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MODERN MODEL OF FUNCTIONING OF ESPORT AS A DIGITAL ECONOMY SPHERE: UKRAINIAN CASE

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СУЧАСНА МОДЕЛЬ ФУНКЦІОНУВАННЯ КІБЕРСПОРТУ ЯК СФЕРИ ЦИФРОВОЇ ЕКОНОМІКИ: УКРАЇНСЬКИЙ КЕЙС

The relevance of the research is determined by the fact that prior to the onset of full-scale aggression, Ukraine had a trend of development in the field of esports. Esports not only shaped a unique esports culture and a wide audience but also emerged as an endemic sector of the digital economy. In war conditions, esports continues to produce esports products, albeit on a reduced scale, while preserving the potential for rapid post-war recovery. Therefore, the article aims to investigate the modern model of the functioning of esports as a sphere of the digital domestic economy, include the ongoing conflict. Attention has been drawn to the fact that from a comprehensive perspective, viewing esports as a dynamic and complex model, it becomes evident that

the success of esports relies on the interaction between professional teams and players, tournament organizers, infrastructure and technology, broadcasting and media coverage, sponsorship and advertising, as well as the viewer base and content consumption. It is worth noting that each of the highlighted components is a key aspect of functioning, and they are quite specific. It has been observed that this framework of functioning can be applied to various contexts, such as systems, organizations, processes, devices, people, and so on. The conclusion has been drawn that the successful development of esports requires interaction and collaboration among all these aspects. For instance, professional teams and players require a suitable training environment and access to modern technologies to enhance their skills. Tournament organizers provide platforms for competitions and act as intermediaries between teams, viewers, and sponsors. Infrastructure and technologies, such as esports arenas and powerful computers, create the conditions for professional competitions and training. Broadcasting and media coverage help attract viewers and sponsors, spread awareness about events, and create engaging content for the audience. Sponsorship and advertising provide financial support to players, teams, and tournaments, while the viewer base and content consumption serve as sources of revenue for the esports industry. The obtained results form the basis for the development of an esports development strategy, which will include a comprehensive plan that ensures a systematic process in which input data or resources are transformed into output results or esports products not only through specific operations but also through procedures of interaction among economic entities belonging to the esports sphere.

Актуальність дослідження зумовлена тим, що до початку повномасштабного вторгнення в Україні була наявна тенденція розвитку кіберспорту. При цьому кіберспорт не лише сформував унікальну кіберспортивну культуру та широку аудиторію, а також виокремився в ендемічну сферу цифрової економіки. В умовах війни кіберспорт продовжує виробляти кіберспортивний продукт (хоча і у скорочених масштабах), зберігаючи потенціал для швидкого повоєнного відновлення. Відтак, метою статті є дослідження сучасної моделі функціонування кіберспорту як сфери цифрової вітчизняної економіки. Автором звернено увагу на той факт, що при комплексному розгляді кіберспорту як динамічної та складної моделі стає очевидним, що успіх кіберспорту залежить від взаємодії між професійними командами та гравцями, організаторами турнірів, інфраструктурою та технологіями, трансляцією та

медіа-покриттям, спонсорством та рекламою, а також глядацькою базою та споживанням контенту. Зазначимо, що кожна з виділених складових є ключовим аспектом функціонування, при цьому досить специфічним. Це зумовлено тим, що категорія функціонування може бути застосована до різних контекстів, таких як системи, організації, процеси, пристрої, люди тощо. Автором зроблено висновок, що успішний розвиток кіберспорту вимагає взаємодії та співробітництва між всіма його аспектами. Наприклад, професійні команди та гравці потребують середовища для тренувань та доступу до сучасних технологій для розвитку своїх навичок. Організатори турнірів забезпечують платформу для змагань і виступають посередниками між командами, глядачами та спонсорами. Інфраструктура та технології, що мають кіберспортивні арени та спеціалізовані ігрові майданчики, створюють умови для проведення професійних змагань та тренувань. Трансляція та медіа допомагають привернути глядачів та спонсорів, розповісти про події та створити цікавий контент для аудиторії. Спонсорство та реклама забезпечують фінансову підтримку гравцям, командам та турнірам, а глядацька база та споживання контенту є джерелом прибутку для індустрії кіберспорту. Отримані результати створюють основу для формування стратегії розвитку кіберспорту, яка буде містити загальний план, забезпечуючи систематичний процес, в якому вхідні дані або ресурси перетворюються на вихідні результати або кіберспортивні продукти. Це відбувається не лише через певні операції, але і через процедури взаємодії суб'єктів економічної діяльності, що належать до сфери кіберспорту.

Keywords: *sports, gamer, endemic sphere, digital economy, esports teams, tournament organizers, revenue.*

Ключові слова: *кіберспорт; геймер; ендемічна сфера; цифрова економіка; кіберспортивні команди; організатори турнірів прибуток.*

Target setting. Esports is one of the fastest-growing industries in the modern digital economy. Before the full-scale invasion, this trend was evident in Ukraine as well, where esports not only fostered a unique esports culture and a wide audience but also emerged as an endemic sector of the digital economy. This is evidenced by the fact that numerous events and championships have been held in Ukraine for schoolchildren,

students, adults, as well as amateur and professional esports athletes. These include Dota 2 minors supported by Valve, and competitions by StarLadder in CS: GO, Dota 2, and Hearthstone, among others. In addition, numerous social projects in esports have been implemented, specifically targeting children with special needs, military personnel, and ATO/OOC veterans. Furthermore, official esports education has been developed at a high level.

However, even in times of war, esports continues to produce esports content, albeit on a smaller scale, while maintaining the potential for rapid post-war recovery. Let's note that the established model of functioning of esports as an endemic sphere of the digital economy operates - despite the challenges, online championships, performances of esports athletes, and other events organized by commercial tournament operators are held.

Analysis of research and publications. The question of esports development has been addressed in the works of researchers such as V.V. Goblik, Y.V. Chaika, I.O. Lazneva, D.I. Tsaranenko, and others. However, the majority of studies focus on the specifics of hardware progress in Ukraine and its impact on the popularization of esports, as well as the transition of sports clubs into the esports environment. At the same time, the modern model of esports functioning is practically unexplored, which highlights the need for research in a particular area.

The wording of the purposes of article (problem). The article aims to investigate the modern model of the functioning of esports as a sphere of the digital domestic economy.

The paper's main body with full reasoning of academic results. Despite the full-scale invasion, the domestic model of the functioning of esports as an endemic sphere of the digital domestic economy has maintained its integrity. It continues to exist in its traditional form, encompassing several components, including professional teams and players, tournaments and competitions, infrastructure and technologies, broadcasting and media coverage, sponsorship and advertising, and the viewer base and content consumption. It is worth noting that each of the highlighted components is a key aspect of functioning, and they are specific. The framework of

functioning can be applied to various contexts, such as systems, organizations, processes, devices, people, and more. In each case, functioning refers to how something operates, how its components interact with each other, and how it achieves its goals. The characteristics of the outlined key aspects of the model of functioning of esports as an endemic sphere of the domestic digital economy are provided in Table 1.

Therefore, within the scope of the research, the key aspects of the functioning of esports should be the fundamental categories that we interpret as the essential components necessary for the successful implementation of core processes or modes of operation of economic actors belonging to this sphere.

Table 1. Description of key aspects of the functioning model of esports as an endemic sphere of the digital domestic economy
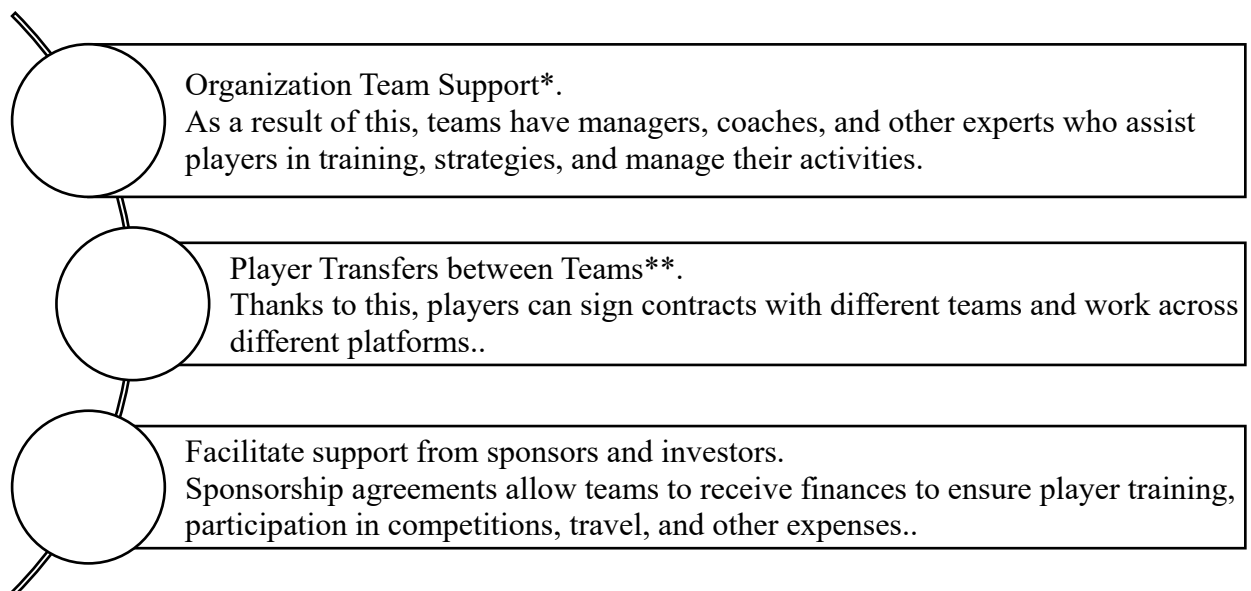
Key aspects	Role in eSports functioning model	A look at the aspect from the point of the e-sports functioning view
Professional teams and players	Based on professional teams and players who compete in various disciplines.	Professional teams and players can be organized as clubs or sports organizations that provide conditions for training, participation in tournaments, and development.
Tournaments and competitions	Based on the organization of regular tournaments and competitions, including national and international events such as leagues, championships, and grand finals.	Tournament organizers attract sponsors, and broadcast competitions, which generate an audience and revenue.
Infrastructure and technologies	Based on the utilization of specialized infrastructure where competitions, training, online games, and technologies take place.	Professional teams, players, and tournament organizers focus on utilizing specialized arenas, training facilities, and online gaming platforms.
Broadcasting and media	Based on the broadcasting of competitions and the use of media platforms for content dissemination.	Esports tournaments are often live-streamed in real-time through specialized online platforms.
Sponsorship and advertising	Based on attracting significant attention from sponsors and advertisers.	Companies aim to reach a young audience; thus, they collaborate with esports teams and tournaments.
Audience base and content consumption	Based on active consumption of esports-related content.	The presence of a wide audience base allows for revenue generation through advertising, sponsorship, and ticket sales for competitions.

Source: formed based on [1; 3]

It includes work, task execution, interactions, and processes that enable something or someone to function, operate, or perform. Based on the presented data, it is evident

that with a comprehensive view of key aspects of esports, it can be represented as a dynamic and complex model whose success depends on the interaction between professional teams and players, tournament organizers, infrastructure and technologies, broadcasting and media coverage, sponsorship and advertising, as well as the fan base and content consumption.

The aspect related to professional teams and players in esports functions through computer or esports clubs and sports organizations that provide players with the necessary conditions for training, participation in tournaments, and development through team organization, player transfers, sponsorship, and funding according to the specificities outlined in Figure 1.

Organization Team Support*.
As a result of this, teams have managers, coaches, and other experts who assist players in training, strategies, and manage their activities.

Player Transfers between Teams**.
Thanks to this, players can sign contracts with different teams and work across different platforms..

Facilitate support from sponsors and investors.
Sponsorship agreements allow teams to receive finances to ensure player training, participation in competitions, travel, and other expenses..

Figure 1. The fundamental characteristics of providing players with conditions for training, participation in tournaments, and development
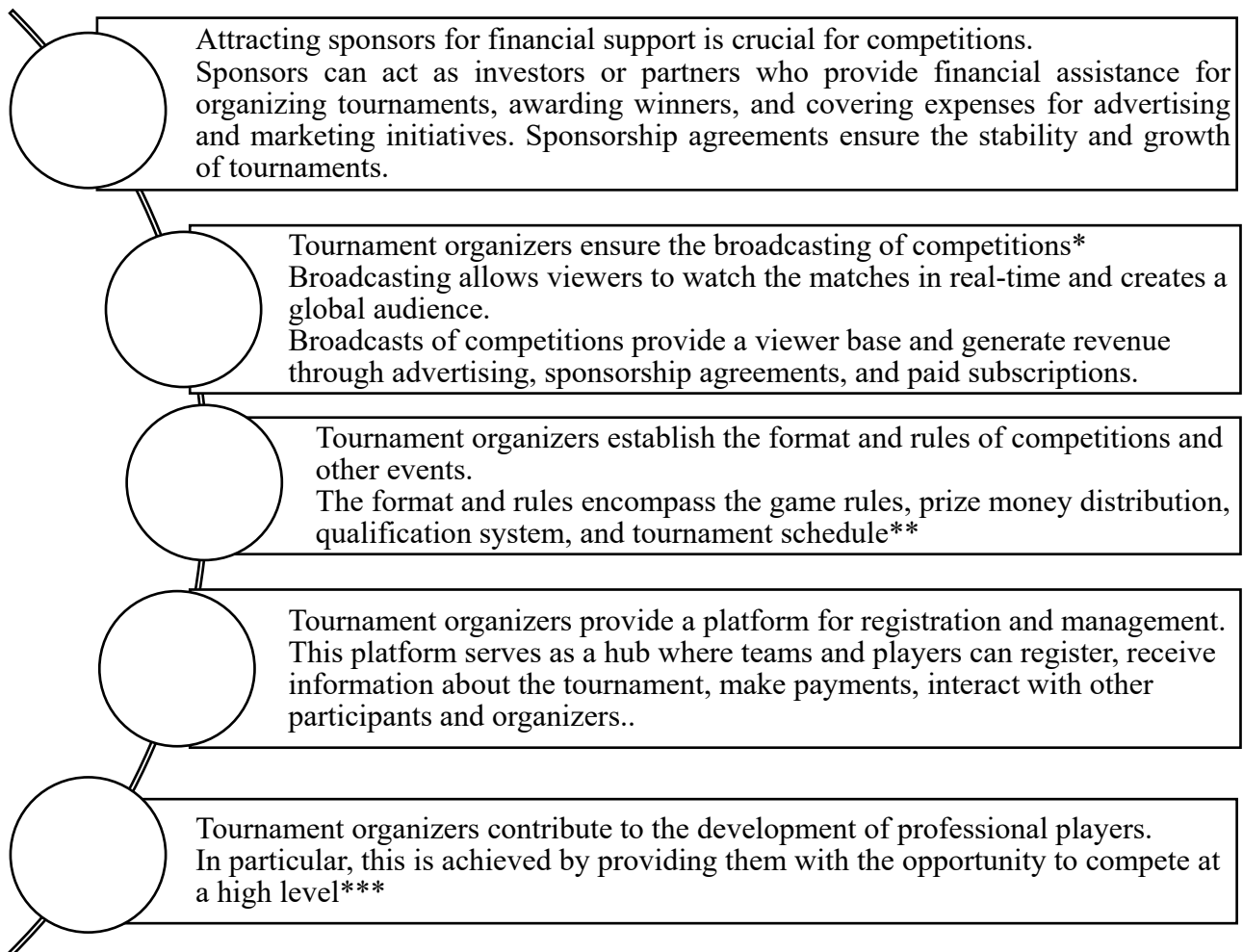
Note:
Professional esports teams can have different forms of organization, including sports organizations, clubs, or organizations created by companies or investors.
**Player transfers are a complex process involving negotiations, financial agreements, and player movements between teams.*
Source: formed based on [1;2; 3]

The specific nature results in teams typically having managers, coaches, and other experts who assist players in training, strategies, and managing their activities. Among the participants shaping this aspect, notable teams include Team Liquid, OG, Evil Geniuses, and Virtus.pro, Natus Vincere, and others.

The aspect related to tournaments and competitions in esports operates through tournament organizers. These entities play a crucial role in creating and managing professional esports competitions and other events. They engage sponsors, competitions broadcast and provide media coverage, establish the format and rules of the competition, offer registration and management platforms, and guide the development of professional players according to the specificities outlined in Figure 2.

Attracting sponsors for financial support is crucial for competitions.
Sponsors can act as investors or partners who provide financial assistance for organizing tournaments, awarding winners, and covering expenses for advertising and marketing initiatives. Sponsorship agreements ensure the stability and growth of tournaments.

Tournament organizers ensure the broadcasting of competitions*
Broadcasting allows viewers to watch the matches in real-time and creates a global audience.
Broadcasts of competitions provide a viewer base and generate revenue through advertising, sponsorship agreements, and paid subscriptions.

Tournament organizers establish the format and rules of competitions and other events.
The format and rules encompass the game rules, prize money distribution, qualification system, and tournament schedule**

Tournament organizers provide a platform for registration and management.
This platform serves as a hub where teams and players can register, receive information about the tournament, make payments, interact with other participants and organizers..

Tournament organizers contribute to the development of professional players.
In particular, this is achieved by providing them with the opportunity to compete at a high level***

Figure 2. The fundamental characteristics of esports tournament organizers

Note:
*Media platforms such as online streaming services, television, and social networks are used for broadcasting the competitions.
** The format and rules of the events take into account the specificities of each game, ensuring balance and fairness in the competition.
*** Tournaments provide players with a platform to showcase their talent, gain experience, and gain recognition in the industry.

Source: formed based on [1; 3; 5]

The aspect related to infrastructure and technologies is formed according to the requirements of professional teams and players, as well as tournament organizers. Infrastructure and technologies are aimed at providing functionality for specialized esports arenas, training facilities, and online gaming. In addition, esports arenas should be equipped with high-tech infrastructure, which includes powerful computers or gaming stations, high-speed internet, video and audio equipment for broadcasting competitions, and comfortable equipment for players and spectators. Before the war, Ukrainian esports organizations planned to invest $40 million in the construction of a multifunctional esports arena [4]. Its importance is driven by the fact that Ukraine lacks sufficient venues that can accommodate both quality online and offline tournaments. Training facilities and online gaming venues should be equipped with powerful computers, high-quality gaming equipment, comfortable workstations, and other necessary facilities. Before the start of the full-scale invasion in Ukraine, esports clubs and other establishments offered players over 50 specialized training and online gaming venues. Some of these establishments had modern computer stations equipped with powerful computers and high-quality equipment for team play. It allowed players to practice, improve their skills, and communicate with their team. Currently, specific information regarding their quantity and condition is not disclosed, but specialized esports arenas and gaming venues continue to play a key role in organizing training and online gaming.

The aspect related to broadcasting and media is shaped by the specifics of esports events. In particular, esports tournaments was real-time streamed through specialized online platforms. In Ukraine, various esports competitions and events have aired through online platforms. Some of the most well-known esports events that aired in Ukraine include the StarLadder and WePlay tournaments. StarLadder and WePlay are renowned organizers of esports tournaments held in Ukraine. They broadcast their events through various online platforms, allowing viewers worldwide to watch the competitions.

The aspect related to sponsorship and advertising is shaped by the attraction of a large audience. It is natural for various companies to seek to reach the young audience

and therefore collaborate with esports teams and tournaments. For example, Natus Vincere (Na'Vi) has sponsors such as HyperX, Monster Energy, GG.Bet, and others. Team Spirit has Parimatch, Xsolla, ViewSonic, and PariMatch League sponsors. Winstrike Team has sponsored such as Winstrike, HYDROGEN, Head & Shoulders, and others.

The aspect related to the viewer base and content consumption is connected to its accessibility through online streams, player streams, video highlights, news, and analysis. It allows for generating revenue through sponsorships, advertisements, and tournament earnings based on the specific characteristics of the viewer base and content consumption, as depicted in Figure 3.
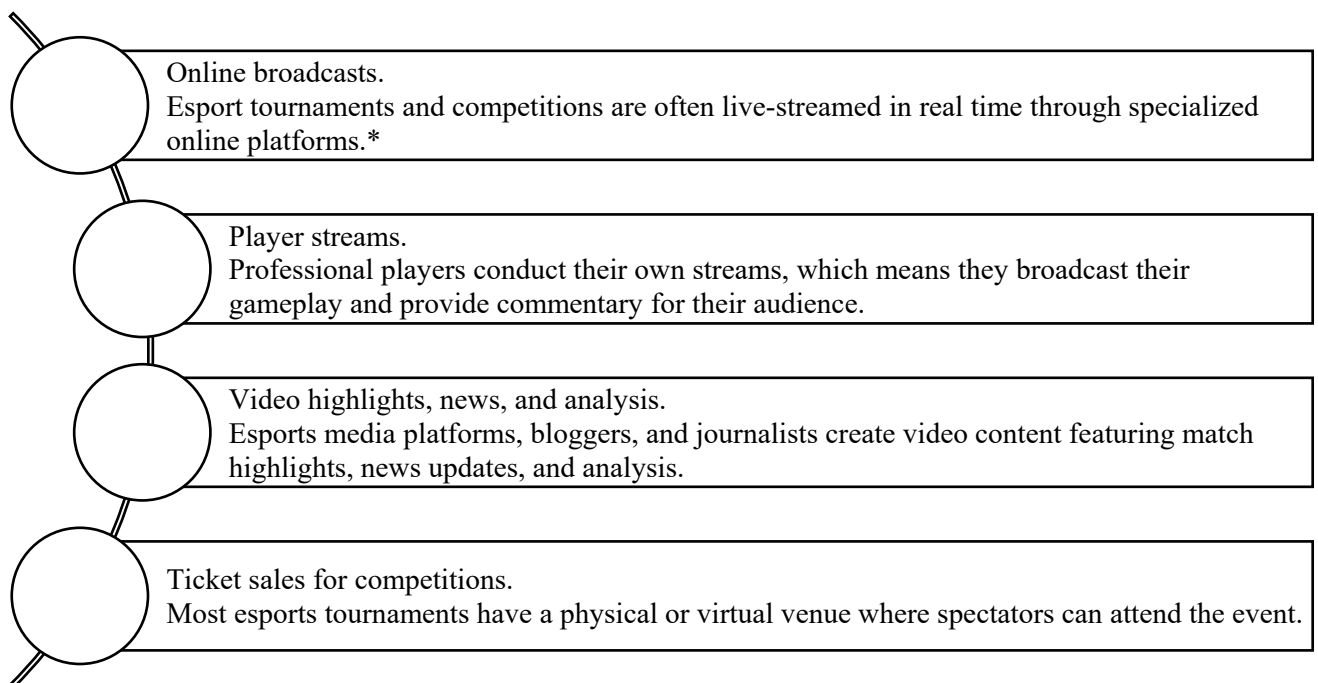
Figure 3. Fundamental characteristics of audience base formation and content consumption

Note:
Specialized online platforms such as Twitch, YouTube Gaming, Facebook Gaming, and others.
Source: formed based on [1; 3; 5]

In particular, advertisers leverage the popularity and success of esports teams and individual esports athletes to attract potential customers. Advertisers can utilize online broadcasts of competitions and other events, and player streams for displaying advertisements and sponsorship messages. Advertisers can also use video content from

bloggers and sports journalists to place advertising materials or sponsor messages. Additionally, most esports tournaments have a physical or virtual venue where spectators can attend the event. Advertisers can simultaneously utilize the physical or virtual venue for advertising placements.

Ukrainian esports teams and individual players utilize their popularity and success to attract sponsors, secure advertising deals, and support the growth of esports. As a result, the successful development of esports requires interaction and collaboration among all these aspects.

Conclusions from this study and prospects for further exploration in this area. Within the scope of the research, the key aspects of esports functioning, which we interpret as essential components necessary for the successful implementation of core processes or modes of operation of economic entities belonging to this sphere, should be categorized as fundamental categories. It includes work, task execution, interactions, and processes that enable someone or something to function, operate, or act. Based on the provided information, it is evident that by taking a comprehensive view of the key aspects of esports, it can be represented as a dynamic and complex model whose success depends on the interaction between professional teams and players, tournament organizers, infrastructure, and technology, broadcasting and media coverage, sponsorship and advertising, as well as audience base and content consumption.

A comprehensive view of esports as a dynamic and complex model allows us to represent its functioning through the unity of the following processes or modes of operation of economic entities within this field:

1. Associated with professional teams and players in esports: Computer or esports clubs and sports organizations provide players with the necessary conditions for training, tournament participation, and development.

2. Associated with tournaments and competitions in esports: Tournament organizers play a key role in creating and managing professional esports competitions and other events.

3. Associated with infrastructure and technology: Specialized esports arenas, gaming facilities, and training centers play a key role in organizing training sessions and online gameplay.

4. Associated with broadcasting and media coverage: Bloggers, streamers, and sports journalists provide real-time coverage of competitions and events through specialized online platforms.

5. Associated with sponsorship and advertising: A large audience is engaged, and various companies seek to reach them through sponsorship and advertising opportunities.

6. Associated with audience base and content consumption: Online broadcasts, player streams, video highlights, news, and analysis generate revenue by catering to the specific preferences of the audience base and their content consumption habits.

The conclusions highlight the fact that the successful development of esports requires interaction and collaboration among all these aspects. The obtained results provide the foundation for formulating an esports development strategy, which will include a comprehensive plan that ensures a systematic process where input data or resources are transformed into output results or esports products not only through specific operations but also through procedures involving the interaction of economic entities within the esports sphere.

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