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**The Phenomenon of Gacha Games in Contemporary
Japanese Society**

Fenomén gača her v současné japonské společnosti

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Vedoucí diplomové práce

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Tato práce se zabývá fenoménem gača her v současné japonské společnosti, které v současnosti dominují mobilnímu hernímu průmyslu po celém světě. Gača hry patří k nejvýdělečnějším mobilním hrám v Japonsku a těší se značné popularitě, jak ze strany vývojářů, tak ze strany hráčů. Tento typ her čelil mnoha kontroverzím a kritice v průběhu let, kvůli svému vysoce ziskovému a hazardnímu charakteru, i přesto v posledních letech počet hráčů stoupá, zejména po koronavirové krizi byl zaznamenán podstatný nárůst. Cílem práce je seznámit čtenáře s tematikou gača her a jejich situací v japonské společnosti. Dále prozkoumat nejzásadnější důvody jejich popularity a potenciální důsledky nadměrného hraní gača her u adolescentů, převážně jejich podobnost s odlišnými formami hazardu provozovanými v Japonsku a vztah k jiným sociálním problémům týkajících se mladé generace Japonců.

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INTRODUCTION

Gacha games are social-mobile games that currently dominate the gaming industry worldwide (GameRefinery Team 2022). They were created based on the popular Japanese vending machines called *gachapons*, from which they took their name and their principal mechanism. On the surface, the games appear to be free of charge, but they are highly financial in nature. Players have to invest real-life money and time in order to progress in these games. Right after the release of the first gacha game, they became extremely popular among users in Japan. In addition, there was a wave of fresh users due to the COVID-19 pandemic. However, because of their monetary aspect and similar nature to gambling, they caused multiple controversies regarding their harmful effects on the young Japanese generation.

The focus of this thesis is to create a comprehensive view of the phenomenon of gacha games in Japan, their origin, and social understanding in contemporary Japanese society. In recent years, the topic of gacha games has started to resurface in newspapers because of the rising number of young people playing gacha games, especially after the COVID-19 pandemic. Game developers claim that implementing the gacha mechanism in mobile games is a phenomenon in the gaming industry. Therefore, this work will explore the reasons why this type of mobile game is so widely popular in Japan among players.

Furthermore, this work aims to analyze the potential consequences of excessive playing of gacha games among the adolescents. It examines whether gacha games develop a problem related to gambling among the younger Japanese generation. Gacha games may have a disturbing character, but can they be considered as hazardous as other gambling methods practiced in Japan? In addition, it reviews the connection between gacha games and other social problems among young people, such as Internet Gaming Disorder or the phenomenon of *hikikomori*. The research questions will be answered using data and statistics gathered from specialized electronic sources.

The first chapter provides a brief summary of the mobile gaming industry in Japan. The following chapters are dedicated to a general introduction to gacha games and their mechanism and an overview of their development from the origin to the current situation. The next chapter focuses on the reasons for the popularity of gachas in Japan. It explores the question of what attracts consumers to gacha games and what factors keep them engaged. The last chapter examines the consequences of playing gacha games, its close connection to other social problems concerning Japanese youth, and its position in the context of the various methods of

hazard in Japan. Moreover, this chapter presents the current efforts to regulate the excessive playing of gachas.

This thesis relies on electronic resources representing a range of studies and research papers dealing directly with or closely related to gacha games. Several works analyze the economic aspect of the gacha games (e.g., Wang 2018, Koeder & Tanaka & Sugai 2017). The gambling attribute of social mobile games is frequently examined (e.g., Johnson & Brock 2019, Scholten, et al. 2019). The legality of gacha games is also discussed (e.g., Schwiddessen 2018, Koeder & Tanaka 2017). Since the topic of gacha games is relatively recent, there are no physical sources regarding this topic. However, there are a few books regarding similar matters, such as the mechanism of F2P games (e.g., Luton 2013) or the mobile gaming industry in Asia (e.g., Dal 2017). The electronic resources also include professional websites created by authors who are working in the gaming industry and offer game consulting or statistics (e.g., Newzoo.com, Serkantoto.com, Statista.com).

1. MOBILE GAMING INDUSTRY IN JAPAN

Since the invention of video games, Japan has been one of the world's leading pioneers in the development of electronic game software and hardware (IrepInc. 2022). The Japanese video game market was the third-largest video game market in the world in 2021, with a value of \$22.1 billion generated by 75.6 million players (Kuzuhara 2021). Some of the most well-known video game companies that are still relevant originate from Japan, such as Sony and Nintendo. Video gaming comprises various forms of gaming, including mobile, PC, and console gaming (Statista 2022).

The video gaming industry is one of the industries imported from the United States, and its beginnings were closely linked to the improving socioeconomic situation in post-war Japan. The early development of the Japanese video game industry occurred through different overlapping industrial sectors, from the consumer electronics industries to toy and television manufacturers. In the 1970s, three already established entertainment conglomerates, Sega, Taito, and Namco, primarily contributed to the early importation and development of video games in Japan by innovating an array of arcade games. Nintendo, which was founded in 1889 and is now a world-renowned game company, also joined arcade gaming at the end of the 1970s (Picard 2013).

Nintendo, which formerly produced traditional toys and Hanafuda playing cards, began experimenting with electronic toy products. Nintendo rose to prominence in 1983 with the release of the first full-fledged home video console, the *Famicon* or "Family Computer" which was, in fact, a latecomer in the home video-game market, among other products made by competitors. Nintendo's eventual success is attributed to its initial alliances with top-selling arcade video games, price competitiveness, and the provision of well-known software franchises, such as *Super Mario Brothers* and *The Legend of Zelda* (Izushi & Aoyama 2004, 1847).

However, Sony Computer Entertainment, one of the world's largest electronics manufacturers, undermined Nintendo's monopoly by entering the market in 1994 with the Sony PlayStation, one of the first home consoles with 3D graphics (Izushi & Aoyama 2004, 1847). Nevertheless, Nintendo's chief developer and creator of *Donkey Kong* and *Super Mario Brothers*, Shigeru Miyamoto, remains internationally known as the "*Father of Video Gaming*" and is the only game developer to receive Japan's highest civilian honor for artists (Kim 2019).

In later years, due to the expansion of the smartphone market, the main objective of the video game industry turned from handheld and home consoles to mobile gaming apps. Compared to consoles, smartphone gaming apps profit from their mobility and high potential user base since consumers do not need to buy specific hardware and tools to play games (Statista 2022). Thus, it contributed to the decline of console gaming and the unruly rise of mobile gaming.

Nowadays, most of the revenue from video games in Japan is generated by mobile games, due to the confluence of many social factors and technological advances. In fact, Japan was the first country to offer downloadable mobile games. The mobile gaming market is one of the fastest-growing segments in the video gaming industry, with revenues reaching \$13.4 billion in 2021. As a matter of fact, that is more than half of the revenue of the entire Japanese video game industry (IrepInc. 2022). This segment recorded a remarkable growth rate of 14% in 2021 as the demand for mobile games increased as a result of the nationwide lockdown during the COVID-19 pandemic. Moreover, the launch of 5G/High-speed internet services worldwide has boosted the growth of the mobile gaming industry (GlobalData 2022). In a global comparison, China has the most profitable mobile gaming industry, generating around \$32 billion in 2021, while the United States is second with revenues of \$15 billion (IrepInc. 2022).

Even though Japan has the third-largest mobile game industry, it ranks highest globally for average revenue per user (ARPU). This means that Japanese gamers, spend significantly more on average than gamers in other countries. According to Statista, ARPU in Japan's mobile games sector was estimated to reach \$418 in 2022, while global ARPU was expected to be only \$64.66 (IrepInc. 2022).

There is a particular reason for the incredibly high ARPU in the country. In the global mobile gaming industry, each country adopts and adapts certain types of games and gameplay that reflect the specificity of that particular location and its associated techno-culture. Some trends and phenomena can emerge as a result of such diversity (Dal 2017, 26).

Mobile games are usually free-to-play games, but Japanese game developers have developed a unique monetization strategy in Japanese mobile games that allows players to purchase additional content with real-life money and provides higher profits to the gaming companies. This monetization strategy was called "gacha" and is now used in almost all blockbuster Japanese mobile games.

2. INTRODUCTION TO GACHA GAMES

Nowadays, the gaming industry is among the most profitable industries in the world, but it might not be if it were not for gacha games. A gacha game is a genre of mobile video game where players can use in-game currency to acquire in-game items. Most of the highest-grossing mobile games across both iOS as well as Android devices implement the gacha mechanism, making it a popular phenomenon not only in Japan but also in the West in recent years.

The majority of the gacha games are free-to-play (F2P) games, which means that this model already gives players access to a sizable portion of the game's content or does not require paying for the players to continue playing the game. However, the F2P model still distinguishes itself from entirely costless freeware games (Drachen, et al. 2016, 23).

In order for F2P games to become profitable, game developers have introduced a special monetization mechanism in their F2P games called "gacha". The main principle of the gacha game is that the consumers have to pay real-life money to get access to a chance of winning additional content or advance further through the game. So even though the gacha games are free-to-play games, the model heavily promotes the option of using real money to obtain virtual prizes with no real-world value. These gacha elements account for a significant share of the revenue in mobile games in Japan (Koeder & Tanaka 2017, 4).

2.1. THE MECHANISM OF GACHA

The main objective is to collect in-game characters, cards, or items that can only be obtained through the "gacha" mechanism. The players invest time, energy and money to reap the rewards of gameplay. It must be clear that gacha is not the game itself but only a key element of these games. The basic mechanism is that the users pay a specific amount of in-game currency in order to "spin" or "pull" the gacha to receive a random character or item. This method is similar to the mechanism of a slot machine or roulette wheel (Kanerva 2016).

Gacha games are often referred to as "games of chance" because the model utilizes advanced chance algorithms and calculated probabilities (Koeder & Tanaka 2017, 5). Some of the characters or items are rare commodities, so the game compels the users to roll the gacha several times before receiving their desired item. For instance, one of the gacha games called *Fate/Grand Order* offers characters of the highest rarity with only a measly 0,7% chance to be pulled and requires a considerable amount of in-game currency to acquire them (Lax & Mackenzie 2019, 2). One of the elements of gacha to ensure the players will not cease playing

after a series of unsuccessful pullings is the so-called pity system, which guarantees that the player receives a high rarity item after pulling for that specific item multiple times without success (Yan 2022).

There are many factors that can draw players to a particular character in a gacha game. One of them is intertextuality, since the universe of these games is based on an existing anime franchise, Western cinematography, or even historical figures. This makes them more attractive to consumers who probably already have a parasocial connection with these characters (Lax & Mackenzie 2019, 2).

2.2. THE ORIGIN OF GACHA IN MOBILE GAMES

The gacha model originates from the popular Japanese vending machines called *gachapons* that dispense plastic capsules containing toys. The word *gachapon* is derived from two onomatopoeia words that represent activities. The first word "gacha" symbolizes the sound of opening the capsule, while the word "pon" is the sound a purchaser hears when the capsule falls out of the machine (Musiolik 2021).

What may be surprising is that the toys in the capsules are not made of cheap materials, but of high-quality PVC plastic and are often skillfully crafted. The dispensed toys usually feature characters from Japanese anime, Western movies, or manga. Each of the *gachapon* machines contains different characters that together form a collection. The main goal is to complete the entire series, but consumers never know what they will get, thus taking the risk of getting the same character they already own. The scarcity of certain figures makes the *gachapon* even more addictive, and consumers are happy when they finally get the toy they want (Heinze 2017).

One of the ultimate advantages of *gachapon* vending machines is that they do not require any special skills for the consumers to have a chance to win an item, but rather rely solely on luck (Wang 2018, 2). The system can be compared to the principle of a lottery. Thanks to this aspect, *gachapon* vending machines have remained hugely popular not only in Japan but throughout East and Southeast Asia, and can be found in back alleys, markets, or busy streets. It can be said that *gachapons* are an indispensable element of Asian culture.

The developers found this part of Japanese culture massively appealing and decided to integrate the gacha mechanism into the new mobile games. This marked the beginning of a new era in the mobile gaming industry.

2.3. THE VARIATIONS OF GACHA

The gacha model may have started out as one type of monetization method used in the game *Dragon Collection*, but over the course of many years, the simple concept has spawned a whole array of different gacha variations. There are an estimated 10–15 general gacha mechanics with many sub-variations (Toto 2016). It is said that the new ways of implementing gacha are one of the reasons for its continued popularity (GameRefinery Team 2022). There are a few common gacha variations that are considered to be the most money-grossing monetization methods used in mobile games in Japan.

2.3.1. KOMPU GACHA

Even though the Kompu gacha mechanism is no longer used today, it was one of the main monetization methods in mobile games at the beginning of gacha game development in 2010 (Toto 2012c). The concept of Kompu gacha was simple: the players roll the gacha in an attempt to "complete" a set of items or characters in order to obtain a rare item. As the number of missing items decreases, the chance of pulling that item is almost improbable (GameRefinery Team 2022). However, this monetization method caused the biggest controversy in the history of gacha games.

2.3.2. BOX GACHA

The fundamental factor of Box gacha or Package gacha is that there are a finite number of items that can be drawn from a prize pool. Players also do not have to worry about winning the same item twice because each time an item is drawn, that particular item is permanently removed from the gacha prize pool. The emptier the prize pool gets, the higher the probability of winning a rare item (GameRefinery Team 2022).

The number of items in the package is disclosed in advance, which means the players can calculate how much it costs to get all the items in a package (Toto 2016). This is the reason this type of gacha is so popular among developers since the system is more transparent for consumers (GameRefinery 2022).

2.3.3. STEP-UP GACHA

In the gaming industry, there is a term that refers to players who spend a lot on microtransactions in F2P games. They are called “whales”. Although whales represent the smallest percentage of users, they are responsible for most of the revenue of the highest-grossing games. Step-up gacha was specifically designed to attract heavy spenders (whales)

and has proven to be highly effective in the case of the Japanese market. The concept of this gacha mechanism is that the chance to win the rarest items will "step-up" every time users spend money to spin the gacha. Generally, these gacha spins become more expensive as the player progresses through the game (Toto 2016).

Since the competition is enormous, the gacha market is constantly evolving, launching new productions with various additional tricks and benefits, such as time-limited promotions that allow the use of gacha at a reduced price or guest appearances from various works of pop culture, to attract new players and encourage old-timers to continue spending (Musiolik 2021).

3. THE DEVELOPMENT OF GACHA GAMES

Japanese developers have produced a long series of various innovations and designs throughout the evolution of the gaming industry in Japan. Some of these innovations gained more popularity than others. The concept of rolling for in-game assets was not new in mobile games, but as the gaming industry expanded, developers needed to monetize the system to become more profitable and find new ways to keep consumers satisfied (Kanerva 2016). It was under these conditions that the idea of the gacha mechanism was born.

In the years that followed, the gacha system was repeatedly the subject of controversy and criticism. However, despite the problematic nature of the gacha model, it became an enormous success. Nowadays, almost all of the two hundred highest-grossing Japanese games use different variations of gacha mechanisms, making gacha games a leading phenomenon in the Japanese gaming industry (Kanerva 2016).

3.1. THE BEGINNING OF GACHA

The use of gacha model is still a relatively new method in the gaming industry. It was only in 2010 that the gacha mechanism was first introduced in Japanese mobile games. There were a few reasons for this invention. First, mobile game developers needed to incorporate a new progressive tool into mobile games to keep up with the times and keep the games attractive to consumers. Second, they needed a new monetization strategy to increase the profits of the growing gaming industry. The idea of the gacha model gained the most favor among all the various models (Toto 2012a).

A game called *Dragon Collection* was the pioneer of the gacha mechanism in social games released on a Japanese mobile-first social network called GREE. In the 2010s, the availability of games with a complicated algorithm on a mobile phone was still a radical idea. However, Japanese multinational video game and entertainment company Konami made it possible, and thus accessible to a larger portion of consumers. Immediately, the game became a huge success and became one of Konami's biggest moneymakers. "*Japan hasn't been the same since Dragon Collection*," claims Serkan Toto, a gaming industry consultant who has lived in Tokyo since 2004 (The N3twork 2018).

Dragon Collection left an immense impact on the gaming industry in Japan. Konami displayed how much money the gaming industry can gain from a simple concept made available on mobile phones (The N3twork 2018). In fact, *Dragon Collection* attracted six million players by

2012 and helped Konami increase its year-on-year net profit by almost 80% (GameRefinery Team 2022). Moreover, as a gacha pioneer, Konami had the enormous advantage of not having any regulations involving game playing and could therefore implement the same patterns found in casinos (Musiolik 2021).

Suddenly, there were dozens of different gacha genres. "Step-up gacha" increases the chances of gaining a rare item with many rolls, "Consecutive gacha" gives the players better odds if they buy a group of rolls at once, "Sugoroku gacha" is inspired by the traditional Japanese game by the same name, and a whole array of other variations of gacha (Toto 2016).

3.2. KOMPU GACHA CONTROVERSY

Two years after the huge success of the *Dragon Collection*, Japanese gaming developers have started promoting a new gacha variant called "Kompu gacha" (The N3twork 2018). Kompu gacha strongly promotes the gacha monetization method. With this gacha variation, players who want to gain a rare item must win a set of other items through rolling gachas that cost real-life money. For instance, to get a rare item, they first must win item A, then item B, then item C, until they "complete" the complete set (Toto 2012c).

The problematic nature of this mechanism leaves it with an unknown chance of winning. That means players could spend money with no guarantee of winning an item they need. Despite the low probabilities, Kompu gacha became incredibly popular among consumers. Therefore, it also became one of the most successful monetization methods in the gaming industry (The N3twork 2018).

However, a number of complaints were submitted to the *National Consumer Affairs Agency* about the high microtransactions used in Kompu gacha games. Those complaints belonged to parents whose children had been exposed to gambling-like mechanisms in mobile games. Two of those cases were especially extreme, one of them being that of a junior high school boy who spent more than 5,000 USD in a month (Schwiddessen 2018, 6).

This precarious gacha mechanism caught the attention of *Yomiuri Shimbun*, Japan's biggest newspaper, which reported that the Consumer Affairs Agency plans to take action against the Kompu gacha mechanism used in social games. It is essential to mention that games using the Kompu gacha method were responsible for a significant part of the revenue generated by the social mobile gaming industry (Schwiddessen 2018, 7).

After this revelation, the Japanese gaming industry was under extreme public scrutiny. The Japanese social-mobile gaming market, worth 1,4 billion dollars in 2011, plummeted rapidly in a span of two days. It led six major gaming companies to abolish Kompu gacha from all their titles by the end of May 2012 (Toto 2012b). Toto called it an "*earthquake in Japan's social gaming industry*." Later, Japan's Consumer Affairs Bureau proclaimed Kompu gacha illegal based on the allegation that the mechanism is too close to gambling (Toto 2012c).

3.3. THE AFTERMATH OF KOMPU GACHA

Even before the Kompu gacha scandal, social-mobile game experts started to notice the tricky nature of Kompu gacha. After the first few attempts by individual companies, in March 2012, six top Japanese social game companies (GREE, DeNA, Mixi, CyberAgent, Dwango, NHN Japan), called the "Big 6", formed a council to regulate the game's monetization method (Toto 2012c).

However, this council attempted to self-regulate the questionable elements of the gacha system and to "control" the gaming industry from within (Toto, 2012c). Moreover, because of Big 6's self-regulations, third-party developers who released their games via Big 6's distribution platforms were forced to remove all Kompu gacha from their games (Schwiddessen 2018, 8).

One month later, the council established another set of self-regulatory measures on standard gacha mechanisms, according to public criticism. Among the measures involved were a requirement to disclose the probabilities of obtaining items through regular gacha mechanisms to address transparency concerns or the implementation of strict regulations against real-money trading (Schwiddessen 2018, 8).

Due to the precautions, the uproar against gacha games quieted down, and the gaming industry has started to flourish again. Furthermore, Toto claims: "*Japanese game developers didn't stop introducing gacha monetization models, they instead came up with other ways to do it.*" (The N3twork 2018).

3.4. GACHA GAMES IN JAPANESE GAMING INDUSTRY TODAY

Gacha games are dominating the Japanese mobile game market now, with 92% of Japanese mobile games featuring gacha mechanisms and 54% featuring more than one type of gacha (GameRefinery Team 2022). In fact, nearly all the two hundred highest-grossing Japanese games offer various gacha models, and they have become an integral part of Japan's mobile gaming culture. It has been estimated that more than half of the revenue of mobile games is

generated by gacha (Kanerva 2016), hence, it has become clear to the Japanese entertainment and game companies that the gacha mechanism is the best monetization method to attract the "whales," or heavy money spenders.

The mobile gaming industry is constantly evolving. The year 2022 seemed to be the year of experimental gacha growth in mobile games, and plenty of intriguing gacha trends are set to continue through 2023. One such trend could be the so-called Preview gachas that were already implemented in the latest FIFA games but were not applied to mobile games. Preview gachas were particularly designed to be more transparent gacha variants where players can try the gacha again if they are not satisfied with the preceding prize they received (GameRefinery Team 2022). The innovation of this gacha variant is strongly tied to criticism and future regulations against gacha systems in society, so that the same case as the Kompu gacha controversy does not happen again. The game developers seriously needed a new type of gacha that would be more transparent for the players to future-proof their gacha games (GameRefinery Team 2022).

Among the two hundred highest-grossing mobile games that offer gacha, there are still only a small number of hit titles that dominate the Japanese mobile gaming market. Titles, such as *Puzzle & Dragon*, which was released by GungHo Online Entertainment in 2012, are the second highest-grossing mobile apps, with a profit of over \$7.2 billion in 2018. The highest-grossing mobile app is a game called *Monster Strike*, with over forty million downloads in a nation of 125 million people (IrepInc. 2022). Worth mentioning is also the equally popular *Fate/Grand Order*, published by Aniplex, which serves as an entry into the blockbuster *Fate* franchise. This gacha features historical figures from fantasy and real life and brings in an estimated revenue of billions of dollars each year (Musiolik 2021).

What cannot be forgotten are also Japanese gacha games, such as *Genshin Impact* or *Pokémon GO*, that have globally swept through the Western market and are extremely popular among young people, specifically high schoolers, and university students. The *Genshin Impact* was particularly popular during the COVID-19 pandemic when students had to study at home, while *Pokémon Go* was a huge hit before the COVID-19 pandemic, especially in the year 2016 when the number of users exceeded two hundred million (Igbal 2023).

The enormous popularity of some gacha games resulted in a fusion of mobile games and Japanese pop culture. In earlier years of mobile gaming, it was the gacha games that were inspired by Japanese anime or manga, but now it is the case that gacha games have spawned a pop culture franchise, including an anime adaptation and other parts of pop culture.

4. THE REASONS FOR THE POPULARITY OF GACHA GAMES

According to the data regarding the number of mobile games utilizing gacha mechanisms from the previous chapter, it can be assumed that the gacha model is eminently popular among gaming developers. In the last few years, games using gacha models have proven to be the most profitable among all the diverse types of mobile games in the Japanese gaming industry. Even Western developers are highly encouraged to implement gacha mechanisms into their games if they want their innovations to become more profitable. However, popularity goes both ways, and thus consumers also have a considerable share in increasing the popularity of the gacha phenomenon.

To explain what attracts new consumers to gacha games and what keeps the old players engaged, we must look at the key concepts on which the gacha games stand.

4.1. THE PSYCHOLOGY OF GAMEPLAY

The psychology of gameplay is one of the factors that developers have taken from gachapon machines and other forms of games of chance. The primary purpose of these games is to give the players pleasure and make them return for more, as they would in reality. Therefore, the virtual gachas are designed to replicate the same excitement and emotions that the physical gacha or *gachapon* creates (Heinze 2017). The same way works, for instance, in a lottery, where the person invests money for the chance to win something. The excitement and emotions build up as a person scratches the lottery ticket.

Gacha games are incredibly addictive, which is possibly a result of another factor of gameplay, which is the human need to collect things and complete tasks (Kanerva 2016). Gachas are games of chance, thus, the users never know what they will receive, and they need to play until they gain the item they are missing and complete a collection. This factor is tightly combined with the emotions the players are feeling when they are pulling the gacha.

Another factor of psychological gameplay is the instinct for human survival, which connects to the human's desire to learn from new experiences. When a person experiences happiness and excitement, the human brain secretes hormones, such as serotonin, oxytocin, and endorphins, that affect motivation, attention, and the desire to learn (Koster 2013, 40–44). As players progress through a game, they can learn new skills to acquire new items or use the skills to

advance in the game. Furthermore, the games are created to be repetitive, so the players enjoy the chance to be able to apply the previously learned skill (Koster 2013, 46).

There is another point to the human need to learn a new skill that is executed in the games to make them more addictive. Any activity, in this case, a form of a game, provides us with several challenges that require skills. For a person to use the skill to perform a task or beat a competition in the game, their focus will be completely absorbed in what they are doing. If a game is meticulously designed without any distractions, the users become entirely caught up in the game (Hejdenberg 2005).

By applying these deep-rooted human needs to the games, the players will keep playing them to gain pleasure and excitement. On the occasion that the consumers become disinterested due to the repetitiveness, the developers are constantly introducing new games every year, and each game presents new content and challenges for the players to try and master.

4.2. INTERTEXTUALITY

Whereas any mobile games include the psychology of gameplay, gacha games strongly depend on another component to keep the player's engagement and attention. That component embodies pop culture's surroundings. The gacha game's themes are often premised on the intertextuality and integration of various forms of pop culture media.

Japanese video game developers drew artistic creativity from the country's distinguished cartoon and animated film industries. Cartoons and animated films have a ubiquitous presence in Japan's culture and society. Furthermore, Japan's comic book industry is likewise well-developed. Comic books or *manga* constitute over one-third of all books and magazines sold in Japan (Izushi & Aoyama 2006, 1847). Comic books gave rise to animated films in the 1960s and 1970s, further reinforcing the strength of *manga* as an integral part of Japanese pop culture. Today, animated films make up a sizable portion of the Japanese film industry (Izushi & Aoyama 2006, 1848).

Thus, a number of games, including *Fire Emblem Heroes* or *Granblue Fantasy*, count on a player's previous engagement in an existing franchise (Lax & Mackenzie 2019, 2). The integration of the three media – video games, cartoons, and animated films, aids in the increase of cross-selling. The games often include video clips from the original footage and use the same voice actors to attract consumers (Izushi & Aoyama 2006, 1848). In fact, voice acting is a

frequent practice in gacha games, such as *Fate/Grand Order* or *Granblue Fantasy*, which use famous Japanese voice actors (Lax & Mackenzie 2019, 2).

The developers also play with the parasocial relationships between players and different characters in the game. For instance, *Fate/Grand Order*'s characters are based on famous mythical or historical figures, such as King Arthur, with whom players are likely to already have parasocial connection (Lax & Mackenzie 2019, 2). The gacha games usually offer a variety of characters to choose from, so the users must prioritize which characters they would like to pull. By successfully pulling a desired character, the players feel pleasure and a sense of belonging. In the gacha communities, the acquisition of a desired character is traditionally referred to as "coming home" (Lax & Mackenzie 2019, 2). Therefore, when the users do not pull their desired character, they will keep spending money until they successfully pull that character.

Because of intertextuality and the parasocial relationship between the players and in-game characters, role-playing games (RPG) are the most favorable genre in the mobile gaming industry (Kuzuhara 2021). In this type of game, the players can choose and assume a character that is often designed based on an already-established anime or manga (Izushi & Aoyama 2006, 1848). Some of the highest-grossing gacha games are RPGs, such as *Fate/Grand Order* or the successfully westernized *Genshin Impact*. According to Newzoo data, more than half of gamers in Japan find fantasy settings appealing, making them the most desirable game theme. It is not unexpected that fantastical settings dominate Japan's favorite genre – RPGs (Kuzuhara 2021). Therefore, the Japanese mobile gaming industry is linked to the historically embedded foundation of Japanese pop culture in various forms.

4.3. PAY-TO-WIN STRUCTURE

There is another point to mention that distinguishes gacha games from other forms of mobile games and adds to the popularity of the gacha domain. As the first two reasons can be applied to other types of mobile games, this reason is more or less applicable to free-to-play games, and as aforementioned in the second chapter, gacha games are a type of F2P game.

The main reason why players keep playing the gacha and, in some cases, spending an extreme sum of money in a single game is because rewards can be easily attainable for a small amount of money (Randell 2023). This is one of the concepts on which pay-to-win games stand. For a small amount of money, players can effortlessly gain a desired character or reward if the players do not want to wait too long or grind through the whole process of playing the game to win.

Gacha games, as a type of F2P game, do not require users to pay money to progress in the game and get access to a sizable portion of the content, but if the players want to win against other players who pay to win or gain a reward, they need a lot of time and skills. There are gacha games that are fully playable without having to spend any money. *Genshin Impact*, a popular gacha game in the West, allows the users to receive a variety of weapons and characters without paying a single cent (Randell 2023).

However, gacha games are designed to tempt consumers into spending real-life money in return for desired items. The thought of winning the game or gaining the strongest character in the game with only one roll of the gacha can be enticing. Unfortunately, the games are also designed to give the items randomly. Thus, the players have no control over what item they will receive for their money. In most cases, the rewards are not worth the money the players paid for them. Moreover, the chance of actually "winning" the game is considerably low (Randell 2023). This pay-to-win concept sadly removes the element of skills that can be acquired through playing.

When the players pay once for a chance to gain a reward, whatever the result is, it entices them to pay for another, and the temptation to spend more money grows stronger. This addictive nature of gacha is undoubtedly the main reason behind the massive popularity and success of the gacha games.

5. THE CONSEQUENCES OF PLAYING GACHA GAMES ON ADOLESCENTS

With the reasons presented in the previous chapter, we can understand why gacha games are so popular and addictive in Japan, both from the consumer's and the developer's perspectives. Unfortunately, in some cases, the players spend an unreasonable amount of time and money on these games, which certainly causes harmful effects for them from social, psychological, and financial perspectives. This chapter reviews how playing gacha games can negatively impact Japanese adolescents.

People of all ages play mobile games. According to a survey done by Statista in 2021, working adults aged 35–44 made up the largest portion of mobile game users, 33%, to be exact. The second greatest portion comprises adults in their late 20s and early 30s (IrepInc. 2022). However, for the purpose of this thesis, we will focus on the third largest group, people under twenty. Considering young people can be more susceptible to external influences from their environment and become more easily detached from their reality due to their imagination and lack of responsibilities.

Unfortunately, the survey covers people from the age of eighteen and not earlier years. Therefore, we must consider that younger players were not counted, implying they would possibly make up a much larger part than the 19% shown in the survey.

5.1. ASSOCIATION WITH GAMBLING

The main damaging effect that playing gacha has on adolescents stems from the games' association with gambling. Until now, serious discussions have transpired on whether these games can be considered as a part of gambling culture in Japanese society.

Gambling is one of the oldest recreational activities dating in human history and exists in many forms worldwide. The fact that Japan has an abundant gambling culture is undeniable. That is despite Japan's strict gambling laws, which make gambling illegal in Japan. However, many forms of gambling, from notorious pachinko parlors to sports betting, which continue to operate in Japan are considered legal due to a series of loopholes in the law and inconsistent policies (Takiguchi & Rosenthal 2011).

Because of this "legal" gambling, Japan is facing so-called problem gambling, which is increasing mainly among Japanese men who are frustrated by a deterioration in their work

environment. One way Japanese cope with work-related stress and feelings of inadequacy is through gambling, especially pachinko (Takiguchi & Rosenthal 2011).

Pachinko, an arcade-style gambling game played on slot machines, is the most popular segment in Japan's gambling culture and generates a multi-trillion Japanese yen industry. Pachinko parlors are widely operated all over Japan because they were given legal status as an entertainment business (Arba 2022). However, the highest revenue is brought in by a segment of sports race betting that is controlled and administered by organizations affiliated with the Japanese government. The most dominant discipline among betting sports in terms of generated revenue is horse racing. In addition to horse racing, there are three main sports race betting disciplines: motorboat racing, bicycle racing, and motorcycle racing (Arba 2023).

In recent years, the pachinko industry has experienced a prolonged decline among the active pachinko player community. This trend has been further accentuated by the COVID-19 pandemic, which brought nationwide lockdown and restrictions on the opening hours of pachinko parlors (Arba 2022). On the other hand, gambling activities such as horse race betting or boat racing have increased due to the digitalization of the sports betting industry (Arba 2023). Innovations and technologies provide consumers with a much larger variety of different leisure activities. With increasing digitalization also comes the expansion of mobile games.

The domestic market for mobile and social games has extended to a size of 1,6 trillion Japanese yen in 2021 and is predicted to grow further with the increase of online gaming (Statista 2022). In comparison to the mobile gaming industry, the revenue of the pachinko industry is in the multi-trillions of the Japanese yen (Arba 2022). That concludes that the amount of money spent by players in mobile games is not even close to the amount of money wagered in pachinko slots. However, the revenue of the mobile gaming industry is comparable in size to that of online betting on motorboat racing, where net sales of gambling tickets surpassed the mark of one trillion Japanese yen (Arba 2023).

The gambling aspect of gacha is questioned because of their pay-to-win nature, which is strikingly similar to the concept of lottery, another popular form of gambling in Japan, and because the design of gacha is comparable to slot machines found in Japanese casinos. On the same principle as in a lottery, the consumer wagers money in the hopes of winning a reward without knowing its value.

The hazardous nature of gacha was not considered dangerous or negatively impactful on children, except for the Kompu gacha in 2012. The issue of children spending a sizeable amount

of money and time was overlooked for a long time. Furthermore, the gachas are not regarded as a gambling form by the Japanese general public, even though there is not much difference between sitting at a slot machine and putting coins in or paying in-game currency in mobile games (Randell 2023).

There is only one significant difference between other forms of gambling and gachas. One is illegal or requires a person to be of legal age, and the other is still legal (Randell 2023), and anyone with a mobile phone can play even if the person is a child under 15 years old. Thus, the revenue from the different gambling forms is mainly generated by the adult Japanese population, whereas the revenue from mobile games comes not only from adults but also from children, who can develop a habit of spending money on similar addictive mechanisms.

There are several cases regarding the potential exploitation of young children by profitable mobile games due to their inability to understand the consequences of their purchases (Miller 2022). However, I assume that gachas affect adolescents more than children under fifteen. In the case of children, the parents can more easily set limits to create an ideal online-offline balance, and children under fifteen generally do not have access to their own credit card.

Meanwhile, being an adolescent is considered to be between the ages of fifteen and about twenty. In this stage of life, adolescents develop their self-confidence, independence, and self-assurance. Furthermore, it leads to the manifestation of one's own opinions and attitudes (Labusová 2014). As their independence evolves, parents cannot watch every step their children take and restrict their time on mobile phones.

Moreover, adolescents commonly either get an allowance from their parents or start to have part-time jobs. By having their own money, the adolescents can spend as much money as they want, not knowing that they are exposing themselves to gambling-like mechanisms that could lead them to becoming potential gamblers addicted to betting money for wins or rewards at a young age.

Although it is true that players can complete many distinct types of gacha games even without spending any real-life money, the addictive nature of the games makes it almost impossible to achieve and not be swayed by the pay-to-win structure. Besides the likelihood of adolescents becoming serious gamblers, the addictive and hazardous attribute of gacha also results in other social and psychological problems in adolescents.

5.2. INTERNET GAMING DISORDER

In the last few years, another social and psychological problem has emerged from the addictive nature of gacha and other types of video games that mainly concern children and adolescents and have been on the rise in Japan. Particularly during the COVID-19 pandemic, when people had to stay at home, a wave of internet addictions and video gaming disorders surged globally. Due to the significant increase in Japan, Internet Gaming Disorder (IGD) has become a recognizable issue in Japanese society.

The Internet Gaming Disorder has been recognized by the World Health Organization as a disorder that causes disruptions in the daily life of an individual as a result of continuous and excessive involvement with online games, and it should be regarded as a new lifestyle-related disease in younger individuals. IGD can be particularly risky for children and adolescents because the diagnostic criteria for IGD are similar to those for other behavioral addiction disorders, such as pathological gambling (Imataka, et al. 2022, 1).

IGD is said to have a negative impact on a person's physical, emotional, and social welfare that commonly involves mental health, sleep-related issues, and decreased interest in schoolwork and extracurricular activities. It is also associated with emotional instability and depressive symptoms. The prevalence of IGD is more common in Eastern Asian countries, substantial ubiquity of IGD can be found in Japanese students (Imataka, et al. 2022, 1–2).

In other words, gaming disorder means staying up all night to play, rejecting any way of connecting with real people, particularly loved ones, and neglecting responsibilities and daily necessary needs, such as eating or keeping up with personal hygiene.

A survey conducted by the National Hospital Organization Kurihama Medical and Addiction Center on "gaming disorders" showed that 85% of participants played video games within the past 12 months, and the most popular gaming platform was a smartphone. 18,3% of young people aged between 10 and 29 play video games for an average of three or more hours a day. Furthermore, a substantial portion of participants who play six or more hours a day reported that they continue despite the occurrence of physical problems, such as headaches or sleep deprivation (Nippon.com 2019).

The COVID-19 pandemic was a crucial factor in the prevalence of IGD in Japan. It was anticipated that during the nationwide lockdown, the IGD would naturally spread. People increased their time spent on smartphones or other electronic devices, and the distraction of online activities in the form of video games was tempting. Considering the growing prevalence

of IGD in Japan, especially after the COVID-19 pandemic, and the similarity to gambling addictions, there should be a better focus on the handling of gaming disorders and the prevention of harmful effects.

5.3. THE PHENOMENON OF HIKIKOMORI

Excessive playing of video games that leads to the previously mentioned problems is also affiliated with a classic phenomenon found in Japanese society, namely *hikikomori*, where a person stays at home for extended periods and does not socialize or work. The relationship between online games and *hikikomori* was further deepened by the COVID-19 pandemic.

Because of this issue, the developers are trying to make games a social activity. Therefore, many of the new gacha games started to provide "online community" features for gamers to socialize with each other. However, according to Newzoo's data, gamers in Japan gravitate toward single-player video games more than multiplayer games, with the highest number of preferred single-player games on mobile platforms (Kuzuhara 2021).

Furthermore, game motivators' scores related to socialization are much lower in Japan than they are worldwide. For instance, the play-to-socialize motivator is 13% in Japan, in comparison to 25% in the rest of the world. Other low-scoring motivators are the competition and enjoyment of beating others and working with teammates to complete goals (Kuzuhara 2021).

From the definition of online gambling addiction and gaming disorder, it can be clearly understood how these two issues are profoundly intertwined with the *hikikomori* phenomenon. The addictive nature of gacha games keeps players engaged in the game to such an extent that they can gradually lose control of reality. Thus, *hikikomori* can simply become another consequence of excessive playing.

5.4. ATTEMPTS AT REGULATION OF GACHA GAMES IN JAPAN

Since their invention, gacha games have been the subject of many controversies and criticisms based on their addictive and harmful nature. Starting with the banned Kompu gacha in 2012, the developers tried to make the games more transparent to avoid further regulations and possible restrictions on gacha mechanisms. However, throughout the years, there have been many instances where gachas have been under scrutiny by the Japanese media.

Kompu gacha was banned by the Consumer Affairs Agency (CCA) under the *Law for Preventing Unjustifiable Extra or Unexpected Benefit and Misleading Representation* due to

its F2F mechanism being overly similar to gambling (Koeder & Tanaka 2019, 8). Since then, gacha companies have had to abandon this concept and invent different types of gacha usage.

In the years 2015 and 2016, several Gacha games were mentioned in the newspapers for their issue with a lack of displayed probability for acquiring a specific game item. Therefore, the Association of Japanese Developers (CESA) issued a new guideline in 2016 that demanded increased transparency within their games (Koeder & Tanaka 2019, 9).

Despite these regulations, gacha games were not considered dangerous to health or a form of gambling for a long time in Japanese society. It was not until the COVID-19 pandemic spread, and the nationwide lockdown led to the considerable growth of gacha gamers that the negative effect started to become known to the Japanese public. Concerns, such as whether children will become addicted to gaming and spending money at a young age or whether gaming affects children's health, became more distinguishable.

During the pandemic, CESA, along with other gaming companies, established an expert panel after the gaming disorder was officially recognized by the WHO. The panel will be in charge of creating safety measures based on results from a nationwide survey of gamers. CESA also encourages parents to limit their children's access to these games (Masataka 2020).

From this chapter regarding the consequences of playing gachas, we can understand that excessive playing of gacha games due to their financial and addictive nature can have an immense impact on young Japanese. After the summary of the most potential consequences, it can be concluded, that gacha mechanisms should be regarded as a harmful way of entertainment, particularly for the younger Japanese generation, which can be easily influenced by their environment. Some of the aspects of gacha games, such as the pay-to-win structure or the chance probability, are comparable to other forms of hazard in Japan and should not be further encouraged by the Japanese gaming industry.

However, even if stricter regulations and laws were implied on gacha games, it would not mean that the development of different mechanisms, contents, and design would cease. Mobile games are part of contemporary culture and always will be present in the lives of young people.

CONCLUSION

The focus of my thesis was to provide a comprehensive overview of the social-mobile games called gacha games as a phenomenon in the Japanese mobile gaming industry, the reasons for their popularity, the consequences of excessive playing of gacha games on adolescents, and their perception in Japanese society, primarily on the basis of available research papers and specialized websites.

The first part of the thesis introduced the Japanese mobile gaming industry in general and the substantial role gacha games play in it. Since their invention in 2011, mobile games implementing the gacha mechanism have increased to such an extent that nearly all top-grossing mobile games in Japan are gacha games, making them a phenomenon in the Japanese mobile gaming industry. They are highly profitable and addictive. Due to their massive popularity among gamers not only in Japan but also in other parts of the world, they bring multi-billion-dollar revenue to the Japanese mobile industry. On the other hand, it is their highly profitable and addictive nature that makes them a subject of controversy and criticism in Japanese society.

The second part of my thesis discussed the reasons for the popularity of gacha games among users. The two first factors mentioned in the work, the psychology of gameplay and intertextuality, are factors that can be applied even to other types of mobile games. However, the most crucial reason for the enormous success of gacha on the Japanese market is assumed to be their pay-to-win structure, which intelligently provokes the players to spend more money for the chance to win rewards.

The last part of my thesis examined the potential consequences of excessive playing of gacha games on adolescents and outlines the situation of regulatory measures against gacha games. The main harmful effect is considered to be the close resemblance to gambling that stems from the addictive and monetary aspects of gacha, which are similar to other forms of gambling practiced in Japan, such as *pachinko* or lottery. Even though the gacha games' revenue is not as high as in the case of *pachinko*, it is still a trillion-yen industry. However, unlike *pachinko* or other forms of hazard, a significant part of profits comes from children and adolescents, which is highly disturbing. Furthermore, the negative impact of gacha on young users seems to be deeply connected to other social problems in Japan, such as Internet Gaming Disorder and the phenomenon of *hikikomori*. It can be said that these social issues naturally arise from the problematic nature of gacha games and their excessive playing.

The problematic nature of gacha games was overlooked by Japanese society for a long time, and it was not considered anything dangerous for young people, with the exception of Kompu gacha in 2011. Thus, in recent years, especially after the COVID-19 pandemic, the number of adolescents experiencing issues related to the excessive playing of gacha games or even other types of video games has been on the rise. It finally caught the attention of the authorities and the children's parents, and more regulatory measures started to be applied to gacha mechanisms. However, despite these efforts, gacha mechanisms are still frequently used by gaming developers, and the popularity of gacha games is still growing among players as it is considered a part of Japanese pop culture.

RESUMÉ

The goal of this thesis is to familiarize the reader with the subject of gacha games in contemporary Japanese society. The thesis is divided into three parts. The first introduces the Japanese mobile gaming industry in general and the phenomenon of gacha games in the social-mobile gaming industry. That means the basic mechanisms and principles of gacha, their origin and development throughout the years, from their invention to their current situation. The second part is dedicated to the reasons why gacha is popular in Japan and what keeps the players engaged in the game. The third part of this thesis examines the potential consequences of playing gacha for prolonged periods of time and their relation to other social problems in Japan, such as gambling, Internet Gaming Disorder, and the phenomenon of *hikikomori*.

Key words: gacha games, mobile gaming industry, popularity, gameplay, consequences of gaming, adolescents, hazard

REFERENCES

- ARBA, Alexandru. Gambling industry in Japan – statistics & facts (2023). *Statista* [online]. Dostupné z: <https://www.statista.com/topics/7981/gambling-industry-in-japan/#topicOverview>
- ARBA, Alexandru. Pachinko in Japan – statistics & facts (2022). *Statista* [online]. Dostupné z: <https://www.statista.com/topics/7427/pachinko-in-japan/#topicOverview>
- DAL, Yong Jin. Mobile Gaming in Asia (2017). *Mobile Communication in Asia: Local Insights, Global Implications*. Springer Nature. ISBN 978-94-024-0826-3.
- DRACHEN, Anders, et al. Rapid Prediction of Player Retention in Free-to-Play Mobile Games (2016). *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE-16)*, 2016. [online]. Vol. 12. No. 1. Dostupné z: <https://ojs.aaai.org/index.php/AIIDE/article/view/12856>
- GAMEREFINERY TEAM. The Complete Guide to Mobile Game Gachas in 2022 (2022). *GameRefinery, a Liftoff Company* [online]. Dostupné z: <https://www.gamerefinery.com/the-complete-guide-to-mobile-game-gachas-in-2022/>
- GLOBALDATA. Market Size of Mobile Gaming in Japan (2017-2021, \$ Billion) (2022). *GlobalData* [online]. Dostupné z: <https://www.globaldata.com/data-insights/technology-media-and-telecom/market-size-of-mobile-gaming-in-japan/>
- HEINZE, Johannes. How gacha can benefit Western game developers (2017). *Games Industry* [online]. Dostupné z: <https://www.gamesindustry.biz/how-gacha-can-benefit-western-game-developers>
- HEJDENBERG, Anders. The Psychology Behind Games (2005). *Gamedeveloper* [online]. Dostupné z: <https://www.gamedeveloper.com/design/the-psychology-behind-games>
- IMATAKA, George, et al. Current Status of Internet Gaming Disorder (IGD) in Japan: New Lifestyle-related Disease in Children and Adolescents (2022). *Journal of Clinical Medicine*. [online]. Dostupné z: <https://www.mdpi.com/2077-0383/11/15/4566>
- IQBAL, Mansoor. Pokémon Go Revenue and Usage Statistics (2023). *Business of apps* [online]. Dostupné z: <https://www.businessofapps.com/data/pokemon-go-statistics/>
- IREPINC. Insight of Mobile Gaming Industry In Japan (2022). *Irep Inc* [online]. Dostupné z: <https://irep.inc/blog/insight-of-mobile-gaming-insutry-in-japan/>

IZUSHI, Hiro; AOYAMA, Yuko. Industry evolution and cross-sectoral skill transfers: a comparative analysis of the video game industry in Japan, the United States, and the United Kingdom (2006). *Environment and Planning A*, volume 38: 1843-1861. [online]. Dostupné z: <https://doi.org/10.1068/a37205>

JOHNSON, Mark R.; BROCK Tom. How are video games and gambling converging? (2019). *Gambling research Exchange Ontario*. [online]. Dostupné z: [https://www.greo.ca/Modules/EvidenceCentre/files/Johnson%20and%20Brock%20\(2019\)%20How%20are%20video%20games%20and%20gambling%20converging.pdf](https://www.greo.ca/Modules/EvidenceCentre/files/Johnson%20and%20Brock%20(2019)%20How%20are%20video%20games%20and%20gambling%20converging.pdf)

KANERVA, Taija. Cultures Combined: Japanese Gachas Are Sweeping F2P Mobile Games In The West (2016). *GameRefinery, a Liftoff Company* [online]. Dostupné z: <https://www.gamerefinery.com/japanese-gachas-sweeping-f2p-games-west/>

KIM, Allen. 'Mario Bros.' Creator Shigeru Miyamoto to be given one of Japan's highest honors (2019). *CNN* [online]. Dostupné z: <https://edition.cnn.com/2019/10/29/tech/shigeru-miyamoto-nintendo-trnd/index.html>

KOEDER, Marco Josef; TANAKA, Ema. Game of chance elements in free-to-play mobile games. A freemium business model monetization tool in need of self-regulation? (2017). 28th European Regional Conference of the International Telecommunications Society (ITS). [online]. Dostupné z: <https://www.econstor.eu/handle/10419/169473>

KOEDER, Marco; TANAKA, Ema; SUGAI, Phillip. Mobile Game Price Discrimination effect on users of Freemium services- An initial outline of Game of Chance elements in Japanese F2P mobile games (2017). 14th Asia-Pacific Regional Conference of the International Telecommunications Society (ITS). [online]. Dostupné z: <https://www.econstor.eu/handle/10419/168503>

KOSTER, Raph. A Theory of Fun for Game Design (2013). *O'Reilly Media, Inc.* 2nd digital ed. ISBN 978-1-449-36321-5.

KUZUHARA, Tomofumi. The Gamers Powering Japan's \$22.1 Billion Games Market: Consumer Motivations, Behavior & Data (2021). *Newzoo* [online]. Dostupné z: <https://newzoo.com/resources/blog/the-gamers-powering-japans-22-1-billion-games-market-consumer-motivations-behavior-data>

LAX, Gawain Lucian; MACKENZIE, Madeleine. Against All Odds: Desire and Monetization in Japanese Mobile Games (2019). Proceedings of DiGRAA 2019. [online]. Dostupné z: https://digraa.org/wp-content/uploads/2019/01/DIGRAA_2019_paper_38.pdf

LABUSOVÁ, Eva. Výzvy a nástrahy adolescence (2014). *Šance dětem* [online]. Dostupné z: <https://sancedetem.cz/vyzvy-nastrahy-adolescence>

MASATAKA, Kozu. Getting serious about gaming disorder (2020). *NHK World-Japan* [online]. Dostupné z: <https://www3.nhk.or.jp/nhkworld/en/news/backstories/787/>

MILLER, Bob. Gacha games and child gambling: overview (2022). *Top Class Action* [online]. Dostupné z: <https://topclassactions.com/lawsuit-settlements/consumer-products/video-games/gacha-games-and-child-gambling-overview/>

MUSIOLIK, Paul. Lootboxes on Steroids – What’s Gacha and Where Did It Come From?.(2021). *Gamepressure* [online]. Dostupné z: <https://www.gamepressure.com/editorials/what-are-gacha-games-history-and-origins-of-the-genre/z7412>

NIPPON.COM. Concern Over gaming Addiction Among Young Japanese (2019). *Nippon* [online]. Dostupné z: <https://www.nippon.com/en/japan-data/h00599/concern-over-gaming-addiction-among-young-japanese.html>

PICARD, Martin. The Foundation of Geemu: A Brief History of Early Japanese video games (2013). *Game Studies* [online]. The International Journal of Computer Game Research. Volume 13 (2). Dostupné z: <https://gamestudies.org/1302/articles/picard>

RANDELL, Laura May. What Are Gacha Games, and Why Are They So Popular? (2023). *Make use of* [online]. Dostupné z: <https://www.makeuseof.com/what-are-gacha-games-why-are-they-so-popular/>

SCHOLTEN, Oliver James, et al. Ethereum Crypto-Games: Mechanics, Prevalence and Gambling Similarities (2019). Proceedings of the annual symposium on computer-human interaction in play 2019. [online]. Dostupné z: <https://doi.org/10.1145/3311350.3347178>

SCHWIDDESEN, Sebastian. Loot Boxes in Japan: Legal Analysis and Kompu Gacha Explained (2018). *Lexology* [online]. Dostupné z: <https://www.lexology.com/library/detail.aspx?g=9207df10-a8a2-4f67-81c3-6a148a6100e2>

STATISTA. Mobile gaming in Japan – statistics & facts (2022). Statista research department, *Statista* [online]. Dostupné z: <https://www.statista.com/topics/5679/mobile-gaming-in-japan/#topicOverview>

TAKIGUCHI, Naoko; ROSENTHAL, Richard J. Problem Gambling in Japan (2011). *Electronic journal of contemporary Japanese studies* [online]. Dostupné z: <https://japanesestudies.org.uk/articles/2011/Takiguchi.html>

TOTOa, Serkan. Gacha: Explaining Japan's Top Money-Making Social Game Mechanism (2012). *Serkan Toto: CEO blog. Kantan Games* [online]. Dostupné z: <http://www.serkantoto.com/2012/02/21/gacha-social-games/>

TOTO, Serkan. How Japanese Mobile Game Makers Go After Whales: 5 Popular Gacha Mechanics (2016). *Serkan Toto: CEO Blog. Kantan Games* [online]. Dostupné z: <https://www.serkantoto.com/2016/03/14/gacha-monetization-japan/>

TOTO b, Serkan. Japanese Social Gaming Market: Size and Growth Projections (2012). *Slideshare, a Scrib company* [online]. Dostupné z: <https://www.slideshare.net/serkantoto/japans-social-gaming-market-size-and-growth-projections>

TOTO c, Serkan. "Kompu Gacha" Social Game Mechanic Is History, Here's How It All Went Down (2012). *Serkan Toto: CEO Blog. Kantan Games* [online]. Dostupné z: <https://www.serkantoto.com/2012/05/09/kompu-gacha-dena-gree-history/>

THE N3TWORK. The History of Gacha in Video Games (2018). *Medium* [online]. Dostupné z: https://medium.com/@john_23522/the-history-of-gacha-in-video-games-2f5640a3160d

WANG, Cecilia. Consumer Behavior in the Virtual Economy (2018). University of Oregon. [online]. Dostupné z: <https://scholarsbank.uoregon.edu/xmlui/handle/1794/24133>

YAN, Si. Genshin Impact Pity System, Standard Pity and Soft Pity (2020). *Videogamer* [online]. Dostupné z: <https://www.videogamer.com/guides/genshin-impact-pity-system/>