

The Modern Economics of the Video Games Industry

Raul Cruz

University of Miami

Abstract

This paper focuses on the modern economic practices of the games industry in the United States. First, it provides an overview into several companies, with individual profiles detailing the products they offer, how they generate revenue, and their roles within the industry. Second, it provides an explanation for why these companies make such economic decisions and evaluates the impact it creates on both themselves and the consumer market. The U.S. games industry is constantly adapting to accommodate the latest technology, and those changes have resulted in multiple avenues for them to generate a profit. By analyzing the industry's trends and financial returns, the paper concludes that the industry will continue to prosper in the electronic marketplace through multiple streams of revenue and a reinforced sense of marketing for the unique services they exclusively provide to the market.

Keywords: video games, revenue, exclusivity, consoles, workplace issues

Introduction

The video games industry, despite being relatively young in relation to other media industries, is embracing the charge for technological innovation across the world. While one may look at a game such as *Minecraft* and *League of Legends* and disregard it as just entertainment, decades of research have shown us that these are products that also invite massive amounts of revenue and interests. Whether it be through built-in subscriptions, downloadable content, or e-sports events, the games industry can practically print money with the various streams of revenue it creates.

As we move forward in what is known as the eighth generation of video game consoles (Webb, 2019), it is important to reflect on the economic practices that currently circulate the industry. Are these practices sustainable for the industry? Does the implementation of new technology reflect positively on overall sales? Does it reflect poorly on game developers and consumers? Is there an issue of ethics within these business practices that can create an adverse effect to their own market? There are over two billion people, around 26% of the world's population, that play video games, and that level of engagement has led to the industry generating at least \$120 billion dollars in 2019 (Webb, 2019). While there is data to suggest that business is thriving, is there evidence to show that these streams of revenue will continue to benefit the games industry?

This paper examines the modern economic practices that occur within the video game sector of the economic market by providing insight into the companies that profit from such practices alongside a review of various economic factors that affect the companies, their employees, and their consumers in a positive and negative way. This topic is important not only because of the increasing relevance for the industry, but also because the video games industry

has become much more advanced compared to most forms of modern communication, with more tech companies investing their efforts for new technological integrations with the market. Their practices should be further analyzed to truly understand if the economic practices that they implement is financially stable. In a time where many companies have shut down due to various forms of inefficiency (Barbour, 2020), the video game industry has proven to steer its course. It is important that these business actions be understood, so that we can see what the future could hold for the economic marketplace in entertainment.

Description

Company Profiles of the Video Game Industry

I. Microsoft

In November 2001, Microsoft introduced the Xbox, the first video game console developed by an American company since the Atari Jaguar halted its sales in 1996. As a first-party developer (meaning a company that makes both games and platforms) (Staff, 2019), the company has grown to be one of the biggest developers in the industry, not only representing a third of the console market, but also becoming a potential leader in the digital marketplace as the economic sector heads into next-gen consoles. Since March of 2014 (Gilbert, 2020), current studio head Phil Spencer and his team have turned their attention away from the controversial issues that consumers had with the Xbox One (Stuart, 2013) and towards establishing themselves as a company that is more reflective of a video game brand than just console hardware (Chalk, 2019). Headlines regarding the company have been made in recent years regarding their acquisitions of third-party developers (most recently with Bethesda Game Studios, Ninja Theory and Mojang, developers of *Minecraft*) as Xbox Games Studios (News Center, 2020), their Xbox

Series X and S consoles (the X being made for physical discs and the S being exclusively for digital), and their ongoing commitment with Xbox Game Pass and xCloud (Warren, 2020).

Currently, the company generates revenue from several places. First, they offer their Xbox consoles that are projected to run at the highest level of efficiency. They run at 4K resolution with 8K support and run up to 120 frames-per-second which also includes ray-tracing for visuals, enhancing graphics that rivals the power for most PC hardware (News Center, 2020). They also make money from their first-party titles such as *Halo* and *Gears of War*, released both physically and digitally through their own storefront. Consumers in the Microsoft market also have the option to subscribe to Xbox Live and Game Pass, services that provide online multiplayer and a library of curated titles (also available on PC) at low costs (Tassi, 2017). Microsoft and Xbox are also focused on creating a return of investment from Project xCloud, their own gaming streaming service where it could potentially make an impact on the mobile gaming market (Warren, 2020). Their previous console, the Xbox One, has had over 48.36 million units sold since its release (VGChartz, 2020).

II. Sony

Japan-based conglomerate Sony introduced the first PlayStation console in December 1994. Their successor, the PS2, is the best-selling console to date with over 155 million units sold as of September 2020 (VGChartz, 2020). While Sony gains revenue from multiple software products (some that are customary for modern consumers, such as the digital PlayStation Store), they are still seen as a fairly traditional video game company, with a focus on hardware and exclusive first-party titles. In 2019, Sony appointed Hermen Hulst, co-founder of one of their in-house studios Guerilla Games, as head of PlayStation Worldwide Studios (Favis, 2019), where they operate with their other studios to create new games. Sony Santa Monica with *God of War*,

and Kojima Productions with *Death Stranding* are a few examples of studios owned by the PlayStation company. In 2018, four out of the top five best-selling console games were titles for the PS4 (only one of them, *Marvel's Spider-Man* by Insomniac Games, was a console exclusive) (VGChartz, 2019). This is evidence that points to more gamers in the current era siding with PlayStation as their source for console gaming. As of September 2020, incoming of the company's next console launch with the PS5, the PS4 has sold at least 112.96 million units since its release in 2013 (VGChartz, 2019), more than twice the total sales of the Xbox One.

While the company makes its money from selling hardware and exclusive titles, they have also invested in providing the market with newer forms of technology to play their games through PlayStation VR, hardware that integrates gaming with a more immersive environment through virtual reality (Barr, 2016). And much like their other first-party rival in Microsoft, Sony also gains revenue from consumers through digital subscription services, such as PlayStation Plus (which provides online multiplayer and discounts on select titles) and PlayStation Now (a console-only streaming service that includes a curated selection of PlayStation titles). Sony represents another third of the global console market and is possibly the most successful company in this current console generation.

III. Nintendo

Another Japan-based company is Nintendo Co., Ltd., the oldest company in the market since its inception in 1889. What was initially a trading-card company eventually grew to be a landmark company for the video game industry alongside the U.S.-based Atari. The company is known for its accessible and family-friendly franchises like *Super Mario Bros.*, as well as their recent emergence in the mobile gaming market, with *Pokémon Go* being their biggest success there ("Think Gaming", 2020). As of 2020, Nintendo was the most financially successful video

game company in Japan (Anderson, 2020), much to the success of their most recent console and handheld hybrid, the Nintendo Switch released in 2017.

The company currently makes a profit through the Switch and the games that are offered there both physically and digitally through their eShop service (Wong, 2020). They also offer a subscription service for online multiplayer through their Switch Online program, which also includes access to a select library of older titles from their NES and SNES consoles. Recently, the company made investments on providing what are considered to be “retro consoles” like the NES Classic and SNES classic, and even hardware that is aimed for the children’s toy market through Nintendo Labo, virtual reality hardware designed to be assembled with cardboard pieces (Moyse, 2018).

In addition to those, Nintendo gains revenue from selling Amiibo figures, toys that feature popular video game characters that also have digital integration with select Switch game titles (Wong, 2020). Since they began creating games for mobile phones, unlike their rivals at Sony and Microsoft, Nintendo has been able to gain revenue through microtransactions, purchases made in-game that provide consumers with additional items and cosmetics for characters in their games. While Nintendo may not share the same success as Sony and Microsoft do, they still represent the last third of the global console market and has generated decades of critical and financial success as a company that markets toward a family-friendly demographic.

IV. Valve

Founded in 1996 by former Microsoft employees Gabe Newell and Mike Harrington, the company began as a third-party developer with titles such as *Half-Life* and *Portal*. A third-party

developer is a term used for companies that develop and/or publish games that are released on multiple platforms (Activision/Blizzard, Electronic Arts, Square Enix, Capcom, Take Two Interactive, SEGA, and Ubisoft are examples of prolific third-party companies) (Staff, 2019). While the company gained popularity through their own titles, it was not until the launch of Steam, their digital distribution service which served as a storefront for most PC titles (third-party and independent), that really set Valve as the innovators that they are today in the games industry (Ravenscraft, 2018). Steam has been proven to be a success for the video game sector of the economic market, with an estimated worth of \$2 to \$4 billion dollars as of 2011 and a monthly active base of more than 10 million users in 2019 (Steam, 2020).

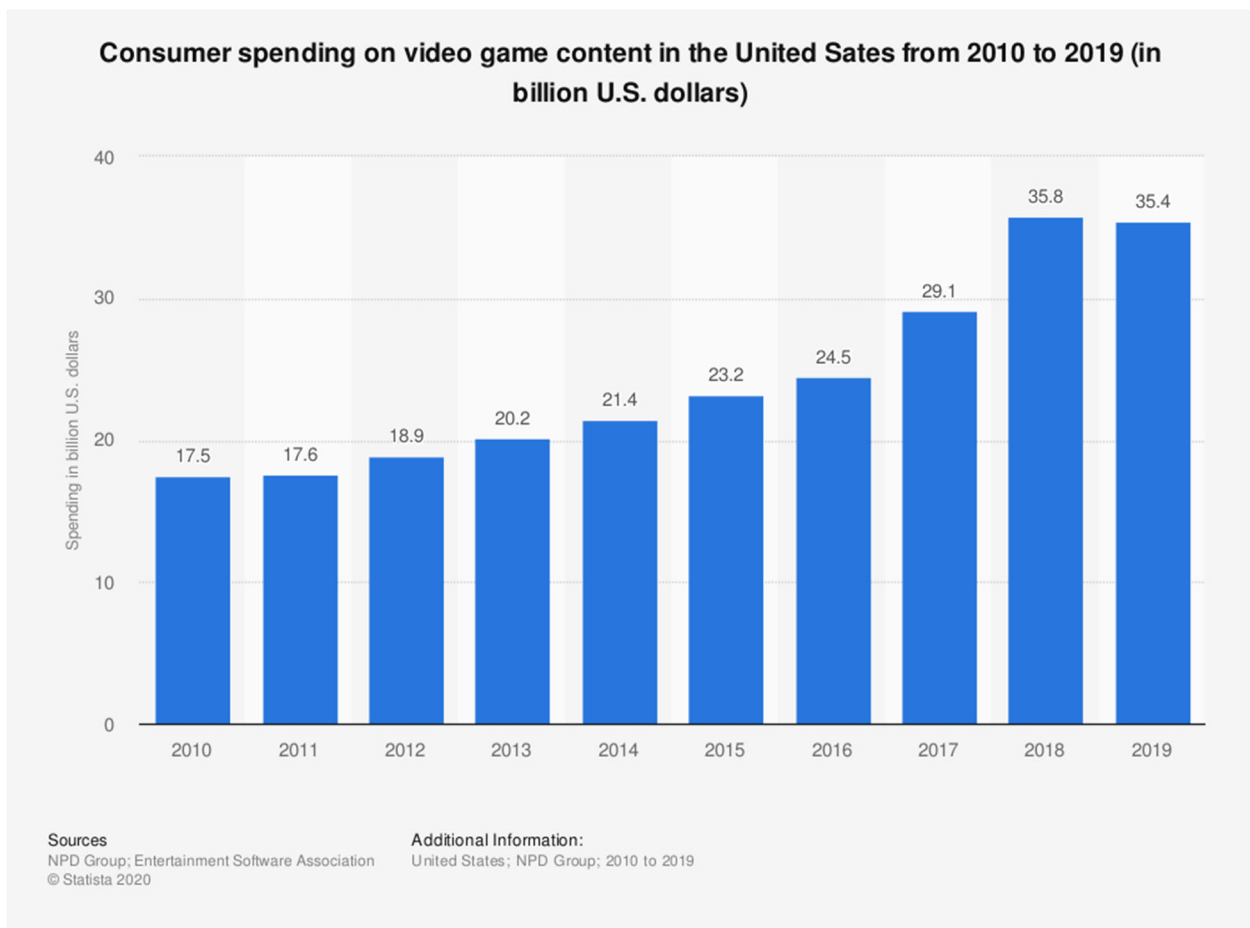
Currently, Valve has made most of its money through a revenue deal with developers who decide to put their game on Steam, with 30 percent of total sales going directly to the company (Statt, 2018). It was Valve who set the trend for providing hardware for VR gaming through the HTC Vive headset (released in 2016) and the Valve Index (released in 2019). They also gain some revenue from microtransactions in games like *Artifact* and *DOTA 2* (Ravenscraft, 2018). Valve, while being a company that is mostly new and mysterious regarding its future endeavors, has proven to be a leader of sorts in the PC games market, with no major competition to rival its sales (until fairly recently with the launch of the Epic Games Store).

Game Types and Revenues

The video game industry has managed to find similar numbers of success within the past couple of years. A survey by the Entertainment Software Association compiled data on consumer spending on video game content in the United States from 2010 to 2019 and were able to conclude that spending has increased steadily throughout the decade, with a noticeable upsurge in spending beginning in 2017 with \$29.1 billion USD to 2018 with \$35.8 billion being spent on

content (Entertainment Software Association [ESA], 2020). When it comes to understanding just where all that money is coming from, a survey conducted in 2019 determined that the United States was the leading gaming market worldwide with over \$36.5 billion USD, closely followed by China with \$36 billion and Japan with \$18 billion (Newzoo, 2020). China has a very clear presence in the gaming industry, with their top types of gaming being mobile games (with sales revenue at 158 billion yuan in 2019) and e-sports (with sales revenue at close to 95 billion yuan that same year) (China, 2019).

Figure 6



Another indication for why so much revenue has been made from China is Tencent, a social media and entertainment conglomerate based in the country. Tencent is also the world's

largest games company in terms of revenue, being the owners of Riot Games (developers of E-sports phenomenon *League of Legends*) alongside having stakes in numerous developers in both console and mobile markets (Frater, 2020). To better understand the importance of mobile gaming within the overall market, another survey determined the total revenue generated worldwide by device was led by smartphone games with over \$60 billion USD being generated, twice the total amount for boxed and downloaded games for PC (Newzoo, 2020). While an argument could be supported that potential revenue can be lost due to piracy, it is unlikely to occur with games on smart devices, as many of them are provided to consumers for free (Borowiecki & Prieto-Rodriguez, 2014).

Users

When it comes to understanding what kinds of people are contributing to the market, surveys showed that 38% of gamers are within 18-34 years old, followed by the 34-54 demographic at 26% and persons under 18 at 21% (ESA, 2020). In 2020, statistics showed that 59% of gamers were male and 41% were female (a number that seems to be fluctuating within that range since 2008) (ESA, 2020). Regarding what genres of games are currently being played, a survey conducted in May 2020 showed that action games (e.g., platformers and fighting games) was the most played type of games at 41%, followed by action-adventure games, strategy titles, casual games, and shooters in that order (Statista, 2020). To counter a claim made by Karol J. Borowiecki and Juan Prieto-Rodriguez, gaming may be more of a global phenomenon than an urban one.

Consolidations/mergers and acquisitions

A common practice that has been occurring within the games industry is the concept of acquiring smaller game companies, and in some cases potentially merging with them. One apparent example is Activision Blizzard, a holding company that was previously divided with Activision (publishers of titles like *Spyro the Dragon* and *Call of Duty*) and Blizzard Entertainment (third-party developers behind the *Diablo* franchise and *World of Warcraft*). Activision CEO Bobby Kotick saw that with the ongoing popularity of massive multiplayer online games (also known as MMOs) came the assurance that such games provide a consistent revenue stream for the publishers, as opposed to gaining revenue from a one-time purchase.

With the biggest MMO at the time being Blizzard's *World of Warcraft*, and with Activision in need of proper representation for the genre, the companies agreed to merge for an estimated US\$18.9 billion (Frank, 2012). The merger has been shown to be a financial success, with the company joining the Fortune 500 in June 2017 (Lev-Ram, 2017). A recent example can be taken from Microsoft when they acquired Bethesda Game Studios in 2020 (News Center, 2020). One of the reasons cited for why the deal took place was for future strategies to establish Xbox as a game studio rather than a traditional console company. The acquisition of developers behind such hits like *Doom* and *The Elder Scrolls* would increase the total number of creative studios under the Xbox brand from 15 to 23. That can be justifiable for the company to be bought for \$7.5 billion USD and catch the ongoing attention of fans for said franchises. What can be understood from a deal such as this is that video game companies are in need of creating competition.

Whether it be for the purpose of having a more exclusive sense of branding for the company or for gaining more investments from shareholders, these mergers and acquisitions provide the market with longevity and potential support for developers as they continue to make

new titles. Only this time it is under a larger parent company. Yet, as is the case with mergers throughout the media industry, these practices may come with unfortunate numbers of lay-offs for employees at either company (see: Crunch culture and other workplace issues).

ISSUES WITHIN THE GAMES INDUSTRY

i. Issues in gender

In their article, Borowiecki and Prieto-Rodriguez suggest that the gender gap in the games industry can be attributed to two historical claims: the first being that males are more socialized with video games than females, statistically shown to socialize through exposure to other forms of art (though in modern times and the increase in mobile gaming that may not be the case). The second claim is that the development teams behind most games usually consist of men, resulting in content that may likely resemble perspectives that appeal to a male audience (Borowiecki & Prieto-Rodriguez, 2014). This is important because these views may reflect on the consistent gender split that the industry has observed over the years, with women in 2020 accounted for nearly 41% of all gamers in the United States, a slight increase over the previous year (ESA, 2020). In a landscape where most of the general protagonists in video games tend to be mostly male, it should not come as a surprise to understand why there are not as many female consumers or developers in the industry. Another possible factor into why there is such a gap in gender may be from a general sense of unease within the developer workplace, made apparent through recent allegations of sexual misconduct within third party companies like Ubisoft (Schreier, 2020). While there is no present data to support this hypothesis, events such as these present a possible indication for why the industry is seen as a more male-dominated sector.

ii. Crunch culture and other workplace issues

Crunch culture is a term used to describe the overwhelming amount of work that is needed from game developers to complete their products, resulting in numerous reports of workplace issues from 100-hour work weeks to stress-induced leave (Gilbert, 2019). One notorious example came in 2018, with reports of grueling work hours and lack of crediting developers stemming from Rockstar Games (owned by Take-Two Interactive) during the production of *Red Dead Redemption 2* (Schreier, 2018). While these reports document a serious and potentially life-threatening issue within the workplace of the industry, statistics show that these issues may not be as prevalent in the eyes of the consumer. In 2018, *Red Dead Redemption 2* was the highest selling video game in the world, with over 13 million units sold (VGChartz, 2019). While this does not establish a direct correlation between crunch culture and consumer loyalty, it is possible that the number of reports and testimonies will increase and could cause a negative impact for overall game sales in the future should no proper action be made within the workplace.

One of the main reasons for why employees on this side of the technological sector have gone through such harsh practices is due to a lack of a labor union. Many employees in the games industry do not have the same employee benefits that others have and, due to the ever-changing nature of ownership through mergers and acquisitions, many of the companies that they work for may not provide employees with any assistance due to factors such as unemployment and repositioning (Colwill, 2019). In another event from 2018, Activision Blizzard laid off a total of 800 employees, just after news broke that the company had made \$7.5 billion in sales and \$1.8 billion in profit the previous year (Futter, 2019). This situation exposes a scenario where employees were simply let go, with no strategies put in place to help preserve those

workers. The discussion regarding unionization continues today, as more potential returns in the industry may result in more people losing their jobs without any warning.

EXCLUSIVITY

i. Exclusives, explained

A critical component that affects potential sales for video game companies are their approaches towards exclusivity for their content. For example, Nintendo has always maintained a traditional sense of exclusivity when it comes to their content, meaning that every Nintendo intellectual property that they own will only be played through Nintendo consoles. The same goes for Sony as well, with critically-acclaimed franchises like *The Last of Us* and the *Uncharted* series being made exclusively for their own consoles (with their most recent console benefitting from successful returns from such practices). While these are traditional practices that serve to generate more direct revenue for first-party products that directly influence these companies, there have been notable examples where certain third-party developers agree to re-brand select titles in “exclusivity windows” for a certain console under a limited time.

Once such example can be found in *Final Fantasy 7 Remake*, a title from developer Square Enix who had agreed with Sony to have the game be a PlayStation 4 exclusive for its first year of release (with the option to have it move to other platforms after March 3rd, 2021. It is assumed that the reasoning for such a decision would be for Sony to obtain a similar success that they had with the original game, itself a timed-exclusive for the first PlayStation console (Farokhmanesh, 2019). Data provided by the NPD suggests that the marketing strategy was successful for Sony and Square Enix, with the game staying within the top ten best-selling video games (retail and digital) of 2020 as of September (NPD, 2020) and selling more than 3.5 million

copies within the first three days of its release (Sheridan, 2020). As more smaller companies are being merged with larger conglomerates, it is very likely that industry giants such as Xbox and PlayStation will continue to establish exclusivity deals with their first-party (and select third-party) titles in order to draw more consumers and potentially retain them as loyal followers of their respective and unique services. While it is important for companies to create these streams of revenue, it is also important to understand exactly what titles should be exclusive and where they should be placed as such.

ii. What could go wrong?

While the concept of having an exclusive title for your company is enticing, it is important to realize the logistics in the marketing for such titles. In the current landscape of the PC market, the two biggest storefronts in that sector are Steam and the Epic Games Store. The store (developed by Epic Games, creators of *Fortnite* and owners of the Unreal Engine software used for most games) launched in 2018 with elements that rivaled Steam such as an 88-percentage share for developers whose games are sold on the store, weekly offering of free curated titles, and independent titles that can only be bought through their own store (Frank, 2018).

This specific practice was met with notable criticism from consumers in the personal computer market, as the standard has been that all titles that were available on PC should be made available in any digital marketplace. Epic's reasoning behind this strategy was to continue ongoing support for independent developers by having them get more money from their products (Watts, 2019). Currently, no data suggests that this decision has been a successful move by the company. Another controversial practice with exclusives has been through the release of Nintendo's *Super Mario 3D All-Stars*: a collection of old Mario titles that are only available on

the Nintendo Switch and eShop until March 31st, 2021 (Webb, 2020). This resulted in confusion from fans, as this was a product of classic games from the Mario franchise that were being re-released the same way as previous titles, only this time it would inevitably be locked away in a proverbial Disney vault with no other means of purchasing it afterwards. Controversy aside, the collection was able to reach the NPD's top ten best-selling games within its release in September 2020 (NPD, 2020).

Conclusion

The video games industry has benefited from the global consumer market in numerous ways throughout the years, and it is very possible that this success will continue to grow exponentially as new technology is being developed. In 2020, it was calculated that there were over two billion people in the world who play video games, transcending from its original reception as just a pastime. Now there are cash-prize tournaments centered on popular games, with the term e-sports receiving the same level of recognition as other kinds of sports like baseball and soccer and more than millions of hours being streamed on global video platforms such as Twitch and YouTube (SullyGnome.com, 2020). Now there are thousands of games being developed with projected sales to reach towards the hundreds of millions of dollars. Now there are more exciting innovations in the tech industry than ever before, with things like 8K resolution and increasing levels of frame rates that will make the experience the one has while playing a video game unlike anything they have seen before. The future is considered to be bright for the games industry, but there are glaring elements that are currently being discussed that could potentially change the economic landscape that we know today.

As we head into what is to be the next-generation of consoles, with both the PlayStation 5 and Xbox Series X/S arriving in holiday 2020, it is important to remember what these companies

have done to generate revenue as these decisions may very well continue to occur in order to ensure their success. It is likely to expect that the industry will see more console and/or timed-exclusives within the marketplace as it is just as likely that more developers will eventually be bought by larger ones. The news of Microsoft buying Bethesda may indicate that this is not the end for said companies' acquisitions (with rumors of Japan-led SEGA being the next big giant on sale). These acquisitions may lead to a similar yet unique counter to Sony's sense of branding, as Microsoft may have plans to have the Xbox be a place for not only hardware through their consoles, but also as software for streaming and playing games on the cloud (regardless of whether games from Bethesda continue to be third-party or not).

A company like Sony could continue to operate as they have before with the PlayStation, with data suggesting that their traditional sense of exclusivity has been an endeavor with successful results. However, this strategy does not mean that investing in newer ways to distribute their titles can create a negative impact to their current success. In an age of streaming, this may very well be a decision that the company is interested in (the same rule of thought applies to Nintendo as well). Yet, as we approach a new era of the digital age, there are other factors at play as well. Ongoing issues such as the current gender divide within the industry, unethical working conditions, and piracy can negatively affect the value of these tech companies in the global market if not handled correctly.

Video games are essentially available everywhere in the modern marketplace, and the industry will continue to expand as time goes on. When it comes to the economic future of the video games industry, the power is ultimately in the player's hands.

BIBLIOGRAPHY

Marchand, A., & Hennig-Thurau, T. "Value Creation in the Video Game Industry: Industry Economics, Consumer Benefits, and Research Opportunities." *Journal of Interactive Marketing* 27, no. 3 (2013): 141-57.

Gil, Ricard, and Warzynski, Frederic. "Vertical Integration, Exclusivity, and Game Sales Performance in the US Video Game Industry." *Journal of Law, Economics, & Organization* 31, no. 3 (2015): 1143-168.

Borowiecki, Karol J, and Prieto-Rodriguez, Juan. "Video Games Playing: A Substitute for Cultural Consumptions?" *Journal of Cultural Economics* 39, no. 3 (2014): 239-58.

Derdenger, Timothy. "Technological Tying and the Intensity of Price Competition: An Empirical Analysis of the Video Game Industry." *Quantitative Marketing and Economics* 12, no. 2 (2014): 127-65.

Parshakov, Petr, Naidenova, Iuliia, and Barajas, Angel. "Spillover Effect in Promotion: Evidence from Video Game Publishers and E-Sports Tournaments." *Journal of Business Research* 118 (2020): 262-70.

Staff, G. (2019, October 03). Understanding the relationship between game developers and publishers. Retrieved November 09, 2020, from <https://gamingstreet.com/game-developer-publisher-relationship/>

Gilbert, B. (2020, February 20). Getting to know Microsoft's new Xbox lead, Phil Spencer. Retrieved November 09, 2020, from <https://www.engadget.com/2014-04-10-phil-spencer-major-nelson-interview.html>

Stuart, K. (2013, June 19). Xbox One DRM restrictions dropped after gamer outcry. Retrieved November 09, 2020, from <https://www.theguardian.com/technology/2013/jun/19/xbox-one-drm-second-hand-restrictions-abandoned>

Chalk, A. (2019, February 05). Xbox Game Studios rebranding signals big changes for Microsoft's focus on gaming. Retrieved November 09, 2020, from <https://www.pcgamer.com/xbox-game-studios-rebranding-signals-big-changes-for-microsofts-focus-on-gaming/>

Anderson, M., & Gamer, T. (2020, August 26). Nintendo Officially Named The Richest Company In Japan In 2020. Retrieved November 09, 2020, from <https://www.thegamer.com/nintendo-officially-named-richest-company-japan-2020/>

Ravenscraft, E. (2018, July 27). What the Hell Does Valve Even Do Anymore (Besides Take Our Money). Retrieved November 09, 2020, from <https://www.howtogeek.com/360177/what-the-hell-does-valve-even-do-anymore-besides-take-our-money/>

Barbour, N. (2020, April 06). Video games recession resistant at the right price. Retrieved November 09, 2020, from file:///C:/Users/Raul's%20Laptop/Downloads/Technology_%20Video%20games%20recession%20resistant%20at%20the%20right%20price.pdf

Frank, A. (2018, December 04). Epic Games is launching its own store, and taking a smaller cut than Steam. Retrieved November 09, 2020, from <https://www.polygon.com/2018/12/4/18125498/epic-games-store-details-revenue-split-launch-date>

Wong, J. (2020, November 05). Nintendo Passes Another Comfy Quarter at Home. Retrieved November 09, 2020, from https://www.wsj.com/articles/nintendo-passes-another-comfy-quarter-at-home-11604577856?mod=tech_lead_pos11

Moyse, C. (2018, October 31). NES and SNES Classic consoles pass the 10 million global sales mark. Retrieved November 09, 2020, from <https://www.destructoid.com/nes-and-snes-classic-consoles-pass-the-10-million-global-sales-mark-529201.phtml>

Schreier, J. (2020, July 21). Ubisoft Family Accused of Mishandling Sexual Misconduct Claims. Retrieved November 09, 2020, from <https://www.bloomberg.com/news/articles/2020-07-21/ubisoft-sexual-misconduct-scandal-harassment-sexism-and-abuse>

News Center, M. (2020, September 21). Microsoft to acquire ZeniMax Media and its game publisher Bethesda Softworks. Retrieved November 09, 2020, from <https://news.microsoft.com/2020/09/21/microsoft-to-acquire-zenimax-media-and-its-game-publisher-bethesda-softworks/>

Warren, T. (2020, February 05). Microsoft's Xbox boss says Amazon and Google are 'the main competitors going forward'. Retrieved November 09, 2020, from <https://www.theverge.com/2020/2/5/21123956/microsoft-xbox-competitors-phil-spencer-cloud-gaming-amazon-google>

Tassi, P. (2017, February 28). Microsoft Takes Aim At PlayStation Now With Netflix-Like Xbox Game Pass. Retrieved November 09, 2020, from <https://www.forbes.com/sites/insertcoin/2017/02/28/microsoft-takes-aim-at-playstation-now-with-netflix-like-xbox-game-pass/?sh=6ae7cb63d9e2>

Statt, N. (2018, December 01). Valve's new Steam revenue agreement gives more money to game developers. Retrieved November 09, 2020, from

<https://www.theverge.com/2018/11/30/18120577/valve-steam-game-marketplace-revenue-split-new-rules-competition>

Favis, E. (2019, November 12). Sony appoints Guerrilla Games' Hermen Hulst new head of PlayStation worldwide studios. Retrieved November 09, 2020, from

<https://www.washingtonpost.com/video-games/2019/11/07/sony-appoints-guerrilla-games-hermen-hulst-new-head-playstation-worldwide-studios/>

Barr, C. (2016, March 16). PlayStation VR first impressions. Retrieved November 09, 2020, from <https://www.slashgear.com/playstation-vr-first-impressions-16431901/>

NPD Group, T. (2020, October). Best Selling Video Games: September 2020 Data. Retrieved November 09, 2020, from <https://www.npd.com/wps/portal/npd/us/news/top-10/video-games/>

Frater, P. (2020, June 22). Tencent Accelerates Games Company Acquisitions. Retrieved November 09, 2020, from <https://variety.com/2020/biz/asia/tencent-games-company-acquisitions-1234624022/>

Lev-Ram, M. (2017, June 07). Activision Blizzard Aims for the Big Leagues. Retrieved November 09, 2020, from <https://fortune.com/2017/06/07/fortune-500-activision-blizzard/>

Frank, F. (2012, July 16). Activision's Unlikely Hero. Retrieved November 09, 2020, from <https://www.forbes.com/forbes/2009/0202/052.html?sh=17019441a16e>

Schreier, J. (2018, October 23). Inside Rockstar Games' Culture Of Crunch. Retrieved November 09, 2020, from <https://kotaku.com/inside-rockstar-games-culture-of-crunch-1829936466>

Colwill, T. (2019, January 16). Game developers need to unionize. Retrieved November 09, 2020, from <https://www.polygon.com/2019/1/16/18178332/game-developer-union-crunch>

Futter, M. (2019, February 16). What the hell happened at Activision Blizzard? Retrieved November 09, 2020, from <https://www.polygon.com/2019/2/16/18226581/activision-blizzard-layoffs-executive-pay-unions>

Gilbert, B. (2019, May 09). Grueling, 100-hour work weeks and 'crunch culture' are pushing the video game industry to a breaking point. Here's what's going on. Retrieved November 09, 2020, from <https://www.businessinsider.com/video-game-development-problems-crunch-culture-ea-rockstar-epic-explained-2019-5>

Farokhmanesh, M. (2019, December 10). Final Fantasy VII Remake is a PS4 timed exclusive until March 2021. Retrieved November 09, 2020, from <https://www.theverge.com/2019/12/10/21004739/final-fantasy-7-remake-ps4-timed-exclusive>

Sheridan, C. (2020, April 21). Final Fantasy 7 Remake launch numbers broke 3.5 million in first 3 days. Retrieved November 09, 2020, from <https://www.gamesradar.com/final-fantasy-7-remake-launch-numbers-broke-35-million-in-first-3-days/>

Watts, S. (2019, November 13). Epic vs. Steam: The PC Digital Storefront Dilemma For Indies. Retrieved November 09, 2020, from <https://www.gamespot.com/articles/epic-vs-steam-the-pc-digital-storefront-dilemma-fo/1100-6471219/>

Webb, K. (2020, September 18). 'Super Mario 3D All-Stars' brings a trio of classic games to the Nintendo Switch on a limited run - here's how to buy the collection before it's gone for good. Retrieved November 09, 2020, from <https://www.businessinsider.com/super-mario-3d-all-stars-preorder-price-release-date>

Webb, K. (2019, October 01). The \$120 billion gaming industry is going through more change than it ever has before, and everyone is trying to cash in. Retrieved November 09, 2020, from <https://www.businessinsider.com/video-game-industry-120-billion-future-innovation-2019-9>

VGChartz. (February 1, 2019). Top-selling console games worldwide in 2018, by unit sales (in millions) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/273335/sales-of-the-worlds-most-popular-console-games-in-2011/>

Think Gaming. (October 16, 2020). Top grossing iPhone mobile gaming apps in the United States as of October 2020, ranked by daily revenue (in U.S. dollars) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/263988/top-grossing-mobile-ios-gaming-apps-ranked-by-daily-revenue/>

SullyGnome.com. (July 9, 2020). Most streamed games on Twitch in June 2020 (in millions) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/1108427/leading-games-twitch-hours-streamed/>

Newzoo. (September 25, 2019). Leading gaming markets worldwide in 2019, by gaming revenue (in billion U.S. dollars) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/308454/gaming-revenue-countries/>

Game Committee of the Publishers Association of China. (December 20, 2019). Sales revenue of the gaming industry in China in 2019, by type of game (in billion yuan) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/796353/china-game-sales-revenue-by-type/>

Entertainment Software Association. (January 23, 2020). Consumer spending on video game content in the United States from 2010 to 2019 (in billion U.S. dollars) [Graph]. In Statista.

Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/252457/consumer-spending-on-video-games-in-the-us/>

Newzoo. (April 28, 2020). Video game market revenue worldwide in 2020, by device (in billion U.S. dollars) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/292751/mobile-gaming-revenue-worldwide-device/>

<https://www-statista-com.access.library.miami.edu/statistics/292751/mobile-gaming-revenue-worldwide-device/>

Consumer Technology Association. (November 15, 2019). Wholesale sales of electronic gaming consoles in the United States from 2013 to 2019 (in billion U.S. dollars) [Graph]. In Statista.

Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/191968/sales-of-electronic-gaming-hardware-in-the-us-since-2005/>

Steam. (October 16, 2020). Number of peak concurrent Steam users from January 2013 to September 2020 (in millions) [Graph]. In Statista. Retrieved November 09, 2020, from

<https://www-statista-com.access.library.miami.edu/statistics/308330/number-stream-users/>

Statista. (May 1, 2020). In general, which types of video games do you play? [Graph]. In Statista.

Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/forecasts/997151/video-game-preferences-by-genre-in-the-us>

Entertainment Software Association. (July 15, 2020). Age breakdown of video game players in the United States in 2020 [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/189582/age-of-us-video-game-players-since-2010/>

<https://www-statista-com.access.library.miami.edu/statistics/189582/age-of-us-video-game-players-since-2010/>

Entertainment Software Association. (July 15, 2020). Distribution of computer and video gamers in the United States from 2006 to 2020, by gender [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/232383/gender-split-of-us-computer-and-video-gamers/>

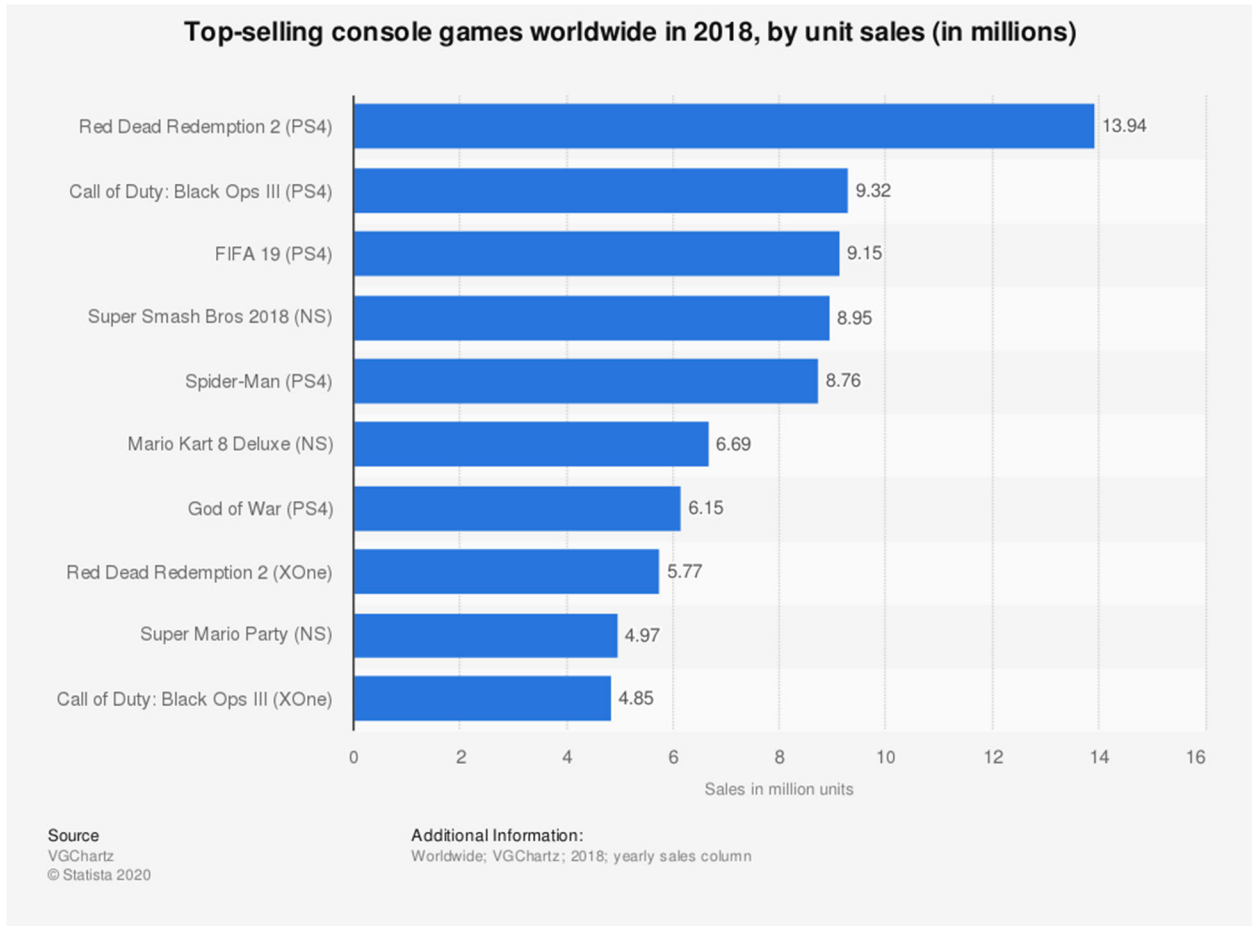
Newzoo. (June 25, 2020). Number of video gamers worldwide in 2020, by region (in millions) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/293304/number-video-gamers/>

Entertainment Software Association. (July 15, 2020). Favorite video game devices according to gamers in the United States in 2020 [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/524172/favorite-video-game-platforms-usa/>

VGChartz. (September 11, 2020). Video game console sales worldwide for products total lifespan as of September 2020 (in million units) [Graph]. In Statista. Retrieved November 09, 2020, from <https://www-statista-com.access.library.miami.edu/statistics/268966/total-number-of-game-consoles-sold-worldwide-by-console-type/>

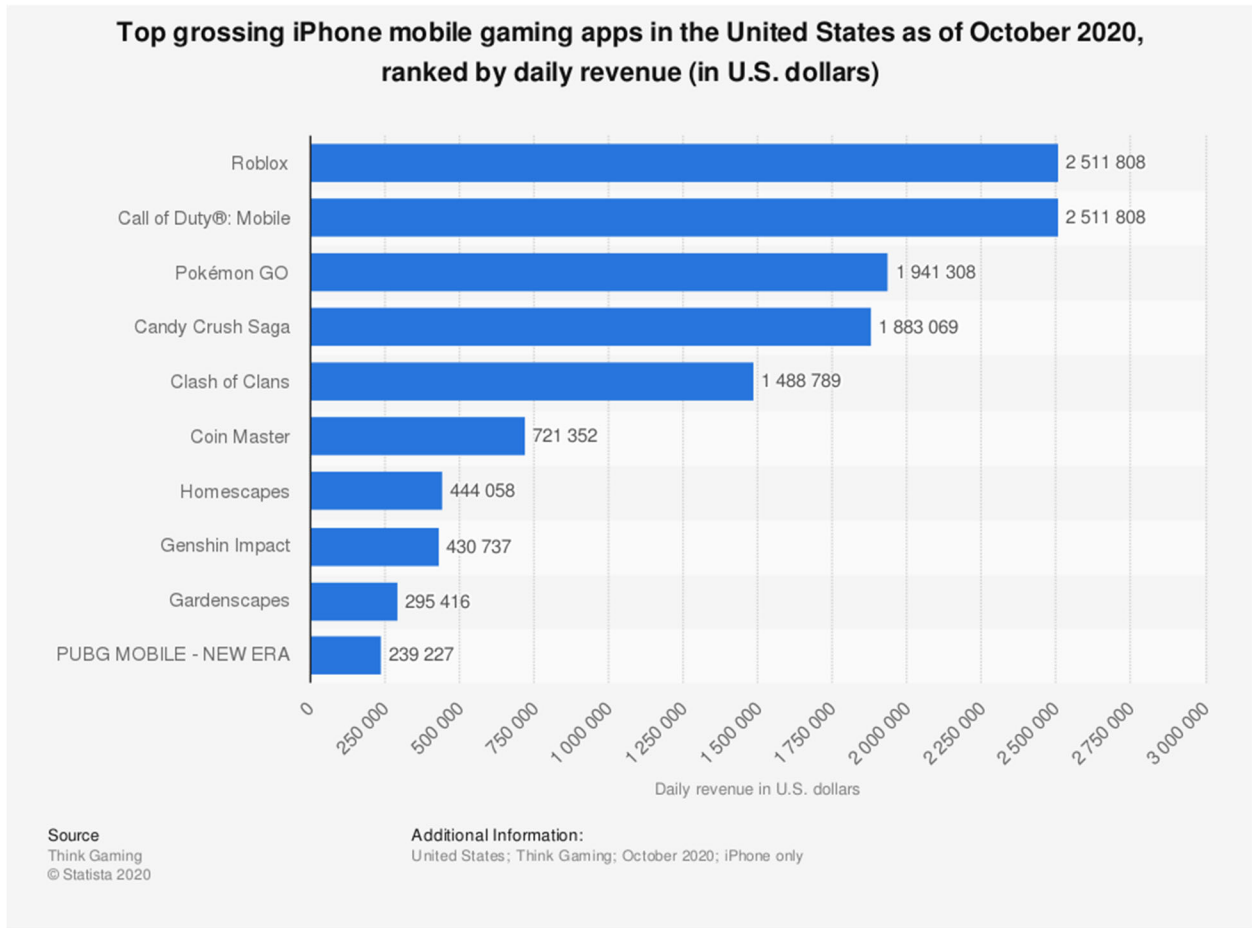
Appendix

Figure 1



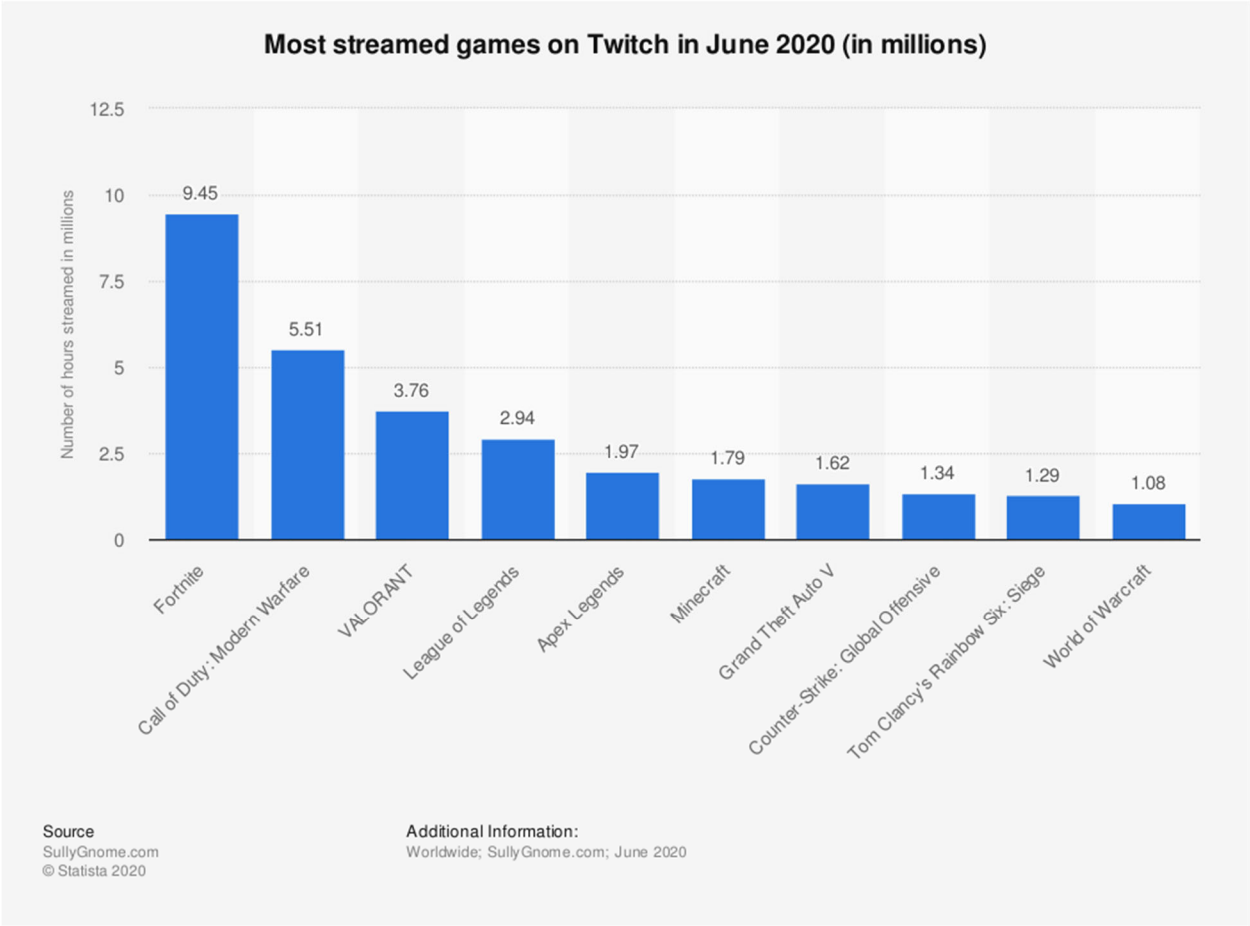
Note: Top-selling console games sold worldwide in 2018.

Figure 2



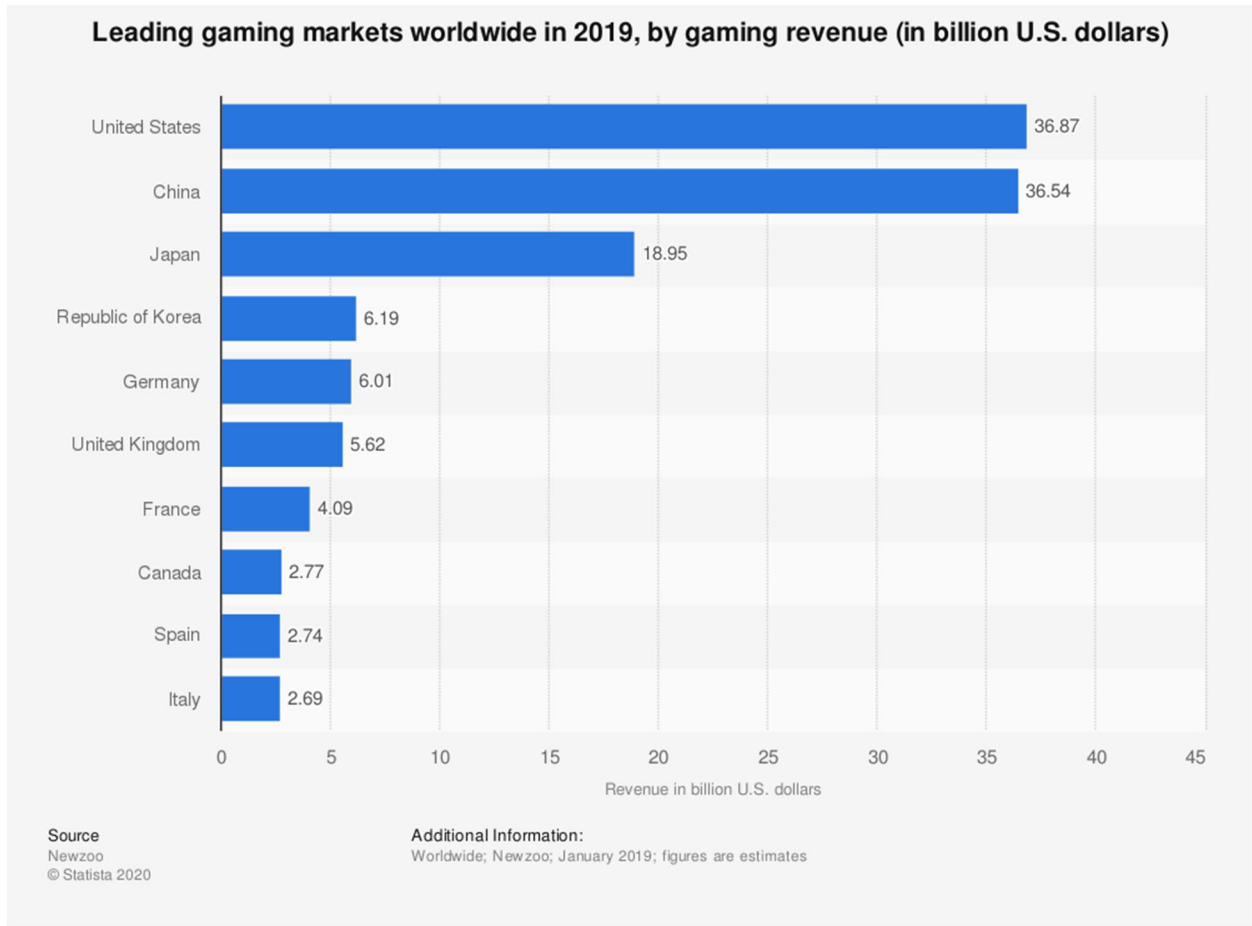
Note: Top grossing mobile games on iPhone in the United States in 2018.

Figure 3



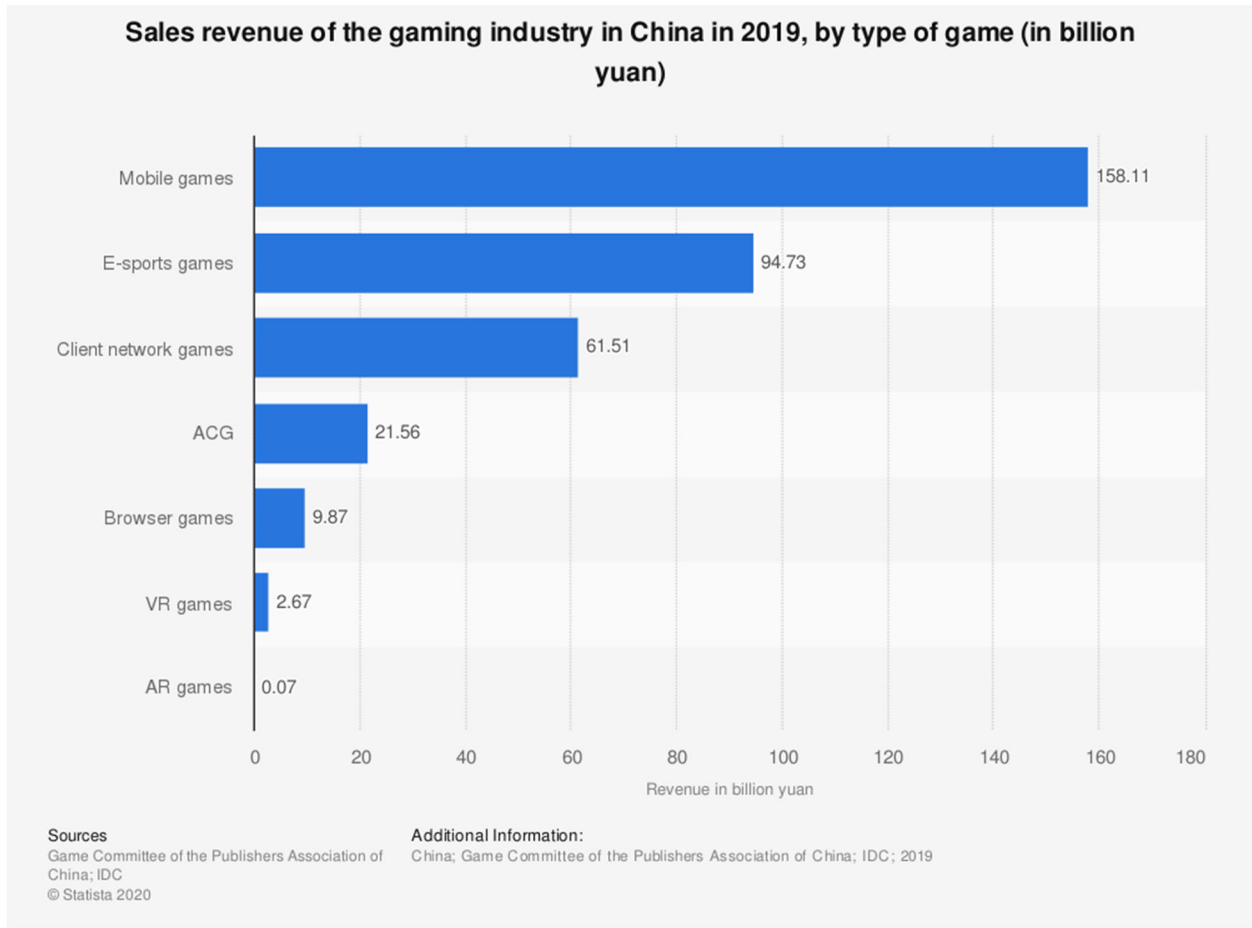
Note: Most streamed games on Twitch in June 2020.

Figure 4



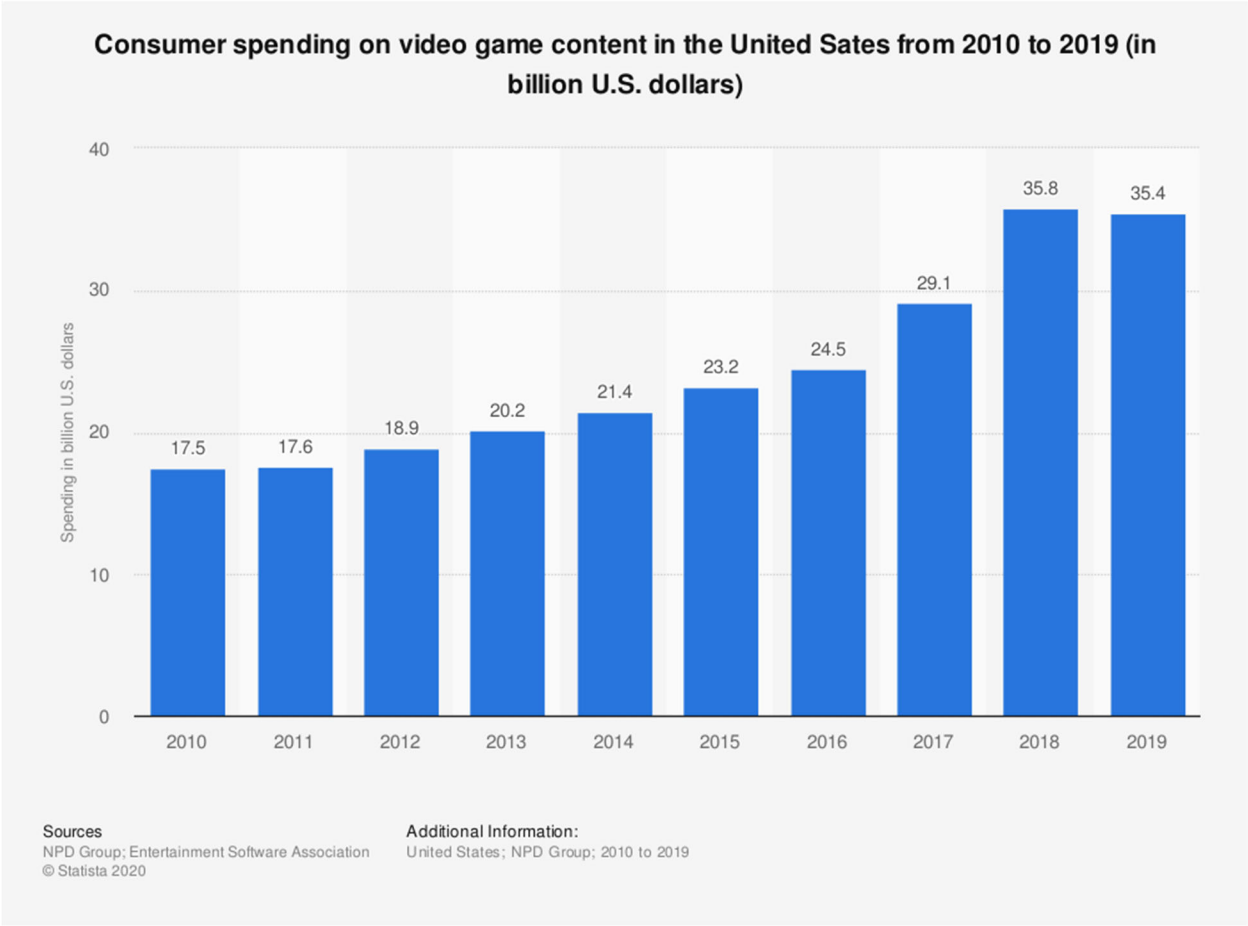
Note: Leading gaming markets worldwide in 2019.

Figure 5



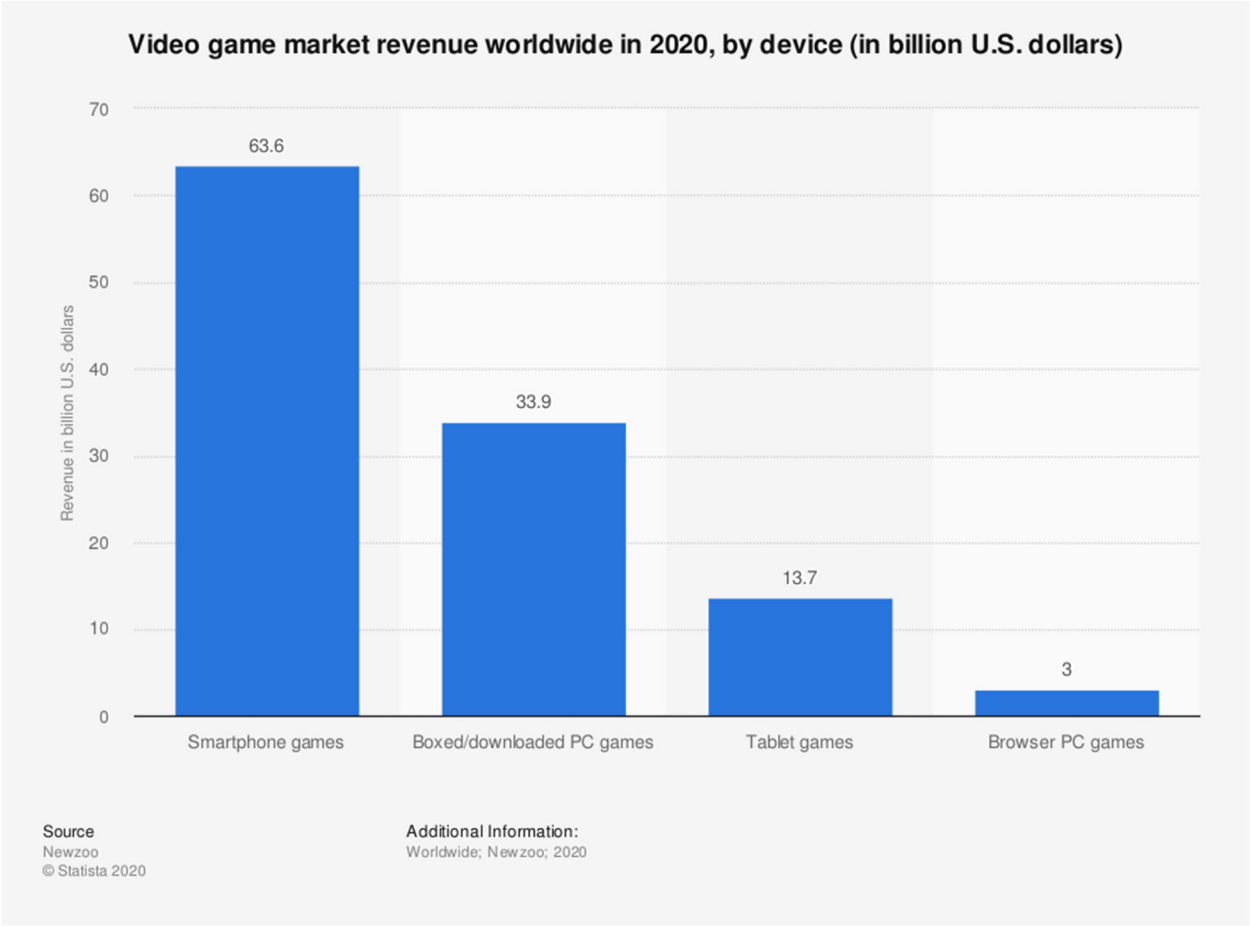
Note: Sales revenue of games in China, 2019.

Figure 6



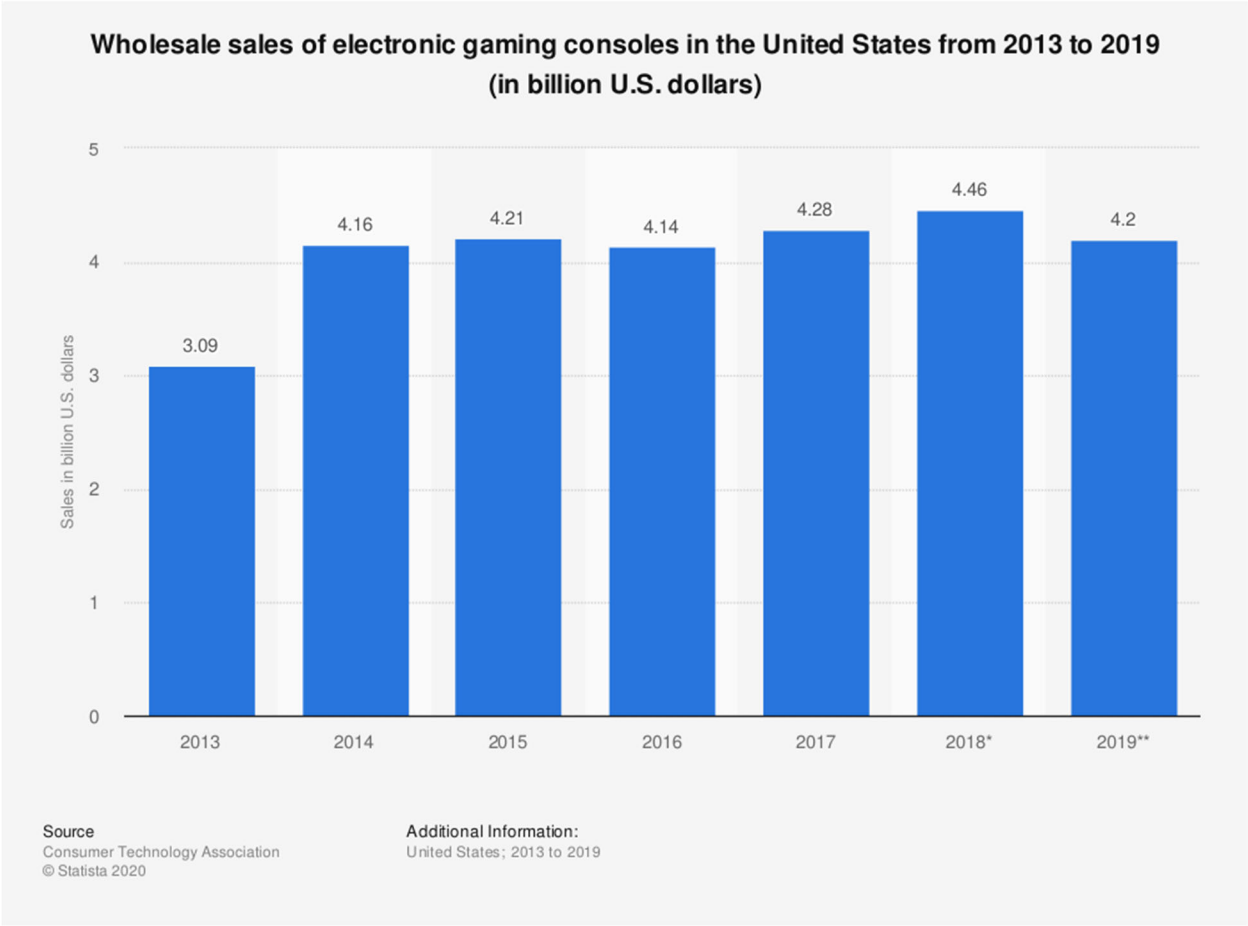
Note: Consumer spending on video game content in the United States, 2010 to 2019.

Figure 7



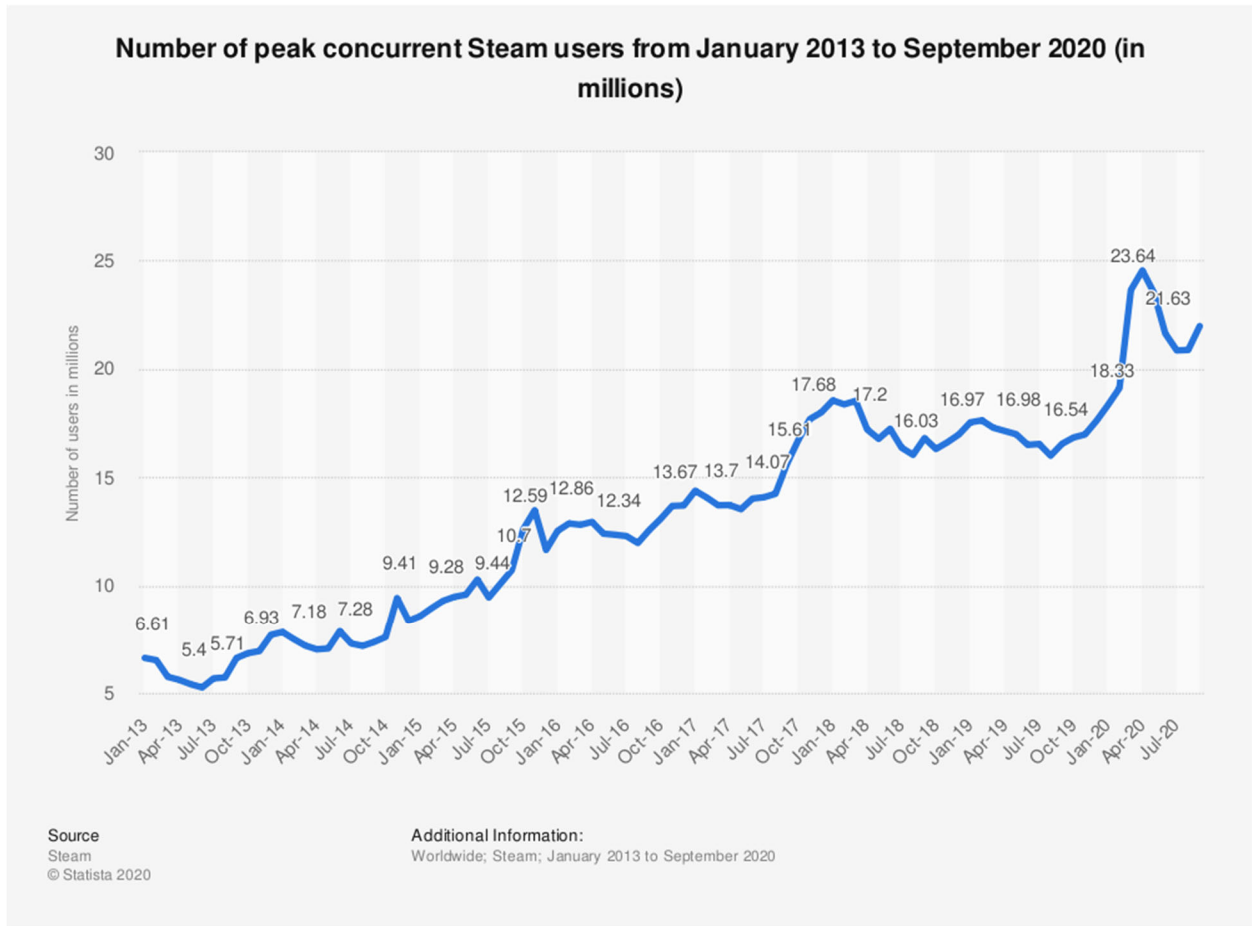
Note: Video game market revenue in 2020, by device.

Figure 8



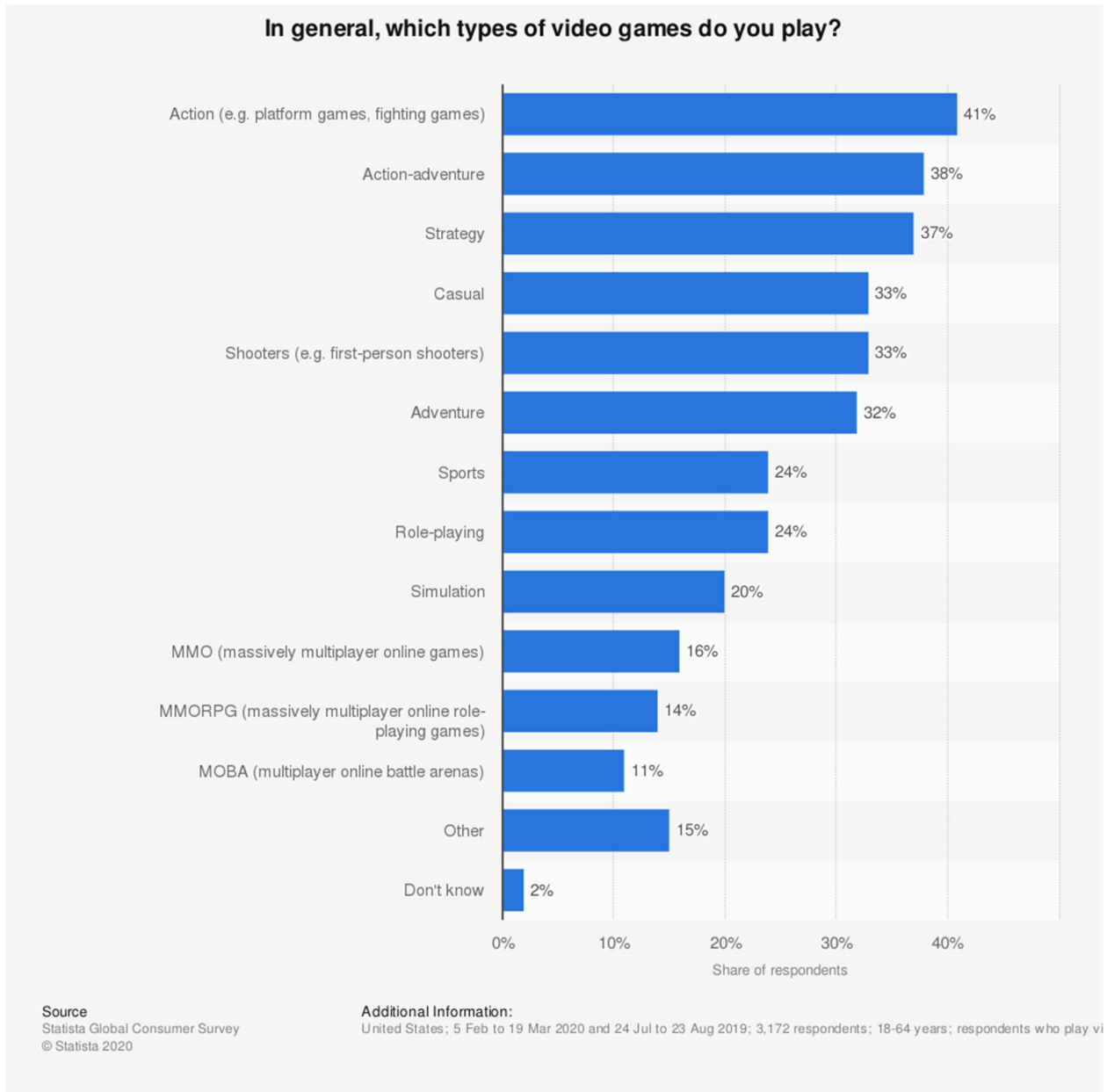
Note: Wholesale sales of gaming consoles from 2013 to 2019.

Figure 9



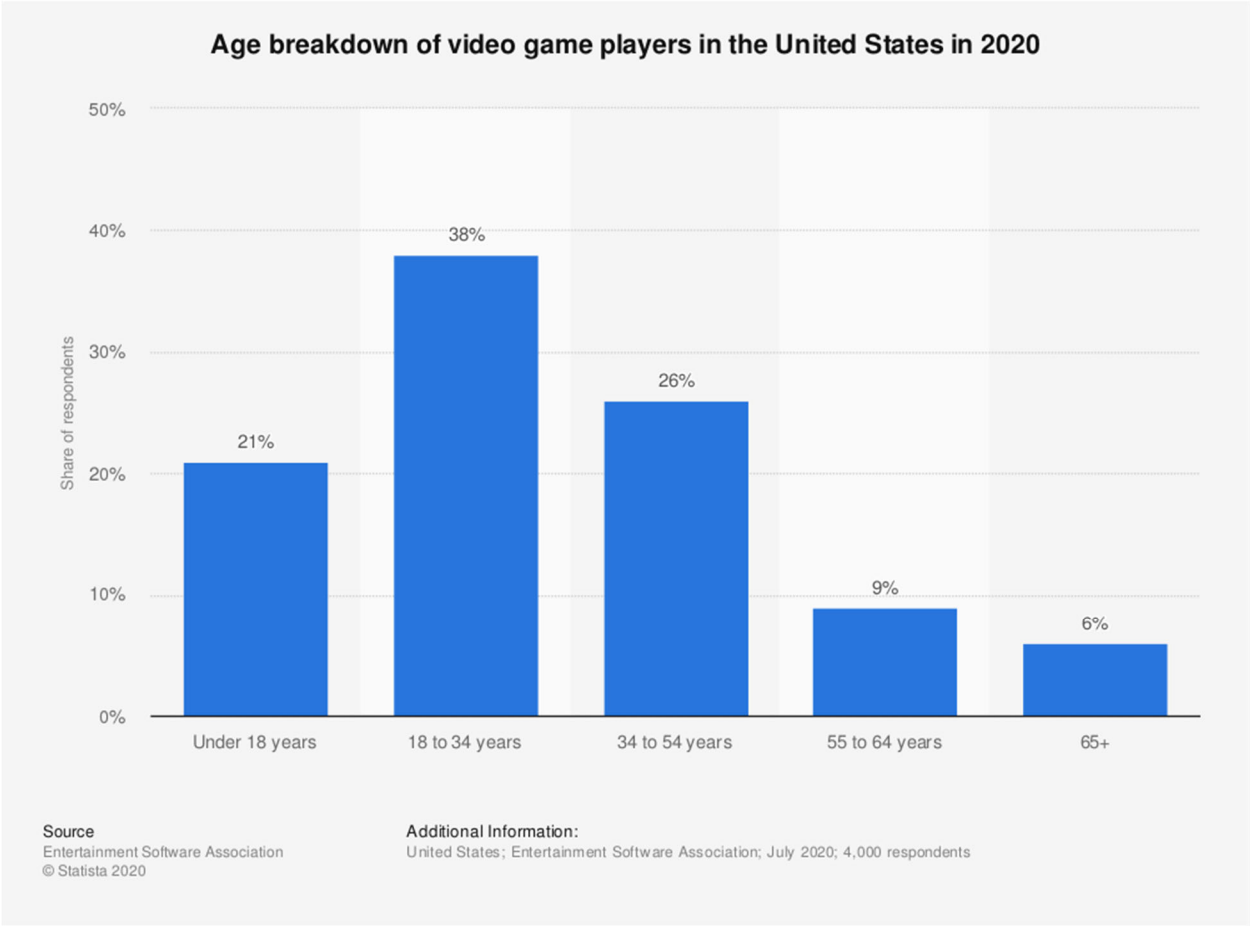
Note: Peak concurrent users on Steam, 2013 to 2020.

Figure 10



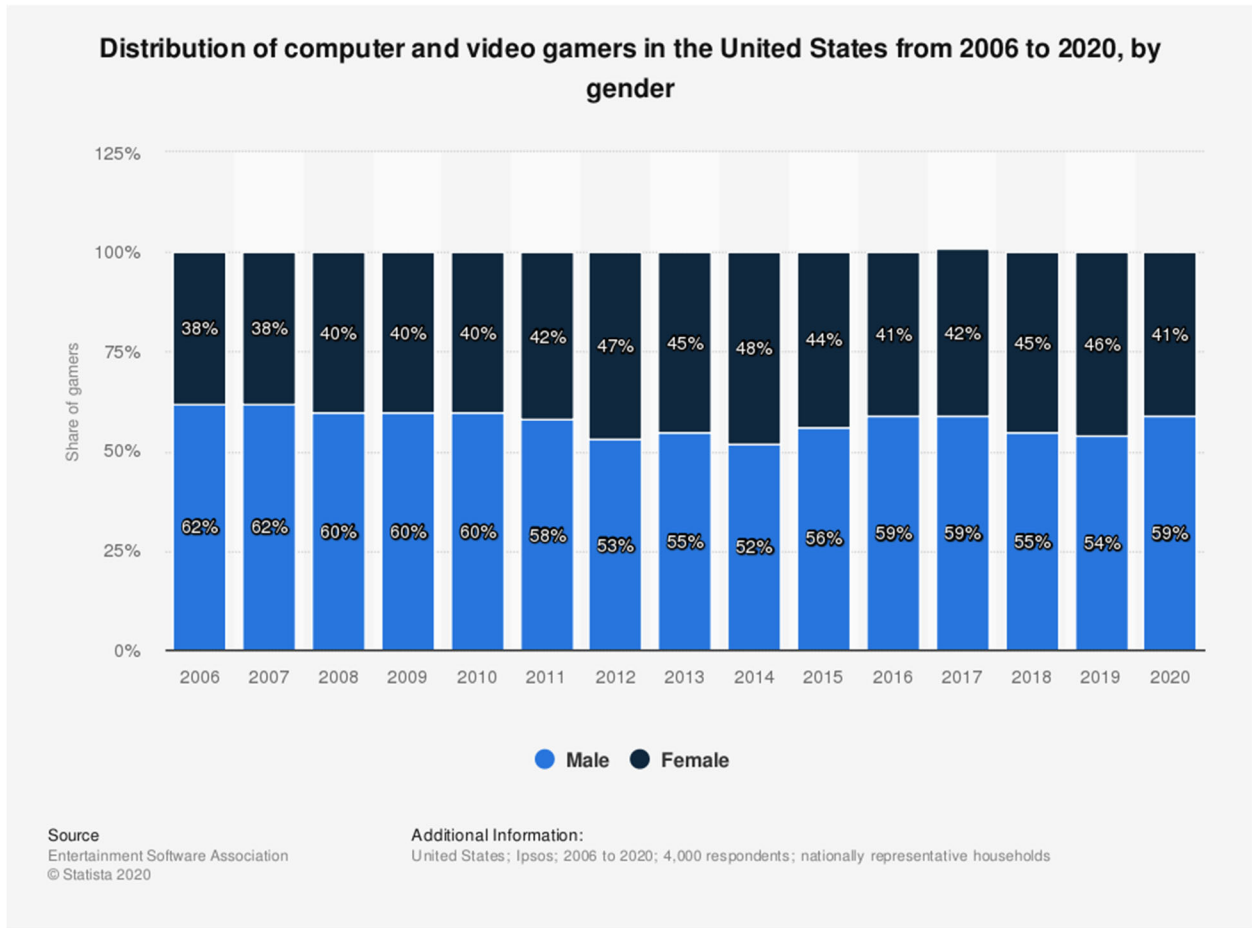
Note: Most played genres of video games.

Figure 11



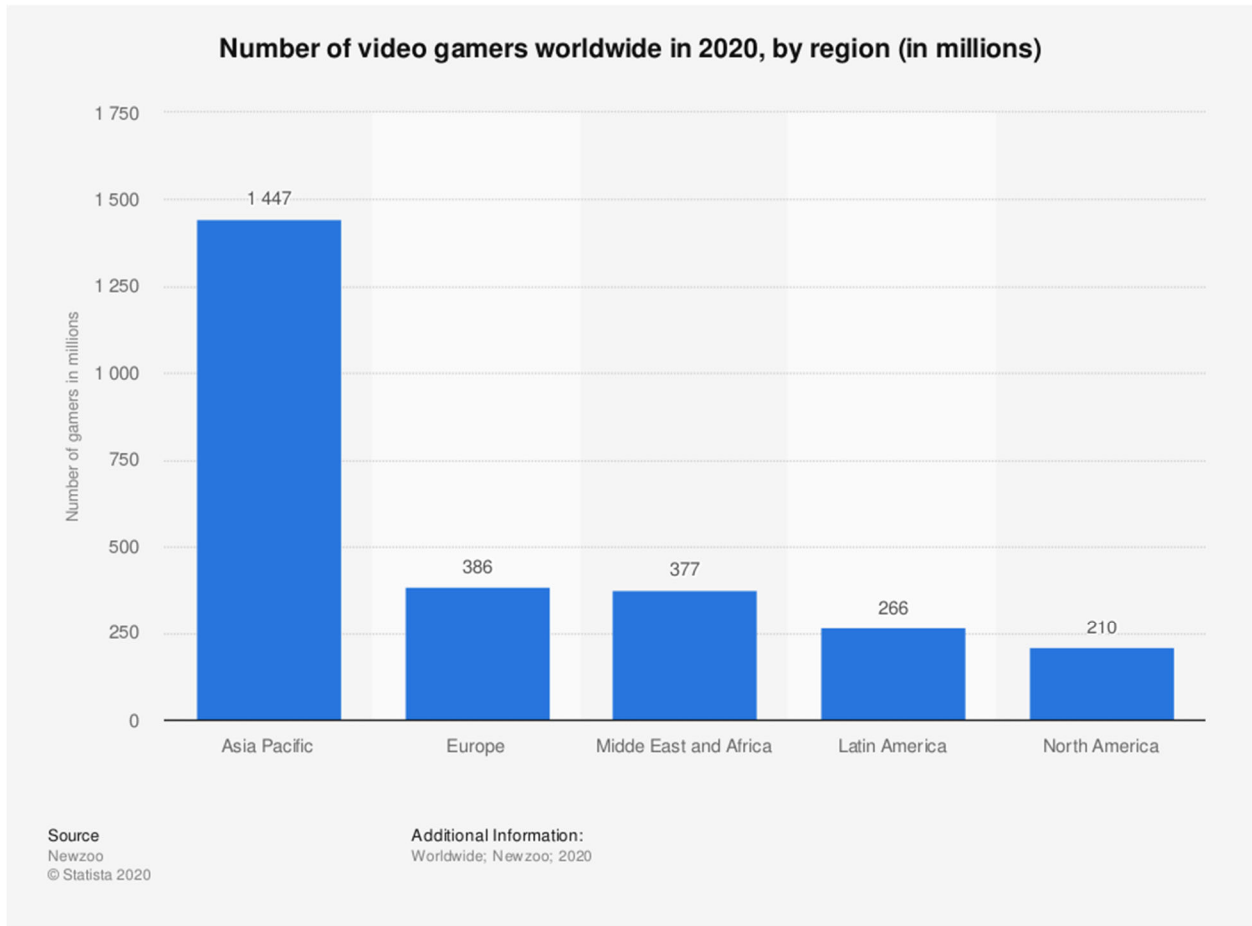
Note: Age breakdown of gamers in the United States, 2020.

Figure 12



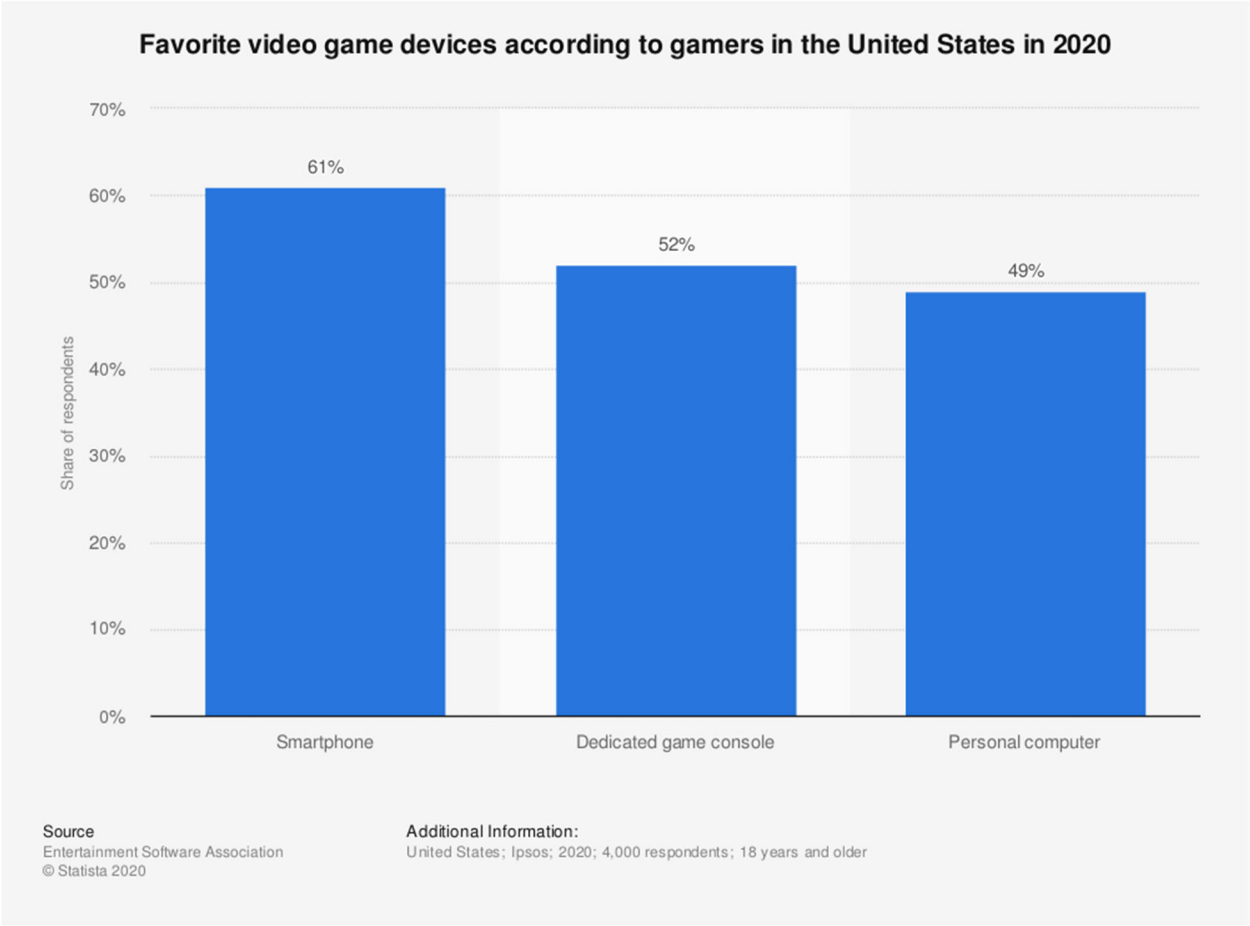
Note: Breakdown of gamers in the United States by gender, 2006 to 2020.

Figure 13



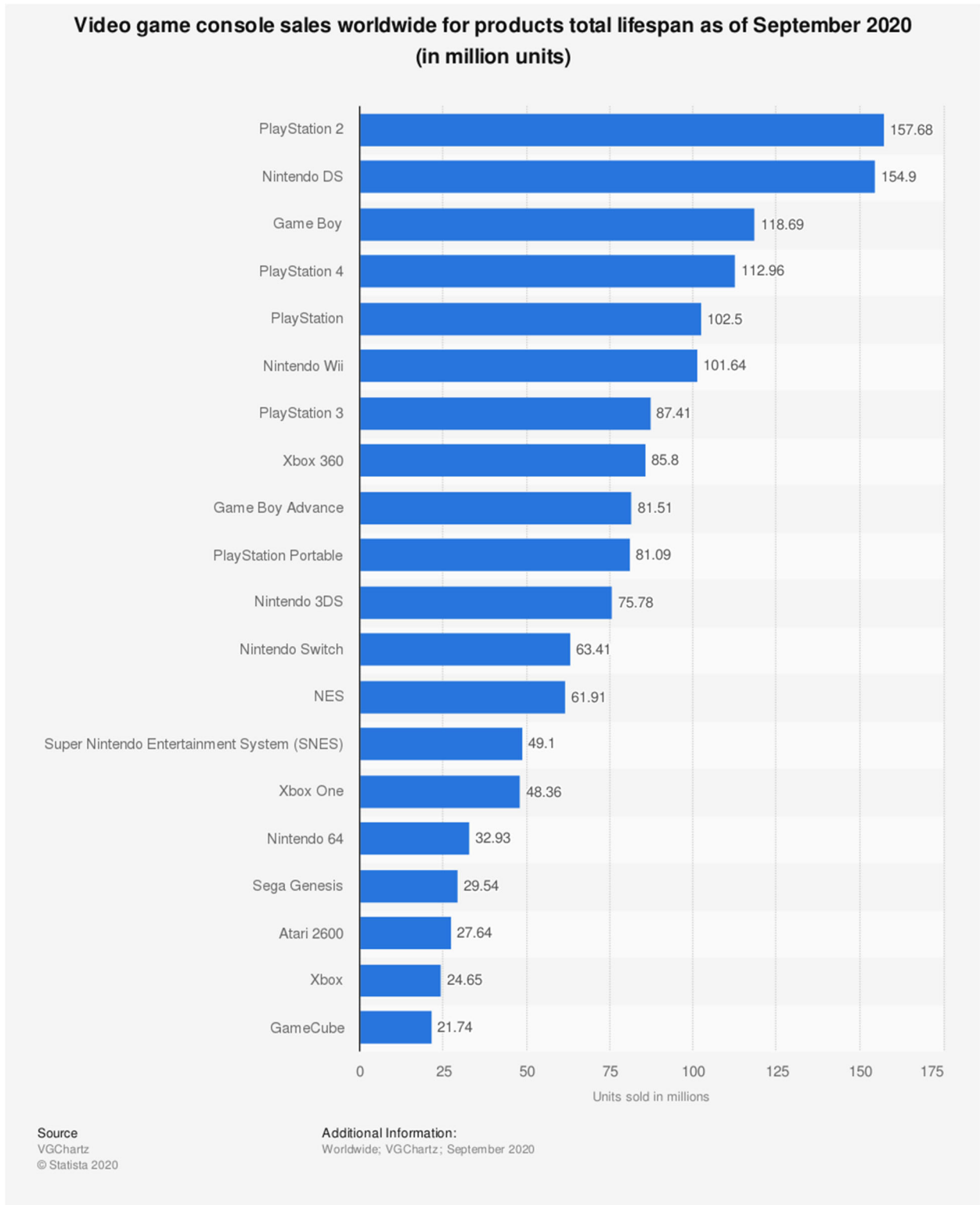
Note: Breakdown of gamers worldwide by region in 2020.

Figure 14



Note: Favorite game devices according to players in the United States in 2020.

Figure 15



Note: Lifetime sales for video game consoles, 2020.