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Does Digitalization Accelerate the Winner-Takes-All Effect in the Sports Industry?

Authors' contribution:

- A) conception and design of the study
- B) acquisition of data
- C) analysis and interpretation of data
- D) manuscript preparation
- E) obtaining funding

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Abstract

Today media and sports are indivisible, having a kind of inseparable, mutually influential relationship. Media attracts audiences and generates profit through sports. In its turn, sports content is disseminated, transmitted, and popularized through the media. Thus, theoretically, sports and media exist in symbiosis. However, practically, this relationship is complex and includes many factors. First of all, in recent decades, the process of overall digitalization (and digital transformation) of all fields of life has had a crucial impact on sport, media, and their interrelationship. This paper aims to conceptualize and analyze the possible impact of digitalization on “winner-takes-all” (WTA) (winner-takes-most, WTM) dynamics in the professional sports industry, notably for spectating audiences, and answer the question: “Can digitalization be seen as a driver of ecosystem change and how it should be tested?” This conceptual model paper seeks to construct and develop a theoretical framework that can explain and predict relationships between concepts of digitalization and key sport spectating variables: audience, TV rights, and revenue through a prism of WTA. We found that the technological change in the sports media market and the greater global-orientated strategy of leading sports organizations have re-sorted and compressed many market shares, but the effect of technological disruption has been significantly less pronounced for the most powerful digital leaders in the industry. To this end, we represent digitalization as the main accelerating factor of the WTA effect (along with other auxiliary effects) in the sports industry and propose future research directions and perspectives.

Keywords: Sports, winner-takes-all, digitalization, network effect, snowball effect

Introduction

Today, media and sports are indivisible, having a kind of inseparable, mutually influential relationship. Media attracts audiences and generates profit through sports. In its turn, sports content is disseminated, transmitted, and popularized through the media (Zheng & Mason, 2022). Thus, theoretically, sports and media exist in symbiosis. However, practically, this relationship

is complex and includes many factors. First of all, in recent decades, the process of overall digitalization and digital transformation (adaptation of the system to operate with the integration and use of information and communication technologies) of all fields of life has had a crucial impact on sport, media, and their interrelationship. It is worth mentioning that digital transformation is viewed as a means to align economies, institutions, and society with the current state

of technological progress on a systemic level (Unruh & Kiron, 2017).

This paper conceptualizes and analyses the possible impact of digitalization on the “winner-takes-all” (WTA), winner-takes-most (WTM – a situation in which a single “winner” receives all the rewards, and the rest of the participants receive nothing) dynamics in the professional sports industry, notably with spectating audiences. Can digitalization be seen as a driver of ecosystem change and how it should be tested? Technological change in the sports media market and the greater global-orientated strategy of leading sports organizations have re-sorted and compressed many market shares and been affected by various dynamics, but the influence of technological change has been significantly less discussed for the most powerful digital leaders in the industry. Organizations that experience a decrease in globalization and lack innovative strategies often see a drop in technology advancement and a shift in market dominance towards highly advanced “superstar” cutting-edge organizations. The mass dissemination of technological advances mainly reflects the massive access to sports content and relocations of spectators (Glebova et al., 2020), rather than a diversification of sports content channels in the incumbent information economy, suggesting that the current trend is primarily driven by technological advancements rather than anti-competitive forces (Glebova et al., 2022; Schwellnus et al., 2018).

The rest of this paper is organized in the following manner. With a focus on the global context, we first identify key constructs and qualitatively review the relationships between the process of overall digitalization and the professional sports industry, to explain the nature of impact and identify and systematize all variables. As a model paper (Jaakkola, 2020; Reese, 2022), this article begins with a presentation of the focal phenomenon and accompanying constructs, followed by further explanation. Next, we analyse the disruptive changes that have occurred in the interdependent relationship between sports and media due to the rapid development of digital technologies, globalization, and the reorganization of the professional sports environment, altering the responsibilities of various parties involved. We conclude by summarizing philosophical discussions, practical implications, and navigating future research directions.

Also, we summarize arguments in the form of a graphic that depicts the main terms and their salient relations, as a set of insights, suggestions, and propositions that are logical statements derived from the conceptual framework. Propositions are logical statements derived from the conceptual framework. They condense the main idea of an argument into a concise form. However, at the same time, this simplicity also highlights any weaknesses in the logic of the argument.

Theoretical framework and rationale

Digitalization and globalization in the sports industry

The emergence and mass diffusion of digital technologies has transformed the sports media landscape, creating a complicated cross-media environment that blends together many contrasting constructs, such as popularity and personalization, or structure and agency, bringing corresponding changes within the professional sports industry (Zheng & Mason, 2022). Westerbeek (2021) argues that sports continue to grow in importance as a platform for communication and mass engagement in the ongoing globalization of sports, taking into account a historical perspective and outlining periodical shaping of the modern sports industry. Thus, today, the sport has become a significant global industry (Riot et al., 2018), which constitutes a truly global market fuelled by the universal appeal of sports competitions. The popularity of sports and the advent of broadcasting and internet access have paved the way for a lucrative and fertile global market, shaped by the collaboration between sports brands and media as they move towards digitalization. For instance, Velagapudi (2020) focuses on the evolution of marketing strategies, from traditional to modern and digital methods, and examines how Wimbledon’s traditional image has evolved into a global brand through these changes, mainly through social media. Caldas et al. (2020) report the conceptualization of a multi-sided platform for sports facilities since multi-sided networked markets are a result of digitalization and “*network effects are one of the most powerful key strategic assets that can be created by technology innovation*” (pp.276–277).

Spectating audiences

Herold et al. (2021) conceptualize professional clubs as economic platforms, and the absence of in-stadium spectators due to network effects (Tamir, 2022) may alter the roles of stakeholders based on the presence of network effects. Caulfield and Jha (2022) find, in turn, that fans can benefit from the increased operational efficiency of innovative technologies in stadia. Notably, tools provide means for fan engagement, which, on one hand, improve fan customer experience, and on the other hand, increase customer retention, sales, and profitability (Adamson et al., 2006; Glebova et al., 2022). Thus, technology providers and related stakeholders are in an advantageous position, since sports are rapidly digitized and, as a result, their services are increasingly in demand.

TV rights and the broadcast industry

The growing and evolving popularity of mediatory watching and televised sports content has influenced the broadcasting sectors and sports leagues (Cave & Crandall, 2001). At the same time, retrospectively, sport has

played a significant role in the growth of television in general, especially during its emergence as a dominant global medium between 1960 and 1980 (Whannel, 2009). TV and broadcasting transformed sports have had a reciprocal affect on all aspects of the industry: economic, political, and cultural (Glebova et al, 2022). Furthermore, Whannel (2009) notices that from the 1970s onward, it was not regular weekly sports broadcasting that commanded the largest mass audiences but the occasional major events, such as the Olympic Games and football World Cup. Since digitalization and the internet have expanded the number of tools and channels, the amount of shared domestic sport-watching leisure have decreased significantly, but it is still relevant today. Andreff and Staudohar (2000) explained how domestic TV rights changed the business model of some professional clubs and leagues. Since the rise of digital platforms and even more thanks to developments in internet protocol television (Scelles et al., 2020), digitalization has increased the WTA phenomenon and foreign TV rights have become increasingly important (e.g. Premier League).

Revenues

With the development of mass media, TV rights income has become the most important source of revenue for the professional sports industry (Zheng & Mason, 2018; 2022). Markets can be seen as multi-sided when two or more customer or participant groups have direct interactions (Rochet & Tirole, 2006). Professional sports have evolved into a multi-sided market centred around the professional league as the main platform, with various stakeholders, such as fans, media, sponsors, and hosts, playing important roles. (Mason, 1999; Zheng & Mason, 2018). In turn, as complex organizations leagues generate revenues from multiple sides through various channels: fans via loyalty programs, content distribution, and ticket sales; the media through broadcasting rights and advertising; sponsors via sponsorship fees; and hosts via benefits provided for a particular event (Mason, 1999). With the growth and digitalization of the sport's fan base, the media, sponsors, and hosts have been transforming their targets and strategies, then providing multiple sides of it, turning it into a marketing opportunity. However, this kind of competitive sports management must involve innovative tools, often only affordable for "superstar" leading service and product providers. Today, both production activities and innovation management are organized through complex networks (de Vasconcelos Gomes et al., 2021).

Savić et al (2018) link "images of athletes" and "material rewards, compensation, and honors awarded to the winners", representing it as a model for the marketing and sales of sports products, illustrating the WTA phenomenon among athletes, where the winners in the image take all (most) benefits. In this regard, researchers emphasize an

increasing need for connections between the public, the media, and sports, in order to create a positive image and reputation on the sports market and reduce the WTA impact on different aspects of the sports industry (Stevens, 2013; Vaughan & Madigan, 2021).

Winner takes it all, Network effect, Snowball effect

Evens and Donders (2018) describe escalating changes in television and claim that disruptive technology is mediated by the prevailing power structures (Szreder, 2021) and institutional inter-relationships in the industry. The outcome of continuous platform competition, as part of the ongoing transformation of the television industry, reflects where structural power lies in the globalized media economy in which particular market leaders have powerful and stable (often growing) positions. Bühren et al. (2020) carried out an experiment to investigate the effect of market incentives and forecaster personal traits on herding behavior in sports betting markets. They found that self-reported knowledge and WTA (Winner Takes All) incentives led to a decrease in anti-herding behavior. WTA incentives and self-reported knowledge improved forecasts. Rietveld and Schilling (2021) show how network effects generate WTA dynamics that influence strategies, such as pricing and quality.

Methodology

While reviewing the literature, we focused on the consideration and justification of the choice of theoretical constructs and theories. We also prioritized the manner in which terms and constructs are integrated to produce the arguments, since we believe it is pivotal in building, sharpening, and polishing the argumentation. We employ literature that tackles the main constructs associated with the potential intersection of digitalization and the WTA phenomenon: the understanding of spectator audiences (Glebova et al., 2022) sheds light on the central phenomenon of technology-enabled applications, and research from various fields explores the potential impact of digitalization on WTA.

Since this is a conceptual paper (Reese, 2022), it is not based on research but aims to develop hypotheses. It is likely to be discursive and covers philosophical discussions on the WTA phenomenon in sports and a kind of synthesis of scholarly work and thinking at an intersection of sports digitalization and consuming audiences.

This article can be defined as a conceptual model paper (Jaakkola, 2020). Therefore, it seeks to construct and develop a theoretical framework that can explain and predict relationships between concepts of digitalization and key sport spectating variables: audience, TV rights, and revenue through a prism of "winner takes it all"

effect, involving potentially related terms such as digital platforms, snowball effect, and network effect. Thus, we describe the entity of WTA and identify related issues – the process of digitalization – and explain how it works by disclosing antecedents, outcomes, and contingencies related to the focal construct. This involves a form of conceptualization that creates a nomological network around digitalization and WTA concepts, employing a formal analytical approach to examine and detail the proposed causal linkages. To this end, in this article, we identify previously under-explored inter-connections and possible relations between constructs of digitalization, sport-consuming audiences, TV rights, revenue, and winner-takes-all effect and then explain why the elements are linked and interrelated and may affect each other.

This paper contributes to the field of sport management and marketing by delineating an intersection of digitalization and WTA in the sports industry: the goal is to detail, describe, and depict digitalization and its relationship to other WTA through the prism of spectating audiences, revenues, and broadcasting rights. Since it is a conceptual article, the creative scope is unfettered by data-related limitations, allowing the emerging phenomena of digitalization and WTA to be explored and modeled using a qualitative approach (Netland et al., 2012), focusing on how and why digitalization impacts the sports industry. To this end, this paper provides a roadmap for understanding WTA by disclosing the concept of digitalization, how it changes, and the key constructs and factors by which it operates, including the moderating conditions that may affect it.

Results and discussion

The WTA effect refers to the phenomenon whereby a small number of firms or individuals dominate a market or industry. In the sports industry, this effect can be seen in the growing dominance of a few major teams or individuals, as well as the increasing financial disparity between these top performers and the rest of the field. The process of digitalization in the sports industry can have some effects that speed up its rate of progression. One is the winner-takes-all effect, from which the leading companies or athletes tend to reap the most benefits. Additionally, the process can be sped up by the increasing the use of technology in sports, which allows for better communication and tracking of performances.

The digitalization process in the sports industry can accelerate due to the winner-takes-all effect in several ways:

1. Increased investment in technology: Superstars, successful teams, and organizations are more likely to have the financial resources to invest in technology that can give them a competitive advantage of being innovative and equipped, such as advanced performance-tracking and analytics tools.
2. Facilitated sports content access: Any game or any sporting event can be (co)watched and then replayed, regardless of the physical location of a viewer.
3. Greater focus on fan engagement and sport-spectating audiences: The top teams and athletes have a larger fan base, which can be leveraged to drive digital engagement and monetization (Adamson et al., 2006).
4. The rise and dominance of streaming platforms: WTA can lead to the emergence of a few dominant streaming platforms that can attract a large audience, leading to digitalization in the broadcasting of sports.
5. Development of innovative business models: WTA can also lead to the development entrepreneurship and of new innovative business models, such as Uberization, pay-per-view, or membership-based models, which can drive digitalization in the sports industry, increasing the snowball effect.

By synthesizing the literature pool, we have identified key variables (mediators, moderators) and then built a theory that could predict the impact of digitalization on WTA effects in the sports industry. This involved a particular kind of formal reasoning, supported by research from multiple disciplines and real-world applications, using method theories and deductive reasoning to explain relationships between key variables, facilitated by theories in use.

Some authors argue that the existing network effects in digital platforms lead to WTA dynamics, which poses a threat to competition (Carballa Smichowski, 2018; Szreder, 2021). On the other hand, other researchers have minimized the significance of the WTA phenomenon and related factors (Evans & Schmalensee, 2017; Inoue, 2019). In this regard, there are two main contrast assumptions raised, which require further testing (Efron, 2004): the null Hypothesis (H0) and the Alternative Hypothesis (H1).

H0: Digitalization does not impact and accelerate the WTA effect dynamics in the sports industry

H1: Digitalization accelerates and increases the WTA effect dynamics in the sports industry

Sports markets have been disrupted by digitalization and the emergence of multi-sided platforms (a service or product that directly or indirectly connects two or more stakeholders). After having discussed all the existing arguments from the literature for and against the existence of WTA dynamics, we demonstrate that there are reasons to argue that the sports industry can be considered as the WTA industry, where network effects are enhanced by the snowball effect (Carballa Smichowski, 2018; Netland et al., 2012).

The snowball effect refers to a situation in which a small initial advantage or disadvantage grows larger over time, and can be used to describe how a team or player that starts winning or losing tends to continue doing so. For example, in the sports industry, the snowball effect can exacerbate the WTA dynamic.

In terms of digitalization, the snowball effect could exacerbate the WTA effect in the sports industry. Digital technologies such as big data analytics and advanced scouting can give teams and players an advantage in terms of training and performance, and the teams and players that can access and utilize these technologies are more likely to win. This could lead to a situation where particular “equipped” teams or players dominate the competition, while others struggle to keep up.

In the professional sports industry, the network effect can play a role in the WTA phenomenon in several ways. (1) Sports organizations (for example, a football club) that are consistently successful tend to have a larger fan base and generate more revenue, which can give them a financial and reputational advantage over their competitors (Glebova et al., 2022). Consequently, it allows them to afford better players, coaches, innovations, and facilities, which can further improve their chances of winning. (2) “Winners” (leading athletes, teams, and

players) often have more opportunities to participate in high-profile events and gain exposure, which can attract more fans and increase their visibility. This can lead to more endorsement deals, merchandise sales, personal and team brand promotions, and other revenue channels. (3) A successful team can also attract top talent, which can include athletes, coaches, scouts, managers, marketers, and other staff members.

In this way, the network effect can amplify the WTA phenomenon in the professional sports industry. Subsequently, the snowball effect can also amplify the network effect and WTA dynamics. Furthermore, the snowball effect can accelerate the network effect in the sports industry by creating a self-reinforcing cycle of success. For example, when a team or player starts winning, they gain a competitive advantage in terms of the fan base, revenue, and exposure, which can, in turn, give them an even bigger advantage in terms of resources and talent.

The sequence is simple: an athlete who starts winning may attract more fans, which leads to increased ticket sales, influencer marketing channels, merchandise sales, and other revenue streams. Thus, the increased revenue can be invested to acquire better coaches and facilities, which can help the athletes continue to win and grow professionally, both in sports performance and in image.

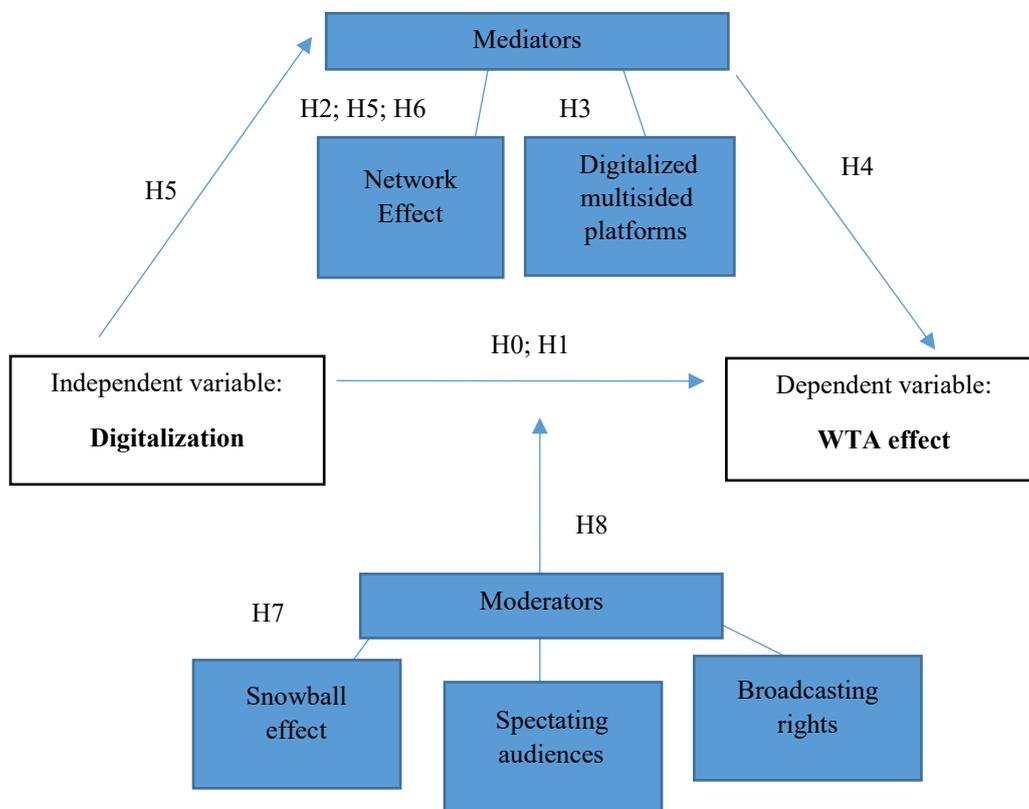


Figure 1. Conceptual modeling at an intersection of digitalization and WTA effect

Note: H (hypothesis)

Generally speaking, the more the team wins, the more fans they attract and engage and the more revenue they generate as a result. This can further enhance their competitive advantage on the sports battlefield and marketing battlefield (successful players can attract more endorsements, sponsorships, and media attention; this can lead to increased popularity and revenue for the player, which can further enhance their performance and belonging to a “higher league”).

Subsequently, mediating variables (mediators: network effect, digitalized multisided platforms) explain the process through which digitalization and WTA are related, while moderating variables (moderators: snowball effect, spectating audiences, broadcasting rights) affect the strength and direction of that relationship (Gunning & Rossi, 2022). Mediators (network effect and multi-sided platforms) are causal results of the independent variable (digitalization) as well as a preceding effect of the dependent variable (WTA effect). This leads us to construct the following hypotheses:

H2: The level of digitalization in the sports industry increases network effects

H3: The dissemination of multi-sided platforms in the sports industry is increased by digitalization

H4: The network effect in the sports industry positively affects the WTA effect

H5: Digitalization leads to an increase in the network effect

H6: An increase in the network effect leads to a growth in the WTA dynamics

H7: The snowball effect accelerates the H1

H8: Spectating audiences and broadcasting rights impact the relationship between digitalization and WTA dynamics

The observed literature mostly discusses indirect aspects of WTA dynamics in sports digitalization. Indeed, this research is so far merely theoretical and mostly provides empirical evidence about the network effect and WTA dynamics, in general, and also in sports (broadcasting, spectating audiences).

Conclusions

Overall, the winner-takes-all effect in the sports industry can lead to increased investment in technology, a greater focus on fan engagement, facilitated content access, the dominance of streaming platforms, and the development of new business models, which can accelerate the process of digitalization in the sports industry.

This process can accelerate due to the WTA effect in several ways. First, the technology is readily available to all organizations, so no matter how small or large they are, they can take advantage of it. Second, the increasing

popularity of sports has made them more susceptible to market forces, which, in turn, has driven up the costs of acquiring and using digital technology. This has forced smaller organizations to seek innovative and cost-effective ways to digitize their operations in order to remain competitive. Finally, the winner-takes-all effect has created a sense of urgency among sports organizations to digitize their operations in order to stay ahead of their competitors. Furthermore, the formulated hypotheses suggest that, by analysing key variables, a theory has been built to predict the impact of digitalization on the WTA in the sports industry. The ideas presented in this conceptual paper can be used as a starting point for further research or as a way to introduce a new perspective on an existing field of study.

In conclusion, the intersection of digitalization and sports media consumption is an important and rapidly developing field of study. However, there is currently a lack of a unifying theoretical framework to guide this research. Adopting a communication and media studies perspective can provide valuable insights into how digital technologies have changed the sports media landscape, as well as the relationships between stakeholders. Further research in this area will help to better understand the impact of digitalization on sports media consumption and ultimately inform the development of effective strategies for the digital transformation of the sports industry. In this paper, by developing hypotheses about the impact of digitalization on sport consumption through the prism of the stakeholder approach, we suggest prospective research directions and an agenda, as well as a conceptual analysis of the impact of digital transformation on the sports industry. These results invite scholars to pursue research on competitive sports market dynamics in digitalized sectors of the industry and to produce more complete and precise empirical evidence.

Ethics approval and informed consent

This paper is not reporting studies on human subjects, human data or tissue, or animals. It has been written with integrity, fidelity, and honesty. The authors take full responsibility for this manuscript.

Competing interests

The authors have no competing interest in commercial associations or financial interests to declare.

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