



**THE CREATIVE INDUSTRIES:
THE VIDEO GAME INDUSTRY AND ITS INFLUENCE
ON SOCIETY**

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ABSTRACT

The main objective of this essay is to analyse the creative industries, in particular the video game sector both outside and within Spain. The history of this industry is summarized in this work highlighting the most important events that have occurred. It is important to position these industries within each country to obtain the best advantages in the field of hardware and software development. The countries that occupy the top positions in the world rankings for video game consumption (USA, China and Japan) have been analysed together with Spain. This analysis includes their comparison regarding economic, strategic and social aspects.. To obtain the results, the revenue in the video game market of these countries along with the demographic profile of gamer and the legal situation of each region has been analysed. Furthermore, the essay also includes the study of their participation in two major streams of the sector: ESports and indie video games.

1. INTRODUCTION

Times change and with them the needs and preferences of consumers. Innovations are increasing and technology is improving to levels where machines exist to make people's lives easier. This is something that companies know very well and use to gain a significant competitive advantage over their competitors. Information and communication technology (ICT) has also helped the efficient development of this market worldwide (Pérez Lozano, Á., 2015).

Creativity is an important starting point for differentiating companies in markets that are very congested with an homogeneous product offer. For this reason, creative industries are born, where innovation and creativity are fundamental pillars in their operation. In addition, they are closely linked to culture, so the political framework benefits them in most cases.

Within these creative industries we find companies that produce movies, music, software, video games... but also other sectors that apply these innovations such as textiles, automotive or technological elements (mobile phones, computers, tablets...). This essay aims to show the evolution of the video game sector in terms of improving technology in order to illustrate the continuous innovative and learning process that occurs in this field.

The video game sector is becoming very important thanks to the technological advances applied by this type of creative industries. More and more companies decide to improve their products to be more attractive in the eyes of customers and thus increase the added value towards them. Consumers are eventually more picky and observant, so they are looking for companies that share their principles and ideals, such as contributing to social causes or not testing their products with animals. Into this industry we find companies such as Ubisoft, Sony, Nintendo or Microsoft.

It is a sector that attracts many audiences but is also heavily criticized by some people who consider games to cause misconduct. On many occasions, these problems have led to significant losses for video game companies and have seen their corporate image publicly tarnished by accusations by different groups.

Another important concept is the study of the video game markets of the three major world players: China, Japan and the United States. These tech giants lead the current market in the gaming world, so they are good examples with which to compare the Spanish industry. The Spanish market is one of the fastest growing in the last decade

thanks to young people who have taken advantage of the weight gain of this industry in the economy, making Spain an important follower of the three great leaders.

The video game world currently has two trends in operation: ESports and the indie industry. In the first, dedicated to online competitions, the viewer can witness video game championships of both sport, shooters or strategy and enjoy the games of professionals of this discipline. When it comes to the indie video game industry, they are still of little importance, but more and more companies are joining this kind of cheaper and more popular design among the public.

The main objective of this study is the analysis of the video game industry through a series of economic, social, strategic and comparative research. This thesis will try to answer the following questions: Is the video game sector important in Spain?, What differences do we find with the American , Chinese and Japanese video game markets? And what social problems have been generated and how have they been solved?

All data presented in this essay is based mainly on secondary sources of information such as survey results, experiments, magazine articles or history books about the video game industry in order to have greater objectivity when it comes to comparisons.

Keywords: creative industry; creativity; innovation; video games; Spanish market; Technology.

2. THEORETICAL FRAMEWORK

The first part of this essay is based on the realization of a theoretical framework for a better understanding of the analyses that are carried out in the following sections. This first point defines concepts such as creativity and innovation, which are very abstract terms, as well as entering the context of the creative industry and more specifically, the video game industry.

2.1. Concept of Creativity and Innovation

Creativity is a concept that many authors have tried to define. There is a definition within the most social realm that is used by people colloquially. In this way they define it as an adjective to describe the qualities of people, processes or products especially in sectors such as art or visual communication. It is also used as a synonym for intelligence or imagination.

Another way to define creativity is based on what is established by dictionaries such as the Royal Spanish Academy: "Action or effect of creating". Both definitions are correct due to the evolution of the concept.

To obtain a more thorough definition of this term, A. Cotrina (2019) establishes 4 stages: The first is based on the use given to it by the Romans. For them it meant "creator urbis", closely related to creation; The second stage corresponds to the use of creativity in the theological field, as synonymous with God; In the third phase the word creativity is attributed to art, at this stage it is no longer linked with creation to become a new attribute that arises in the field exclusively of art; The last stage corresponds to the twentieth century and is born through scientific theories. The term began to be used in all areas of human culture. As it began to be defined so broadly it created uncertainty to know the true meaning of creativity.

This term can be applied in all fields that involve skill improvement or process creation based on new techniques. Currently this concept applies in multiple sectors such as art, technology, teaching, gastronomy... and it is increasingly spreading to other sectors.

The innovation concept also has controversy behind it as to how to define it. Many authors try to give an accurate definition of the term, but as with creativity, its meaning changes depending on the scope in which it is applied.

For a better understanding of this definition, C. Valdés et al., (2019) compare the different definitions and get several concepts that are repeated in all: It is a process of change, it happens in all products and processes, not only creates but improves, is accepted by society and is a means of achieving an end.

2.2. Concept of Creative and Culture Industries

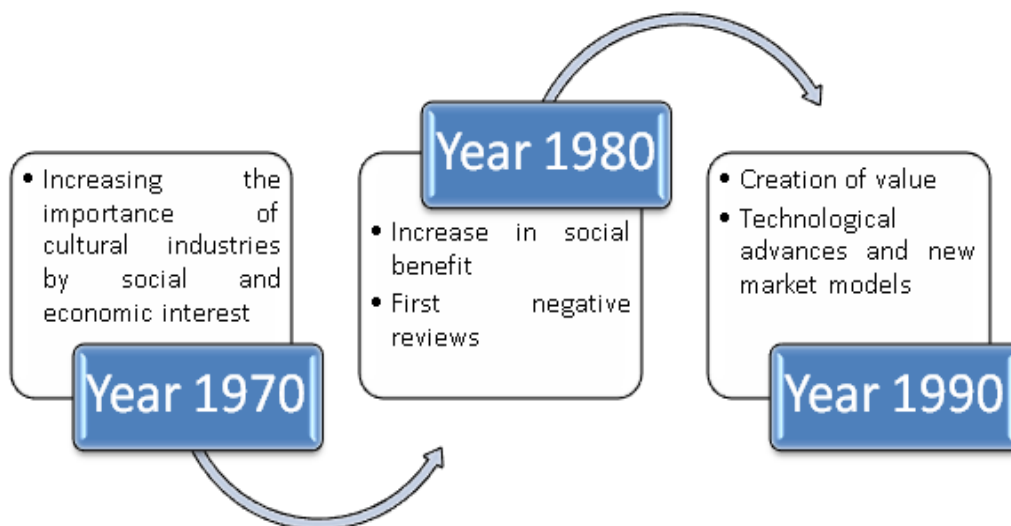
Creativity and innovation are fundamental pillars within the creative and cultural industries. A good definition of this type of industry is that given by C. Blanco-Valbuena and other authors (2018) in which they identify them as industries in which their wealth is based on the talent, intellectual property, connectivity and cultural heritage of a region. The companies that make up these industries perform work whose origin is in creativity, skill and individual talent. These companies generate jobs and wealth through intellectual property. They define it as "the new economy."

Another key pillar in these types of industries is digital technologies that are gaining more weight in society and in the economy of countries. The same authors claim that these companies have significant weight in the knowledge economy. Thanks to ICT, these industries change their structures, business models and the relationships between creators and users and give rise to new cultural expressions. This is a very important resource within the sector that is defined in the present work: that of video games.

These industries, during history, have gone through various stages:

- Year 1970: Cultural industries began to take on importance in the political and academic sphere. At this stage interest in such companies was purely political and linked to the economy, not on the basis of benefits for society. It is not considered as a good thing for society until the French politician Girard wrote an article in 1982 about the benefits of these industries. Together with other authors who also had the same opinion, they got this concept to become purely political.
- Media of 1980: These companies are beginning to have more weight from the criticism of the authors, so this model was extended to more sectors as it was beginning to be supported and has been of strong importance in the economy, thanks not only to the economic benefits but also to what it contributed to society. At this stage, early negative criticisms of these models also began to emerge as they only applied mainly in cultural activities.
- Making the end of 1990: Another term with a strong connection began to be applied: Value Creation. Technological advances increased and new market models were created to change existing society. (O'Connor, J. 2011)
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Figure 1. The Evolution of the creative and culture industries



Source: Own elaboration based on the data obtained from O'Connor, J. (2011)

Currently, a good definition is: "Creative and cultural industries are those that have their origin in creativity, innovation, skills and individual talent, and that have a potential for the creation of wealth and work through generation and exploitation of intellectual property." (Department for Culture, Media & Sport, 2001)

Another definition that gives a better explanation of that made by UNESCO (United Nations Educational, Scientific, and Cultural Organization, 1946) where it classifies them as the sectors of activity that have as their main objective the production or reproduction, promotion, dissemination and / or marketing of goods and services of cultural, artistic or heritage content.

These companies share some common characteristics: a point of union between economics, culture and law; Creativity as a central component of production; Artistic, cultural or heritage content; Goods, services and activities frequently protected by intellectual property, Double nature: economic and cultural; Innovation and recreation; Demand and behaviour from audiences difficult to anticipate.

The European Commission (2010) makes a distinction between the type of activities that comprise them:

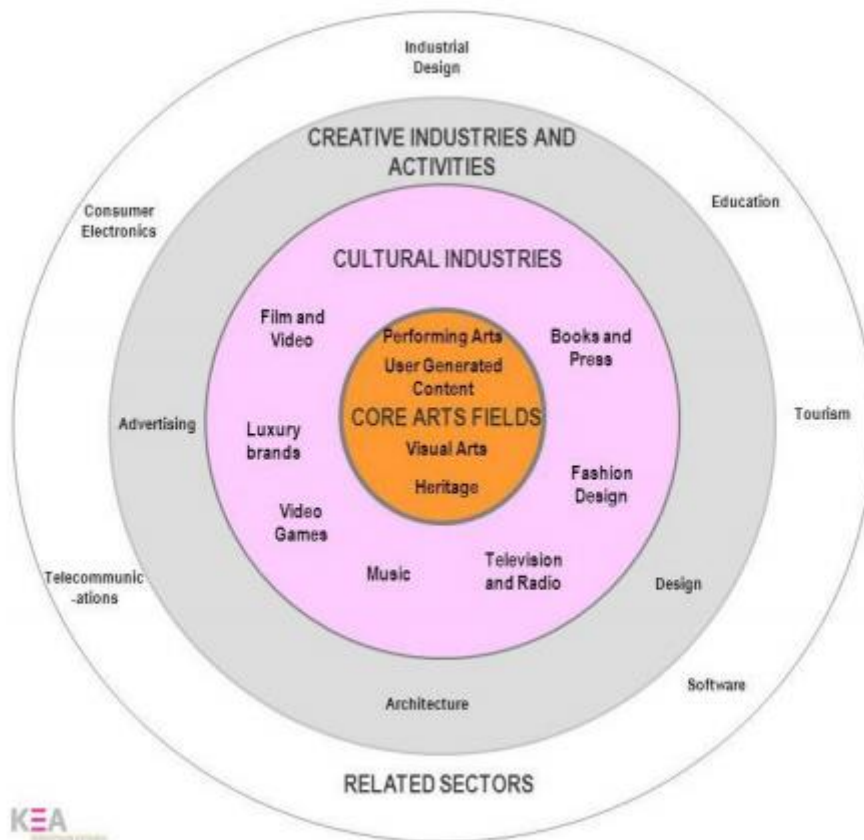
- Cultural industries: they produce and distribute goods and services that are considered an attribute that transmits culture and are independent of their commercial value. Cultural products and services are movies, books, television, radio or video games.
- Creative industries: They use culture as input, although they have no cultural purpose. For example, advertising and architecture, which use culture as a starting point but do not have an end.

Based on the different governmental bodies, different classifications of this type of industry are made. The European Commission's Directorate-General for Companies and Industries classifies them into clusters:

- Publicity (Advertising).
- Architecture.
- Media.
- Design, fashion (Design – Fashion).
- Video games, new media (Gaming, new media).

- ❑ Cine (Film).
- ❑ The finer arts – literary, visual and performing arts.
- ❑ Library, museums and heritage
- ❑ Music.
- ❑ Photography.
- ❑ Printed Media.
- ❑ Art objects – Glassware, ceramics, cutlery, handicrafts and jewellery.

Figure 2. Cultural and creative industries



Source: KEA European Affairs. *The economy of the Culture in Europe*
<https://uvadoc.uva.es/bitstream/handle/10324/36489/TFG-N.1067.pdf?sequence=1&isAllowed=y>

2.2.1. Video Game Industry

As we have noted in the above definitions, video game companies are classified within cultural enterprises but today, with gamification and technological advances they also fall within the definition of creative industry.

Video games are considered to be the most modern form of culture to which today's society and the most important entertainment medium has access economically.

Today's video game systems are composed of four elements: the platform (device by which the game starts), an audio and video output (a monitor or television, although there are currently portable platforms that carry it built-in), (integrated or external) and software in the form of a game (both physical and digital)

The following sections explain how the video game industry has evolved at a general level, the social problems facing this sector, and finally gamification.

2.2.2. Social Problems

Video games are in the crosshairs of many social groups that classify them as causes of some problems such as addictions. But it must also be recognized that they are the cause of improvements in areas such as education and work.

As for negative social effects, a study produced by Moncada, J. and Chacón, Y. (2012) reports: pre-schoolers who use video games find it difficult to develop some social attitudes and lack concentration; teenagers, who are the majority audience, are less effective and social if they play video games. These effects are due to misuse of the platforms and overexploitation by the consumer.

The same study has found that efficient use of video games has managed to improve the condition of chronically ill patients with degenerative diseases such as cerebral palsy or cystic fibrosis. The use of video games to eradicate misconduct in children and adolescents has also been promoted.

On the other hand we find psychological problems where aggressive behaviour and attention problems stand out. These drawbacks arise especially in children between 6 and 12 years old who have video games that are not recommended for their age or after use of play time.

Finally this study responds to the physiological effects that video games can have: hormonal response, since in the face of a victory or defeat our body secretes substances like testosterone; the energy expenditure of the players, formerly the games were too passive and the consumer was not exercised, currently accessories have been incorporated where the player must move for the character to move, which has increased energy use; with regard to sight and visual attention, it has never been shown that video games have any involvement in the social decline of players; and finally, some games can

affect the central nervous system as there are sounds and images that can cause alteration in the consumer. (Moncada, J. and Chacón, Y. 2012)

2.2.3. Gamification

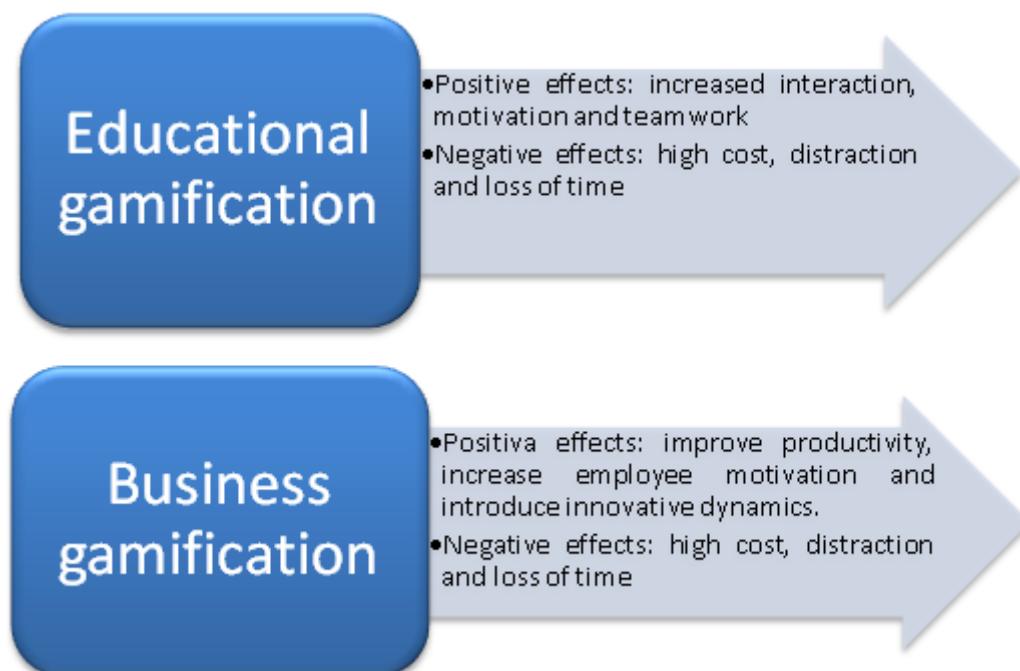
Gamification can be defined as "It is the use of strategies, models, dynamics, mechanics and elements typical of games in contexts outside of these, with the purpose of transmitting a message or content or changing behaviour, through a playful experience that promotes motivation, involvement and fun"

(Martín, M. and Vílchez, L.F. 2017)

Martín, M. and Vílchez, L.F. (2017) highlight two associated movements:

- The educational gamification, where it seeks to apply video game techniques to achieve greater student interaction, causing them to increase their motivation, learn technological skills or improve teamwork. It also has negative effects such as high cost, distraction and loss of time or ephemeral motivation.
- Business gamification, which seeks to improve productivity, increase employee motivation and introduce innovative dynamics. Today, many companies use this technique to enhance their corporate image, train their employees and increase brand engagement.

Figure 3. Educational and business gamification



Source: Own elaboration based on the data obtains from Martín, M. and Vílchez, L.F. (2017)

3. CONTEXT OF THE VIDEO GAME SECTOR

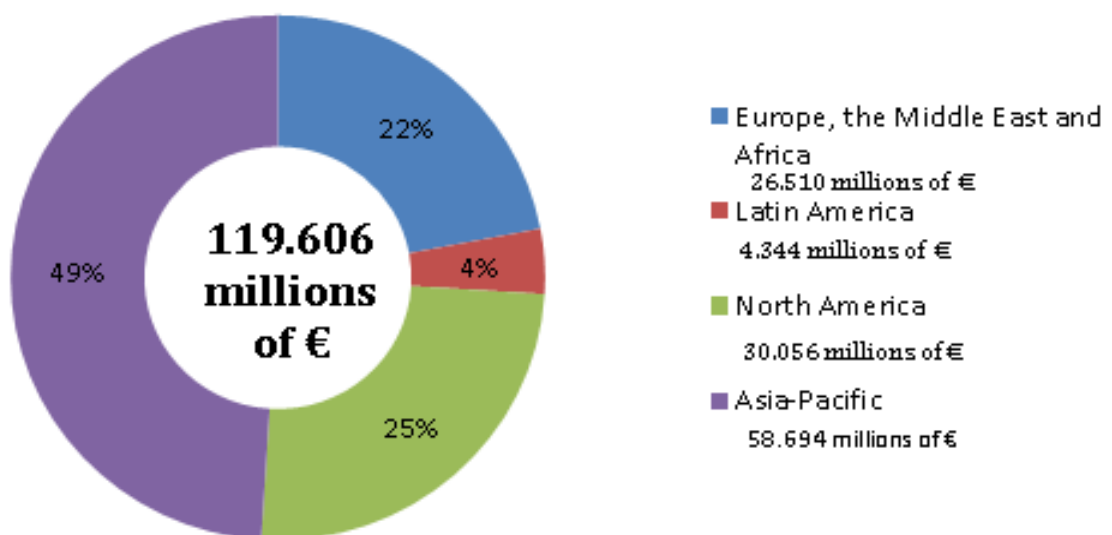
The third point of the essay is about the context of the video game industry. At this point a demographic analysis is carried out with the preferences of the gamers of each country, a psychophic profile is made with the ages, hours used and the weight of the women's sector and the different platforms and themes of video games prevailing in each region are exposed.

3.1. Video games outside of Spain

Becker, A. (2019) talks about a significant increase in video game sales compared to 2018, especially in Europe. The European countries with the highest number of sales are Spain, France, Germany and the United Kingdom. It also clarifies that today's gamers are no longer the profile we understand, women have increased their participation to 45% and older players (between 45 and 64 years old) have also increased.

Overall, 2018 was a year of global growth in the video game industry. The leading billing continents are Asia followed by North America and Europe. More specifically, the countries with the highest sales were China, the U.S. and Japan. Worldwide, the sale of physical video consoles and video games, followed by gaming computers, remains at the forefront (AEVI, 2018).

Figure 4. Market billing for video games in 2018



Source: Own elaboration based on data obtained from http://www.aevi.org.es/web/wp-content/uploads/2019/05/AEVI_Anuario_2018.pdf

3.1.1. Habits of Video Games in China

Chinese culture has nuances that unite it with both the world of video games and anime. For this reason, it is the country that uses video games the most in the field of teaching so that young people quickly learn all the concepts related to their roots.

There are currently 1,944 million people who have access to the internet in the Asian giant, so its use spreads quickly and for the video game industry is an advantage because most video games have the online gaming function. But this country is worried about the hours spent in video games.

The Chinese gamer community is made up mainly of minors. The Chinese lifestyle adapts the technology to children so that they can use it from a very young age. This has led to an increase in the use of video games by minors, especially children between the ages of 6 and 10. This worries the government about what time constraints have been put in place for this population segment that is too influencing.

Adult audiences also spend time on their leisure to play video games. They are mainly male, but female gamers are on the rise, making it an important focus of today's market. This is achieved with the investigation of this public. Chinese women seek a psychological experience unlike men who prefer wins or point accumulation. (Forbes Magazine, 2018).

The favorite video games of Chinese gamers are the competitive ones where League of Legends, Counter Strike, Overwatch and Fortnite. Although the town's favorite is called Kings Of Glory, it's for mobile phone. This is because the main device used to play by the Chinese population is the smartphone followed by the consoles (especially the Switch) and finally the computers. The difference with mobile phones is very large as the smartphone video game market has grown significantly in recent years.

3.1.2. Habits of Video Games in Japan

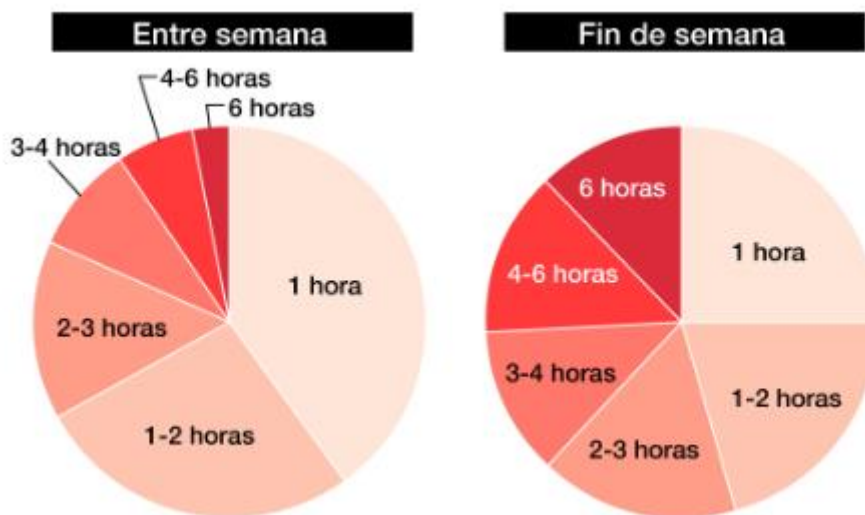
Japan has always had a very strong culture related to video games. For them it is not only a leisure activity, but also a mode of teaching and learning that they apply to children from a young age to help them with new technologies.

According to a survey conducted by Kurihama National Hospital Medical and Addiction Center (2019), 85% of young people between the ages of 10 and 29 have played video games in the last year. Men are still the ones who consume the

most video games, but 77% of Japanese women already use them. For the most part, the most commonly used platform is the mobile phone, but game consoles and computers has a lot of weight in the industry.

The same study reflects that most of these players do so from a young age, although with age they increase the hours and change their tastes regarding the themes. Regarding the hours spent, many are the ones who play 1 hour a day on weekdays, but the following graphic shows that the hours of play increase on weekends.

Figure 5. Time spent on video games in Japan



Source: Own elaboration based on data obtained from Kurihama National Hospital Medical and Addiction Center, Japan (2019)

As for adults, due to the pace of life they possess, 64% aged between 30 and 60 claim to devote some of their leisure time to video games. This niche population spends between 2 and 6 hours a week.

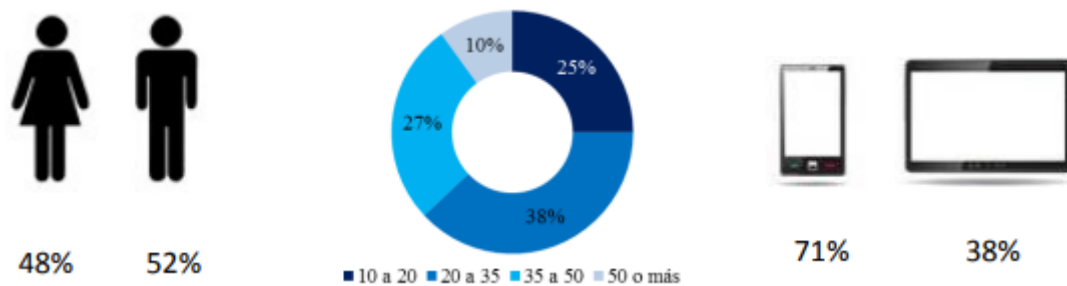
As for the themes of best-selling video games during 2019 in Japan, they were very varied: action, adventure, wrestling and sports. Among the titles that won the most sales in 2019 are: Pokemon Sword & Shield, Super Smash Bros. Ultimate, Kingdom Hearts 3 and Mario Kart 8 Deluxe. The most widely used game console was the Nintendo Switch followed by the PS4.

3.1.3. Habits of Video Games in United States

The U.S. is another of the world's leading countries in video game manufacturing and consumption. According to an analysis by Anton, J. (2014), 58% of Americans claim to play video games and in 72% of households there are some kind of video game device.

Of the total players, 48% are women and 52% are men. The ages that comprise the most gamers are 20 to 35 years old with 30%, followed by the age range between 35 and 50 years. The most widely used platform is smartphones again.

Figure 6. U.S. video game player profile.



Source: Pérez, A. (2015)

The time spent by these players has increased in recent years. The same study reflects that this increase may be due to the increase in the number of people playing video games and also because of the improvement in marketing actions, which make the video game market an eye-catching option.

Americans' consumption habits for video game platforms are the Nintendo Switch, which achieved the highest number of sales in 2019 due to its modern software, better than that of PS4 and Xbox One. In contrast, the best-selling games belong to the Sony and Microsoft platforms. Some of them are: Call of Duty: Modern Warfare, NBA 2K20, Borderlands 3, Mortal Kombat 11 and Mario Kart 8 Deluxe. As you can see, the themes are very different as we find shooter, sports and adventure games.

3.1.4. Leading Video Games Companies Outside Spain

Most software-creating companies that have more market share are outside Spain. Some of the most famous companies are: Microsoft, IBM, Oracle, HP and Adobe. These companies are world-renowned because of their technological advances and sales.

Some of the companies that in 2019 obtained the highest number of sales by video game development, although they do not develop this activity, are the following: Tencent in the first place; Sony; Microsoft, which along with software development stands out; Apple, which does not develop video games but does sell through its devices; Nintendo; Ubisoft; Konami; Capcom, etc. These companies are mainly American and Asian, so our analysis will be carried out in the American, Japanese and Spanish markets. (Statista, 2019)

Statista collects a ranking of some of the most important retailers worldwide: Electronic Arts, Valve, Sony Interactive Entertainment; Xbox Game Studios, Nintendo, Konami, Namco, Rockstar Games, Activision Blizzard, Ubisoft, etc. As with video game development companies, they are mostly companies in the US and Japan.

3.2. Video games in Spain

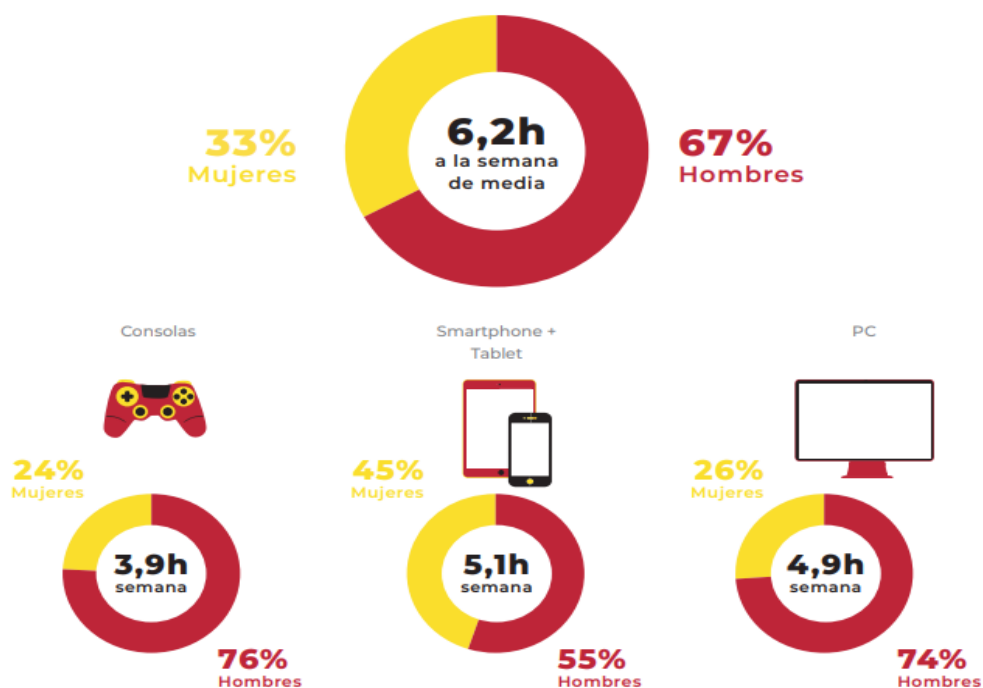
This section details how the average Spanish player is currently and the tastes and hobbies of these in terms of video games.

3.2.1. Habits of Video Games in Spain

The Spanish Video Game Agency draws up the profile of the Spanish player: He is a man (although women gamers already account for 41% of the total), between 6 and 10 years old (it is the age group with the most players but closely followed by the following groups of 11 to 34 years). We spend 6.2 hours on average a week on video games.

Another interesting fact that this report describes are the topics that Spaniards like the most. The sale of action games stands out in an eye-catching way. Followed by sports games and FPS (First person shooters). Although the best-selling game in 2018 was FIFA 19 followed by Red Dead Redemption 3 and Spider-man. These players mostly use consoles and computers, although smartphones are increasing their use for this purpose.

Figure 7. Spanish video game player profile



Source: http://www.aevi.org.es/web/wp-content/uploads/2019/05/AEVI_Anuario_2018.pdf

3.2.2. Leading Video Games Companies in Spain

The video game industry ranges from software-creating companies to video game and console distributors.

Some of the Spanish software companies classified by CNAE (2019) in Spain are: JDK Videojuegos SL, in Navarra; Asomay Video Games AIE, in Madrid; Qsis Video Games, based in Seville; and Futura Videojuegos SL, Valencia.

The companies that have the greatest market power in terms of video game editing in Spain today are: Zitro Laboratory SL., a company from Barcelona; Gameloft Iberica SA, also Catalan company; Meristation Magazine SLU, based in Madrid; and Big Bang Box SL, in Madrid too. (CNAE 2019 classification)

Finally we find the distribution companies of the outputs, in this case the platforms and video games ready for the final consumer. It should be noted that many SMEs are responsible for the distribution of these items, so it is impossible to collect all the information necessary to know which has the most market power.

4. EVOLUTION OF THE VIDEO GAME INDUSTRY

The fourth section of this trial is based on describing market developments by pointing out at the birth of the current industry-leading companies that are Sony, Nintendo and Microsoft. There is also an attempt to give a vision for the application of technological advances in the development and gameplay of video games.

Other concepts explained in this section are: ESports and their importance in current sports, as it is a stream that generates a lot of money; and about the indie gaming industry which is an opportunity that many entrepreneurs are taking advantage of for their business development. In Spain both concepts are becoming very important.

4.1. History

- First Steps:

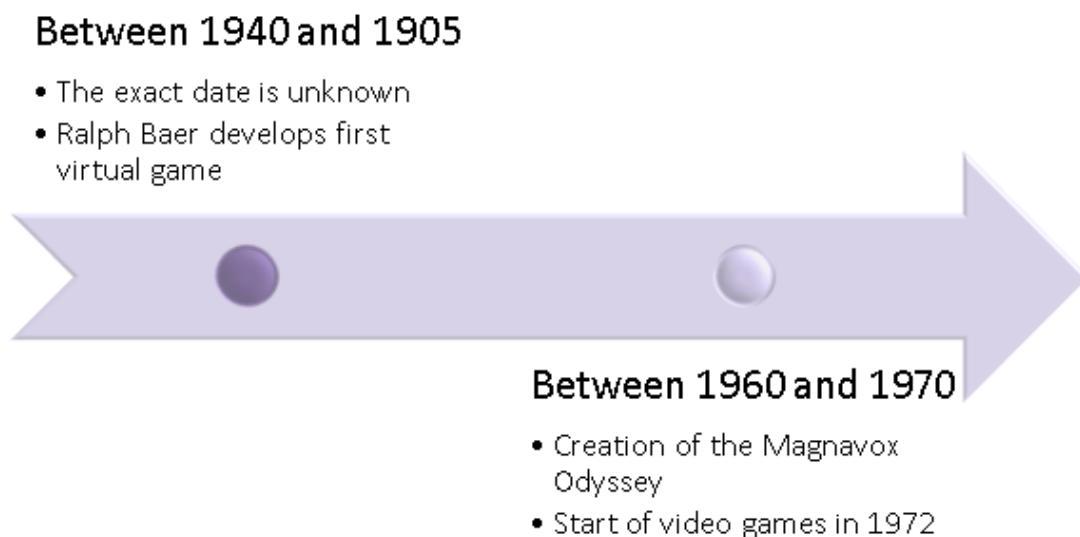
The beginnings of this cultural movement cannot be known exactly as the first projects were between 1940 and 1950 where a human interacted with a machine for entertainment purposes. The first chess games were created and tick-tack-toe of people against computers. Around this time, an employee of Loral (American TV

manufacturer) named Ralph Baer created a system of interaction between television and people where a small pixel was handled creating a "virtual pilla-pilla". At first this idea was scrapped by the company's managers.

Years later, some companies began developing two-player ship games. This led Ralph Baer to autonomously recover his main idea and thanks to the help of investors managed to develop 11 games including shooting, hiding place and games with balls such as tennis.

As it was an emerging sector, Baer could not find any company that bought its creations until years later a Philips subsidiary, Magnavox, decided to accept the partner-distributor agreement by creating the first desktop console with the Baer games. This model was called Magnavox Odyssey and was separated from the TV. It had many limitations like couldn't play sound and didn't have any memory. But this invention served as the basis for producers who years later developed the current industry. There is talk to the beginning of video games from 1972, but it is an inaccurate fact. (Pérez, A. 2015)

Figure 8. First steps of the video game industry



Source: Own elaboration based on the data obtains from Pérez, A. (2015)

- Golden Age:

After the invention of the first independent CONSOLE of the TV, the Magnavox Odyssey, many companies created clones of the console and the famous tennis game that so pleased the population. This game consisted of two sticks at both ends of the TV and a bouncing ball. The role of the players was to get points by scoring on the

opposite side by moving their stick with the controller. As expected, after launches, a "patent war" occurred from which Atari's Pong product was victorious. Although this platform was created for arcades and not homes, it was another impetus for the video game industry.

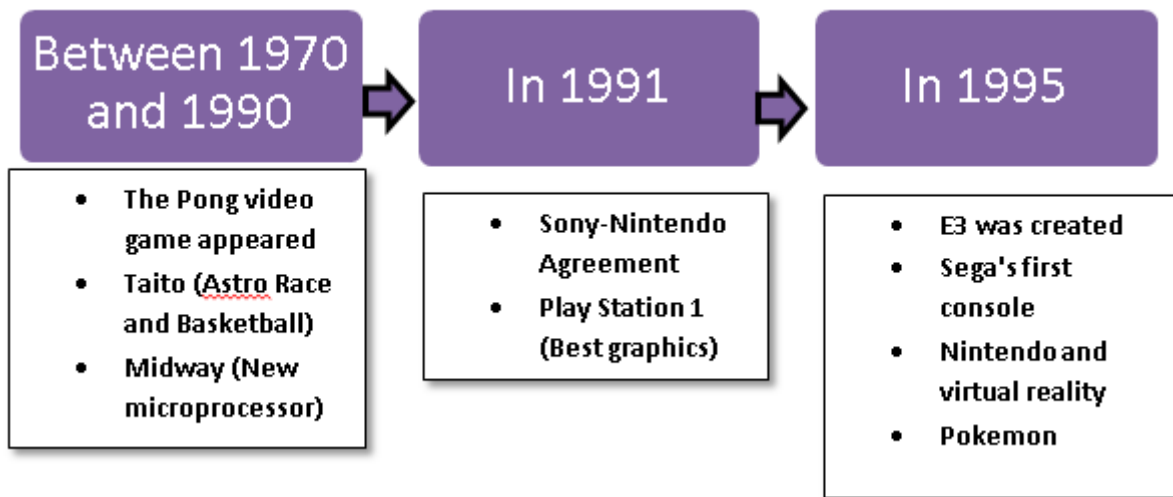
Up to this point, you could talk about two platforms, the Family Odyssey and the Pong for Recreation Rooms. The following years many companies emerged copying Atari's ideas but without too much success until taito's emergence. This Japanese company created the first racing game called Astro Race and I also created Basketball, which offered a new sport to play. Japanese company Midway developed the first microprocessor in its machines, which was a revolution for the sector. Faced with pressure from new competitors, Atari decided to return to the option of home consoles. This revolution encouraged Atari to bring to market the first CD-ROM console, the Atari Jaguar. It was unsuccessful and marked the end of this company's fame.

In 1991, the agreement took place between Nintendo and Sony, which lasted only one day and triggered a war between the two companies. Sony developed the PlayStation with a significant improvement over its predecessor the Odyssey, its games having polygonal graphics in three dimensions. This together with games as successful as Gran Turismo, Fifa World Soccer or Tomb Raider. Sony entered markets until reaching Japan where Sega was the market leader in video games.

It was not until 1995 that the E3 (Electronic Entertainment Expo) appeared, currently the most famous video game fair. In it Sega launched his console to gain an advantage against Sony, which posed a threat to the Japanese company. This led to the sinking of Sega due to the problems that the console had caused by the hasty decision to bring it to market before the scheduled date. For this reason Sony rose to the leading of the video game market.

On the other hand, Nintendo continued to manufacture its games in cartridges, which was a higher cost and did not allow it to compete with its console, the Nintendo 64, with the PlayStation. Despite this, the Japanese company was increasing its market share although far from its competitor Sony. That's why he decided to enter the virtual reality market in 1995, which did not do well due to poor planning and development.

Figure 9. Golden Age of Video game industry



Source: Own Elaboration

- The arrival of other companies:

PlayStation continued to lead and had a difficult advantage to imitate for other companies. But this was not a barrier for Sega, who launched the Dreamcast in 1998, nicknamed "the console ahead of its time". This platform outperformed its competitors, the PlayStation and the Nintendo 64, thanks to its new technology. This console included an internal modem that allowed you to browse the web, play multiplayer games, and download content. But he had a lot of problems because of his advance pitch.

Concerned about this Sega action, Sony said that in two years it would bring to market a new console better than those that already existed, the PlayStation 2 (PS2). This new platform offers backward compatibility with DVDs, many exclusive titles and good marketing. The PS2 was the first console with the intention of being a multimedia center for the home. Upon this release, Sega decided to withdraw from the hardware market.

Nintendo didn't stay behind and brought the GameCube to market. This console was not his best idea, but he got a good market share. In 1995, the Japanese company created its most successful title, Pokémon. This game came out for your Game Boy handheld console.

To everyone's surprise, a new competitor appeared on the market. Microsoft was dedicated to manufacturing computer software. The decision to enter this market of video consoles arose from the company's concern at technological advances in these

platforms, which posed a risk to its current business, computers. Xbox was the name of the platform created by Microsoft and gained a good market share, which caught the attention of its competitors Nintendo and Sony. The Xbox was intended for an adult audience, so it exploited its online connection for multiplayer and web browsing.

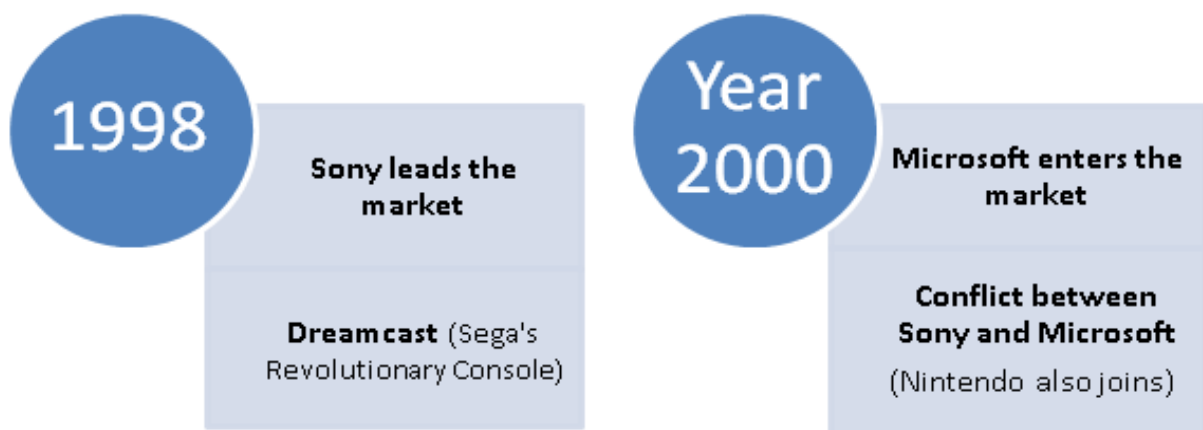
A new war would begin in 2005. Microsoft released its new console, the Xbox 360, and was an immediate success. It didn't mean major innovations: just a more advanced DVD reader, better network connection, Xbox Live service reissue, and many exclusive titles like Gears of War, Halo 3 or Forza Motorsport.

Sony released the PlayStation 3. This console was a further advance in its predecessor PS2. Some of these were: Bluetooth connectivity, wireless network connection, HDMI output and improvements in memory and gameplay. Consumers continued to choose the Xbox 360 for its exclusive titles.

Nintendo also entered this fight by betting on another type of gameplay, the Nintendo Wii. It had lower features, did not offer DVD support but its final price was lower than its competitors. What made it stand out was its control system, as the movement was done through a sensor and not by buttons.

It should be noted that between 2004 and 2005, Sony and Nintendo released portable consoles. The Nintendo DS by the Japanese company, which included a touchscreen and the PlayStation Portable (PSP), with excellent market share.

Figure 10. The arrival of other companies



Source: Own elaboration

- The current generation:

Currently, the main idea of companies is to get the consumer to have the consoles 24 hours a day. This is done by improving portability, the cloud, or new environments.

In this time, new independent companies have also appeared that have led to indie games. They are usually video games with little budget and very varied themes where especially horror or competitive games stand out.

Finally, it is worth noting the application of virtual reality in video games. It had already been tried to apply in advance in the industry but was not well developed so it did not get the desired results. With the improvement of the technology and the investment in R&D of companies, it has been possible to correct the problems that arise in the first test and ensure proper application. On the other hand, by expanding the market, other companies like Facebook and HTC have entered to compete in terms of their virtual reality devices.

4.2. The ESports in the world

Due to the current situation and the improvement of broadcast platforms, ESports have increased their participation within the global economy and sport.

E-Sports are professional competitions worldwide online from different video game disciplines. Each sport sets the rules and limitations for platforms that can participate (sometimes they are cross-platform and another is only from a specific device). At first it seemed that people were not going to follow these championships because they would prefer to play rather than watch, but over time the audience that follows this type of sports has increased.

The emergence of this type of sports has led to an increase in business models interested in promoting e-sports and creating a new ecosystem. It currently has an audience of between 10 and 35 years old, although they also have public outside this age range. These people can enjoy the broadcast of competitions from their homes, through social networks and sometimes from stadiums or enabled areas, depends on the importance of that discipline.

Not all games are ranked within ESports. Video games that are within the competitions must have these characteristics: it allows the clash between two or more players, there must be official leagues and competitions with rules and professional players, and must have a wide audience that plays or follows the broadcasts.

These championships consist of 5 actors: The Advertisers, such as Activision or Blizzard; leagues, such as LVP (Professional Video Game League) and Overwatch League; participating teams, such as Heretics and Giants; channels where they are broadcast, such as Twitch and Youtube Gaming; and sponsoring brands, such as El Corte Inglés and Movistar.

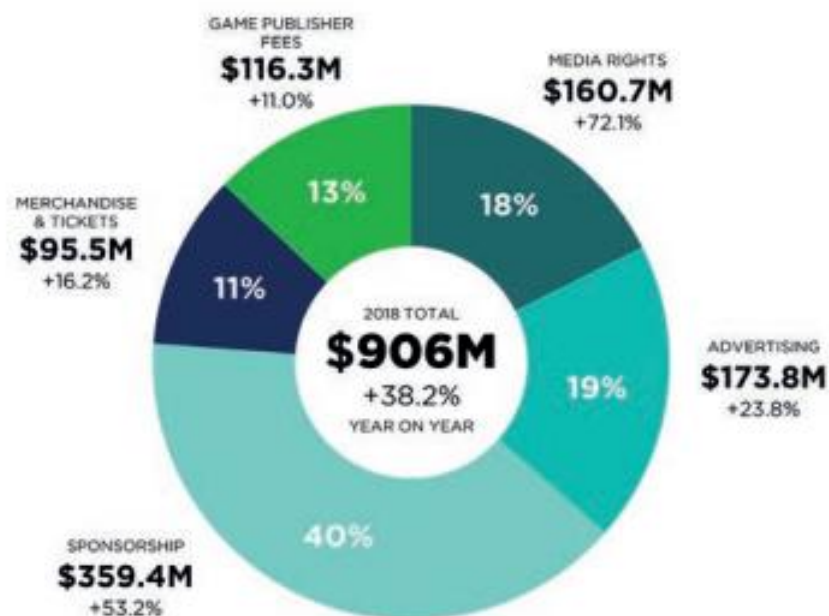
Regarding the specific data, Galiana, P. (2020), conducts a study that collects economic data, number of viewers and benefits for society. Globally, 1.1 billion euros were billed in 2019 and an increase to 1.5 billion is expected by 2020. In 2019, 400 million viewers were counted worldwide, surpassing the NFL (National Football League) and matching NBA viewers (National Basketball Association).

The benefits offered by these leagues are mainly entertainment and learning, but it also seeks to train professional players who improve their technical concepts, boost healthy lifestyle habits and enhance the good values that video games can bring.

Examples of world-renowned ESports competitions include:

- DOTA 2 (Defence of the Ancients 2). Video game developed by Valve and can be achieved on the Steam platform. It is currently the game that moves the most money in ESports competitions.
 - LOL (League of Legends). It was created in 2009 by Riot Games. The selected platform is both Windows and Apple.
 - CS: GO (Counter-Strike: Global Offensive). It was developed by Valve and Hidden Path Entertainment in 2012.
 - StarCraft II. Developed by Blizzard with military theme.
 - Heroes of the Storm. It's a strategy game developed by Blizzard in 2015.
- (Luís, E. 2017)

Figure 11. Global ESports market in 2017 by sources of income



Source: ICEX (2018)

4.3. The indie gaming industry

Another important aspect to include in this essay is the so-called "Indie Games". This term comes from the word independent, which according to Cambridge Dictionary (2019), means: "a film or recording made by a small company that is not owned by a larger company". If we apply this definition to the field studied, video games, we can define indie games as creations made by video game companies or independent and non-multinational people. It also applies to companies or people who do so, which are called indie development studios. Both concepts are closely related (Vazquez, A, 2018).

The main features that such games should have are:

- Reduced budget. This is because indie development studios are very small companies or independent individuals without large investments.
- They have been carried out by independent companies or individuals, not multinationals known worldwide and experienced.
- They have less content and duration than other video games.
- Generally are distributed over the internet to reduce costs.
- They have no creative limitations and do not require editorial approval.
- Not well-known or successful games.

- They are usually available for multiple platforms such as consoles, portable consoles, and computers.

It's important not to confuse indie video games with amateur developers. The products of the latter are usually mods or parts for games already created.

The beginnings of this indie movement date back to 1990, but it was not until 2000 that the interest and popularity of this type of games increased significantly. This is mainly due to the expansion of the internet and some services such as Xbox Live Arcade or Steam.

The gamer audience is increasingly more demanding and seeks an experience and not just fun. This has caused the indie market to grow in recent years. Despite the low resolution of its graphics and its reduced investment, many people prefer indie stories over mass games. Some games that have increased the importance of this independent industry have been:

- **Braid.** It can be classified as a Super Mario Bros-style platformer, but with the difference that there is no character's death. When you fail in the attempt, you can jump back in time and make amends for your mistake.
- **Limbo.** It is a puzzle and platformer with a monochrome design (The protagonist is represented by a shadow). It has a very dreary atmosphere as it develops in purgatory and tries a child in search of his little sister.
- **Inside.** From the same creators as Limbo. With a similar theme, leave black and white to add a splash of colour and increase the feeling of chase.
- **Cuphead.** With animations reminiscent of the 1930s. Try to advance levels by eliminating enemies. It is considered to be one of the most difficult games today by many youtubers.
- **Florence.** It was the indie gaming revolution for mobile. It tells the story of a young woman where the player decides the interactions that the character performs.

Some world-renowned independent development studios and individuals are: Jonathan Blow, creator of Braid for Xbox Live Arcade in 2008; Frictional Games, creator of games such as Penumbra Overture, Penumbra Requiem and Amnesia; and Ninja Theory, designer of Hellblade: Senua's Sacrifice, founded in 2000 in Cambridge.

Regarding the creations and studies of indie development in Spain, they have been growing in recent years. Some of the Spanish-born indie video games are: Unepic, created by Francisco Téllez in 2011, is a platform game with many allusions to other video games; The Red Strings Club, made by Deconstructeam in 2018, set in a cyberpunk world where the story is tell through the confrontation of dialogue; and Maldita Castilla, developed by Locomalito in 2012, is a 2D platformer where a warrior lives adventures as if he were a crazy Don Quixote. Some of the Spanish development studios known worldwide are: Valhalla Cats, an independent video game creation studio founded in Murcia founded in 2013, has titles such as Stars in the trash; Tequila Works, created in 2009 in Madrid, has produced video games such as The Sexy Brutale; and The Game Kitchen, founded on June 18, 2010 in Seville, has created games such as Blasphemous (Pérez-Rufí, J. P., 2016).

5. VIDEO GAMES MARKETS IN THE WORLD

The American, Chinese and Japanese markets are explained in more detail, as they are the most important. The data explained below correspond to the revenues in the different countries in 2018, the opportunities and threats faced by markets in the different regions, as well as their participation in ESports and social problems and proposed solutions.

5.1. China Video Games Market

Although China does not have globally recognized companies within the video game market, there are subsidiaries of major companies such as China 2K, which is the subsidiary of the American company 2K; Ubisoft Shanghai; and Shanda, which is a company founded in China and has created video games such as MapleStory, The Legend of MIR II, The World of Legend or The Sign.

In 2018, the Chinese market earned revenues of 33.780 billion euros. Until this year, China had ranked first in the ranking of companies with the highest entry into the video game market. This year it was surpassed by the US, but there is a big difference from Japan that ranks third on the list. (AEVI, 2019)

The main weakening of this market is the current legislation, because due to the misuse of video games by minors has forced the country to issue different laws where the playing time for this sector of the population is reduced. The low importance of domestic companies in the global video game market is also a weakness. The main threat to this

country is the increase in tariffs in other countries such as the US, as much of China's revenue comes from exports.

On the other hand, the main opportunity that China has is the specialization in the smartphone market that is increasingly given more gaming use and requires special peculiarities to support many of the games that come to market. Although their domestic companies do not stand out in the market, the strength is the development of emerging software and hardware industries, which in a few years can gain the necessary weight in the market to compete with Sony, Nintendo or Microsoft.

In terms of participation in ESports, like most countries, it has been increased in recent years due to the economic movement that these competitions provoke. China is finishing building a stadium to host such championships. Despite all the legal restrictions on video games, for Chinese culture, national ESports players are of great importance as ambassadors of the country. Since 2003, they have been considered official sports as they consider them healthier than traditional video games. Its ultimate goal is to have national representatives in all categories of ESports and have them hold dominant positions.

With regard to the social problems we encounter is the excessive and misuse by minors. They spend a lot of time on video games neglecting family and school obligations. It's the collective that worries the nation the most.

The main measure taken by the country is the limitation of play time for minors, as it is a collective that worries the country and has detected very high rates of prolonged use of video games by this group. Spending on online games for minors has also been reduced. Another measure is to try to eliminate the use of fake accounts through player identification. Time is needed to know whether these measures will have had the desired effect and many countries are waiting to impose similar measures.

5.2. Japan Video Games Market

Japan is one of the world's leading powers in the video game industry. It is also one of the biggest producers of games and platforms as it has titles such as Pokémon or Super Mario and its variants and are the creators of the different Nintendo platforms (Switch, 3DS, Wii, etc. and Sony (PlayStation)).

According to data from AEVI's 2019 report, Japan's turnover for video games and platforms in 2018 was 30.5 billion euros, at the top of the list as world powers in the video game industry.

The remarkable strength in Japan is the state's large funding for the video game industry. This is because video game characters are used for advertising as if they were celebrities and are more recognized in the country. In addition, the large investment in R&D for the continuous improvement of the sector. As opportunities we find the great specialization in consoles, since they are mainly dedicated to this type of platforms leaving aside computers. Although smartphones lead the market, many players still prefer to use consoles and look forward to the next generation's exit, to see the improvement over their predecessor. It is an oligopolistic market with few national software makers.

On the contrary, we find that the specialization in consoles and smartphones has left part of the video game market unattended. This is an important thing because more and more players decide to use computers as the main gaming platform because most titles are available for Steam and the graphics are better. Another threat is the increase in market share in this sector of competing countries such as China and the US. As weakened, domestic companies have to bear high taxes, so their main objective is to increase sales in order to cope with these payments. Another weakness is the aging population because although the video games have no maximum age, it is a market where children predominate and people have the most accustomed to the use of machines. This assumes that most of the country does not invest in this sector so it must export a large amount of its products. (Teso, A. 2019)

As for the ESports, Japan entered later than Spain and the US, in 2018. But the welcome of the Japanese country to these competitions was such that the media soon created supports for the projection of these championships. Sponsors were able to seize the opportunity by making this move gain a lot of strength and weight in a short time.

Its participation in ESports has been lower than that of other giants in the sector. His participation in ESports has been lower than that of other giants in the sector. This has not prevented Japan from holding competitions during this time as the one organized for disabled players in August 2018. The most prominent Japanese players currently on the ESports are: Yasuhiro 'Kizoku' Nishi, Yuta 'Reycyil' Inou and Masato 'Bonchan' Takahashi. Their participation is mostly in fighting and shooter games like the Rainbow Six

Siege, Tekken or Street Fighter. They are also very present in strategy games such as the League of Legends. Japan is very clear about the importance of these championships worldwide so it gives them the importance necessary for rapid growth.

Like video games, there are social problems in Japan linked to players who don't leave their homes for an extended time because they're playing. They are called "Hikikomori" and it is a major concern in the country and is 1.57% of the population. There are also restrictive policies for the use of video games in Asian countries, where children have been banned from playing during night hours and the time spent on them is specified.

To try to solve these problems, an attempt is made to expand the use of these resources to adapt them to teaching and jobs. This promotes responsible use and attempts to prevent excessive use of these.

5.3. United States Video Games Market

The U.S. is currently the world's first gaming powerhouse. This is where Microsoft was born, which has seen its market share increase in recent years. The turnover in 2018 for investments in everything related to video games was \$43.2 billion (approximately 40 billion euros).

When it comes to THE DAFO analysis of the video game market in the USA, high competition and low player loyalty are the main threats. More specifically, the weaknesses of this market are the lack of funding caused by the existing government and the product life cycle is very short.

On the other hand, the strengths that reside in this market are the low cost of production, the easy access and gameplay and the arrangement on multiple platforms of some titles. In terms of market opportunities, there is prolonged and sustainable growth of video games as a means of culture and social networks help their expansion (Herrero, A. 2012).

As for the weight of ESports in the North American continent we find that their value is currently the same as traditional sports. A stadium has been created to host only this type of competition as they represent quite significant income. It is also widely used by some agencies such as the army to improve their skills in a way that does not pose a risk to people.

In this competition we find that some American teams have the greatest weight. Highlights include Cloud9 and Team SoloMid. Table 1 covers the data of this equipment. These teams are top 1 and top 2 worldwide thanks to government support and great public reception.

Table 1. Top TEAMS from ESports USA.

Rank	Company	Owners	Value \$Mil(1)	Revenue \$Mil(2)	Number of Players	Number of Teams	Primary Games
1	Cloud9	Jack and Paullie Etienne	310	22	92	11	League of Legends, Overwatch, Fortnite, Counter-Strike: Global Offensive, Rainbow Six Siege, Clash Royale
2	Team SoloMid	Andy Dinh	250	25	39	7	League of Legends, Fortnite, PlayerUnknown's Battlegrounds, H1Z1, Clash Royale, Hearthstone

Source: Forbes Magazine

As shown in the table above, strategy-themed games or shooters stand out. The titles that stand out most in these competitions are LOL, Fortnite and CS: GO. It is both the weight in the economy of these competitions that are the first power in the world in the creation of championships both face-to-face and online.

5.4. The Video Games Industry in Spain

Spain has signed up for video game fashion and is a good competitor for the American and Asian markets. According to the 2018 Yearbook prepared by AEVI (Spanish Gaming Association) more than 1.5 billion euros were billed, assuming an increase compared to 2017.

This industry has as its main weakness the limited financing that many companies receive since the film industry has a much greater investment to develop its activity. As for the biggest threat in the market are existing international competitors who have a high investment in R&D and specialized developers.

On the other hand, the main strength of this market is creativity and improvements in technology that help create eye-catching titles that surprise the consumer. The opportunities of this industry in the market are the national opening of the market, creation and

commercialization of successful brands and virtual reality that has been a breakthrough for Spanish companies (Perez, J.P. 2016).

At this point, it is also interesting to see Spain's attitude towards ESports. E-Sports have had an unexpected reception. It is so wide the public that a program called Esports Generation has been enabled in the GOL network to tell all the news and novelties related to these types of competitions. In 2019, E-Sports in Spain gathered more than 16.8 million followers; mostly men and women aged 25 to 34.

The video games that have the most importance in the last year with a presence in the ESports have been Fortnite, LOL and FIFA, since they have had the most viewers through twitch in the different competitions held during 2019. In addition, Spain has gathered some of these face-to-face championships and Spanish teams and players have had a lot of presence in them.

In view of the increase in the video game industry, Spain has taken the opportunity to create television channels and on the network where you can see all the news related to the ESports championships. (Mesonero, S. 2019)

To try to solve some of the social problems, the response of AEVI by Spain is the creation of a pioneering project called "The Good Gamer", to claim the values of video games and promote responsible use. To achieve its goals, this project is aimed at many audiences: players, parents to encourage responsible use to their children, teachers and doctors to use video games as therapeutic tools. It is understood that the association is mainly aimed at minor gamers who do not know how to take responsibility, but anyone can propagate their principles.

AEVI wants the video game market to be as legal and accountable as possible and therefore developed various proposals for the government to improve the market situation. Some of these proposals were: Establishment of tax incentives and deductions of social contributions, creation of an ecosystem that facilitates foreign investment in Spain and creation of a fund to support the video game sector.

6. COMPARATIVE ANALYSIS

Using as a starting point the data already presented in this work, the next point is based on an analysis of the different aspects between the 4 nations

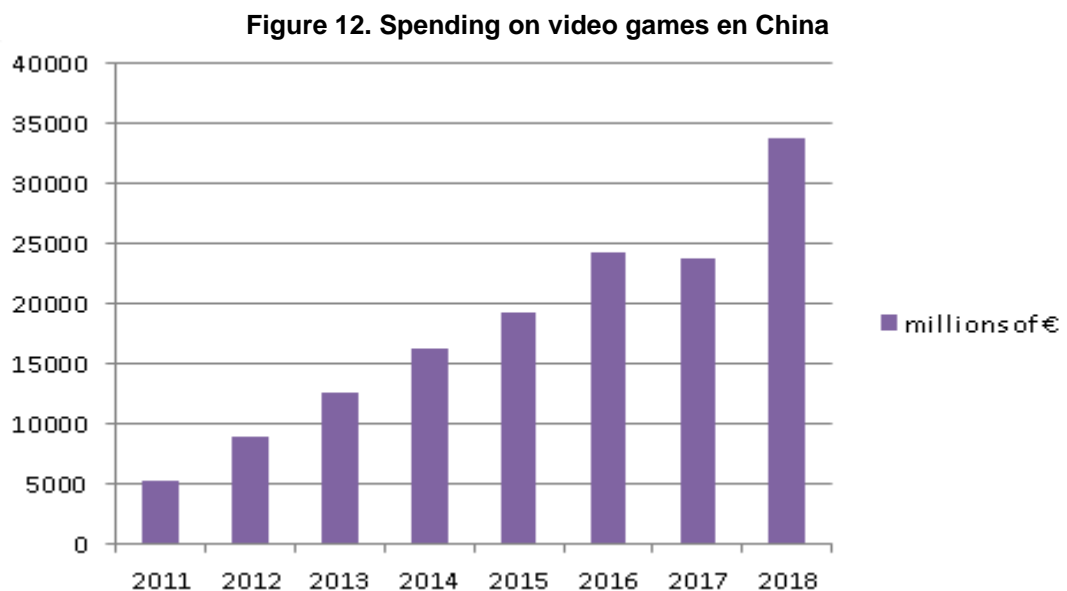
described above (USA, China, Japan and Spain). The data we are analysing are economic (income obtained over the years, starting from 2010-2011 to 2018), strategic (DAFO analysis of the different markets studied) and social (Comparison of each country's demographic profile and social problems).

6.1. Economic comparative analysis

The first country to analyse is China. The economic data obtained from this region were as follows: in 2011, it achieved estimated revenue of 5.3 billion euros in terms of software and hardware sales. Since this year, the figure has been increasing progressively until 2015, which achieved revenues of 19,343 million euros.

From that date, there was a significant increase that led to China's dominant position in the ranking of countries with higher income (In 2016 it was 24,369 million). In 2017 it suffered a slight decline (23,788 million euros) due to the application of the various laws and measures against video games.

In 2018, it increased revenue again to 33.780 million euros, but it was not enough to outperform the US, so it was second in the rankings. (AEVI, 2018)



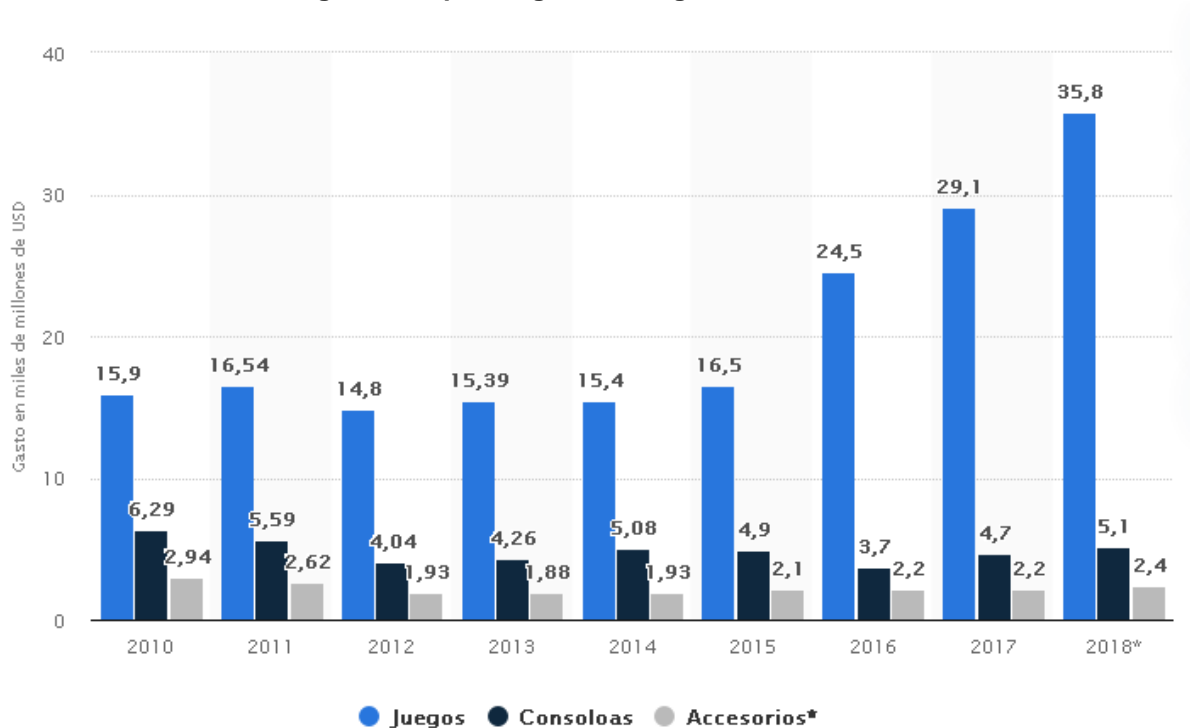
Source: Own elaboration based on yearbook data prepared by AEVI

The US is the next country to discuss in the economic study. As of 2010, we found that spending remained stable over the next five years (ranging from \$25 billion to \$26

billion). From 2016, an increase can be seen from a total expenditure of 30.4 billion of which 24.5 billion were for video games.

The trend in the following years is growth with a value of \$36 billion in 2017 and \$42,500 in 2018. During all periods, spending on video games is much higher than for consoles and accessories (controls, VR goggles, cameras, etc.). (Statista, 2019)

Figure 13. Spending on video games in the USA



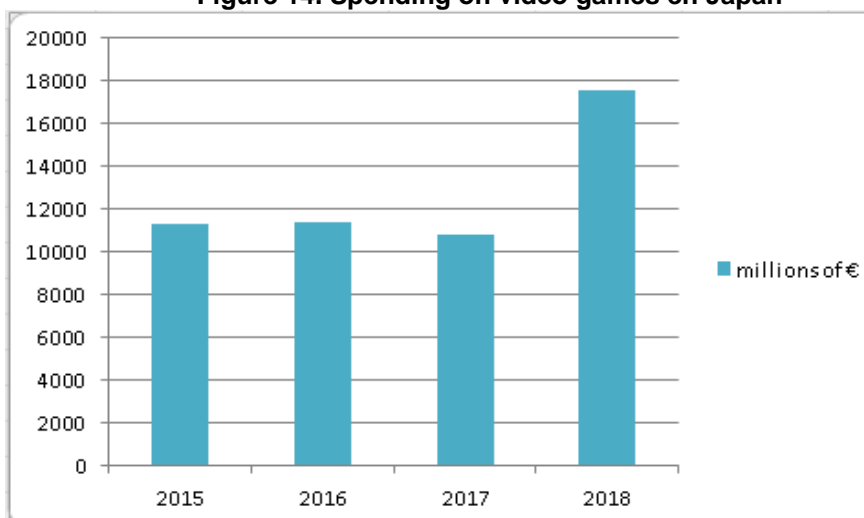
Source: <https://es.statista.com/estadisticas/598739/gasto-de-los-consumidores-en-videojuegos-por-segmento-estados-unidos/>

Taking the base year in 2010, as it is when the video game industry is beginning to play a role in the economy, Japan spent on video games of 2.720 million euros. From that year to 2014, spending is gradually declining year after year. Emphasize that it has been difficult to find economic data from this region.

In 2015, Japan suffered a significant increase in video game spending (largely due to smartphones). The figure you get is 11,303 million euros. In 2017, another drop to 10,834 million was seen again.

But it is not until 2018 that Japan has significant growth to reach figures of 17,584 million euros, its peak so far. There is talk of a new golden era for the Japanese video game market. (AEVI, 2010-2018)

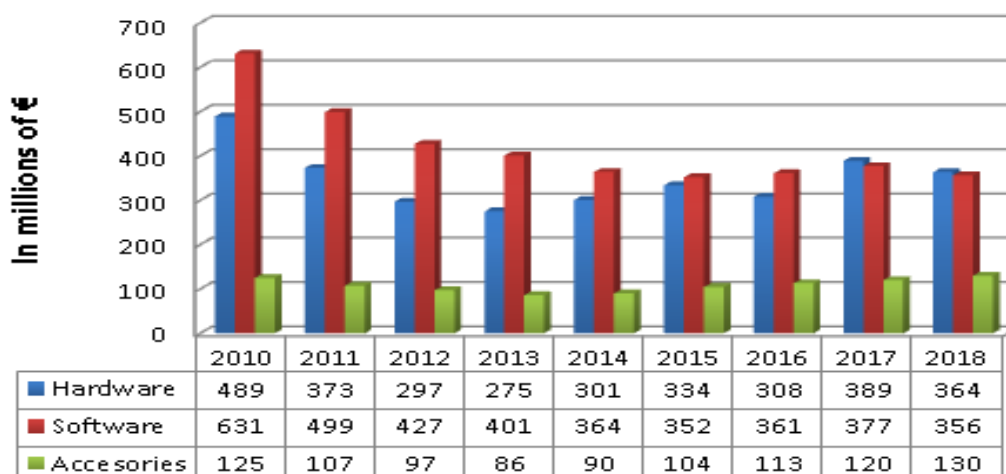
Figure 14. Spending on video games en Japan



Source: Own elaboration based on yearbook data prepared by AEVI

Spending in Spain in this industry is much lower as it ranks 9th in the rankings within the video game sales market. Taking the base year in 2010, the expenditure on consoles (Hardware) was 489 million euros. Spending on video games (software) in the same year was 631 million and on accessories such as controllers, microphones, headphones, etc. was 125 million.

Figure 15. Spending on video games in Spain



Source: Own elaboration based on yearbook data prepared by AEVI

As shown in Figure 11, the following years reduce the expenditure made on the three components of the analysis. In 2014, it is appreciated how spending increased again in consecutive years. It is appreciated that software spending continues to increase over the years the same as that of accessories. Meanwhile, the hardware suffers oscillations in 2016 and 2018, where spending decreases compared to the previous year.

In 2018, the figures reported by the yearbook made by AEVI are: 364 million euros in hardware, 356 million in software (First decrease from video game expenditure in the years analysed) and 130 million in accessories (The highest data regarding peripherals and auxiliaries).

6.2. Strategic comparative analysis

In this part of the analysis, the DAFO that has been explained in the previous sections of the three powers will be compared. Only the most important regarding strengths, threats, weaknesses, and opportunities of each country will be explained to simplify the analysis comprehension

China has benefited from the increase in smartphones players around the world, a market in which it is very competitive and has a lot of specialization, which is a great opportunity. As strength is the large number of start-ups in the sector that promise an increase in national video game products. In return, the country's main weakness lies in existing laws prohibiting and limiting spending and time spent on video games. Moreover, the great weakness for China is the increase in tariffs in other countries, since much of China's economy lies in exports.

Figure 16. China DAFO

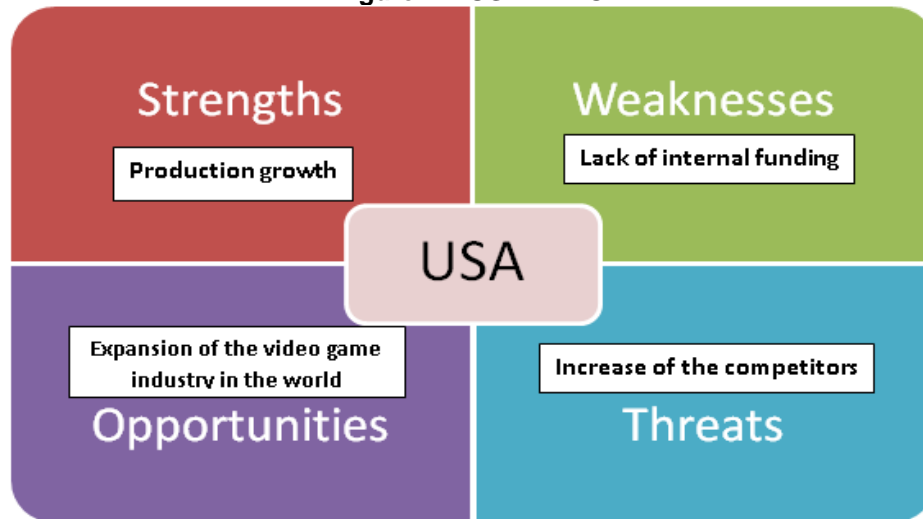


Source: Own elaboration

In the United States, market growth along with low production costs represents the most important strengths, while the expansion of the video game industry in the world is a great opportunity for technology exports that include platforms and video games. On the other hand, increased external competition, international start-ups entering the market and

reducing the share of American companies, and lack of state funding, are its main threats and weaknesses.

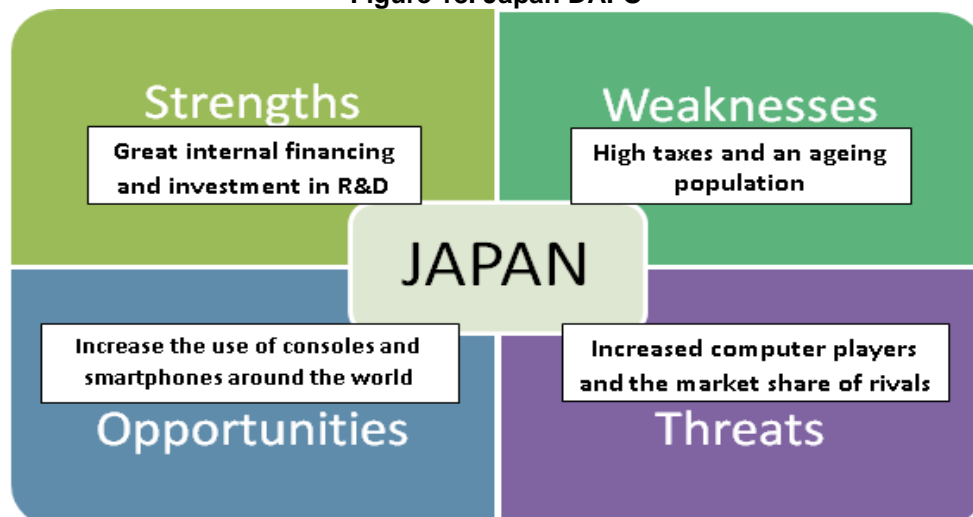
Figure 17. USA DAFO



Source: Own elaboration

Japan's case finds the increase in the use of consoles and smartphones in the world as the main opportunity, as it is a growing market and Japan's specialization in it helps it as a form of expansion. The main strength is the large financing by the state in this sector and the investment in R&D that companies realise. This is due to the use of video game characters for advertising campaigns. By contrast, the main threats are the increased use of computers by the player community, a niche neglected so far by Japanese producers and the increase in market share of other international companies. As the main weakness we find the high taxes faced by Japanese companies and the population is mostly aged in this country, which requires exporting.

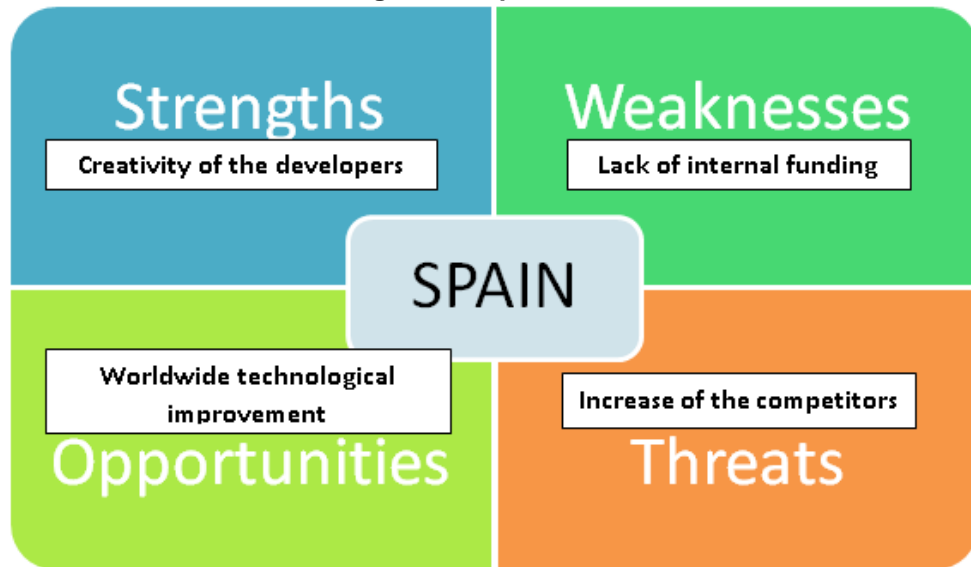
Figure 18. Japan DAFO



Source: Own elaboration

Spain has a significant weakness in its lack of funding by the state and private companies. Moreover, increased external competition poses a major threat. On the plus side, the great strength of this country is the creativity of its creators, which make video games more attractive. The most important opportunity is the improvement in technology in the worldwide such as virtual reality, where Spain has seen the source of improvement and is taking advantage of it.

Figure 19. Spain DAFO



Source: Own elaboration

6.3. Social comparative analysis

In this part of the comparative analysis we will gather all the data related to the social effects that have been collected during the different sections of the work.

China has a great concern for the country's future, so the most protected public is minors. Like other countries, concern about the violence in some video games and the excessive time spent on some children and adolescents led China to limit some aspects related to video games through laws. The measures taken by the country have been: limit the schedule of minors, leaving only 90 minutes of daily play on weekdays and prohibiting its use between 22 and 8 a.m.; the other measure applied is the setting of a maximum of money to be spent on online video games, for children 16 years old the limit is 25 euros per month and for teenagers aged 16 to 18 years is 50 euros per month (Toledano, B., 2019).

As for Chinese adults, because of their pace and lifestyle, the portion of the population that makes excessive and inappropriate use of video games is

negligible, so it is not something that concerns, for the time being, the government of the country.

USA has a strong concern about minors who misuse video games. Taking into account the large amount of violence on the North American continent, measures should be taken to take greater control of what type of games minors play and always listen to the restriction that appears on the back of the game (They are called PEGI tags and show the recommended age for that game). To this problem is also added the isolation of much of the gamers, as they decide to spend most of their time at home playing. As mentioned above, the government does not pay too much attention to this sector, although it represents a significant income for the country's economy.

The case of Japan is similar, as there are many video game player populations that are recruited at home ("Hikikomori"). In addition, in Japan there are laws restricting the use of video games, especially minors, to try to solve existing problems in the United States due to misuse or overuse. In this country they do take into account the importance of video games in the economy, so we try to expand the use of them for teaching and every day they adapt more to jobs.

Spain is also concerned about the misuse of video games and the carefreeness of some parents for the recommended ages as the age group that consumes the most are children from 6 to 10 years old. To solve this, they created the project "The Good Gamer". As for players who are being held in their homes for a long time, there is no great concern because of the lifestyle of Spaniards, although it would be interesting not to stop analyzing this sector because of the growth trend existing in the market.

Another comparative aspect between the three countries is the gamer's profile. China concentrates its gaming audience on children between the ages of 6 and 10, although there are players of all ages and tastes. It emphasizes the use of smartphones to play video games and competitive games have a greater weight.

In the US, I would be a man between 20 and 35 years old who uses the smartphone above all. The theme of best-selling games is summed up in sports and shooters.

The majority profile in Japan is a man between the ages of 10 and 29. Highlights

include those who play through the mobile phone. As for the themes of the best-selling video games we find races and adventures above all.

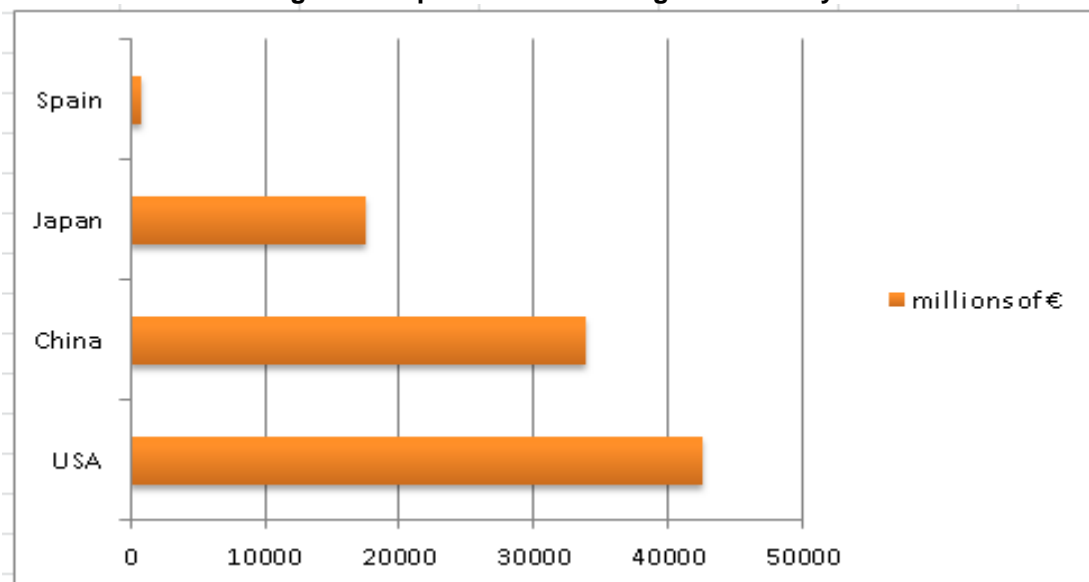
In Spain, the gamer by definition is younger, between 6 and 10 years old, male. The most commonly used platforms are consoles and computers. The themes of the games most consumed by the Spaniards are sports and adventures.

6.4. Results

Once all the necessary data for comparison have been gathered, this section shows the results obtained.

Economic analysis shows us that the United States has the largest spending on video games and consoles, followed by China and Japan and, by far, Spain. After three years at the top of the list, China has come in second place, behind the US on video game spending. The four markets have seen an increase in recent years, assuming an important element in the economy of the respective countries. Emphasize that despite Spain's difference from the other powers, both Japan and the United States have important developers of both consoles and video games, increasing their economic weight in the country's GDP.

Figure 20. Spend on the video game industry



Source: Own elaboration

With regard to strategic analysis, the main global threat is increased competition and market power for major companies, as well as increased tariffs or

increased players on platforms that some countries have underserved as a PC or console. As a more worrying weakness we have the lack of funding and importance for China, Spain and the United States towards this market model, which for Japan is an opportunity as they have a great investment. Also the taxes that companies have to pay in some countries like Japan. On the contrary, the improvement of technology and specialization are great opportunities and strengths for the companies that make up this sector. The increase in video game players, in addition to the use of new platforms such as smartphones, makes the specialization of some countries a source of competitive advantage. As for the invention and application of virtual reality, it represents new markets to expand for the four countries.

Figure 21. Simplified DAFO of Strategic Analysis



Source: Own elaboration

Social analysis shows the importance in all three countries in responsible use of video games, especially by minors, who are the most vulnerable audience when it comes to believing in everything they see. There is also a growing concern for adults who lock themselves in their homes to play over-video games and neglect their lives. To try to solve this, laws and projects have been created to limit both the time spent and the money that gamers are left in online video games.

Figure 22. Main social problems and solution



Source: Own elaboration

7. CONCLUSIONS

With the data obtained in the preparation of this essay we can extract different ideas that position the video game market as a sustainable alternative and that reports great benefits, but that does not yet have the importance it deserves in some countries. Some of the ideas summarizing this report are:

The video game market in Spain has less funding than other creative industries such as film or music. Given the economic weight showed over the years, it may be important to review investments in this sector to take advantage of the benefits it brings. The indie video game industry is making Spain increasing positions in this market and its brand being more recognized worldwide. It can be said that the video game industry can be an important source of revenue for Spain if in the future it receives the necessary funding and importance from the competent institutions.

Another important fact is that video games are in an emerging market that has a growing audience so it can be a source of revenue that will grow over the years. This can be reflected in the increase of competing companies in the sector. We find that Sony, Microsoft and Nintendo are the undisputed leaders in the market, but every day new companies appear that represent strong competition.

On the other hand, the emergence of ESports has been a revolution in both in the video game industry and professional sport competitions. These competitions have many followers because through platforms like Twitch or Youtube they broadcast them live. However, there are detractors who claim that these sports do not provoke emotion in

participants or spectators. Furthermore, in the current situation, the ESports have helped to hold planned competitions that have not been done due to confinement.

The different analyses carried out give us data on the gamers of the four regions studied. Very different profiles are observed in terms of ages and preferences regarding the themes. It is also evident in the economic analysis that the US and China have a higher spending in this sector as they consider it more important than in Spain. It is an industry hardly punished by critics due to misuse and fake news related to this world.

In terms of the comparison between the four countries, China and Japan attach important importance to video games as they often represent the country's culture and serve as a teaching model. On the contrary, Spain and the US do not motivate this sector of the economy, so they are missing an important opportunity to generate profits in something that is eventually advancing and gaining ground to other activities considered cultural such as music or cinema.

As has been collected in the different sections of this work, video games have many social problems due in many cases because of their themes (action, deaths, wars, sex, etc.). Social analysis shows that Japan and China have a greater concern about protecting minors from misuse. These countries have created prohibitive laws to regulate the use and investment by gamers. Spain also joins the creation of projects to motivate responsible use, while the US does not consider it to be a major problem for the country.

All things considered, the results obtained in this analysis can be useful for both professional dedicated to the sector and policymakers. Professional can benefit themselves from the knowledge provided in the benchmark performed among the leading countries and also from acknowledging the user profiles predominant in these countries. In the same vein, policymakers can be inspired to design development plans and programs along with improving the regulatory framework applied to these activities.

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