Gaming Industry and its Innovations

**Abstract - India's gaming business is thriving. Video games are progressively displacing traditional games, which has a direct impact on how internet users use their leisure time. The accessibility of platform and game distribution mechanisms is a major contributor to the surge in online gaming enthusiasm. A new sector has sprung up as a result of the growing popularity of online gaming. The gaming sector, which comprises inventive experts, has grown to prominence in recent years. As per capita income rises, interest rates rise, and the number of dual-income households rises, the gaming business expands, all of which contribute to the market's development. Because of rising usage of smartphones and consoles, as well as cloud penetration, the industry is likely to grow substantially in the future. In addition, the sector is experiencing tremendous growth in terms of consumers and games downloaded as a result of the current COVID-19 epidemic.**

**Keywords –** *Gaming industry, growth*

***Introduction***

The gaming industry is currently worth billions of dollars worldwide, and there are over 2.5 billion gamers, with that number expanding at an exponential rate. In 2019, the average number of users in the gaming industry was 2.48 billion, up 8% over the previous year. Individuals love not just playing games for themselves, but also sharing their gaming experiences with others through social media sites such as Facebook and Twitter.

Video gaming and programming divert our attention away from the traditional definition of a game, allowing us to investigate the influence of redefining games on human civilization. The game helps users to divert their attention away from real-world issues and toward other priorities and behavioral adjustments in everyday life. Continuous innovation is propelling the video game industry forward. Scholars have introduced the notion of "gamification", which claims that psychological components in the game influence employee motivation and energize the customer.

The gaming business thrives on new ideas. It's projected that new technologies, controls, and experiences will emerge. The industry's future appears bright as more people play games, generate demand for immersive entertainment, and seek simpler access to games. Gaming will become a more important income area as the globe moves away from time spent on mobile phones and streaming services on mobile phones, and huge technology firms will try to leverage their present frameworks to become involved. Another fascinating development in the market is the growing demography of gamers.

***Gaming Industry in India***

With 628 million online gamers, India's gaming business is expected to be worth $1.1 billion by 2020. This gain in popularity is partly due to increasing public access to video games, as well as multi-platform distribution and a saturated and inexpensive technological market, which assures that smart gadgets reach even more people each year. By 2021, India's internet penetration is predicted to reach 53% of the population.

In India, the typical player spends 42 minutes every day playing mobile games. According to a KPMG report, the digitalization of traditional Indian games would reshape internet gaming in the future. Many Indian game developers have experimented with this notion, generating online games in a variety of local and regional Indian languages, as well as online versions of popular card games like Rummy and Teen Patti.

In India, there are a few main divisions in the gaming market. Individual gaming is the most frequent, followed by multi-player gaming (both offline and online) and a fast increasing ecosystem of fantasy sports. Due to their growing popularity, Indian companies such as Mobile Premier League have developed tremendously. MPL is a platform that allows players to compete in e-sports competitions using their Android devices and win cash. Virtual-reality gaming is also a rapidly expanding field in India, with big names like Google and Samsung leading the way in terms of VR adoption.

The Indian gaming business has recently attracted global investment as well as a slew of domestic efforts. Tencent, the Chinese internet behemoth with holdings in famous games such as League of Legends, Call of Duty, and World of Warcraft, plans to invest in India's gaming business. Last year, Youzu, a big Chinese gaming developer, released an Indian version of their popular strategy games. StomStudio, a gaming company located in Vietnam, recently teamed with Gamesbond, a mobile game developer in India, to produce mobile games.

***Global Gaming Industry***

From $167.2 billion in 2019, the global gaming business is predicted to drop to $166.4 billion in 2020. The drop is mostly due to a global economic slowdown caused by the COVID-19 epidemic and the actions taken to contain it.

Furthermore, the CAGR (Compound Annual Growth Rate) for this business is expected to be 12 percent between 2020 and 2025. It is expected to rise much more as a result of the COVID-19 epidemic, which is causing more individuals to stay at home. As a result, we should expect new gaming trends to reshape the industry's face.

Game developers in emerging economies are continually seeking to improve gamer experience by launching and editing codes for a variety of platforms, including PlayStation, Xbox, and Windows PC, which are integrated into a single product supplied to gamers via the cloud platform.

In 2021, income from video games are estimated to reach $180.1 billion. We've previously established that mobile gaming is sweeping the globe, with its market share anticipated to increase by 59 percent. Furthermore, by 2021, PC games are expected to produce $32.3 billion in revenues and account for 19% of the worldwide games industry.

***Mobile Gaming Industry***

Mobile gaming is a $106 billion market, more than both PC and console gaming combined (in terms of revenue). It is increasing at a rate of 26.8% each year, 2.5 times faster than PC. Mobile games have the most consumers since they are easily accessible, making them the ideal platform for popular adoption of NFT-gaming.

In 2020, the mobile gaming business will be one of the most profitable industries on the planet. With a tremendous turnout of $77.2 billion in the previous year, 2021 shows no signs of slowing down. The number of players has increased by 12%. With approximately 2.5 billion gamers in 2020, the mobile gaming market will have grown by 12% from 2019.

In 2020, the epidemic fueled the rise of the mobile game industry. The year 2020 will be remembered as the year of the pandemic. Everything came to a standstill that year, and humanity faced difficult circumstances.

Despite the fact that the rampaging epidemic killed numerous enterprises across various industries, the gaming industry was spared. Mobile gaming is one of the most well-known options. Mobile gaming is easier and more convenient than other channels while yet giving the same amount of pleasure.

**2020 mobile game statistics**

We'll look at the numbers to see how quickly the mobile gaming business expanded in 2020. As you can see, there were several advantages. To make things easier for you, we've divided the data into distinct categories:

Revenue Statistics

* Revenues of $77.2 billion USD are expected in 2020.

In 2020, the mobile gaming business will be one of the most profitable industries on the planet. With a tremendous turnout of $77.2 billion in the previous year, 2021 shows no signs of slowing down.

* The number of players has increased by 12%.

With approximately 2.5 billion gamers in 2020, the mobile gaming market will have grown by 12% from 2019. With travel still restricted and people confined to their houses, the figure is expected to rise much further this year.

* In the second quarter of 2020, alone, $19 billion was spent.

During the second quarter of the previous year, Lockdown prompted a boom in the number of players. In the year 2020, gamers will have spent more than $19 billion on mobile gaming.

* Apps for iOS account for 25% of all downloads, while Android apps account for 21%.

Mobile games account for around 21% of all Android app downloads and 25% of iOS app downloads. This proportion is projected to rise in 2021, with numerous investors and developers releasing exceptional games.

**Analysis and trends in the mobile gaming industry**

There's no denying that 2021 was an active and record-breaking year for the gaming industry, with IPOs, iOS 14, legal disputes, and new business models dominating the news. Here are some significant trends to keep an eye on in order to prepare for 2022.

1. **Play-to-earn is becoming more popular.**

Since pay-to-play and, more recently, free-to-play, the most dominant business model has been play-to-earn (P2E). P2E games, which use blockchain technology to create real money and store it in a crypto wallet, allow players to resell their assets at any time.

1. **Building a brand is crucial.**

It's no secret that advancements in privacy have posed new obstacles for acquiring mobile users. Building a brand and community around your app is more important than ever for expanding installations and improving retention as UA becomes more challenging.

We'll see more opportunities for community management as brand creation becomes increasingly important. As a result, you'll have someone dedicated to increasing user engagement and creating a more cohesive shared experience across players. As developers adjust for the difficulty of performance marketing activities in this new privacy period, there will be more brand marketing efforts.

1. **More businesses are venturing into the gaming industry.**

This past year, prominent entertainment businesses and IT behemoths dabbled with gaming, drawn in by the industry's scale and reach.

Apple Arcade and Google Play Pass are both subscription-based, all-you-can-eat mobile gaming libraries. While Amazon's gaming branch has been operating for a while, the MMO 'New World' was its first hit in over a decade this year. Even Netflix has strayed from its basic business strategy, creating titles that are available worldwide on iOS devices. And social media applications like Tik Tok and Snapchat are demonstrating that they can be excellent publishing venues.

***PC Gaming Industry***

PC games, often known as personal computer games, are video games that are played on a computer using keyboards, mice, joysticks, or gamepads. The lack of a central governing authority and a higher capacity for input, processing, and output distinguish these games. PC games momentarily lost market share to consoles in the mid-1990s, but owing to digital distribution, they rebounded in the mid-2000s. Locally or online, games can be played.

PCs are called to as the "master race" in jest. The phrase relates to the PC platform's alleged supremacy in the gaming sector. And, while nothing can equal PCs in terms of raw power, consoles have progressively and slowly undermined PCs' previously unchallenged dominance. In 2021, the PC gaming market is expected to be worth $45.5 billion. According to PC gaming statistics, about half of all PC owners use the device to play video games.

In 2019, the global revenue from free-to-play PC games reached $21.3 billion. Razer is the industry leader in peripherals, with 12.83 percent of the entire PC gaming market share. Approximately 66 percent of all gaming studios are now working on PC games.

**Advantages of PC Gaming**

PCs provide a variety of benefits, including the ability to personalize your PC, set hotkeys, produce crisper and more lifelike pictures, improve peripheral accuracy, and edit games more easily.

1. **PC hardware may be customized.**

You may select where, when, and how much you want to invest in your computer by creating your own gaming PC. Some gamers invest in a high-end computer in order to run the latest game releases at the highest settings available. Others opt for a low-cost gaming PC and update only when necessary.

1. **The graphics have improved.**

It is one thing to win the competition, but it's quite another to watch it in the highest possible quality. You have control over how crisp the pictures are, whether you use integrated graphics or a graphics processing unit (GPU) or graphics card. You may also play games on numerous displays at once on a PC.

1. **Gaming peripherals give you more control over how you play.**

Unlike consoles, which limit how you may play, PC users have a large selection of controllers and mouse to pick from. Wireless controllers, joysticks, and even a steering wheel for racing games are available on most consoles, allowing gamers to kick back and relax.

1. **PC games are less expensive.**

While many gamers focus on the expense of establishing a PC, one of the less well-publicized benefits of PC gaming is the pricing of PC games. Many digital distribution channels now sell PC games, allowing gamers to compare prices and discover that PC games are sometimes less expensive than console-specific versions.

1. **Exclusively for the PC**

True, certain games are only available on consoles, but many other popular games are only available on PC. Consider which systems provide the games you enjoy before making a decision, just as you would with a console.

***Console Gaming Industry***

A video game console is a device that is used to play games. The game is shown on a video picture produced by the console. Home consoles, portable consoles, microconsoles, and dedicated consoles are all examples of consoles. The console has developed into a single device that can function as a set-top box, web browser, and CD/DVD player.

The video game console business has been defined for the previous two decades by a power struggle between three big companies: Sony, Nintendo, and Microsoft.

From one hardware generation to the next, these behemoths fought for every single percentage point of the video game market share. However, it has never been more clear who the frontrunner is. This is due to a shift in focus away from pure console sales and toward paid subscription models such to Netflix.

Two-thirds of console gamers prefer physical games over digital games, according to the most recent research on video game trends. Sony's PlayStation dominates 8th-generation console sales, selling 2.5 times as many as Microsoft's Xbox.

Year-over-year revenue growth in the console video game industry is forecasted to be 13.4 percent. Nearly a quarter of game creators selling on Switch reported their items sold better than on other platforms. With over 36.4 million monthly PlayStation Plus customers, the video game industry is becoming increasingly reliant on the paid subscription model.

***Statistics about the Video Game Industry***

The video game business is clearly one of the most important industries in the world today. It is one of the most lucrative sectors to invest in or work in, with hundreds of billions in sales. New titles are continually being released by developers for players to enjoy. On Steam, a prominent video game marketplace, 8,000 titles were launched in 2019. The following statistics depict the video game industry as a whole:

* In 2020, there will be 2.7 billion gamers on the planet.
* The Asia-Pacific area has 1.5 billion players.
* At least one gamer lives in 75 percent of American households.
* The top three gaming markets in the world are China, the United States, and Japan.
* Half of all game developers were born in the United States.
* In 2019, university graduates made up 40% of game developers.
* In the United States, Call of Duty: Infinite Warfare is the most popular game.
* In 15 nations, FIFA 17 is the most popular game.
* With 157.68 million copies sold since its release, the PlayStation 2 is the best-selling gaming system of all time.
* In 2019, the United States employed 53% of all game developers.
* Sixty-six percent of game developers are working on PC-based games.
* For 47 percent of game creators, Steam is the most popular shop.
* VR and AR games are being developed by 48% of gaming firms.
* As of March 2020, League of Legends is the most popular PC game on the planet.
* With 66.5 million hours viewed on Twitch, Counter-Strike: Global Offensive is the most popular video game.

***Game Age Statistics***

Movies are meant to be enjoyed by people of all ages, and video games are no exception. Playing video games is no longer restricted to the young. The average age of a gamer is in his or her 30s. Furthermore, even the elder age is using their smart devices to play digital versions of games they are familiar with, such as mahjong, card games, and others.

* A gamer's average age is 33 years old.
* The average age of female gamers is 34 years old.
* A male gamer's average age is 32 years old.
* The majority of gamers, 16.3 percent, are between the ages of 18 and 24.

*Gamer Gender Statistics*

Gamers are frequently portrayed as the nerdy couch potato who lives in his parents' basement. This will no longer be the case in 2020. The days of male dominance in the video game business are long gone. Gaming is popular nowadays, regardless of gender - the numbers speak for themselves.

* In 2019, male gamers account for 54% of all gamers in the United States, while female gamers account for 46%.
* Males account for over 80% of the game development sector, while girls account for barely 19%.
* God of War, Madden NFL, and Fortnite are among the most popular games among male millennial players.
* The most popular games among female millennial gamers are Candy Crush, Assassin's Creed, and Tomb Raider.

***Gamer Behavior and Perception Statistics***

Gaming, contrary to popular (but fast vanishing) opinion, has a number of advantages for people. Gaming, according to several studies, helps people improve critical thinking and creativity. Video games are, for the most part, a way for individuals to get away from the stressful situations they find themselves in. Furthermore, many of the games currently available on the market are played online and may be played with others. Battle royal games like Fortnite and MMORPGs like World of Warcraft are just a handful of the games that are best played with friends.

* 65 percent of adults in the United States play video games.
* Ninety percent of parents say they pay attention to their children's games.
* In the next presidential election, 59 percent of gamers are certain to vote.
* Gamers are 56 percent more likely than typical Americans to have a creative pastime.
* In the United States, 32% of gamers play a musical instrument.
* Games give mental stimulation to 79 percent of gamers.
* According to 78 percent of players, games give relaxation and stress alleviation.
* In the United States, 63% of gamers play with others.
* Adult gamers play with others online for 4.8 hours each week.
* Adult games take up 3.5 hours of their time to play with others in person.
* Before making a purchase, 39% of gamers look at YouTube videos.

***Video Game Revenue Statistics***

The video game industry is a booming business. The sector is expected to rise year over year, according to experts. Game creators are likewise getting more strategic in their marketing efforts. Previously, you could buy a game and get all of its features, but nowadays, game developers frequently provide the option of purchasing downloadable material to unlock specific stages or add extra plot content. Many people appear to have accepted this strategy, as seen by a 2019 forecast that gamers would spend a total of $152.1 billion on games. Other significant facts concerning the gaming industry's income may be found in the statistics below.

* In 2022, the worldwide game market is expected to generate $196 billion in sales.
* In March 2020, gaming income in the United States was estimated to be over $1.6 billion.
* In 2019, video gamers are expected to spend a total of $152.1 billion on games.
* The average price of a game on Steam in 2020 will be $9.65.
* In 2019, income from free-to-play games climbed by 8%.
* With $1.8 billion in sales, Fortnite is the highest-grossing game of 2019.
* In 2018, the independent gaming market is expected to be worth $1 billion.

***Video Games: More than Entertainment***

The world of video games is always changing. The introduction of augmented reality (AR) and virtual reality (VR) technology will undoubtedly have a significant influence on the business. Gaming is now considered as more than simply a way to pass the time. Gaming is a source of income for millions of individuals. Twitch, a famous live video streaming website, has provided a platform for tens of thousands of gamers to make a reputation for themselves.

Furthermore, the emergence of e-games as a sport has piqued the curiosity of many people in the sector. For many people, gaming has now become a viable job option. The numbers in this page are intended to enlighten as well as demonstrate the potential for doing business with this industry. Taking notice of gamer behavior and insights may also help your brand stand out in this particular market.

***Chain of Value***

The value chain for video game creation is distinct. As the game reaches the customer, this chain sets the ultimate pricing. This chain is made up of the following essential components.

1. **Investment**

Investments in this business are increasing, owing to the popularity of the industry. An investment might come from the platform that will host the game or from a huge publishing house. Independent game creators have the option of self-funding their projects. At this point, the main difficulty is to prevent copyright infringement and piracy.

1. **Creative and Design**

This is where the game's creative development by artists, designers, and developers takes place. From a fundamental notion to a project plan, the game is transformed. At this step, documents and guidelines are established to aid game production. Treatment documents, which explain the game's aim, game play, plot, character descriptions, and concept art, are among them. This is then translated into the design document in greater depth. An art style guide is also established to ensure that the game has a consistent appearance and feel throughout. To keep everyone on track and define timetables, a project plan will be prepared towards the end.

1. **Tools and Production**

This is the gear and software that will be utilized during the game's real creation. Modeling and visual manipulation tools are examples of production tools. Larger systems may have their own game engine, while smaller ones may rely on licensed middleware.

1. **Publisher/Distribution**

The game publisher will work on marketing tools and catalogues in order to get the game into the market and assure a profit.

1. **Hardware**

The gaming hardware vendors are involved in this area of the value chain. Since most games made these days may be accessible in the same way, these firms may be spread over many platforms. Some of these corporations may pay a premium or make special arrangements to debut a game on their platform first and only for a limited time. Microsoft, Apple, Sony, and Nintendo are the largest of these corporations.

1. **The End User**

The end user, or gamer, is an important component of the value chain. The majority of them are males of various ages, but with the development of mobile and internet gaming, women have become a substantial part of the business.

***Trends to Watch in the Gaming Industry in 2020-2021***

1. **Improved Graphics**

Every year, video game visuals improve and become more realistic. You may now totally digitize an alive actor and transfer his or her face looks and motions to the screen in order to create a character. Drawing details is also improving, allowing the user to experience the full range of emotions available in the game. Of course, if you want things to look as well as possible, you'll need a decent monitor. When comparing an expensive monitor to other standard displays, there is a significant difference. Even in 2021, anyone who use their PC for work, gaming, or video editing will tell you that investing in the greatest 144 Hz 1080p display is the way to go.

1. **Recognition of Faces and Voices**

Face recognition technology has previously been applied in a variety of sectors, including gaming. With the advancement of technology, gamers will soon be able to scan their looks in order to create characters that are similar to themselves in numerous games. Human speech recognition is expected to undergo a similar transformation. You'll be able to control the entire game and even turn the console on and off with it.

1. **5G will continue to propel cloud gaming forward.**

Although it would be exaggerated to label 2019 the year of 5G, it was the year that marked the start of the global shift to 5G adoption. 2020 may or may not be the year 5G becomes genuinely ubiquitous, but one thing is certain: 5G will seek to impact the most recent breakthrough in the gaming industry: cloud gaming.

To stay competitive, the gadget will need to improve its broadcasting capabilities and keep its library up to date in order to serve its increasing audience.

1. **Smartphone**

The smartphone gaming business is rapidly expanding, providing investors, mobile developers, and publishers with a cost-effective opportunity.

In addition, despite the COVID-19 epidemic hurting the digital sector, online gaming is gaining traction as one of the finest ways to enjoy yourself at home. The market is experiencing a significant increase in app downloads, as well as increased time spent and involvement in online gaming.

***The 7 Most Important Gaming Technology Advancements***

1. **Displays in High Definition**

As game visuals have progressed, there has been a desire for better consoles in order to fully enjoy the experience. People may now purchase gadgets that link directly to their HD TVs or laptops. This has progressed to the point where Ultra 4K quality gaming is now possible. This provides an unrivalled gaming experience and has allowed game visuals to advance to the point where they are nearly film-like.

1. **Controllers that have been improved**

Since their inception, controllers have seen significant evolution. Because of the gaming industry's fast expansion, developers saw the promise of new user-interface technology, and an entire science devoted to inventing radical controllers to maximize the gaming experience arose.

Despite the fact that new gaming gadgets are always being introduced, controllers remain one of the most technologically advanced gaming devices. Among their amazing attributes are:

* Increased tactile sensations via haptic feedback, such as rumbling and shaking, that let users to feel what's going on in a game better built-in mics to assist conversing with other player’s 3D audio that promotes more immersive gaming

1. **Gaming in an Open World**

Older games had to be made with a lot of stages so that the player would take longer to get to the conclusion. With the introduction of open world or sandbox games, this became less important. These games provide the player with a large interactive environment, complete with various NPCs and hours of gameplay.

The usage of Wi-Fi to allow players to connect through the game took this notion even farther. Games today provide more diversity in terms of gameplay, as well as nearly limitless environments for the user to explore.

1. **AI**

Artificial intelligence advancements have had a significant influence on the gaming business. While AI has been present in video games since the 1950s, the newest technology is significantly more advanced. It may now provide NPCs with intellect that is close to that of humans (non-player characters).

The fundamental effect of these technology advancements is that certain games now allow players to modify the game while playing. The decisions users make can have a direct impact on the game's plot and NPC replies.

1. **Audio and visuals have been improved.**

The gaming business is the place to go if you want to see some of the greatest implementations of the newest technical developments.

You'll not only uncover the most fascinating technologies, but you'll also be enticed to try them. However, creators recognize that a fantastic game isn't enough to improve the gaming experience.

It's also vital to note the underlying technology that provides their games their oomph factor. So whether it's noise-canceling headphones or HD graphics that allow stereoscopic 3D viewing, you need cutting-edge technology that puts you right in the thick of the action.

1. **Haptic Technology**

This isn't a new trend, but it's one that individuals in the game industry increasingly take for granted. The system that feeds back to the user with jolts and sensations is known as haptic technology. It was the first technological advancement that allowed players to get more engrossed in the game. Almost all electronic gadgets now have haptic technology. Even if you're playing on your phone, you'll feel vibrations while playing.

1. **Gaming on Demand**

People no longer need to buy the games they enjoy. We are currently in an era where gamers can watch, play, and share games from anywhere, at any time, on any device, thanks to the development of internet gaming and mobile gaming.

Game makers, like movie streaming services like Netflix, understand that giving subscription-based gaming services has a significant benefit. It's no surprise that Sony's PlayStation Now catalogue has over 400 games. Players can pay a monthly subscription to stream these games and play them on their PCs or consoles.

Furthermore, subscription-based gaming websites such as Unlimited Gamez Mo have appeared, making online games more enjoyable and accessible.

***Conclusion***

As a result of the epidemic, media organisations and brands have realized that there is still an addressable market of highly engaged people. We may anticipate the gaming business to expand its collaborations with other entertainment industries.

During the forecast period, between 2020 and 2026, the global gaming market is predicted to develop at a high rate. The market was expanding at a moderate rate in 2020, and the market is expected to rise over the forecasted perspective due to rising adoption of plans by major companies.

The increased interest in gaming may hasten a trend toward game distribution via mobile and cloud-based systems, which is already occurring. The gaming business is predicted to have a bright future, thanks to technological advancements.

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