

Superstars: why does the winner take all?

Economic literature describes the superstar phenomenon as a situation in which a small number of individuals enjoy significant income and capture dominant market shares in their business. Theoretical analysis identifies the markets in which the superstar phenomenon appears in different ways. The empirical approach sheds light on the sources of remuneration heterogeneity [Bourg, 2008].

The characteristics of working in the sporting spectacle

Professional sport is part of the celebrity economy and the entertainment industry. Several stylised facts specify the market for sports fame. Talent is the main vector of fame in sport because it is measurable, at least in part. Indeed, sporting talent can be objectified by the ranking, the score, the victory, the defeat, as well as with a multitude of indicators isolating the contribution of each player in team sport: playing time, number of goals or points, counters or interceptions, distance covered, etc.

Professional sport operates according to a worker's power model in which almost all resources are allocated to the primary producers, i.e., the athletes themselves, who have negotiating power over the owners [Demazière, 2016]. This is because the 'value' of a team is created essentially by the athletes, whose talent and quality of performance largely determine the sporting and financial results.

Professional sport is neither exclusively, nor primarily, about creating shareholder value. Admittedly, the legal and economic differences between the two main organisational models (Europe and North America) make it difficult to say. Nevertheless, since competition is the very essence of top-level sport, priority is given to recruiting talent in an attempt to win. Hence the bidding war to attract the best, who can 'name their price' because their price is the result of competition between the clubs at the top of the sporting and financial hierarchy.

Revenue from the sporting spectacle and therefore the income of athletes comes mainly from direct and indirect revenue from immaterial production: televised sports image rights, which are converted into audiences then sold to sponsors, TV broadcasting rights, and the marketing value of the international image of sportsmen and women for brands.

It is a well-known fact that on average, and generally, talented people earn more than less talented people. A good plumber earns more than a mediocre plumber. However, the best plumbers in the world do not earn the salaries of the best athletes. Gregory Mankiw and Mark Taylor [2019] explain these differences by two specificities of the markets in which sports champions sell their services: every

consumer wants to enjoy the goods offered by the best producer; the goods are produced with a technology that allows the best producer to provide its services to every consumer at a low price.

This is how Cristiano Ronaldo - a five-time winner of the world's best footballer award and winner of 5 Champions Leagues - can show his exceptional qualities to his millions of fans simultaneously. Watching two televised matches of players half as talented as Ronaldo is not a satisfactory replacement. This has considerable consequences for his remuneration: around 100 million euros in income each year, 40% of which comes from advertising contracts with Nike, Altice, Herbalife, Tag Heuer, KFC, Fly Emirates, American Tourister and Samsung including his own brand, CR7. In contrast, these superstar effects cannot work for plumbers. All things being equal, everyone prefers to hire the best plumber, but he can only offer his services to a limited number of customers.

The superstar model

The American economist Sherwin Rosen [1981] has shown that the use of fame, in the context of mass production and global media coverage, has four essential characteristics: income differentials are much higher than talent differentials; the value of fame extends beyond the initial field of competence; the advantages obtained are subject to self-reinforcing phenomena; technological progress and globalisation enlarge the size of the market for the most successful players.

For Rosen, stardom arises in markets characterised by imperfect substitution between suppliers and the possibility of joint consumption. According to Rosen's model, there is a direct relationship between the remuneration of talent and the size of its market, which are more important the more talented the suppliers are perceived to be. There are, therefore, two fundamental aspects to these models of production and consumption.

An imperfect substitutability

The imperfect substitutability between providers of certain services has consequences for the distribution of income and the market share captured by superstars. Less talented providers are not substitutable for very talented ones, who are rare and in a quasi-monopoly position. The lack or insufficiency of talent cannot be compensated for by a greater number of suppliers. On the contrary, in some extreme situations, the market may be characterised by a natural monopoly of the superstar in his or her discipline: see the examples of Michael Jordan (basketball), Michael Schumacher (Formula 1), Zinedine Zidane (football), Tiger Woods (golf), etc. The preferences of employers and consumers for superstars explain why

small differences in talent - observable by all – lead to considerable differences in remuneration.

Economies of scale

The economies of scale in the joint consumption of certain services, thanks to audiovisual technology, multiply the impact of superstars. The production costs of a football match broadcast worldwide are fixed and do not depend on the number of viewers. The television audience for the World Cup final is close to 1 billion viewers in more than 200 countries, while the stadium can only hold 100,000 spectators. The digitalisation of the sporting spectacle also allows superstars to have a huge and captive audience of followers on social networks. Cristiano Ronaldo is the most followed personality in the world, all sectors combined, with more than 500 million followers on Instagram, Facebook and Twitter.

The unlimited growth of the audience and fame of the most talented, as well as the existence of economies of scale, help to explain the very high earnings of superstars. From 1991 to 2021, the peak period for the development of this new economy of televised sport, the cumulative amount of the world's ten largest sportsmen's incomes rose from 105 million euros, in current terms, in 1991 to 336 million in 2006, then to 867 million in 2021 (source: Forbes). In 2020-2021, despite the Covid-19 pandemic leading to a decrease in the revenues of sports organisers (shortened season, banning of spectators from stadiums) and a decrease in the salaries of sportsmen and women (reductions of 10 to 20% on average), the revenues of the ten best-paid athletes in the world have increased by 28% compared to the previous year; the increase in their extra-sporting earnings more than compensates their decrease in salary.

Only superstars have the capacity to capture the largest share of the income from this technology-driven market expansion for the most talented. The change in the scale of markets also leads to a change in the scale of remuneration. The winner-take-all theory of Robert Frank and Philip Cook [1991] demonstrates the existence of a hyper-concentration of income and a durable hyper-concentration, with the winner taking a disproportionate share of the total income, all or almost all, consistently over a long period. This double phenomenon can be explained by the growing media value of superstars resulting in demand from fans by the phenomenon of infatuation, to the detriment of the less talented, less televised and less charismatic athletes. The best tennis or golf players, for example, qualify for the final stages of their tournaments and thus showcase their talent for much longer and more frequently.

The superstar effect

Work based on Rosen's theoretical model has highlighted the links between the media coverage of superstars and their ability to attract the public. The concentration of consumption on a few individuals who are recognised as talented and offered recognition is based on the consumer's preference for notoriety. Verifiable talent acts as a signal of quality. Reputation is built up through a series of performances, but also through the media, which issue rankings ("Sportsman of the Year", "Golden Ball", "Best centre forward of the World Cup", etc.). This further accentuates the hierarchy of athletes' ratings, widens the natural market of the superstar and increases his remuneration.

Reputational capital confers on its holder a quasi-rent (the surplus linked to the superstars' advantageous position). This is especially true since the pleasure or utility of consuming the superstars' services escapes the law of diminishing marginal utility and is cumulative. Instead of causing a gradual saturation, consumption creates an addiction that leads to a self-reinforcing phenomenon of stardom. For his community of followers, Cristiano Ronaldo has an image that goes beyond football and sport. He falls under the domain of celebrity with his exploits, his looks and the values associated with him: prestige, luxury, success and hard work.

The superstar's employer (the club, the organiser, the sponsor), on the other hand, seeks to maximise its sporting and financial gains by increasing its market opportunities without a corresponding increase in production costs. Advances in technology allow the market for the superstar and his employer to expand. The difference in remuneration between football superstars and merely good players can be explained by the calculation of the clubs that combine the considerable marginal advantage that the superstar can represent with what they can pay and what their competitors are equally willing to pay.

Therefore is it better to pay the best centre forward at the moment - scoring 50 goals a season and with a charismatic image - €60 million a year, or a good striker - capable of scoring 50% fewer goals and not well known - €10 million? Depending on the club's ambitions and resources, the answer will be different. But, there are only about ten teams in Europe who can choose the first option. The case of Ronaldo illustrates this dilemma. With an average of over 50 goals per season, he costs more per goal scored (€1.2m) than a second choice who scores 25 goals (€400,000). But the clubs that have successively bought Ronaldo (Manchester United, Real Madrid, Juventus) have compared the marginal benefit of each additional potential goal (better chances of qualifying for and winning the

Champions League, increased TV and commercial revenues) and have adjusted their salary proposals accordingly.

Numerous economists have established a direct relationship between the level of demand for superstars and their power of attraction [Grimshaw and Larson, 2021; Humphreys and Johnson, 2020]. Under Michael Jordan, the Chicago Bulls not only won back-to-back NBA titles but also tripled their attendance and enjoyed a \$25.5 million increase in annual revenue. In 1997 to 98 alone, Jordan's total value to the Chicago Bulls was estimated at \$40 million, while his salary was less than \$30 million. This superstar effect was also reflected in Zinedine Zidane's impact on Real Madrid's revenue of between 42 and 54.5 million euros per season from 2001 to 2006. Given Zidane's total cost per season to the club (€36 million in transfer fees, salary and bonuses), Zidane's annual return to the team was between €6 million and €18.5 million.

All econometric tests of the superstar's impact on demand have been positive. This is consistent with the idea that the substitutability of products in renowned markets decreases with the talent they incorporate, as consumers demand their superstars who become a signal of the ex-ante quality of an event or product. This is why sponsors are keen to associate their brands with the image of superstars, who alone have visibility, audience, popularity and the power of influence. Forbes calculated that in 2015-2016, Cristiano Ronaldo generated 165 million euros of added value for his business partners simply through his activity on social networks alone.

Lessons and perspectives

Superstar theory improves understanding of the formation of very high earners in sport. The talent gaps were identical, a priori, in 1991 and 2021. However, in three decades, superstar incomes have increased exponentially and the gaps have also widened. Multiple sources of remuneration heterogeneity have been identified: differences in talent; how these gaps are valued at a given time; the very imperfect substitutability between sportsmen and women; the magnification effect of these talents and the increase in the size of the markets through television and social networks; economies of scale in the joint consumption of certain sports services and, the market power of superstars.

One avenue of research could put into perspective the role of institutions on the level and hierarchy of superstar earnings. Institutional arrangements are justified by the need to regulate sports markets to preserve the balance of competition and the uncertainty of outcome. In doing so, they influence the economic outcomes of leagues and clubs. Labour markets operate according to different rules in North America, which is highly regulated (rookie draft, salary

cap, luxury tax, collective bargaining) and in Europe, which is deregulated (free movement, Bosman ruling). The same is true of the North American and European entertainment markets: closed leagues/open leagues; maximisation of financial gains/ maximisation of sports gains; high cartel power of the league/low cartel power of the league; and strong mutualisation of commercial revenues/low mutualisation of commercial revenues.

Thus, it would be useful to measure and compare the impact of the imperfections of these markets on the amount and differences in remuneration. It would also be interesting to explain the apparent paradox of a majority representation of North American professionals in team sports leagues (basketball, American football, baseball, ice hockey, soccer) in the annual ranking of the 50 highest sports incomes in the world. This is even though the labour markets in which these athletes sell their services are theoretically strictly regulated, unlike the deregulated labour markets of European athletes, who are much less well represented in this ranking. The demographic and economic size of the North American market, the efficient organisation of the major leagues in terms of sports business, their market value on an international scale, the competition between the major networks to buy television broadcasting rights and the advertising strategy of the large American firms betting on sport may account for this over-representation of North American sportsmen and women amongst the highest earners.

The share of North American athletes has indeed been decreasing steadily and noticeably in the Forbes Top 50 over recent decades: on average, from 35 to 40 during the 1990s, then around 30 during the 2000s, then 25 during the 2010s. Is this the result of more effective wage regulation in North America? The origin of this relative weakening seems to be the much faster increase in the income of superstars in European football than in North America (an average of eight footballers were in the Top 50 at the end of the 2010s compared with one or two thirty years earlier).

The deregulation of the post-Bosman era (1995) and the fierce competition between TV channels to buy and broadcast football have accelerated transfers and encouraged the top clubs to outbid each other in order to recruit superstars, a bidding process fuelled by the strong, steady and lasting growth of their TV and sponsorship revenues. Football superstars have thus benefited from the inflationist media coverage of this sport, which is the most-watched sporting spectacle in the world. In the early 2020s, Cristiano Ronaldo, Leo Messi and Neymar were at the top of a hierarchy from which footballers were previously excluded. This development illustrates and confirms the superstar effect, which is working in their favour more effectively thanks to audiovisual and digital technology, as well as the new deregulated and globalised football economy.

Further information:

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