# SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY ORGANIZATION AND MANAGEMENT SERIES NO. 172

2023

# MICROPAYMENTS IN GAMES USING THE FIFA SERIES AS AN EXAMPLE - FUN OR E-GAMBLING ACCESSIBLE TO CHILDREN? DISCUSSION AROUND CONTROVERSY AND REGULATION

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**Purpose:** The study's main objective was to identify the risks associated with game developers' mechanisms to define the micropayment system, using the example of EA Sports' practices in the FIFA series of games. The specific objectives were: to define the form in which micropayments occur in games of the FIFA series, to determine the factors that affect the attractiveness of micropayments to players, and to define the similarities between loot boxes and gambling games.

**Design/methodology/approach**: The authors highlighted the payments used by game developers available from within the app, their characteristics and the juxtaposition of these mechanisms with those used in gambling. Then, using desk research analysis, the financial benefits of using this system for the developers of the FIFA series were analyzed, as well as the identified potential risks of these practices. The authors based their considerations on Polish and foreign literature, studying academic articles, books, reports, and chapters from monographs and electronic sources. The following professional, scientific databases were used to gather scientific literature: Google Scholar, ResearchGate and ScienceDirect.

**Findings:** Micropayments are an essential source of additional revenue for game developers. Not only do they effectively engage players, but the value of additional in-game purchases often exceeds the product's original price (i.e. the full-priced game). The term micropayments, in this case, is already used conventionally - it is widespread for some in-game purchases to be as much as hundreds of zlotys. Because of their apparent similarities to gambling, loot boxes, or boxes with randomized prizes, are controversial - so much so that countries such as Belgium are considered gambling and do not allow for young people. Typical users of micropayments in games are minors, who are more easily influenced by the persuasion practised by game developers, especially in multiplayer games, where a competitive element and additional content can improve a player's performance.

**Social implications:** Due to mechanisms using microtransactions, companies can profit significantly from selling complementary content after the revenue from product sales has already been generated. Loot boxes engage players, but they also raise a lot of controversy and doubts due to their disturbing resemblance to gambling.

**Originality/value:** The treatment of issues treating the phenomenon of micropayments in online games is based on the literature on the subject, Polish and foreign, enriching the existing body of scientific work on the gaming industry, signalling the authors' contribution to the development of the discipline of management and quality sciences. The article is primarily addressed to researchers and scholars dealing with e-gaming in the context of its various dimensions. The work may also interest students of marketing, psychology and pedagogy. In addition, the article is valuable for parents and guardians of children and adolescents who spend time on online games to outline the problem of micropayments in games. The article's value is a comprehensive discussion of gambling, micropayments and "loot box" mechanics about the controversies and regulations surrounding them.

Keywords: micropayments, games, gaming, FIFA, EA Sports, gambling, loot box.

Category of the paper: General review.

## 1. Introduction

Gaming is a required field which developed from simple arcade games to enormous productions that have become popular worldwide (Kent, 2010). Video games owe their popularity mainly to the phenomenon of transmedia and the usage of convergent narratives, which stand for a large variety of communication methods – the games do not only experience the written story but also the one visible and readable. In games classified as transmedia stories, the story is told by one medium and developed by others (Boczkowska, 2014).

Nowadays, games are not only targeted at a single player, but many of them allow some forms of competition, primarily online, connecting gamers from all over the globe. It is trendy in games such as football or basketball that simulate sports competition through the screen. In games partly or generally based on competition between players, in-app payments often occur.

Micropayments have been a subject of discussion for years that becomes more lively as the popularity of micropayments in apps and games, all mobile, computer and console, keeps rising. However, small payments are made within the used app (Zakonnik, 2007). Industry sources present microtransactions as a part of the game, considering both free-to-play (the ones that can be played for without initial payment) and a great deal of big-budget productions. Due to micropayments, the player can unlock some extra, usually hard-to-obtain, content. The purchase can be performed in two ways: buy the content for real money or the exceptional balance with a premium currency that lets them purchase within the game (GRYOnline.pl, 2013).

The discussion around in-game payments is mainly about their potential dangers. First, there goes the lack of justice in competition, where purchasing additional content affects the player's performance. The second is subsidizing a product the player has already paid for it. This situation takes place in the case of games that are not free to play. The third and most disturbing aspect is the randomness of some mechanics, which can carry the hallmarks of gambling (loot boxes).

The main objective of this article is to present the issues accessible within the literature on the characteristics of micropayments in games using the example of EA Sports' practices in the FIFA game series and the potential dangers arising from them. The specific objectives are to analyze the microtransactions used by developers within the FIFA game series, to identify the factors determining the attractiveness of micropayments to players and their impact on the functioning of the community, and to define dangerous mechanics for minors, show the similarities between loot boxes and gambling games. The authors highlighted existing and planned legal restrictions on using micropayment systems in games. They discussed the phenomenon of gambling as one of the behavioural addictions and highlighted its various dimensions.

#### 2. Methodology

The authors used the *desk research* method. They reviewed the literature on micropayments in electronic entertainment, including primary games in the FIFA series created by the EA Sports studio. The bibliography includes 41 items, covering scientific articles, books, reports, and chapters from monographs and electronic sources - mainly from 2016-2023. The following scientific databases were used to gather the literature: Google Scholar, ResearchGate and ScienceDirect.

# **3.** Gambling as a behavioural addiction phenomenon and its various dimensions

The word "gambling" originally derives from the Arabic as "az-zahr," meaning "game of dice" or "dice" for this game. In Old French, the word appeared as "azard" or "azart," meaning blind luck, chance, or good fortune. The phrase "gambling" was understood as surrendering to the decisions of fate, entrusting the game's results to the simple chance, giving up the possibility of consciously influencing the course of events, or, finally, allowing the risk (Wilk, 2012).

Currently, in the Polish language, gambling takes on two meanings. First, it means all games of chance, including betting, poker, or slot machines. Second, gambling is also a risky venture, the outcome of which is difficult to predict. Games of chance, the outcome of which depends solely on chance and which may result in monetary or material winnings, further include contests and lotteries of Totalizator Sportowy, scratch cards, number games, dice games, bingo

games, roulette, text message contests, card games, lotteries (Borecki, 2018). In doing so, it is worth pointing out the differences between gaming and gambling. Gaming as a form of casual fun not involving the loss of a large sum of money is not bad. It becomes dangerous when one loses control over one's behaviour and can lead to disrupted family and social relations, professional problems, loneliness and significant material losses (Gontarz, 2019).

According to the classification of gambling, one can distinguish (Woronowicz, 2017): recreational gambling - which is a pastime, a form of leisure activity, and risk gambling - where the negative consequences of gambling are still small enough that the gambler can deal with them on their own; problem gambling - here the first more serious negative consequences of gambling already appear; pathological gambling (otherwise known as compulsive, addictive or problem gambling (Banaszak, 2014; Tucholska, 2008) – which stands for addiction with all its consequences. Pathological gambling is a behavioural addiction compulsion to perform a particular activity that destroys the functioning of the addict and those around them (Kaczmarek, Laere, 2019).

The literature distinguishes determinants of the development of pathological gambling, which are the following factors: familial/genetic, sociodemographic (age, gender, ethnicity, type of gambling), subjective (personality, biochemical reactions, cognitive processes, mental states), religious/spiritual (Tucholska, 2008). According to (Panasiuk, Panasiuk, 2016), a large percentage of gamblers, especially adolescent and middle-aged men, reveal a tendency to abuse psychoactive substances, such as alcohol, drugs, nicotine, or anabolic steroids, which eventually leads to addiction to them. Combining pathological gambling with another harmful addiction or bad habit, such people often commit criminal and delinquent acts or engage in self-aggressive and self-destructive activities, such as self-harm or suicide attempts.

In turn, the determinants of e-gambling, by (Lelonek-Kuleta et al., 2020), are gender, age, population, place of residence, education, and monthly family income. Men are more likely to gamble than women. In terms of age, the youngest group (under 29) is much more likely to gamble online than older people (over 50). As for the place of residence, practising e-gambling is much less common among those living in urban areas than those living in rural areas. Education also plays a significant role in online gambling, with those with primary education showing higher activity than those with vocational education. Finally, those with low monthly family incomes are significantly more likely to devote their time to online gambling than those earning more than 3000. The researchers (Lelonek-Kuleta et al., 2020) also highlight the frequency of Internet use as a concurrent element with online gambling. Those who use the Internet more frequently tend to engage more in e-gambling.

According to (Lelonek-Kuleta, Bartczuk, 2021), psychological factors, including motivation and coping strategies, play a key role in explaining problematic esports betting. The authors also noted that e-gambling activity is associated with other forms of gambling and playing video games in the context of gaining an advantage through payment. Moreover, the intensity of pathological e-gambling increases with involvement in other types of online

gaming. Interestingly, in the group of people actively involved in intensive esports betting, some of them do not experience its negative consequences. According to the study, this situation is because the protective factor for these individuals turned out to be committed coping strategies.

## 4. Micropayments and characteristics of the "loot box" mechanics

Effective electronic payment systems determine the development of e-commerce. Large-scale payments use credit/debit cards, while small-scale e-commerce is limited by the nature of existing e-payment (or otherwise "micropayment") systems (Baddeley, 2004). According to (Carat, 2002), micropayment systems represent e-payment solutions that allow payments of up to five euros. A similar definition of micropayments is given by (Hernandez - Verme & Valdes Benavides, 2013), according to which it is an online or mobile real-time or deferred financial transaction with a value of fewer than five euros that initiates the immediate delivery of a digital good in the form of news content, online music, movies or TV shows. On the other hand, according to (Herzberg, 2002), micropayments are defined as charging amounts less than (or close to) the minimum credit card transaction fees - which are around 20 cents. (Nguyen, 2006) states that micropayments are low-value electronic payments that do not use a digital signature to authenticate each payment made – the same as the case of high-value payments. Payment authentication is inaccurate for micropayments due to the high computational and processing cost for the bank compared to the value of the payment.

On the other hand, micropayments are the name used colloquially for payments in games of various amounts, but the division by the range of these amounts used by (Zakonnik, 2007) helps determine the scale of the phenomenon. A distinction is thus made between:

- milipayments up to 1 zloty,
- micropayments above a zloty to 100 zloty,
- mini-payments above PLN 100 to PLN 1,000,
- macro-payments above PLN 1,000.

We can still look at micropayments from an industry-specific point of view a micropayment is considered a small payment for additional content in a game, which can give a wide range of interpretations towards this mechanic since under the word small can be completely different amounts perceived subjectively as not high. Micropayments, however, are made through a store implemented into the game, so the user does not have to log into additional platforms. The offer must also be some premium product - that is, it must be difficult to access, or its acquisition method is time-consuming - the payment can significantly accelerate the player's goal or improve his gameplay experience (GRYOnline.pl, 2013). At this point, it is worth mentioning a mechanism that affected the market even before the popularization of smartphones - in Japan, in free-to-play mobile games (the user can enjoy the game for free), unique monetization mechanisms called *Gacha* or *Gachapon* were introduced. The name comes from toy slot machines housed in unique balls - after inserting a coin and turning the mechanism, the customer receives a random toy. *Gacha-Pon* refers to the sound the device makes when the mechanism moves. Some toys differed in their rarity, for example - and the whole thing contributed to its adaptation in Japanese F2P games, where it was henceforth possible to land additional content for the game. The whole concept differs from American and European productions' ideas - the player does not pay for content but rather for a lucky draw that may allow him to get the prize of his dreams - in real or virtual currency. In the case of micropayments, which are traditional for the European or American markets, the player instead buys specific additional content with specified features (Josef et al., 2018).

The feature of micropayments is primarily their convenience since acquiring an electronic product does not require complicated transfers - most often, it is done by using the payment method assigned by default to the user's account or e-transfer through an intermediary platform. As a result, the purchase requires virtually no effort.

The number of microtransactions (such as Pay2Win), a business model where players can buy virtual items using micropayments, has increased significantly in recent years. This situation involves the purchase of specific virtual goods in the game, such as weapons, capes, pets, cards, and characters using real money. However, other types of microtransactions have also emerged, one of which is loot boxes (or loot crates (Josef et al., 2018)) also referred to as chests or boxes, where players use real currency to purchase a random virtual item in the game (González-Cabrera et al., 2022).

Lootboxes are one of the most controversial microtransactions in online games. First, mainly because of the randomness with which players earn valuable rewards. Moreover, secondly, because of the perceived psychological effects of the business model behind this mechanism. The high probability of receiving duplicate and low-value rewards encourages players to purchase loot boxes to earn more valuable or useful rewards. In addition, the loot box environment, which contains lights and sounds, is exciting, which translates into buying loot boxes, which also seems exciting and appealing. The randomness of the contents of the virtual loot boxes, the possibility of winning game-changing items, and the experience of the psychological thrill of anticipation and winning all tap into the same psychological characteristics and financial risks of traditional gambling, contributing to excessive gaming behaviour and psychological overinvestment in video games. Therefore, the similarities between loot boxes and traditional forms of gambling create severe and long-lasting psychological and financial risks, especially among minors, who are more susceptible to such risks (Derrington et al., 2021).

Virtual reward crates take different forms - some we can buy with real money (and these raise the most objections), and some the player can obtain using in-game currency. An additional division is a possibility of selling content - some models allow the exchange of acquired content for in-game currency and even sale for real money, while others do not provide such options. It is challenging to identify which ones pose the greatest threat to players (Zendle et al., 2020). We can therefore differentiate them according to the following characteristics (Zendle et al., 2020):

- paid or free crate openings: some games allow only or almost only crates purchased with real money (e.g. *Counter-Strike: Global Offensive*), while others, in addition, also offer crates for game progress (e.g. *FIFA* or *Overwatch*);
- the possibility of monetizing game content: in some productions, it is allowed to sell content acquired by the player for real money (for example, on a particular exchange), whereas in others, it is not by the rules of the game and the creators do not provide such a solution in the face of these restrictions, players often sell accounts or use unofficial marketplaces called grey market;
- Pay2Win model: we can distinguish loot boxes into those whose purchase provides or can provide an advantage over other players, for example, by enabling faster gameplay progress (e.g., the card game *Hearthstone*), while in others, they perform cosmetic or even decorative functions such as unique skins for characters or games, backgrounds, visual effects (e.g., the previously mentioned *Counter-Strike: Global Offensive*);
- use of in-game currency: Another feature is the currency the player uses to make loot box payments. We distinguish between mechanisms in which the purchase is made directly using the actual currency and those in which the purchase is made through payment in in-game currency - but this is often an indirect purchase with real money, as the player buys the in-game currency and then the loot box with it. The currency, in many cases, can be acquired by the player as the game progresses;
- crate and fundamental mechanics: an emerging solution is also a mechanic in which the player can acquire content crates as the game progresses, while they can be opened with a key. The key is often challenging to obtain or purchasable with real money or in-game currency;
- presentation of possible rewards before opening the loot box: some crates present the contents in the front of the player only after opening. However, there are also mechanisms in which the player can preview potential content before opening the loot box for example, a range of rare items that the player can draw (though not necessarily) upon opening this can be a form of roulette, for example, in which the player can see near-winners items close to the one drawn giving the player hope that the next prize might be more valuable since it was so close;
- exclusive content: most loot boxes owe their appeal to exclusive items that cannot be obtained elsewhere in the game. However, this is not a standard in all games but a common practice.

Loot boxes contribute to the development of the concept of games as services. As the name implies, a game product is a commodity with a specific set of features the player pays for and can use in a specific way. Game as a service (GaaS) is a term that refers to a type of game distribution oriented to maximize monetization over time. The goal is not to sell the product once but to provide ongoing support from the developer long after the game's release so that the player makes additional purchases - through micropayments, paid add-ons and even subscriptions - and so that the player base is steady or growing and keeps the community alive, generating substantial revenue (GRYOnline.pl, 2020). The trend is so strong that it no longer applies to free-to-play games but also to high-budget AAA productions and regular buy-to-play games.

#### 5. Micropayments in the FIFA series

The *FIFA* game series has been the most famous soccer simulator for years and is one of the most popular sports series in gaming history. It is counted among Electronic Arts' extensive portfolio as a game by their EA Sports brand. However, it was announced that the International Federation of Football (FIFA) would not sign the game starting with the next release due to the failure to grant a further license. The developers did, however, announce a continuation of the series under a new name – *EA Sports FC* (GRYOnline.pl, n.d.).

The FIFA Ultimate Team mode is a vital element of the series, attracting players for years, which first appeared in the *FIFA '09* edition. It allows players to create the football team of their dreams, which can be "managed" correctly for their purpose. This situation can be achieving league promotions in online play, recreational play against AI-controlled opponents, participating in Championships with players worldwide, completing challenges, trading players and opening packs with players and other feature cards (Siuda, 2021). An example of a squad in *FIFA Ultimate Team* is shown in Figure 1.



**Figure 1.** An example of a squad in FIFA Ultimate Team. Source: (EA SPORTSTM FIFA 23, 2023).

There are several ways to acquire players (and content for upgrading them, coaches, stadium elements and the like), which have varying values - bronze, silver and gold cards and unique cards. Footballers, because they are the key value here, can be acquired by the player as follows:

- by performing appropriate tasks in Ultimate Team mode,
- by achieving corresponding results in online competition against other players or AI (*Squad Battles, Division Rivals, FUT Championships*),
- through the transactions on the internal transfer market,
- by buying content packs with FIFA Coins or the particular currency FIFA Points.

The developers list several methods of acquiring coins (used to operate in the transfer market and buy the aforementioned "packets") and *FIFA Points*. Coins can be obtained by:

- playing matches in *Ultimate Team*,
- earning rewards in online competition modes against other players or AI,
- selling cards on the transfer market.

The *FIFA Points* particular currency can be purchased with real money in the in-game store, the store dedicated to the platform the player is using (PC, consoles), in stationery stores as top-up cards and in other trusted stores (Electronic Arts Inc., 2023).

The most popular option for acquiring footballers in the game is to open packs - they are available as prizes for *FIFA Coins* and *FIFA Points*. However, to get them without additional financial outlay, the player must perform a relatively large number of activities in the game and, above all - regularly. Therefore, a commonly used alternative is buying packs with real money. Micropayments in *Ultimate Team* bring considerable profits to EA, as evidenced by annual financial reports (Armughanuddin, 2019).

An analysis was made of the micropayments present in the FIFA game, highlighting the characteristics discussed in Chapter 4, as shown in Table 1.

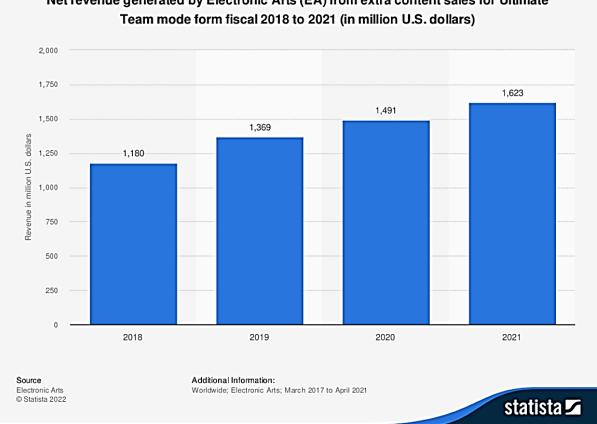
# Table 1.

paid and free box	There are two types of openings in the game - both for real money and for currency
openings	acquired in the game.
the possibility of mone-	The developers do not allow a legal form of monetization of content; only sometimes
tizing the game content	is there the possibility of exchange for in-game currency.
Pay2Win	This controversial matter cannot be stated outright because a higher number of paid
	packets opened does not guarantee an improvement in a player's performance or even
	obtaining top players. However, it statistically increases the likelihood of obtaining
	valuable rewards, such as coveted unique cards.
use of in-game currency	Both funds earned within the game (FIFA Coins) and those purchased with real
	money (FIFA Points) are used.
crate and key mechanics	The mechanics do not apply to the FIFA series.
showing possible	There is the case with packages purchased with FIFA Points. The player can
rewards before opening	sometimes preview the entire package contents and, in other cases - the probability
the loot box	of obtaining rewards of a given rarity and value.
exclusive content	An element of randomness characterizes packs, although in theory, prizes can also
	be won without additional financial outlay - packets containing exclusive items are
	unlikely to occur. The exception is promotional content, which can be purchased with
	FIFA Points or coins, although then the exact content of the package is known.
Source: own study based on: (Zendle et al. 2020)	

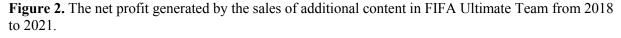
Characteristics of microtransactions in the FIFA game

Source: own study based on: (Zendle et al., 2020).

The very high revenue is encouraging the developers to continue this practice. As the sources point out, despite the emerging criticism, FIFA Ultimate Team profits are increasing significantly yearly. Figure 2 illustrates the net profit generated by selling additional content in FIFA Ultimate Team from 2018 to 2021.

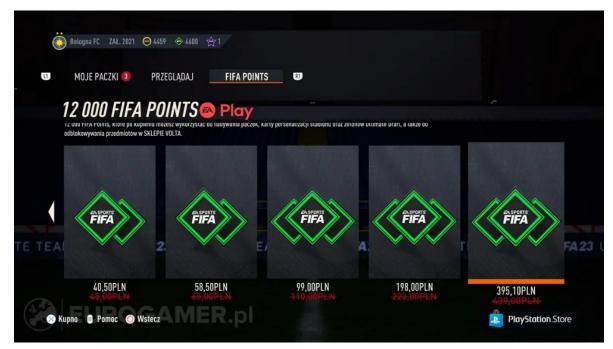


Net revenue generated by Electronic Arts (EA) from extra content sales for Ultimate



Source: Clement, 2022.

The FIFA game is dedicated to players as young as 3 years old, which may raise some doubts - the prices of single packs of FIFA Points within the 2022 game reach up to PLN 439.00. In addition, when opening the packs, the player may notice a resemblance to a gambling game - including randomness, stimulating visual and sound effects and the likelihood of winning unique content. The whole thing becomes beautiful not only for adults but also for underage players. In FUT, the player realistically has only a tiny chance to get valuable content, and the whole mechanism is confusingly similar to casino games. The controversial issue remains that the players are dominated by underage users, who are much more susceptible to the adverse effects of online gambling (Lemmens, 2022). Developers, however, do not apply any significant restrictions to protect the youngest, which is widely criticized. Figure 3 shows the available FIFA Points packages in FIFA 23, including promotions for subscribers to EA Play, a paid service that allows favourable access to EA's game catalogue.



**Figure 3.** Paid card packs in FIFA 23. Source: Wańtuchowicz, 2022.

#### 6. Controversy and regulation around loot boxes

Loot boxes have been causing controversy over their mechanics for years. According to psychologist Claire Murdoch, who works for the NHS in England, loot boxes damage children's psyches and addict them to gambling. In her opinion, the sale of games that allow the purchase of random loot should end as soon as possible, reducing children's exposure to the love of gambling in adulthood (Nic, 2020). In turn, according to the authors of the 2022 report, loot boxes cause financial and emotional harm to younger players. This harm consists of using credit cards without parental knowledge to acquire socially valuable items; remorse over subsequent spending; and frustration over the lack of a dream item in a loot box (Ash et al., 2022). The same authors have made several recommendations in this regard. First, the gaming industry should have independent regulations. Second, paid reward systems in digital games should be regulated. Third, in-game accounts, parental controls and purchase systems should be standardized. Finally, tools should be implemented to make it easier for players to track and manage their spending across video games and platforms (Ash et al., 2022).

Further recommendations have been made regarding reducing the risk of switching from playing video games to gambling (Wieczorek & Dąbrowska, 2021). In their report, these authors first point to the need for a prevention strategy that raises awareness and informs and educates about gambling and gambling disorders and the links to playing video games. Second, game operators should place greater emphasis on social accountability for marketing strategies

that result in increased game sales. Third, stricter age verification measures should be introduced. Finally, parents must also take responsibility for allowing their children to play social games and supervise all apps installed on children's phones (Wieczorek, Dąbrowska, 2021).

In 2018, the Belgian Gaming Commission (Commission des Jeux de Hasard) stated unambiguously that loot boxes were gambling and banned their use. Despite the objections of major game developers, the ability to purchase real-money loot boxes from Belgian versions of games by some of the most prominent players in the market was eventually removed (Olejnik, 2019). On the other hand, Australian lawmakers plan to introduce a law restricting access to games with loot boxes. At issue is a situation that, under the relevant law, would require developers of video games with loot boxes to label them as available only to adults. The proposed law stipulates that games containing loot boxes will be labelled as R18+ and thus easily identifiable by parents or guardians. On the other hand, if the publisher does not agree to label a game appropriately, it cannot be sold in stores (Pławecki, 2022).

Also, console manufacturers: Sony, Microsoft and Nintendo are working on their regulations to control game spending more. These regulations would mainly inform players about the chances and probability of hitting a valuable item in chests (Portal Bukmacherski Spryciarz, 2022).

A critical classification cataloguing games in terms of their content and level of adaptation to the age of players is PEGI (Pan European Game Information). The PEGI system, which is valid in Europe and Poland, consists of two levels of information (Dębski, Bigaj, 2020; PEGI, n.d.):

- 1. Age designations five categories (+3, +7, +12, +16, +18) that suggest the minimum age of the audience to which a digital game is suited. The lower the category, the less likely the game contains elements that may cause fear in young viewers. Then, expose them to the sight of violence or vulgar language; encourage gambling behaviour; expose them to sexual content and nudity; show situations of drug use, alcohol consumption or smoking; expose them to scenes containing stereotypes of an ethnic, religious, nationalistic or other nature that may constitute a type of content inciting hatred.
- 2. **Content descriptors**\_- eight symbols indicating potentially undesirable elements, such as foul language, discrimination, drugs, fear, gambling, sex, violence, and in-game purchases, which a product may contain.

Every game officially released in Poland contains PEGI designations, which, in the physical version, can be found, among other things, on the box, so you can get acquainted with them before making a purchase. It is worth paying attention to the digit indicating the permissible age and additional descriptors (Dębski, Bigaj, 2020). Unfortunately, all games are not assigned descriptive categories (Grajewski, 2023).

#### 7. Limitations

This article has several limitations. First, the literature review was based only on three selected scientific databases, Google Scholar, ResearchGate and ScienceDirect, which may have limited the number and value of search results for relevant items. Second, the literature search used specific keyword combinations with Boolean operators, which may have resulted in the omission of other scientific items in a given database. Selected industry reports and electronic sources were used for the subject matter covered to supplement the analysis.

Despite the identified limitations of the study, this article may form the basis for a more extensive study in the future, which could include other entities/facilities that use micropayments. In addition, this paper may be the beginning of a series of articles on the issue of micropayments in gaming, emphasizing the regulatory issues surrounding loot boxes.

#### 8. Conclusions and recommendations

The main objective of the article was to identify the risks associated with the mechanisms used by game developers to define the micropayment system using the example of EA Sports' practices in the FIFA series of games, as well as the specific objectives that have been achieved.

Through a literature review on the subject, the authors' findings indicate that loot boxes are still popular - especially among children and teenagers despite the controversy surrounding them. Despite their randomness, or perhaps mainly because of it, the loot box environment seems extremely exciting to players, translating into the act of buying them. The article also points out the similarity of loot boxes to traditional gambling, posing severe and long-lasting psychological and financial risks - especially among minors.

An alarming practice is that a soccer simulator such as the FIFA series promoted as a game suitable for children and young people, bases its financial success on high-risk microtransactions (the rewards are often inadequate to the funds invested), which bear the apparent hallmarks of gambling. The revenue from in-game purchases has increased yearly, exceeding the profits from selling a full-priced product such as a boxed or electronic game.

Several practical implications have been developed based on the analyzed content of academic and industry items. First, regulations based on the PEGI classification provide an opportunity to avoid or move away from the phenomenon of micropayments. Second, it is possible, and indeed desirable, to introduce secure financial instruments to assist players in managing their spending in games. This situation could solve the problem of uncontrolled and sudden purchasing actions using parents'/guardians' payment cards. Third, it would be necessary to regularly make parents/guardians of minors aware, through dedicated training

courses, seminars, and conferences, of the factors that most determine their vulnerability to e-gambling. Demographic (gender, age, education, income, wealth), behavioural (frequency of Internet use), as well as psychographic (personality, interests, cognitive processes, mental states) and religious/spiritual factors, should be mentioned here. Finally, it would be appropriate to look at the problem of micropayments in a broader context, not only pejoratively, but also as a sign of the times, a trend in developing the concept of games as services, to which loot boxes are a significant contributor.

#### References

- Armughanuddin, M. (2019). FIFA Ultimate Team Net Revenue Up By 40%, FIFA Accounts For Majority of EA's Net Revenue. https://www.spieltimes.com/news/fifa-ultimate-teamnet-revenue-up-by-40-fifa-accounts-for-majority-of-eas-net-revenue/#.ZEWW291By3A? utm\_content=cmp-true.
- Ash, J., Gordon, R., Mills, S. (2022). Between Gaming and Gambling. Children, Young People, and Paid Reward Systems in Digital Games. http://www.gaminggamblingresearch.org.uk/wp-content/uploads/2022/10/ESRC-BGG-Final-Report-2022.pdf.
- 3. Baddeley, M. (2004). Using E-cash in the New Economy: An Economic Analysis of Micropayment Systems. *Journal of Electronic Commerce Research*, 5(4).
- 4. Banaszak, A.M. (2014). Gambling as the problem in the contemporary societies. *Journal of Modern Science*, *20*(1), 401-418.
- 5. Boczkowska, M. (2014). Opowieść transmedialna znak naszych czasów. *Postscriptum Polonistyczne*, *14*(2), 125-137.
- Borecki, W. (2018). Co oznacza słowo hazard? https://www.legalsport.pl/ciekawostki/cooznacza-slowo-hazard/?fbclid=IwAR2FIExOVr3IkHrxmeaZs4oa\_O9WV1QDcvyAkqb5O7z0iuZhsf2V4UL6zk.
- 7. Carat, G. (2002). ePayment Systems Database Trends and Analysis Electronic Payment Systems Observatory (ePSO).
- 8. Clement, J. (2022). *Net revenue generated by Electronic Arts (EA) from extra content sales for Ultimate Team mode form fiscal 2018 to 2021*. Statista. https://www.statista.com/ statistics/217474/electronic-arts-ea-ultimate-team-revenue/.
- 9. Dębski, M., Bigaj, M. (2020). *Granie na ekranie. Młodzież w świecie gier cyfrowych*. Gdańskie Wydawnictwo Psychologiczne.
- Derrington, S., Star, S., Kelly, S.J. (2021). The Case for Uniform Loot Box Regulation: A New Classification Typology and Reform Agenda. *Journal of Gambling Issues*, 46, 302-332. https://doi.org/10.4309/jgi.2021.46.15.

- 11. EA SPORTS<sup>TM</sup> FIFA 23 (2023). *Przykładowy skład w FIFA Ultimate Team*.
- 12. Electronic Arts Inc. (2023). *FIFA 23 Bezpiecznie korzystaj z monet FUT i FIFA Points*. https://help.ea.com/pl/help/fifa/be-safe-with-fut-coins-and-fifa-points/.
- 13. Gontarz, M. (2019). Hazard jako fakt społeczny (współczesne odsłony). Uniwersyteckie Czasopismo Socjologiczne, 24(1), 59-66. https://doi.org/10.21697/UCS.7345.
- González-Cabrera, J., Basterra-González, A., Montiel, I., Calvete, E., Pontes, H.M., Machimbarrena, J.M. (2022). Loot boxes in Spanish adolescents and young adults: Relationship with internet gaming disorder and online gambling disorder. *Computers in Human Behavior*, *126*, 107012. https://doi.org/10.1016/J.CHB.2021.107012.
- 15. Grajewski, P. (2023). *Gry komputerowe: ryzykowna dwunasta muza? Identyfikacja psychologicznych aspektów problemowego grania*. Wydawnictwo Uniwersytetu Warszawskiego. https://doi.org/10.31338/uw.9788323561446.
- 16. GRYOnline.pl (2013). *Mikropłatność*. https://www.gry-online.pl/slownik-gracza-pojecie. asp?ID=344.
- 17. GRYOnline.pl (2020). *Gra-usługa, game as a service*. https://www.gry-online.pl/slownik-gracza-pojecie.asp?ID=440.
- 18. GRYOnline.pl (n.d.). *Seria FIFA seria gier*. Retrieved from: https://www.gry-online.pl/gry-z-serii-i-podobne.asp?ID=26, 6 April 2023.
- Hernandez-Verme, P.L., Valdes Benavides, R.A. (2013). Virtual Currencies, Micropayments and the Payments Systems: A Challenge to Fiat Money and Monetary Policy? *1st Annual International Interdisciplinary Conference, AIIC 2013*, 325-343.
- 20. Herzberg, A. (2002). Micropayments. In: *Secure Communication and Commerce Using Cryptography*. http://amir.beesites.co.il/book.html.
- 21. Josef, M., Tanaka, E., Mitomo, H. (2018). 'Lootboxes' in digital games A gamble with consumers in need of regulation? An evaluation based on learnings from Japan. 22nd Biennial Conference of the International Telecommunications Society (ITS): 'Beyond the Boundaries: Challenges for Business, Policy and Society'.
- 22. Kaczmarek, K., Laere, K. Van. (2019). *HAZARD? Nie, dziękuję!* ETOH Fundacja Rozwoju Profilaktyki, Edukacji i Terapii Problemów Alkoholowych.
- 23. Kent, S. (2010). The Ultimate History of Video Games, Volume 1: From Pong to Pokemon and Beyond... the Story Behind the Craze That Touched Our Lives and Changed the World. Crown. https://books.google.com/books/about/The\_Ultimate\_History\_of\_Video\_Games\_ Volu.html?hl=pl&id=PTrcTeAqeaEC.
- Lelonek-Kuleta, B., Bartczuk, R.P. (2021). Online Gambling Activity, Pay-to-Win Payments, Motivation to Gamble and Coping Strategies as Predictors of Gambling Disorder Among e-sports Bettors. *Journal of Gambling Studies*, 37(4), 1079-1098. https://doi.org/10.1007/S10899-021-10015-4/FIGURES/1.
- 25. Lelonek-Kuleta, B., Bartczuk, R.P., Wiechetek, M., Chwaszcz, J., Niewiadomska, I. (2020). The Prevalence of E-Gambling and of Problem E-Gambling in Poland. *International*

Journal of Environmental Research and Public Health, 17(2), 404. https://doi.org/10.3390/ijerph17020404.

- Lemmens, J.S. (2022). Play or pay to win: Loot boxes and gaming disorder in FIFA ultimate team. *Telematics and Informatics Reports*, 8, 100023. https://doi.org/10.1016/ J.TELER.2022.100023.
- Nguyen, Q.S. (2006). Multi-dimensional Hash Chains and Application to Micropayment Schemes. In: Ø. Ytrehus (Ed.), *Coding and Cryptography. WCC 2005. Lecture Notes in Computer Science*, Vol. 3969, pp. 218-228. Springer Verlag. https://doi.org/10.1007/ 11779360\_18/COVER.
- 28. Nic, M. (2020). Walka z lootboksami głównym celem psycholog z Anglii. https://android.com.pl/news/291948-walka-z-lootboksami-anglia/?fbclid=IwAR0-5tZUap6XaD5X-BHSIkR\_sjSUWcoTfXVKiyFRTTCf9MkRM3N1CMly1Iw.
- 29. Olejnik, M. (2019). *Czy lootboxy w świetle polskiego prawa mogą być uznane za hazard?* https://blog.dgp.legal/hard-stuff/czy-lootboxy-to-hazard/?fbclid=IwAR1WB3WQ6Re M1TXvhfcNqXFGltUohJLTITthHK0S-Pa9oYXW2frn76s4GNU.
- 30. Panasiuk, K., Panasiuk, B. (2016). Patologiczny hazard możliwości rozpoznania i leczenia. *Colloquium*, *8*(3), 85-110.
- 31. PEGI (n.d.). *Co oznaczają poszczególne znaki?* Retrieved from: https://pegi.info/pl/ node/59, 10 April 2023.
- 32. Pławecki, Z. (2022). Australia planuje wprowadzić ustawę, która ograniczy dostęp do gier z lootboxami. https://e.sport.interia.pl/newsy/news-australia-planuje-wprowadzic-ustawektora-ograniczy-dostep-d,nId,6446499?fbclid=IwAR01aAityWYWrkoAsfDx1Nxrnu CKrtnFdRSNma6kK6W1SABGOpAbYK7cUCI.
- 33. Portal Bukmacherski Spryciarz (2022). Loot box'y hazard w grach komputerowych. https://spryciarz.com/poradnik-typera/loot-boxy-155?fbclid=IwAR3abgxsbplDFi0sej NxfOEcbFfmjjyUOytoiQTwqLXCnPdqAsjvNcEywXI.
- 34. Siuda, P. (2021). Sports gamers practices as a form of subversiveness-the example of the FIFA ultimate team. *Critical Studies in Media Communication*, *38*(1), 75-89. https://doi.org/10.1080/15295036.2021.1876897.
- 35. Tucholska, S. (2008). Zjawisko hazardu patologicznego i jego uwarunkowania. *Roczniki Psychologiczne*, *11*(2), 45-68.
- 36. Wańtuchowicz, P. (2022). *FIFA 23 FUT paczki i FIFA Points: cena, gdzie kupić*. Eurogamer.Pl. https://www.eurogamer.pl/fifa-23-fut-paczki-i-fifa-points-cena-gdzie-kupic.
- 37. Wieczorek, Ł., Dąbrowska, K. (2021). *Raport z realizacji badania 'Czynniki ryzyka rozwoju zaburzeń hazardowych wśród graczy w gry komputerowe online i offline (w tym gry typu Pay2Win)'*.
- 38. Wilk, L. (2012). Hazard. Studium kryminologiczne i prawne. C.H. Beck.

- Woronowicz, B.T. (2017). *Hazard patologiczny*. https://www.mp.pl/pacjent/psychiatria/ uzaleznienia/71343,hazard-patologiczny?fbclid=IwAR2X8M-IGLHUGkrBl8gv6RK-SWN1zkAXaCxvb2uZvl-VXiqNy2GQVqP-JCo.
- 40. Zakonnik, Ł. (2007). Systemy mikropłatności oparte na pieniądzu elektronicznym i ich przewaga nad tradycyjnymi metodami płatności detalicznych. *Acta Universitatis Lodziensis. Folia Oeconomica*, 211, 43-53.
- 41. Zendle, D., Cairns, P., Barnett, H., McCall, C. (2020). Paying for loot boxes is linked to problem gambling, regardless of specific features like cash-out and pay-to-win. *Computers in Human Behavior*, 102, 181-191. https://doi.org/10.1016/J.CHB.2019.07.003.