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EVOLUTION OF BUSINESS MODELS IN THE GAMING INDUSTRY IN THE CONTEXT OF SOCIAL MEDIA DEVELOPMENT

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Purpose: The purpose of this publication is to analyze the relationship between the evolution of business models in the gaming industry and the popularity of various social media platforms. The study aims to identify key trends in both areas and explore their mutual influences.

Design/methodology/approach: In the theoretical part, a critical literature analysis was conducted, including international and Polish sources. The research methodology involved analyzing data on active users of selected social media platforms and rankings of the most popular games from 2015 to 2024. Particular attention was paid to changes in game business models and their correlation with social media trends.

Findings: The research revealed a significant shift towards free-to-play models with microtransactions in the gaming industry, closely tied to the growing role of social media in game promotion and community building. The study identified key platforms like YouTube, Twitch, and TikTok as crucial for the gaming ecosystem, influencing both game popularity and longevity.

Research limitations/implications: The study primarily focused on global trends and popular titles. Future research could expand on regional differences and niche gaming markets.

Practical implications: The findings provide valuable insights for game developers and marketers on leveraging social media platforms effectively and adapting business models to current trends.

Social implications: Social media makes gaming a virtual space for socializing and collaboration, expanding players' social interactions worldwide. While increased access democratizes gaming, it also raises issues of ethics and consumer protection. Content creators shape public attitudes and promote a participatory culture. These shifts call for responsible industry practices and policies to ensure positive social impact and quality of life.

Originality/value: The article offers a comprehensive analysis of the interplay between gaming business models and social media trends over a decade, presenting an original perspective on their co-evolution.

Keywords: business models, gaming industry, social media, free-to-play, subscriptions, buy-to-play, microtransactions.

Category of the paper: Research paper.

1. Introduction

The concept of business models is becoming an increasingly dominant subject of research in the field of management sciences. Over the last decade, there has been a significant increase in the number of academic studies focusing on this topic (Osterwalder et al., 2012). Table 1 provides an overview of selected definitions of a business model.

Table 1.Selected Definitions of Business Models

Authors	Definition			
Afuah, Tucci	A strategy for enhancing and utilizing a company's resources to deliver an offering to			
(2003)	customers that surpasses the competition while ensuring the profitability of the enterprise.			
Amit, Zott	An integrated set of interrelated activities that defines how business operations are			
(2001)	conducted in relation to customers, partners, and suppliers. This system extends beyond			
	the firm's boundaries and includes activities aimed at satisfying identified market needs,			
	specifying who performs these activities and how they are interrelated.			
Falencikowski	A complex conceptual structure that describes business operations by explaining the logic			
(2013)	behind value creation for the customer and the mechanism for capturing part of this value			
	by the company.			
Jabłoński (2013)	A business model is a specific combination of tangible assets and intellectual capital used			
	to implement a strategy for increasing value in a given market situation. The attractiveness			
	of a business model enhances a company's value. Business models are dynamic and			
	continuously active, influencing company valuation and value creation in conjunction with			
	a changing market environment.			
Obłój (2002)	A holistic approach encompassing various elements that constitute a company's			
	competitive advantage, key resources, competencies, and value chain structure.			

Source: own elaboration based on: (Afuah, Tucci, 2003; Amit, Zott, 2001; Falencikowski, 2013; Jabłoński, 2013; Obłój, 2002).

The analysis of the evolution of business model definitions reveals interesting trends in the development of this concept within management sciences. All definitions treat the business model as an integrated system where both its internal components and market environment are important.

Early definitions focused on key elements within a company that enable it to achieve a competitive advantage. Over time, subsequent researchers expanded the conceptual scope of the business model by including relationships with external partners and dynamic market changes. Notably, newer definitions associate the business model with processes of value creation and capture. This trend emphasizes not only creating value for customers but also how organizations can leverage this value for their benefit.

Despite its evolution, certain consistent elements remain in business model definitions. They consistently highlight the role of the business model in achieving market advantage. A systematic approach to the business model persists, along with its customer orientation and strategic importance.

The concept of a business model and its components has been extensively analyzed in the literature (Osterwalder, 2005). According to this approach, a business model is "a conceptual tool encompassing components and their relationships aimed at presenting the logic behind how

a company operates. It describes how an enterprise creates value and derives profits from it". Developing a complete business model requires consideration of nine key elements (Table 2).

Table 2. *Elements of the business model*

Main areas of	Key elements of the	Simplified description of the elements	
the model	business model		
Product	Value proposition	Specific benefits the company offers to its customers.	
Customer	Target groups	Defining who the firm's offer is aimed at.	
	Customer channels	Methods the company uses to reach customers and sell its	
		products/services.	
	Customer relationships	How the company builds and maintains relationships with its	
		customers.	
Organization	Key activities	The most important activities the company must perform to	
of Activities		deliver value.	
	Key resources	The main assets and skills needed to implement the business	
		model.	
	Business partners	A network of collaborators and suppliers supporting the	
		company's operations.	
Finance	Cost structure	The main costs associated with running the business.	
	Revenue streams	Ways in which the company generates income.	

Source: own elaboration based on (Osterwalder et al., 2005; Osterwalder, Pigneur, 2013).

The presented overview shows that definitions of business models have evolved from emphasizing internal resources and competitive advantage (Afuah, Tucci, 2003; Obłój, 2002) toward a broader perspective that integrates value creation and dynamic interactions with the environment (Amit, Zott, 2001; Falencikowski, 2013; Jabłoński, 2013). Osterwalder's framework, with its nine building blocks, provides a comprehensive lens for analyzing these shifts (Osterwalder et al., 2005; Osterwalder, Pigneur, 2013). It highlights not only how organizations create and deliver value, but also how they maintain customer relationships, organize key activities, and structure revenue streams. This theoretical foundation creates a solid basis for examining the specific case of the gaming industry, where rapid technological and social changes strongly influence business model design.

2. Selected business models in the gaming industry

The video game industry is one of the most demanding sectors for business operations, mainly due to the limited time for adaptation (Sotamaa, Karppi, 2010) and constant changes in consumer preferences (De Prato et al., 2014). To stay competitive in the market, companies must achieve high performance and have a business model that ensures customer retention. Over the past two decades, this industry has experienced impressive growth, largely due to increasing consumer interest in products from this field (Carpenter et al., 2014). Today, it is one of the most profitable areas of the media industry.

The free-to-play model in the online gaming sector is based on providing online games without charge, both on mobile devices and desktop computers. The source of revenue becomes virtual items that users can purchase during the game. Research has shown that players decide to make such purchases for various reasons, including ensuring an uninterrupted gaming experience, establishing connections with other players, participating in competition, and for economic considerations (Brasseur et al., 2017). This model derives directly from the business concept known as freemium. A characteristic feature of this model is offering a product or service free of charge, with a set of basic functions. (Teece, 2010; Hamari et al., 2017).

From the perspective of Osterwalder's framework, the free-to-play model redefines several key building blocks of the business model. Most visibly, it alters the revenue streams, shifting the focus from direct sales to continuous monetization through microtransactions. At the same time, the value proposition expands beyond the core gameplay to include personalization, social prestige, and uninterrupted access to the game. The role of customer relationships also changes, as developers rely on constant interaction, community engagement, and timely updates to sustain players' willingness to pay. Finally, social media platforms themselves become critical channels, serving as the primary means of reaching customers and stimulating viral growth (Osterwalder et al., 2005; Osterwalder, Pigneur, 2013).

In the subscription model, most commonly used in MMORPG (Massively Multiplayer Online Role Playing Game) games, players pay regular monthly fees, which provide a steady income for developers. The best example is "World of Warcraft" with a \$14 monthly fee, although the games themselves often require huge investments (Makuch, 2012). This model is popular due to the long life cycle of the game and developed end-game content, which increases players' willingness to pay. However, due to growing competition, many games are switching to a free-to-play model with microtransactions. Even the creators of "World of Warcraft" have adapted their models, offering partially free gameplay for new players (Blizzard, 2025).

The subscription model emphasizes long-term customer relationships by offering continuous access to content and regular updates, thereby strengthening player loyalty. Its value proposition is based on stability and extended content, while predictable revenue streams provide developers with financial security and the possibility to invest in large-scale projects (Osterwalder et al., 2005; Osterwalder, Pigneur, 2013).

Since the creation of the first MMORPG games, players have created a virtual market within the game. This genre is not only associated with subscriptions but also with the pay-to-earn model. Virtual currency, earned through in-game achievements, was exchanged between players. The creators of World of Warcraft introduced auction houses where players could trade items such as resources (so-called mats), which were most often desired. Players discovered the possibility of earning money on this virtual currency and began selling it on auction platforms like eBay or Allegro. In response, game creators began to prohibit this practice, threatening punishment in the form of account blocking (Rapp, 2020). However, this is not the only game genre where such trade took place. Another example of trade exchange between players are the

so-called skins in the game CS GO (Yuan, 2024), which gained enormous popularity thanks to the activity of streamers from various parts of the world in 2015-2018.

3. Social media in the gaming industry

Social media are contemporary platforms for horizontal communication, whose effectiveness depends on the active engagement of users (Kaznowski, 2010). Users create original messages, and information processes are grassroots and uncoordinated. Time is not relevant to the importance of information - virtual events can generate new discourses even years later. The aim of this process is to create and strengthen social bonds, but it can lead to the creation of information bubbles, limiting access to information through content personalization and algorithms. In this way, social media can both enable communication and fragment society, limiting access to diverse perspectives. Table 3 presents an overview of definitions of this concept.

Table 3.Selected definitions of social media

Author	Definition	
Bauer (2009)	New media are characterized by a hypertext structure of transmission and reception,	
	programmability (asynchrony of transmission and reception), interactivity,	
	cumulativeness, global reach, and individual access.	
Bielawski,	Social media are characterized by scalability, universal access, unlimited possibilities for	
Ziółkowska	content modification, freedom of creation and reception, and direct community influence	
(2018)	on the content and value of information.	
Grębosz, Siuda,	Social media are internet platforms where users create communities and transmit	
Szymański	information through websites or applications.	
(2016)		
Kaplan,	Social media is a group of Internet-based applications that build on the ideological and	
Haenlein (2010)	technological foundations of Web 2.0, and that allow the creation and exchange of Use	
	Generated Content.	
Kaznowski	Social media are means of communication subject to social control, used on any scale,	
(2016)	containing both the content of the message and various points of view relating to the	
·	information.	

Source: own elaboration based on: (Bauer, 2009; Bielawski, Ziółkowska, 2018; Grębosz et al., 2016; Kaplan, Haenlein, 2010; Kaznowski, 2016).

The definition of social media has evolved over the years, reflecting changes in technology and the way these communication tools are used. In early interpretations, emphasis was placed primarily on the technical aspects of new media, such as hypertext structure and global reach. Over time, definitions began to focus more on social and interactive aspects. The concept of internet platforms as places where users create content and engage in online communities was introduced. This trend has continued in more contemporary definitions, which emphasize the freedom to create and modify content, as well as the community's influence on the value of information.

Despite these changes, certain elements have remained constant in definitions over the years. Interactivity has consistently been emphasized as a two-way nature of communication that enables active user engagement. Similarly, global reach has always been an important component, including the ability to reach a wide audience. User-generated content, although initially less emphasized, has over time become a key element of the definitions.

The classification of social media by function includes the following types (Kaznowski, 2016):

- Social media for publishing opinions and views This category enables open expression of thoughts by users. Examples include blogs and citizen journalism platforms.
- Social media for resource sharing Based on the idea of Web 2.0, these involve sharing resources online, such as videos, photos, or presentations. Examples include YouTube, Flickr, and Slideshare.
- Social media focused on co-creation and collaboration These are relatively rare and focus on achieving specific goals through collaboration. Examples include tools like Google Docs or MMO (Massive Multiplayer Online) games.
- Social media aimed at building and maintaining relationships The most popular form of social media, examples being social networking sites and virtual worlds.

The presented classification illustrates that social media are not homogeneous but encompass diverse functions, ranging from opinion sharing to collaborative content creation. Despite their variety, all categories share two fundamental features: interactivity and the ability to shape community relationships (Kaplan, Haenlein, 2010; Kaznowski, 2016). These characteristics make social media particularly relevant for the gaming industry, where platforms simultaneously act as channels of communication, arenas of value co-creation, and spaces for sustaining long-term customer relationships. This multidimensional nature positions social media as a critical factor influencing the design and evolution of contemporary business models.

4. Research overview

To identify social media platforms most closely associated with the gaming industry, it's worth examining relevant research. Gandolfi (2016) study aimed to understand the motivations and behaviors of Twitch users. Gandolfi's research model encompassed three key dimensions: Information, Entertainment, and Socialization. The study results showed that the main motivation for using Twitch is entertainment, with an average rating of 4.56 on a five-point Likert scale. Other significant reasons include observing gaming events (3.95) and using the platform as an alternative to television (3.74). Regarding information, the highest-rated aspect was the ability to acquire new strategies and techniques (3.46). Socialization, though less

important, received the highest average of 2.23 for communication between users. The analysis also showed that users spending more time on the platform are inclined to spend more. It was also noted that the importance of socialization in platform usage increases over time.

Mastiņš (2024) aimed to investigate TikTok's impact on streamers' popularity. The study involved interviews and a survey with experienced streamers. TikTok was identified as the most promising promotional tool for streamers due to its reach and short-form video format. Funny gaming moments, memes, and trends are popular. Networking and collaboration with other creators proved important for increasing visibility. The study results show that many streamers regret not starting to promote their content on media outside streaming platforms earlier or not publishing enough of it.

Sjöblom and Hamari (2021) conducted a study aimed at analyzing viewers' motivations and forms of engagement during live video game broadcasts on Twitch and YouTube platforms. The authors developed a research model based on the "Uses and Gratifications" theory, which included five main motivation dimensions: Affective, Cognitive, Personal Integrative, Social Integrative, and Tension Release. Data was collected through an online questionnaire with 1097 respondents. The main motivation for watching live game broadcasts is the emotional aspect. Other important motivations are tension reduction and cognitive aspects. The analysis showed that these motivations are strongly related to various forms of viewer engagement, such as subscriptions or donations. Different types of games attract viewers with different motivations. For example, strategy games are more associated with cognitive aspects, while RPGs are associated with emotional tension release.

5. Research methodology

For the purpose of this article, an analysis was conducted on the number of active users of selected social media platforms that allow creators to conduct live broadcasts, and a list of the most popular games from 2015-2024. Particular attention was paid to the growing number of visitors to individual sites and changes in game business models (with emphasis on key resources and ways of reaching customers). Several cases indicating strong dependencies were identified.

Most of the data on active user lists comes from DataReportal reports, pertaining to the entire world and largely based on information published by the companies mentioned below. Where this was unavailable, services such as Statista were used, which provide many statistical reports depending on user requirements.

The game ranking was divided into best-selling games in given years (buy-to-play) and highest-earning games (free-to-play). Both models in most titles included microtransactions. Where this was not the case, it is marked in Table 5. The compilation was based on industry

reports from companies such as Sensor Tower, SuperData Research, gaming websites such as Eurogamer, Gamespot, or Pocket Gamer, and directly from publishers including Activision Blizzard, Electronic Arts, and Rockstar Games.

6. Popularity of selected social media and the most popular games in 2015-2024

Table 4 presents data on the number of active users (in millions) of five popular social media platforms that enable video game streaming from 2015 to 2024. The first column contains the names of social media platforms, such as Facebook, YouTube, Instagram, TikTok, and Twitch. In the subsequent columns, data for selected years from 2015 to 2024 is presented. These selected periods allow for tracking significant changes in the usage of these platforms at key points in time, which facilitates the analysis of long-term trends.

Table 4.Number of active users (in millions) using social media platforms enabling video game streaming from 2015-2024

Platform	2015	2016	2017	2018	2019	2020	2022	2023	2024
Facebook	1,366	1,550	1,871	2,167	2,271	2,449	2,910	2,958	3,065
YouTube	1,200	1,400	1,500	1,800	2,000	2,300	2,600	2,680	2,700
Instagram	300	400	600	800	1,000	1,000	1,478	2,000	2,000
TikTok						347	500	800	1,000
Twitch	0.53	0.61	0.77	1.07	1.26	2.12	2.78	2.58	2.38

Source: own elaboration based on: (DataReportal, Demandsage, Statista, Business of apps, Oberlo, Twitch Tracker).

The presented data indicates an increase in popularity for all mentioned platforms, with Facebook and YouTube still holding leading positions. Meanwhile, Instagram and TikTok have seen significant growth in user numbers, and Twitch, despite a smaller base, has recorded a substantial increase in users, especially between 2019-2022.

Table number 5 includes two main sections: "Most profitable games" and "Best-selling games (buy-to-play)" for the years 2015-2024. For each year, three titles are presented in both categories, allowing for analysis of trends in the gaming industry over a decade. The profitable games section contains information about the title and business model, while the sales section focuses on games in the traditional buy-to-play model.

Table 5. *Most profitable and best-selling games from 2015-2024*

Most profitab	Best-selling games (buy-to-play)					
1/2000 \$101000	2015	Dest seming games (out to play)				
Title	Business model	Title				
League of Legends	Free-to-play (PC)	Grand Theft Auto V				
Monster Strike	Free-to-play (mobile game)	Fallout 4				
Clash of Clans	Free-to-play (mobile game)	Ark: Survival Evolved				
	2016					
Title	Business model	Title				
League of Legends	Free-to-play (PC)	CS GO				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	DOTA 2				
Monster Strike	Free-to-play (mobile game)	No Man's Sky				
	2017	·				
Title	Business model	Title				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	PlayerUnknown's Battlegrounds				
League of Legends	Free-to-play (PC)	Call of Duty: WWII				
Dungeon Fighter Online	Free-to-play (PC)	Grand Theft Auto V / Online				
	2018					
Title	Business model	Title				
Fortnite	Free-to-play (PC)	Red Dead Redemption 2				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	Call of Duty: Black Ops 4				
League of Legends	Free-to-play (PC)	NBA 2K19				
	2019					
Title	Business model	Title				
Fortnite	Free-to-play (PC)	Grand Theft Auto V				
PlayerUnknown's Battlegrounds	Free-to-play (mobile game)	Pokémon Sword and Shield*				
Dungeon Fighter Online	Free-to-play (mobile	Call of Duty: Modern Warfare				
	game/PC)					
*game is the only on	e among those listed that does no	ot include microtransactions				
	2020					
Title	Business model	Title				
PlayerUnknown's Battlegrounds	Free-to-play (mobile game)	Animal Crossing: New Horizons				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	Call of Duty: Modern Warfare				
Roblox	Free-to-play (PC)	FIFA 20				
*game is the only on	e among those listed that does no	ot include microtransactions				
774.7	2021	771.3				
Title	Business model	Title				
PlayerUnknown's Battlegrounds	Free-to-play (mobile game)	Minecraft				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	Pokémon Brilliant Diamond / Shining Pearl				
Dungeon Fighter Online (DFO)	Free-to-play (mobile	New World				
Dungeon Figure Onnine (DFO)	game/PC)	INCW WOILU				
	2022					
Title	Business model	Title				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	Pokémon Scarlet / Violet*				
PlayerUnknown's Battlegrounds	Free-to-play (mobile game)	Elden Ring				
Dungeon Fighter Online (DFO)	Free-to-play (mobile	Call of Duty: Modern Warfare II				
	game/PC)	Can of Daty. Intodom warter in				
*game is the only one among those listed that does not include microtransactions						
2023						
Title	Business model	Title				
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	Hogwarts Legacy				
PlayerUnknown's Battlegrounds	Free-to-play (mobile game)	Call of Duty: Modern Warfare III				
Candy Crush Saga	Free-to-play (mobile game)	The Legend of Zelda: Tears of the				
Kingdom*						
*game is the only one among those listed that does not include microtransactions						
Same to the only one among those hored that does not include interestations						

Cont. table 5.

2024				
Title	Business model	Title		
Honor of Kings / Arena of Valor	Free-to-play (mobile game)	Call of Duty: Black Ops 6		
Monopoly Go	Free-to-play (mobile game)	EA Sports College Football 25		
Royal Match	Free-to-play (mobile game)	Helldivers 2		

source: own elaboration based on: (Activision, 2020; App2Top, 2024; Business of Apps, 2022; China Film Insider, 2017; CNBC, 2016; Epic Games, 2021; Eurogamer, 2016; GameRant, 2024; Games Industry, 2016, 2020; GameSpot, 2017, 2022; Gilmore Jon, 2024; KRAFTON, 2022; League of Betting, 2017; NDTV, 2017; Newzoo, 2020; Niko Partners, 2019; Nintendo, 2020, 2022, 2023; PocketGamer.biz, 2024; Pocket Gamer, 2016; Sensor Tower, 2021, 2022; SuperData, 2017, 2018, 2020, 2021; The Jakarta Post, 2017; The Sage News, 2024; Variety, 2018; VentureBeat, 2019).

Over the years, there is a visible dominance of the free-to-play model among the most profitable titles, although initially, buy-to-play games were more popular. This trend continues throughout the analyzed period, indicating the effectiveness of the free-to-play model in generating revenue.

With the development of mobility, we observe an increasing presence of mobile games among the most profitable titles. In later years, mobile games often dominate this category, which demonstrates a change in player preferences and the development of the mobile market. The popularity of particular genres is also changing - while in the initial years MOBA games dominated (e.g., League of Legends), later on, battle royale games (e.g., Fortnite, PUBG) and open-world games gained importance.

Some games, like Grand Theft Auto V or League of Legends, remain on the lists for many years, which indicates a change in approach to the game life cycle - from a one-time sale model to a long-term support and update model. Throughout the analyzed period, it's evident that well-known franchises (e.g., Call of Duty, Pokémon) regularly appear among the best-selling games, confirming the strength of recognizable brands.

Microtransactions also remain a constant element, with exceptions to this trend clearly marked in the table. All segments of the gaming market - PC, consoles, and mobile devices - are consistently included, indicating their sustained importance. The seasonality of releases is also visible, with a tendency to publish big titles during the pre-holiday period, which is reflected in the annual lists of best-selling games.

7. Summary

One of the most significant impacts of social media on the gaming industry is the transformation of business models. The traditional buy-to-play model has, in many cases, been replaced by the free-to-play model, which relies on microtransactions and the sale of virtual items. This shift is directly tied to the growing role of social media in promoting games and building gaming communities.

7.1. YouTube - long-form content as a channel for knowledge and promotion

The revolution in the industry began with Fortnite's success in 2017-2018, which, thanks to its free model with microtransactions, displaced a paid competitor - PlayerUnknown's Battlegrounds (PUBG). The key was integration with streaming platforms like Twitch and YouTube Gaming. Fortnite, designed with spectacular gameplay in mind, became ideal content for creators (Gexe, 2025). Unlike PUBG, which was available for purchase on PC, Fortnite's free access increased availability, enabling broader promotion through user-generated content. Games that combine ease of streaming with a free-to-play model gained a competitive advantage, even against long-standing titles like League of Legends (LoL), which, despite having a massive monthly active player base, saw flattened growth in favor of newer productions. YouTube, which had 1.2 billion users in 2015 and reached 2.7 billion in 2024, remains a key platform for the gaming industry. According to research, 74% of teenagers regularly watch gameplay videos on YouTube. This platform is especially important for RPG and strategy games, which require longer sessions and more detailed tutorials (Bleeding Edge, 2024).

7.2. TikTok and Discord - virality and social spaces

Lockdowns highlighted the demand for games as virtual social spaces. Roblox became a platform for hosting virtual birthday parties and social gatherings (Wirtualne Media, 2023), offering tools for creating private worlds and chat integration. Similarly, Minecraft leveraged the trend of creative collaboration, allowing players to work together on building projects. The social value of these titles was enhanced by platforms like Discord (an internet communicator enabling voice chat via microphone (Semcore, 2024)) and TikTok.

7.3. Twitch - live streaming and community engagement

Content creators have become crucial both for sudden surges in popularity (e.g., Fall Guys in 2020 due to Twitch streamers (Twitch Tracker, 2025)) and for extending the lifespan of older titles. Minecraft, which has existed since 2011, is experiencing a renaissance thanks to "Survival Multiplayer" series on YouTube, where influencers create new narratives around the game. Streamers such as Ninja (Fortnite) or Disguised Toast (Among Us) not only popularize strategies but also influence developers' decisions - for instance, introducing timed events to enhance the FOMO ("fear of missing out") effect (Inneo, 2020).

7.4. Ethical and regulatory challenges

Alongside new opportunities, gaming business models also face ethical and regulatory challenges. Investigations by the Belgian Gaming Commission into titles such as FIFA 18, Overwatch, and Counter-Strike: Global Offensive showed that loot boxes often meet the legal criteria of gambling, exposing even underage players to risks (Gaming Commission, 2018).

Similar concerns have been raised by regulators in Poland, France, and the Netherlands, underlining the need for stricter consumer protection measures.

Another important concern relates to gaming disorder, which has been recognized as a behavioral addiction. While Internet Gaming Disorder was included in Section 3 of the DSM-5 as a condition requiring further study (American Psychiatric Association, 2013), the WHO officially classified gaming disorder in the ICD-11 as an addictive behavior alongside gambling (World Health Organization, 2019). Research highlights its impact on young people, whose excessive gaming can impair personal, educational, and social functioning (Grzegorzewska, Cierpiałkowska, 2018; Gaebel, Zielasek, Reed, 2017). These findings emphasize that, beyond innovative value propositions and new revenue streams, the industry must also confront public health challenges.

7.5. Integrated perspective - convergence of business models and social media

The evolution of business models in games is tightly connected to the development of microtransaction systems and player-to-player trading, which represents another point of intersection with social media trends.

Future research could focus on analyzing the impact of social media on the evolution of business models in gaming, such as the expansion of microtransactions and player trading. Another interesting direction is the role of content creators in ensuring the longevity of games and their influence on developers' design decisions. Additionally, it is worth exploring social spaces in games and how platforms like Discord or TikTok strengthen social interactions.

When viewed through the lens of Osterwalder's model, these transformations illustrate how different business logics converge. Value propositions increasingly rely on free access combined with exclusive digital goods, while channels such as YouTube or TikTok amplify reach and visibility. Customer relationships are strengthened by the participatory nature of platforms like Discord, where developers and players co-create game experiences. Finally, revenue streams diversify, ranging from subscriptions and premium passes to donations and in-game purchases, making the social media-gaming nexus not only a cultural but also a financial ecosystem (Osterwalder et al., 2005; Osterwalder, Pigneur, 2013).

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References

- 1. Afuah, A., Tucci, C. (2001). *Internet Business Models and Strategies: Text and Cases*. New York: McGraw-Hill/Irwin.
- 2. American Psychiatric Association (2013). *Internet gaming disorder. In Diagnostic and statistical manual of mental disorders (5th ed., Section 3).* American Psychiatric Publishing.
- 3. Amit, R., Zott, C. (2001). Value creation in E-business. *Strategic Management Journal*, 22(6-7), 493-520.
- 4. App2Top. *In 2023, the top ten highest-grossing games earned almost a billion dollars less than the year before.* Retrieved from: https://app2top.com/analytics/in-2023-the-top-ten-highest-grossing-games-earned-almost-a-billion-dollars-less-than-the-year-before-261660.html, 15.03.2025.
- 5. App2Top. *State of Mobile Gaming 2023*. Retrieved from: https://app2top.ru/wp-content/uploads/2023/03/state-of-mobile-gaming-2023.pdf, 15.03.2025.
- 6. Bauer, Z. (2009). Nowe media. In: E. Chudziński (ed.), *Słownik wiedzy o mediach*. Warszawa: PWN.
- 7. Belgian Gaming Commission (2021). *Loot box report English publication*. Brussels: Gaming Commission. Retrieved from: https://www.gamingcommission.be/sites/default/files/2021-08/onderzoeksrapport-loot-boxen-Engels-publicatie.pdf
- 8. Bielawski, R.A., Ziółkowska, A. (2018). *Media społecznościowe, a kształtowanie bezpieczeństwa państwa*. Lublin: Tygiel.
- 9. Bleeding Edge Studio. *How Youtube Is Transforming Game Industry*. Retrieved from: https://bleedingedge.studio/blog/how-youtube-is-transforming-game-industry/, 15.03.2025.
- 10. Brasseur, T.M., Strauss, C., Mladenow, A. (2017). Business model innovation to support smart manufacturing. *Proceedings of the American Conference on Information Systems* 2017 Workshop on Smart Manufacturing, Vol. 9. Association of Information Systems (AIS), pp. 1-7.
- 11. Carpenter, M., Daidj, N., Moreno, C. (2014). Game console manufacturers: The end of sustainable competitive advantage? *Digiworld Economic Journal*, *94*, 39-60.
- 12. China Film Insider. *Tencent Megahit 'Honor of Kings' Becomes World's Top-Grossing Game*. Retrieved from: https://chinafilminsider.com/tencent-megahit-honor-kings-becomes-worlds-top-grossing-game/, 14.03.2025.
- 13. CNBC (2016). *Digital gaming sales hit record \$61 billion in 2015: report*. Retrieved from: https://www.cnbc.com/2016/01/26/digital-gaming-sales-hit-record-61-billion-in-2015-report.html, 03.03.2025.
- 14. DataReportal. *DataReportal Global Digital Insights*. Retrieved from: https://datareportal.com, 11.03.2025.

15. DataReportal. *Digital 2015: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2015-global-digital-overview, 11.03.2025.

- 16. DataReportal. *Digital 2016: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2016-global-digital-overview, 11.03.2025.
- 17. DataReportal. *Digital 2017: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2017-global-digital-overview, 11.03.2025.
- 18. DataReportal. *Digital 2018: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2018-global-digital-overview, 11.03.2025.
- 19. DataReportal. *Digital 2019: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2020-global-digital-overview, 11.03.2025.
- 20. DataReportal. *Digital 2021: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2022-global-digital-overview, 11.03.2025.
- 21. DataReportal. *Digital 2023: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2023-global-digital-overview, 11.03.2025.
- 22. DataReportal. *Digital 2024: Global Overview Report*. Retrieved from: https://datareportal.com/reports/digital-2025-global-digital-overview, 11.03.2025.
- 23. Davidovici-Nora, M. (2014). Paid and free digital business models Innovations in the video game industry. *Digiworld Economic Journal*, *94*, 83-102.
- 24. De Prato, G., Feijóo, C., Simon, J.-P. (2014). Innovations in the Video Game Industry: Changing Global Markets. *Digiworld Economic Journal*, 17-38.
- 25. *Disguised Toast*. Retrieved from: https://www.youtube.com/@DisguisedToast, 16.03.2025.
- 26. DocDroid (2016). *SuperData Year in Review 2016*. Retrieved from: https://www.docdroid.net/RPwDoyG/superdata-year-in-review-2016-pdf, 14.03.2025.
- 27. El Afí, F., Ouiddad, S. (2021). The Rise of Video-Game Live Streaming: Motivations and Forms of Viewer Engagement. In: C. Stephanidis, M. Antona, S. Ntoa (eds.), HCI International 2021 Posters. HCII 2021. *Communications in Computer and Information Science*, vol 1421. Cham: Springer.
- 28. Eurogamer. *Best-selling Steam games list has a few surprises*. Retrieved from: https://www.eurogamer.net/best-selling-steam-games-list-has-a-few-surprises, 14.03.2025.
- 29. Falencikowski, T. (2013). *Spójność modeli biznesu: Koncepcja i pomiar*. Warszawa: CeDeWu.
- 30. Gadgets360 (2017). *GTA V Sales in 2017: Take-Two Earnings Revealed*. Retrieved from: https://gadgets.ndtv.com/games/news/gta-v-sales-2017-take-two-earnings-1810170, 15.03.2025.
- 31. Gaebel, W., Zielasek, J., Reed, G.M. (2017). Mental and behavioural disorders in the ICD-11: Concepts, methodologies, and current status. *Psychiatry and Clinical Neurosciences*, 71(6), 181-190.

- 32. Gamerant. *Best-Selling Video Games of 2024*. Retrieved from: https://gamerant.com/best-selling-video-games-2024/, 15.03.2025.
- 33. GamesIndustry.biz (2020). *The mobile games market is getting bigger and not just for the top ten*. Retrieved from: https://www.gamesindustry.biz/articles/2020-02-03-the-mobile-games-market-is-getting-bigger-and-not-just-for-the-top-ten, 15.03.2025.
- 34. GamesIndustry.biz. *Monster Strike drives 900 per cent profit growth for Mixi*. Retrieved from: https://www.gamesindustry.biz/monster-strike-drives-900-per-cent-profit-growth-for-mixi, 14.03.2025.
- 35. Gamespot (2017). *PUBG Passes 3 Million Concurrent Users On PC*. Retrieved from: https://www.gamespot.com/articles/pubg-passes-3-million-concurrent-users-on-pc/1100-6455835/, 15.03.2025.
- 36. Gamespot (2022). *Call of Duty: Modern Warfare 2 Hits \$1 Billion In Revenue In 10 Days, Faster Than Any Past CoD Title*. Retrieved from: https://www.gamespot.com/articles/call-of-duty-modern-warfare-2-hits-1-billion-in-revenue-in-10-days-faster-than-any-past-cod-title/1100-6508942/, 15.03.2025.
- 37. Gandolfi, E. (2016). To watch or to play, it is in the game: The game culture on Twitch. tv among performers, plays and audiences. *Journal of Gaming & Virtual Worlds*, 8(1), 63-82.
- 38. Gexe.pl. *Rozwój i przemiany branży gier wideo: nowe trendy i technologiczne innowacje*. Retrieved from: https://gexe.pl/inne/art/7644,rozwoj-i-przemiany-branzy-gier-wideo-nowe-trendy-i-technologiczne-innowacje, 12.03.2025.
- 39. Gilmorejon (2024). *Open World Blues: On Mechanical Dynamism and Difficulty Curves*. Retrieved from: https://gilmorejon.wordpress.com/2024/04/24/open-world-blues-on-mechanical-dynamism-and-difficulty-curves/, 15.03.2025.
- 40. Go Sensor Tower (2022). *The State of Mobile Game Monetization 2022*. Retrieved from: https://go.sensortower.com/rs/351-RWH-315/images/st-state-of-mobile-game-monetization-2022.pdf, 15.03.2025.
- 41. Grębosz, M., Siuda, D., Szymański, G. (2016). *Social media marketing*. Łódź: Wydawnictwo Politechniki Łódzkiej.
- 42. Grzegorzewska, I., Cierpiałkowska, L. (2018). *Psychologia uzależnień: Alkoholizm, narkomania, uzależnienia behawioralne*. Warszawa: PWN.
- 43. Hamari, J., Hanner, N., Koivisto, J. (2017). Service quality explains why people use freemium services but not if they go premium: An empirical study in free-to-play games. *International Journal of Information Management*, *37(1)*, 1449-1459.
- 44. Investor Activision. *Call of Duty Modern Warfare 1 Most Played Call of Duty Multiplayer*. Retrieved from: https://investor.activision.com/news-releases/news-release-details/call-duty-modern-warfare-1-most-played-call-duty-multiplayer, 15.03.2025.
- 45. Jabłoński, M. (2013). Kształtowanie modeli biznesu w procesie kreacji wartości przedsiębiorstw. Warszawa: Difin.

46. Kaplan, A.M., Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1).

- 47. Kaznowski, D. (2010). Podział i klasyfikacja social media. Networked Digital.
- 48. Kaznowski, D. (2016). Social media społeczny wymiar Internetu. In: J. Królewski, P. Sala (eds.), *E-marketing. Współczesne trendy. Pakiet startowy* (pp. 91-95). Warszawa: PWN.
- 49. Krafton (2022). *KRAFTON, INC. REPORTS \$1.57 BILLION USD IN REVENUE FOR 2021*. Retrieved from: https://press.krafton.com/KRAFTON-INC-REPORTS-157-BILLION-USD-IN-REVENUE-FOR-2021-THE-HIGHE, 15.03.2025.
- 50. Locowise (2025). *Digital 2025: Global Overview Report*. Retrieved from: https://locowise.com/blog/digital-2025-global-overview-report/, 11.03.2025.
- 51. Makuch, E. (2012). *Star Wars: The old republic cost \$200 million to develop*. Gamespot.Com. Retrieved from: https://www.gamespot.com/articles/star-wars-the-old-republic-cost-200-million-to-develop/1100-6366274/, 05.04.2013.
- 52. Mastiņš, A. (2024). *TikTok's effect on the growth of live streamers* (Unpublished thesis). Kajaani University of Applied Sciences.
- 53. Mmostats. *New World*. Retrieved from: https://mmostats.com/game/new-world, 15.03.2025.
- 54. Niko Partners (2019). *Evolution of Mobile Esports for the Mass Market*. Retrieved from: https://nikopartners.com/wp-content/uploads/2019/08/Evolution-of-Mobile-Esports-for-the-Mass-Market.pdf, 14.03.2025.
- 55. *Ninja*. Retrieved from: https://www.youtube.com/channel/UCAW-NpUFkMyCNrv RSSGIvDO, 16.03.2025.
- 56. Nintendo (2020). *Financial Results Briefing for Fiscal Year Ended March 2020*. Retrieved from: https://www.nintendo.co.jp/ir/pdf/2020/200130 3e.pdf, 15.03.2025.
- 57. Nintendo (2022). *Financial Results Briefing for Fiscal Year Ended March 2022*. Retrieved from: https://www.nintendo.co.jp/ir/pdf/2022/220203 3e.pdf, 15.03.2025.
- 58. Nintendo (2023). *Financial Results Briefing for Fiscal Year Ended March 2023*. Retrieved from: https://www.nintendo.co.jp/ir/pdf/2023/230207 5e.pdf, 15.03.2025.
- 59. NPD (2018). *The 20 Best-Selling Games of the Year*. Retrieved from https://venturebeat.com/business/npd-2018-the-20-best-selling-games-of-the-year/, 15.03.2025.
- 60. Oberlo. *How Many People Use TikTok?* Retrieved from: https://www.oberlo.com/statistics/how-many-people-use-tiktok, 13.03.2025.
- 61. Obłój, K. (2002). Tworzywo skutecznych strategii. Warszawa: PWE.
- 62. Osterwalder, A., Pigneur, Y. (2010). *Tworzenie modeli biznesowych, Podręcznik Wizjonera*. Gliwice: Helion, pp. 22-48.
- 63. Osterwalder, A., Pigneur, Y. (2013). *Tworzenie modeli biznesowych. Podręcznik wizjonera*. Gliwice: Helion.

- 64. Osterwalder, A., Pigneur, Y., Tucci, C.L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of AIS*, 15.
- 65. Osterwalder, A., Pigneur, Y., Tucci, C.L. (2012). Clarifying Business Models: Origins, Present, and Future of the Concept. *Communications of the Association for Information Systems, Vol. 15, May*, pp. 1-40.
- 66. Pocket Gamer Biz. *The Top Grossing Mobile Games of 2024*. Retrieved from: https://www.pocketgamer.biz/the-top-grossing-mobile-games-of-2024/, 15.03.2025.
- 67. Pocket Gamer Biz. *Whatever Happened to GungHo?* Retrieved from: https://www.pocketgamer.biz/whatever-happened-to-gungho/, 14.03.2025.
- 68. Press Krafton (2022). *Krafton, Inc. Reports \$1.57 Billion USD in Revenue for 2021, The Highest Annual Revenue Since Inception*. Retrieved from: https://press.krafton.com/KRAFTON-INC-REPORTS-157-BILLION-USD-IN-REVENUE-FOR-2021-THE-HIGHE, 15.03.2025.
- 69. Rayna, T., Striukova, L. (2014). 'Few to Many': Change of Business Model Paradigm in the Video Game Industry. *Digiworld Economic Journal*, 61-81.
- 70. Sagenews. *Top Selling Games of 2023*. Retrieved from: https://thesagenews.com/22413/lifestyle/top-selling-games-of-2023/, 15.03.2025.
- 71. Semcore. *Czym jest Discord i jak go wykorzystać w marketing?* Retrieved from: https://semcore.pl/czym-jest-discord-i-jak-go-wykorzystac-w-marketingu/, 15.03.2025.
- 72. Sensor Tower (2022). *PUBG Mobile Five Billion Revenue*. Retrieved from: https://sensortower.com/blog/pubg-mobile-five-billion-revenue, 15.03.2025.
- 73. Sensor Tower. *Billion Dollar Mobile Games 2021*. Retrieved from: https://sensortower.com/blog/billion-dollar-mobile-games-2021, 15.03.2025.
- 74. Sensor Tower. *PUBG Mobile Tops Billion Dollar Mobile Games 2020*. Retrieved from: https://sensortower.com/blog/pubg-mobile-tops-billion-dollar-mobile-games-2020, 15.03.2025.
- 75. Sjöblom, M., Hamari, J. (2017). Why do people watch others play video games? An empirical study on the motivations of Twitch users. *Computers in Human Behavior*, 75, 985-996.
- 76. Sotamaa, O., Karppi, T. (2010). *Games as Services*. Tampere: Department of Information Studies and Interactive Media.
- 77. Statista. *Most popular social networks worldwide as of January 2025, ranked by number of active users*. Retrieved from: https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/, 13.03.2025.
- 78. Strive Sponsorship (2018). *SuperData 2017 Year in Review Digital Games and Interactive Media*. Retrieved from: http://strivesponsorship.com/wp-content/uploads/2018/02/SuperData-2017-year-in-review-digital-games-and-interactive-media.pdf, 14.03.2025.

79. SuperData Research (2020). *2019 Year in Review*. Retrieved from: https://web.archive.org/web/20200409122229/https://www.superdataresearch.com/2019-year-in-review/, 15.03.2025.

- 80. SuperData Research (2021). *2020 Year in Review*. Retrieved from: https://web.archive.org/web/20210106144257/https://www.superdataresearch.com/blog/2 020-year-in-review, 15.03.2025.
- 81. Takeda, L. (2020). The History of Nintendo: the Company, Consoles and Games.
- 82. *Take-Two Interactive Software*. Retrieved from: https://pdf.irpocket.com/C3659/wigp/Bk3B/C9Yf.pdf, 15.03.2025.
- 83. Teece, D.J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2), 172-194.
- 84. The Jakarta Post (2017). *Steam reveals top-selling games of 2016*. Retrieved from: https://www.thejakartapost.com/life/2017/01/04/steam-reveals-top-selling-games-of-2016.html, 14.03.2025.
- 85. TwitchTracker. Retrieved from: https://twitchtracker.com/games/512980, 15.03.2025.
- 86. TwitchTracker. Statistics. Retrieved from: https://twitchtracker.com/statistics, 12.03.2025.
- 87. Variety (2018). 'GTA V' Hits 100 Million Sales. Retrieved from: https://variety.com/2018/gaming/news/gta-v-100-million-sales-1203022310/, 15.03.2025.
- 88. VG Insights. *Amazon's New World launch in numbers: sales, active players, and reviews.* Retrieved from: https://vginsights.com/insights/article/amazons-new-world-launch-in-numbers-sales-active-players-and-reviews, 15.03.2025.
- 89. Web Archive (2021). *Call of Duty Hits 60.5 Million Sold Units on All-Time Best-Selling PS4 and Xbox Titles List.* Retrieved from: https://web.archive.org/web/20210930180450/https://leagueofbetting.com/call-of-duty-hits-60-5-million-sold-units-on-all-time-best-selling-ps4-and-xbox-titles-list/, 15.03.2025.
- 90. Wirtualne Media. *Msze święte w Roblox hitem internetu. Jak to działa?* Retrieved from: https://www.wirtualnemedia.pl/artykul/msze-swiete-roblox-hit-internet-jak-to-dziala, 14.03.2025.
- 91. World Health Organization (2019). *International classification of diseases for mortality and morbidity statistics (11th revision)*. World Health Organization.
- 92. World of Warcraft. Retrieved from: https://worldofwarcraft.blizzard.com/en-us/start, 03.03.2025.
- 93. Yuan, M. (2024). CS: GO Skins Market Impact Factors Analysis. *Advances in Economics, Management and Political Sciences*, 82, 1-11.