(701.00)	(510.00)	(1,835.00)	(886.00)	(620.00)
R^2	—	—	.9037	—	—	.8351	—	—	.9957
Pseudo-R2	.6567	.7611	—	.5811	.7245	—	.8385	.9484	—

	CELL			DTT			SAT		
	Equality Test p Value			*Equality Test p Value*			*Equality Test p Value*		
Coeffients of									
FANS	0.5569			0.9882			0.8461		
WAGE	0.3815			0.6124			0.8450		
RATIO				0.8722			0.9044		
HISTORY	0.8859			0.6225			0.8451		
GOALS									
POINTS				0.7011					
DSTOCK	0.7106			0.6922			0.8734		
CONST	0.9077			0.6363			0.2834		

Note. Bootstrap errors are in parentheses (1,000 replications) for quantile, and robust standard errors for OLS. Null hypothesis of the equality test, H_0: coefficient (quintile .15) − coefficient (quintile .65) = 0.

* p = .10. ** p = .05. *** p = .01.

quantile in *CELL*). No differences between the quantile coefficients of *FANS* means that the price paid is the same for all, and neither the media nor the league can implement a third-degree price discrimination based on publicly available information. For example, the media cannot discriminate customers (downstream) according to the club they root for, so they pay the clubs (upstream) the same price per fan. The data on fans' subscription rates are proprietary to the media outlet, and by leveraging upon this information, it presumably earns its legitimate profit (which is not a distortion in market allocation). Furthermore, the media outlet can even be willing to lose money to acquire the subscription of fans of a minor club to offer the championship as a unitary product.

Having found impartiality, we feel authorized in turning the burden of proof on the social planner to present a justification for the proposed change of regime. To justify its policy intervention, the legislator/social planner should demonstrate, even before CB enters the scene as a legitimate aim to justify the laws, that reducing revenue inequality is more important than the existing impartial mechanism of distributing wealth.

Consider RQ2. We looked at whether a more populated market structure displayed a different broadcaster behavior. The equations for *CELL* and *DTT* show that bargaining power is unblemished. As confirmed by the fact that the situation does not vary across different market structures (across equations), there is no reason to create a cartel among clubs to support smaller ones in their negotiations against the monopsonist (SKY) because it behaves as if it were a competitor in a more populated market.

To measure revenue inequality, we deployed a series of indicators, presented by Lerman and Yitzhaki (1985) and Stark, Taylor, and Yitzhaki (1986), based on decomposing the Gini coefficient by income source; one of them calculates the impact on inequality of a marginal change in a specific income source (for explanations, see Table 3, as well as Lopez-Feldman, 2006).

In Table 3, Panel A, note that 20% of the inequality of *REVENUES* (the sum of media revenues and stadium revenues [*STAD*]) depends on *STAD* and 70% on satellite TV, upon which, in turn, depends 88% of the inequality among the media.

To answer RQ3, consider a counter-factual experiment based on the sharing rule enforced by Law No. 106 of 2007 and Law No. 9 of 2008, and assume that the same clubs played season 2005 through 2006 *and* season 2010 through 2011. We calculated the revenues for each club according to the newly established rule pursuant to the RPL model, labelled this new variable *LAW,* and compared it to *MEDIA* (the sum of *CELL, DTT,* and *SAT*). The sample median and minimum increased, the maximum decreased, the standard deviation of media revenues halved (see Table 1), and the Gini coefficients for *MEDIA* and *LAW* were 0.476 and 0.287, respectively; these are immediate indicators that revenue inequality would be reduced.

The Wilcoxon signed-rank test cannot reject the null of the equality of the rank distributions of *MEDIA* and *LAW* ($z = -0.597$, Prob $> |z| = 0.5503$); therefore, relative positions do not substantially vary. We also considered the one-sided test in which the null is that the median of *MEDIA* is equal to that of *LAW,* against the alternative that the median of *MEDIA* is less than that of *LAW*; the null was rejected with a probability of 0.0577 in favor of the alternative.

In Table 3, Panels B and C, we decomposed, once again, the Gini coefficient by income source for *MEDIA* and *LAW* revenues (excluding the parachute for relegated clubs and mutual-ization). Inequality between clubs does not stem from bargaining power, but from the relevant

TABLE 3
Gini Decomposition by Income Source

Source	S_k	G_k	R_k	Share	% Change
Panel A. Income variable: *REVENUES*					
CELL	0.0536	0.6314	0.9888	0.0735	0.0199
DTT	0.0416	0.3287	0.7110	0.0214	−0.0203
SAT	0.6713	0.4786	0.9938	0.7009	0.0296
STAD	0.2335	0.4178	0.9540	0.2043	−0.0292
Total income		0.4555			
Panel B. Income variable: *MEDIA*					
CELL	0.0700	0.6314	0.9852	0.0914	0.0214
DTT	0.0543	0.3287	0.7599	0.0285	−0.0258
SAT	0.8757	0.4786	0.9998	0.8801	0.0044
Total income		0.4761			
Panel C. Income variable: *LAW*					
Equal parts	0.4000				
Population & fan-base	0.3000	0.6144	0.9684	0.5839	0.2839
Sporting results	0.3000	0.4300	0.9862	0.4161	0.1161
Total income		0.3057			

Note. S_k = share of each income source over total income; G_k = the income k source's Gini; R_k = Gini correlation of income from source k with the distribution of total income; Share = the share of each income source in total inequality; % Change = the impact that a 1% change in the respective income source (k) had on inequality (Lerman & Yitzhaki, 1985; Lopez-Feldman, 2006; Stark, Taylor, & Yitzhaki, 1986). In Panel C, data are calculated before mutualization and before the "parachute" for relegated clubs.

factors indicated in the law and collected into the three categories. The inequality that persists may be attributed as follows: 58% from population and fan-base and 42% from sports results. Therefore, the law preserves existing local monopolistic power based on the geographical differences (more value is given to bigger cities) while downplaying the sporting variables, which we used as a proxy for allocative efficiency (and which are deemed less important than population now).

We replicated OLS and quantile regressions with the counter-factual dataset, and measured the effects from the introduction of the new laws, applying the same public information and criteria as was done earlier (see Table 4). Besides the intercept, *CONST,* we included only three regressors: *WAGE,* fan loyalty (*RATIO*), and the dummy for the listed companies. We did not consider *FANS* and *HISTORY* because they were already included in the calculations of the simulated variable *LAW*.

All the OLS coefficients in the *status quo ante* are significant, except for the constant, whereas the introduction of the laws makes listing insignificant. The OLS equation suggests that the new laws force the media industry to reduce evaluations of the players' talents. The quantile regression results, which are similar to OLS, allow us to compare the post-laws regime against the *status quo ante* as far as impartiality is considered. The constant and wages are significant in both quantile regressions. Again, after the regressions for *MEDIA* and *LAW,* we tested equality of between-quantile coefficients for each regressor and the constant. None rejected the null hypothesis of equality (see bottom of Table 4), so the legislator can sustain that the new regime, too, is impartial in deploying its rule. However, in contrast to the situation

TABLE 4
Quantile Ordinary Least Squares (OLS) Regression for *MEDIA* and *LAW*

Dependent Variable	*MEDIA*			*LAW*		
	Quantile			Quantile		
	q = .15	q = .65	OLS	q = .15	q = .65	OLS
Regressors						
WAGE	0.54***	0.55***	0.56***	0.25***	0.24**	0.26***
	(0.10)	(0.06)	(0.02)	(0.08)	(0.08)	(0.02)
RATIO	161.00	80.00	101.00***	−10.00	−98.00	−74.00**
	(1,130.00)	(357.00)	(31.00)	(722.00)	(438.00)	(29.00)
DSTOCK	3,919.00	2,864.00	7,091.00*	4,486.00	1,838.00	7,459.00
	(7,745.00)	(7,816.00)	(3,718.00)	(6,601.00)	(9,202.00)	(4,377.00)
CONST	309.00	3,539.00**	1,561.00	9,711.00***	13,939.00***	11,615.00***
	(3,638.00)	(1,273.00)	(963.00)	(2,453.00)	(2,301.00)	(1,104.00)
Pseudo-R^2	.7460	.8960	.9851	.6345	.7354	.9233

Coefficients of	Equality Test p Value	Equality Test p Value
WAGE	0.9147	0.8486
RATIO	0.9355	0.8993
DSTOCK	0.8976	0.7610
CONST	0.3605	0.1599

Note. Bootstrap errors are in parentheses (1,000 replications), and robust standard errors for OLS. Null hypothesis of the equality test, H_0: coefficient (quantile .15) − coefficient (quantile .65) = 0.

*$p = .10$. **$p = .05$. ***$p = .01$.

before, where impartiality was an emergent property of a series of arm's-length contracts, here it is imposed.[5]

The prior evidence can be commented on from two perspectives. The first regards the main interest of the article, the comparative statics on the structural aspects of the two regimes, which can be visually inspected by looking at Figure 1 and at the downward shift of the quantile plot in Figure 2.

Consider the two quantile-quantile plots in Figure 1. In Graph A, we compared *WAGE* to *MEDIA.* Note that the wages of the bigger teams wander from the diagonal, indicating that the payroll is based on an unsustainable financial policy. In Graph B, we compared *MEDIA* to *LAW.* Note that the bigger clubs keep the differences and replicate the pattern in Graph A. The individual selling regime is much more rewarding for the bigger teams; they suffer a strong penalization after the cartelization. The new regime has no effects for the medium-size clubs (such as Fiorentina, Lazio, and Palermo), whereas there is an improvement for the smaller clubs on absolute levels.

In Figure 2, we present a comparison between the two quantile plots of *MEDIA* and *LAW*; the graph shows quantiles of the dependent variables (Cox, 1998). Note that, in both cases

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[5]Welfare evaluations on inequality easily get economic efficiency entwined with moral implications, among which are those regarding economic freedom.
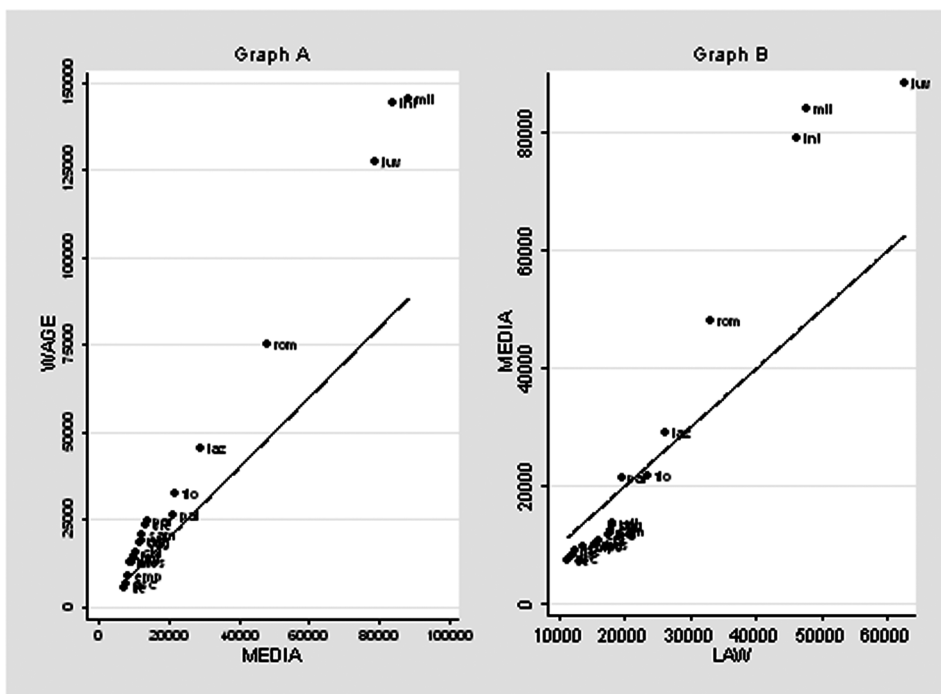
FIGURE 1   Quantile–quantile plots. Graph A shows the comparison between MEDIA and WAGE, Graph B shows the comparison between MEDIA and LAW. *Note.* MEDIA is the sum of CELL, DTT, and SAT. LAW is the simulated variable. Clubs are denoted by the first three initials of the simplified denomination of the team (e.g., AC Milan is Mil). Data in thousand Euros.

(*MEDIA* and *LAW*), the distribution is symmetric up to $q \approx .65$, when it then becomes very asymmetric. Note also the small upward movement in the lower fraction of the data (a small subsidy to the poor by transferring money from the rich) subsequent to the introduction of the new laws, and compare it with the contemporaneous, abrupt, downward movement seen at the higher end of the sample data (a revenue cap that ultimately translates into wages). This conforms to regression results. The coefficient of *WAGE* is halved in the ex post situation; again, this is a form of a salary cap enforced via the media revenues in the new institutional setting introduced by the industrial policy.

Note also that, in the new regime, the constant is 30-fold for the lower quantile and 4-fold for the higher quantile, which makes the proportion between the two in the ex post situation 10 to 13—another indication that revenue inequality would be reduced. However, as Angrist and Pischke (2009, p. 281) pointed out, quantile coefficients tells us about effects on distribution, not on individuals, so the poorer are still the poorer, although better off than they would have been without the laws, thanks to the lump-sum redistribution (a subsidy from the rich to the poor).

The second perspective concerns CB. First, the effects of a salary cap on CB are unclear, and vary according to league characteristics (as striking examples, compare Késenne, 2000, to Endo, Florio, Gerber, & Sommers, 2003). Does the new sharing rule weight the wages paid
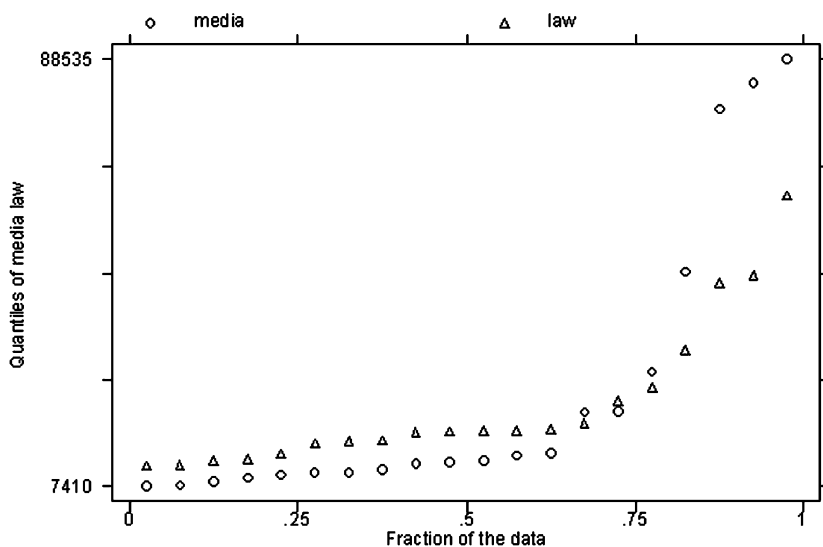
FIGURE 2   Quantile plots of MEDIA and LAW. *Note.* ○ is the sum of CELL, DTT, and SAT; LAW (△) is the simulated variable. Data in thousand Euros.

by the higher quantile in a different way from the lower? No, and this implies that the bigger clubs will continue to hire more talented players and beat the clubs endowed with less money, given that they remain in the same quantile (that talent fulfils promises). In turn, this implies that either the president of the club will have to pay from his or her own deep pockets or the club will go further into debt, or the sharing rule will work as a salary cap.

Second, let us produce some cursory evidence of the relation between the revenue-Gini (calculated only on TV revenues) and the point-Gini (calculated on pitch results). Consider the first year of application of the laws beneath the RPL model (2010–2011), and compare it with the last season of the ICO model (2009–2010). As expected, the revenue-Gini substantially decreased from 0.3273 in the 2009 through 2010 season to 0.2299 in the 2010 through 2011 season. One would expect a change in the point-Gini, at least in the same direction. On the contrary, whereas the point-Gini was 0.1535 in the last ICO season, it was 0.1582 in the first RPL season—a small *increase.* This is evidence (indeed, inconclusive and preliminary) that the effort of the legislator brought about a *worsening* of CB.

Consistent with the worries expressed by Fort (2001), revenue-sharing imposed by the laws reduces revenue inequality and the spending on talent (it acts as a salary cap), but has no effect (at best) on CB.

DISCUSSION

In this article, we present a case study concerning an industrial policy. New Italian laws brought about a change in the market structure for selling broadcasting rights by professional soccer clubs, with the introduction of the pooling and sharing of revenues to the aim of improving

the CB of the first division. The legislature wants to control the clubs' investment policies to improve CB and foster mutualization between major and minor leagues so that financial stability will be attained.

In this section, we qualify and expand our results by comparing the two institutional designs–before and after the launch of the cartel—along four metrics:

1. Allocative efficiency.
2. How they deal with informational rent appropriation.
3. *Ex post* renegotiations (post-contractual haggling).
4. The risk of antitrust litigations.

For the most part, our comments refer to the bilateral monopoly between the league and the satellite broadcaster. We close this article with a discussion on the appropriateness of the industrial policy enacted by the laws and on the relevance for CB of our results regarding revenue-sharing.

First, regarding the first metric, we show that the cartel distorts *allocative efficiency*. Our case study concerns a peculiar multilateral contracting situation in which a nexus of bilateral contracts is substituted by inefficient resource allocation within the boundaries of quasi-ownership. The so-called GHM ownership theory of Grossman and Hart (1986) and Hart and Moore (1990) sustained that ownership of the productive asset is allocated to the party requiring the most protection against ex post contractual opportunism, which is always impending in a supply relation when one party makes relation-specific investments (Williamson, 1975, 1985). In our case, idiosyncratic investments are those made by clubs that hire talented players because they improve the quality of the tournament to the benefit of all. Because it is not possible to write an enforceable contract specifying the level of investment each club must undertake, the league is given the authority as a cartel to redistribute media revenues as if it were a mechanism of *punishment* for those who deviate. Now, consider the league as a quasi-horizontally integrated partnership; then, contrary to the more rational use of ownership as depicted by the GHM theory, the cartel is not born to protect clubs that invest more into the relation. Rather, the league enforces a mechanism of deterrence against relation-specific investments that makes ex post opportunism automatic (because unequal investment on talent is considered to worsen clubs' CB). Note that Késenne (2005) presented other theoretical arguments that support similar conclusions.

As shown by our simulation based on sporting and entertainment variables, when compared to the pre-existing institutional setting, this automatism works well only in distorting the desire to invest in talent because the calibration of revenues induces a form of salary cap plus a subsidy in favor of teams endowed with less talent. Thus, the substantial reduction in revenue inequalities will be achieved at the cost of affecting the working of the trading mechanism concerning talent and the well-functioning of the mechanism that establishes which team/possessor will put that talent to the most valued use (on Coasian efficiency in sport leagues, see Szymanski, 2007). Besides, this is not accompanied by a relevant improvement of CB because the laws are preserving the group of elite clubs—a result that confirms some worries already put forward by Fort (2001).

Furthermore, when applied to the setting of this article, Rosen's (1981) rationale implies a causal chain that connects talent to pay and talent to a better final ranking in the race for money.

Rosen explained inequalities in superstars' pay in terms of the joint effect of (a) the imperfect substitution among factors of production and (b) a technology that allows economies of scale in consumption—and the media is one such technology. Whenever the broadcasting technology enters the scene, pay is also connected to larger market shares and higher revenues. The new Italian laws forget about the pecking order of this sequence, with the result that imposing a sharing rule for television-rights revenues to achieve CB ends up creating a ceiling for athlete pay and talent. Once the scale economies allowed by media technologies are scrambled by law and public intervention—and somewhat hampered—the result is a cap on talent and a form of redistribution through transfers/subsidies, which represent a misallocation of capital.

Second, regarding the second metric, consider the distortions in the *appropriation* of the informational *rents,* which the media would earn from its private information on fan-bases. A central insight of the theory of optimal contracting under asymmetric information is that there are allocative inefficiencies that arise from informational monopoly rents, which are similar to those associated with classical monopoly pricing. From this, a basic lesson in institutional design can be derived: "[T]he potential allocative distortions, arising from the uninformed party's attempt to extract the informed party's informational rent, are reduced or even entirely eliminated if the bargaining power is shifted to the informed party" (Bolton & Dewatripont, 2005, p. 259). In our setting, the media outlet is the informed party (surely, better than the league) and, hence, more efficient in measuring the club's marginal contribution to the season as a unique product.[6] (If we considered the championship as a unitary package/product to be delivered to audiences, and considered the metering problem *à la* Alchian & Demsetz [1972, p. 778], the media is better than the league as "the centralized contractual agent in a team productive process.") The legislature hopes that by giving the uninformed party (the league) the possibility of extracting the informational rent from the informed party (the media) it can pursue distributive justice but, instead, it veers the outcome of the market structure away from Pareto optimality.

Furthermore, there is one pending risk for the league. To better understand our reasoning, we inform the reader that, in the past, the satellite broadcaster has always managed to draw-up contracts with all the clubs because the outlet wanted to sell the championship as a unitary package.[7] The negotiation rounds usually went on and on until the minor clubs and the newly promoted ones accepted the offer—usually at the very last minute before the kick-off of the championship.

Now, when comparing publicly observable contracts (RPL and the cartel) with the privately observable ones (ICO and one-on-one contracting), the relevant externalities that the parties are attempting to internalize are different. Under the RPL, "the relevant externality to determine the direction of distortion of equilibrium outcomes relative to efficiency is the one on nontraders," whereas under the ICO, "the relevant externality is the one affecting all traders at the socially efficient trade level" (Bolton & Dewatripont, 2005, p. 620).

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[6]Contrary to the average Italian soccer clubs, whose expertise is more on picking players rather than on marketing management, the media outlet focuses on its clientele and invests in marketing knowledge (information system) to better know customers' tastes and preferences. Note also that the league outsourced to an intermediary the negotiations with the media.

[7]This rules out the accusations that the broadcaster may pursue its own strategy in picking matches selectively, thus creating differences in the levels of club exposure (to the ultimate effect of influencing their popularity).

Under the RPL there are no externalities on non-contracting parties because all sign in with the media. Nevertheless, the welfare of the contracting parties is not maximized because asymmetric information and information rents to be extracted persist; the league is unable to block rent extraction by the media. On the contrary, under the ICO, the group of potential non-traders threatened to not sign the contract with the media; in this case, the possibility of a negative externality on the traders was real and would have affected all the traders. Yet, in the past, the socially efficient trade level was reached because all participated. Therefore, the two institutional designs are equally ranked as far as the informational rent appropriation is concerned because the media exploit their informational advantage in either institutional setting. This evidence contrasts with Andreff and Bourg's (2006, p. 59) contention that demand-side concentration (of television channels) will have the effect that the outbidding interested only the clubs that generate high television revenues.

Also, the confrontation between the bigger clubs and the minor ones will not only persist beneath the new design, but there will also be a new issue concerning how much the newly promoted clubs must be paid. The media has an accurate assessment of the fan-base for all the clubs, even for the newly promoted ones at their first appearance at Serie A because they have accumulated prior information on those fan-bases during the previous season when clubs played in Serie B.[8]

Furthermore, beneath the ICO design, the media would have paid the minor clubs more than what was reasonable to expect from fan subscriptions because the media wanted to have all clubs on board. Beneath the RPL, the league already has all the clubs on board, including the newly promoted ones, so the unitary package is granted, with the result that the media is not worried anymore. The media now obtains the exclusivity by paying a premium to the league, but this is a monetary compensation for the reduction in transaction costs originated by the single point of sale (Jeanrenaud & Késenne, 2006, p. 8); hence, the total amount of welfare is unchanged (the compensation is a transfer of money between parties). Because it is pocketed by the league, the side-effect is that the premium is now shared by all and earned by elite clubs, too. We do not know whether this solution is better than the previous one for the minor clubs. We conjecture that because the media outlet is endowed with private information on all the clubs' fan-bases, it is not forced to present at the auction a bid higher than before for the entire contract. The broadcaster calculates the bid price for the clubs on which it has prior information by summing the revenues it would have paid to each club in bilateral contracting. If the newly promoted clubs have never been in Serie A before, this time that part of the total bid price, which could be imputed to them, can be calculated according to their real contribution (less money than before) because full participation is granted and the newly promoted clubs do not have to be convinced. Hence, the newly promoted clubs could have benefited more in the previous institutional setting than in the new one.[9] As seen, minor clubs need not the shield of joint, centralized selling to preserve their bargaining power.

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[8]The promotion to *Serie A* will improve the TV subscription rate for the club. The broadcaster can estimate this increment from data collected on clubs with similar histories of promotion. This leaves room for the possibility of a forecast error, which is, in any case, lower than the error the league would make.

[9]In the past, the broadcaster faced a trade-off between losing one club (and selling an incomplete season) versus leaving more money on the negotiation table to the newly promoted clubs. We speculate that the latter route was chosen.

Consider now the third metric, *ex post renegotiations.* After the auction, revenues are divvied up among the clubs on the basis of information on fan-bases, but because this information is only a proxy for the private information that the media retain, post-contractual haggling by some clubs is not avoided but, rather, internalized within the league. Whereas information on fan-bases is observable and verifiable for the media, it remains observable but unverifiable for the league. If the clubs had the same assessment as the media on their fan-bases (which we also question), they could not pass it on to the league in verifiable terms because they will all tend to brag about their fan-bases. Hence, fan-bases remain to be measured by an outside independent source. Furthermore, there is ample scope for the newly promoted clubs to quibble with the incumbent clubs over the accuracy of the data, so each year the contract will have to be renegotiated, the league will run the risk of being blocked in a stalemate by internal contrasts between opposing coalitions, and transaction costs will rise for all.

During the first year of application of the new laws (at the end of the 2010–2011 season), we witnessed an even worse situation, when a coalition of 15 clubs stood up to the 5 bigger ones and appealed the internal court to settle the issue concerning the approximately €200 million to be redistributed. The controversy concerned the distribution of revenues according to the rule fixed by the law! We are not talking about the negotiations on the new sharing rule (recall that the laws fixed the sharing rule only for the first season of the new regime), but on how the laws were to be interpreted. The term *fan,* as used by the laws, was linguistically analyzed, the definition and the ontological status of the fan dissected, and the Council of Ministers was consulted for an informed opinion. This evidence reduces the strength of the conclusions presented by Jeanrenaud and Késenne (2006, p. 8) on the comparison between individual- and joint-selling regimes. Surely, as they pointed out, central marketing of media rights generates the benefit that the cartel works as a "single point of sale" that reduces transaction costs for the broadcaster (however, see our earlier comment on this), but evidence shows that transaction costs of another kind may arise that not only counterbalance that benefit, but represent a residual loss for all.

Finally, regarding the fourth metric, the new regime is more exposed to the *risk of antitrust litigations,* despite the legitimacy granted to horizontal cooperation agreements under the RPL. While we wrote this article, a case in antitrust litigation, filed by Conto TV, received a first approval in court hearings. The plaintiff, opposed to the sale by the league to SKY, contested how the packages of TV rights were composed. We cannot foresee what will happen in future hearings, but this is already evidence that the new laws created openings to more antitrust litigations.

As for the impact of revenue-sharing, we showed that focussing on CB may be myopic because the relation between revenue inequality and CB is not clear-cut. The evidence on the first season of application of the laws justifies our prudent approach to the issue. The new sharing rule reduced the revenue-Gini index by 30%, whereas the point-Gini (the inequality in points at the end of season) *increased.* Of course, this is evidence only of the failure of the sharing rule fixed for the first season; it is just one occurrence that means nothing in statistical terms. Surely, other sharing rules may do a better job. Yet, this evidence should give food for thought to those who were as certain as the legislator was of the effects of the sharing rule on CB.

Some politicians may be obsessed with the role of the media, and may assume that they can be instrumental in fixing problems in other industries. Our suggestion is that the media be

regulated to ameliorate their functioning, not to steer an impact of sorts upon other industries as an instrument of industrial policy.

ACKNOWLEDGMENTS

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