

## Study on Videogame Industry and Its General Developing Trend

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**Abstract:** Sports are no longer limited by the real world, for the E-sports now is widely recognized as an information platform-based sport. National Sports Bureau formally launched it as the 99th sports in 2003. Under the advanced information technology and growing popularity, e-sports industry are constantly developing and expanding, full of potentials and opportunities. Macro industrial policy and specific regulations show supporting trends, which greatly promotes the development of e-sports. Based on the analysis of videogame's economic scale, Asia dominates games business with the highest share of games market. E-sports should demonstrate its sports spirit, teamwork, and ability to cultivate thinking, etc. In order to get public support, government involvements and regulations are needed to improve the social environment of e-sports and standardize the game movement. In addition, government is vital to manage the game industry to eliminate illegal operations and institutions in organizing events. Media also plays an important role in guiding public to correctly recognize e-sports so that more professional players can fully devote themselves into this new sports and more companies can spot the economic benefits in e-sports.

### 1. Introduction

Video games impact the economy more than we think, especially when we are in the technology era. The entertainment side of the software world is expanding remarkably faster than other segments of the economy, because people nowadays place much more value on entertainment for several reasons. First, entertainment appeal continues to grow as it adapts to different formats to keep with technology. Second, most of us have stressful lives at an ever-accelerating pace, and entertainment is the best option for us to relax efficiently. Third, people are seeking for a variety of novelty entertainment in the high-choice environment. There are a lot more about gaming world we can analyze other than the video game products. Global consumers are showing a greater appreciation for engaging, high-definition visual experiences. The entertainment software industry continues to show its potentials in earning high profits and creating new jobs at a rapid pace in a challenging economic environment. According to industry statistics, U.S. sales of computer and video games have doubled its revenue from 2009 to 2016.

The videogame is still a very young industry, less than 30 years of history, hence the paper will start with a brief definition of Videogames. Needless to say, the basic of videogame is game no matter how much cultural forms, art models, and educational purposes people have added on it. Roger Caillois, a French educator, provides a precise definition of game: a fictional, unpredictable, and unproductive activity with rules, with time and space limits, and without obligation. And a videogame is a game limited with electronic devices that require players to manipulate an input device in response to the graphics on a screen.

Competitive gaming has existed almost as long as video games themselves. Organized online and offline competitions were largely between amateurs until the late 2000s when professional players emerge and participate in events. The first video game competition, the Space Invaders Tournament, was held by Atari in 1980. It attracted more than ten thousand participants and can be viewed as an origin of eSports. Later in 1990s, tournaments for arcade and console games had become increasingly popular, and the rise of the internet and the world wide web made now online competitive gaming possible. At the end of 1990, the rise of PC gaming along with the first true eSports competitions sowed the seeds of gaming industry. The flourishing of eSports started in 2000 when eSports truly

rise with both popular tournaments and games. Streaming media platforms, for example Twitch.tv, panda.tv, and douyu.tv promotes the availability of watching competitions online. In 2016, it was estimated that approximately 426.7 million people worldwide watched eSports.

## **2. Market Potential Analysis**

The paper will analyze the videogame's economic on global game markets in four different measurements, including:

- Global eSports industry is growing at the rate of 30% in 2017 .
- The entertainment software industry generates \$108.9 billion in game revenues in 2017, which represents an 7.8% increase from the year before.
- Global direct employment in eSports has increased 8% globally. Take U.S. as an example since 95% of video game companies were founded in the United States, game companies directly employ 65,678 workers in the U.S., while the rest of the 220,000 are indirect jobs.
- Global eSports audiences will increase in size at a steady rate of 15% from 2016-2020.

### **2.1 E-Sports Current Market**

The world's growing appetite for video game content also stimulates sales of consoles, video games, and related accessories, which generated great amount revenue for countries. As we discussed before, video gaming has a long history since the early days of Pong and Pac-man. Under the competitive video gaming industry, companies have churned out the superior features of video gaming to bring us to the excellent quality we see today. The evolution of video game consoles can be traced back to 1967, when a bulky rectangular brown wooden box with two attached controllers was invented. At that time, the Brown Box was limited to six simple games, but it did inspire the future improvements on video game console. Now we currently have more than 70 different consoles, and these video game related products can have great economic impact.

The changing in gaming landscape on a global scale leads to dominated games business in Asia area. Traditional media companies embrace esports and view it as a modern way to engage with millennials and compensate for the aging viewer community around traditional sports. The following two graphs show the games market revenue worldwide, and clearly Asia region has the highest share of games market. In 2016, 58% of growth of the global games market comes from the Asia-Pacific region. China earns most revenue from mobile games with the emerging genre of real-time multiplayer. According to a new research conducted by Newzoo, the data showed that nearly half of the mainland's estimated 565 million gamers this year will be playing on three main gaming platforms- console, personal compute and mobile. Chinese gamers continue to maintain great interest in the top Western personall computer franchises, and Internet giant Tencent Holdings, the world's largest games company evaluated by revenue, was credited for introducing to mainland and discovering gaming potentials in China. The low barrier of entry is an advantage the mobile games markets has over console and PC. Comparing to western markets, China and Southeast Asia moves first to embrace the mobile esports sector. The overseas opportunities boost the confidence on the mobile games growth trajectory. In 2016, mobile games generated \$36.9Bn, or 37% of the global market.

Obviously, mobile sector drives E-sports the most. Mobile games have four main advantages, portability, low development costs, cheap and free games and console quality titles. Mobile phones are portable and therefore, free mobile games allow millions of worldwide players to compete against one another anytime and anywhere. Comparing to PC or console, mobile games save the costs of packing, promotion and shipping to lower its development costs. P/C maintains its great share of game market for its unique characteristics, for the personal computer games are always the fundamental innovation for many games developers. Mobile device cannot bring full console experiences to them, so true game lovers turn to PC as a device on which they can customize their experience to suit what they are playing. Another absolute advantage of PC is that PC users upgrade

more frequently and naturally than console users do, and this is crucial for players to keep up with the trends and technologies.

Video game industry-\$116 billion: (1) Digital content - \$100.5 billion; (2) Physical sales - \$14.6 billion; (3) Interactive media - \$ 11.2 billion.

Table 1. Gaming sectors

Mobile gaming \$59.2 billion	Console gaming \$33.3 billion	PC gaming \$33 billion	Interactive media \$11.2 billion
Smartphones \$39.1 b	Digital content \$21.9 b	Free-to-play \$29.1 b	eXtended Reality(XR) \$4 b
Tablets \$11.4 b	Physical sales \$11.4 b	Premium sales \$5.5 b	Gaming video content(GVC) \$3.2 b eSports \$800 m

## 2.2 Global Game Revenue in 2017

China: \$32,536 M. China became the world’s leading publisher and distributor in the gaming market after Chinese Tencent acquired the Finnish video game developer Supercall in 2016. China not only generates great revenue but also exports culture through video games. Recently, Chinese game developers mostly focused on the rapidly growing domestic market as well as expanding overseas game business.

United States: \$25,426 M. The U.S. video game industry boomed in the early 2000s and became the top country in the world for its great contribution of designing games as well as the place where people spend the most money on video game entertainment. Though US’s sales are expected to grow at 4.6% annually, other countries, notably in Asia, are rising fast and quickly

Japan: \$14,048 M. Japan preserves a big video game market with a great amount of passionate audience and a home of two of three major console manufacturers in the world, Nintendo and Sony.

## 2.3 E-Sport Competition

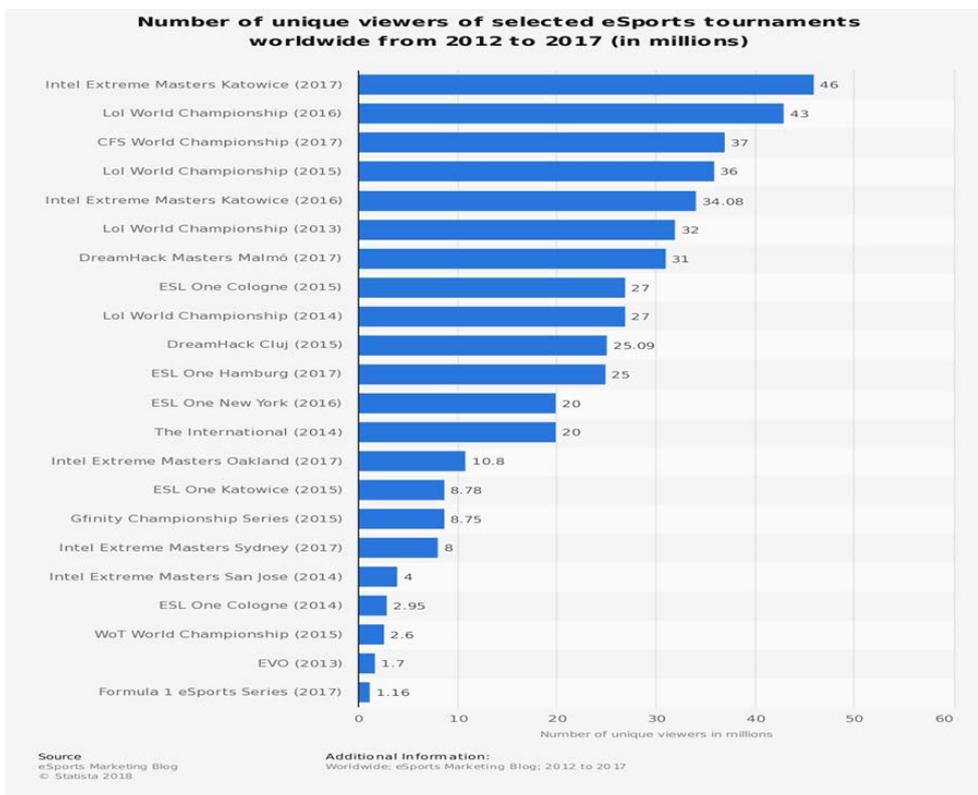


Figure 1. Number of unique viewers of selected esports tournaments Worldwide from 2012 to 2017 (in millions)

Nowadays, video game competitions have been broadcasted on the TV channels and other media, almost the same important as traditional sports. The entertainment sector has reconstructed drastically over the past couple of years as a result of massive popularity of eSports and internet-streaming generation. E-sport is a very competitive entertainment, and that's what fascinate audience, both playing it and watching it. Pro gaming tournaments are easily sold out worldwide, and there will be millions of viewers joining the discussion every time a famous competition is streamed on Twitch. The growing interests in giant broadcasters attract investors to share a pie of game business. Approximated 300 million game lovers worldwide engage in eSports today, and this number is growing rapidly, closer to 500 million by 2020. Hence, it is reasonable to explain why traditional media are eager to capitalize on this expanding gaming markets before it is discovered others and became mainstream. For example, YouTube has made great process in eSports investment by signing a multiyear broadcasting deal with Faceit to stream the Esports Championship Series.

### 3. E-sports' s Economic Scale and Profit Model

#### 3.1 General Profit Model in this Industry

Table 2. Profit model and description

Profit Model	Description
Charge by duration	Charges are made for a fixed period of time, generally in units of hours or months. The player agrees to purchase a point card to play the game for an amount of time.
Charge by item	In order to unlock more games or have priority game experience, players need to buy virtual items in the game. For example, players might need to buy clothes, weapons, and characters.
Charge by transaction	Game developers charge a certain percentage of the processing fee for each transaction when players trade on the game platform.
Game build-in advertising	Advertisements appear in appropriate positions. The main forms of in-game advertising include: game street advertising, 3D legislation Physical objects, built-in advertising scenes with special scenes, game props, in-game text broadcast, travel sign. The pop-up advertisement when the player log-in or logout the account.

#### 3.2 New Profit Forms. Live Broadcast platforms

There are many live broadcast platforms on the internet, and many people have earned substantial revenue through these live game broadcast. Different platforms have different methods or strengths of earning money, for example advertising, network, and gift. Viewers can use real currency to buy gifts for the anchor, then the anchor can convert these gifts into money but with some discount collected by the platforms. Platforms also hire famous players to broadcast to attract more viewers. Twitch hire Faker, a professional league of llegend player, to perform live stream, and his first stream attract 245,000 concurrent viewers, which is the highest count for a single streamer of all time.

New currencies defined by video games. The currencies in free to play games could define your in-game economy. Most free to pay games adopted a multiple currency model for their economies, and the initial formula is a dual currency system. One "Soft Currency" that players earn through playing the game and one "Hard Currency" that can only be purchased to speed up in game progression. Nowadays, games feature more than just two currencies, but there is always one

“Premium” currency that can only be purchased with real money. More currencies lead to a more complex economy, which will encourage players to spend more time and money on the game.

Take “League of Legends” as an example, the item charge does not affect the fairness of the game. The in-game mall sells game skins, game rune pages, double experience cards and gold coin cards to enhance users’ game experience. And player who are not willing to spend money can also compete with other players on the same level. However, with the development of e-sport e-sport culture has become an important part of player’s life. Hence, people are willing to pay for in-game softwares to experience personalized services.

#### **4. Analysis of E-sports Enthusiasts**

The number of active video gamers shows an increasing trend each year. Among the users surveyed, 21-35-year-olds accounted for the highest proportion of 35%. There are significantly fewer enthusiasts over the age of 50, which can be explained by the game’s high-intensity hands-on operations. Teenager is the main group of video game players, and now video games serve as an effective way to establish and maintain friendships. According to Pew Research, 72% of all teens play video games on a computer, game console or portable device like iPhone. Video games are not simply entertaining media for teens, for the innovations in game design and platforms have increased the opportunities to interact and socialize with other players or friends through playing video games. The data shows that teen gamers play with friends they know in person (83%) and online players only (54%). Moreover, more than half of teens have made new friends online through playing video games. Nearly 78% gaming teens say they feel more connected to existing friends they play games with, and this depth of teen’s sense of connectedness can be enhanced through daily games. In order to communicate with friends more efficiently, 59% of teens who play online with others use a voice connection through the mechanics of the game, which also stimulate the popularity of other software like Skype. Online gameplay allows teens to enjoy relaxation and happiness through strategic gaming. Though playing games also can provoke feelings of anger or frustration, teens report more positive emotions. There is no significant difference in distribution of video games by gender.

The percentage of consumers who ever play video games are not significantly different in various income and educational group, which means that video games are popular despite the difference in income and educational level.

#### **5. E-sports’ Huge Potential for Further Growth**

E-sports will continue to have great potentials in development of e-sports competition and video game-related products. Broadcasting rights, merchandising and ticket-sales are all the profitable resources, and they are supported by the massive fan base. Comparing to traditional sports, fans of e-sports are not limited by the nationalities. Because players themselves are the focus of fans respect, and the idolization of top professionals encourage fans to watch competitions. There are a handful of figures, like Faker from South Korean, Xiaofeng Li from China, and KuroKy from Germany, etc. In addition, a great amount of e-sports titles has real power to stay in popularity for a long time, and their ability to dominate a genre and audience will continue to generate steady increasing revenues. To be more specific, League of Legends is a huge game with a huge community and millions of fanatic fans. Though people always question how long their success can go on for, the current evidence prove that LOL still has growing trend.

The total number of LOL players exceeds 100 million this year, and the straight growing trend disproves the rumor that LOL will die soon.

Main live streaming video platforms, like Reddit and Twitch, all have positive subscriber growth. As we know, Reddit is a huge online discussion board where millions of viewers come to discuss games, and the data shows that millions of people have subscribed to the Reddit after League of Legends joins.

Most core PC gamers believe that video games are a real sport. Although eSports can be traced back to 1997, it hasn’t earned such great attention until the 2007 debut of Twitch and the 2009 launch

of Riot Games' free-to-play League of Legends. According to the game research from Newzoo, 85% of the 1.2 billion gamers worldwide play LOL, and the expected total gross revenues of LOL can easily attract many investments from big brands. Coca-cola is an example of the big brands which enter eSports, and the partnership between Riot, League of Legends, and Coca-cola symbolizes how serious investors are about the eSports potentials. In addition, the collaboration with big brands will help elevate eSports to a new level in the world of international sports.

Many gaming companies realize the core business of eSports is competition, and the increasing rewards of competition demonstrate the significant impact of eSports. For example, Activision and Microsoft provided \$1 million in cash to the top Call of Duty players in Los Angeles in April; Virgin Gaming awarded \$1 million in checks to the best PlayStation 3 players; Valve Software marked the highest prize record in eSports history - \$2.8 million for the top players of Dota2.

Video game is a platform for culture exchange. The idea that video games can add noteworthy influence on popular culture and society is well accepted. As a new medium of exchanging ideas and storytelling, video games have changed an entire generation's childhood. The design of characteristics in a video game has helped transcend cultural boundaries. Take League of Legends as an example, Riots design many champions with different background, not limited by the nationality and races, to attract worldwide players.

## **6. Conclusion**

Teenager is the main group of video game players, and now video games serve as a new way to interact and socialize with others. People who have higher gamer usage tend to have better peer relationships and good social skill because video game is an effective way to communicate with others in a relaxed atmosphere and generate a real sense of kinship with friends, colleagues, and even strangers. Researchers have been observing this trend for decades, and studies have shown that many people can establish very positive and close relationships with others through playing games. Video game is a team and relationship-building experience where you can quickly learn about other person outside the home and workplace.

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