Factors affecting growth of Console and PC Video Games in India and their comparison with Other Digital Entertainment Sources

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Abstract-

Digital entertainment industry is amid unprecedented growth phase fueled by lockdowns during the pandemic. India too has seen tremendous growth in OTT, mobile games, and subscription-based music industry both in revenue and consumer base, but the growth has been lethargic in PC and Console Video Games in India. This study analyses the difference between Console and PC games and other digital Entertainment sources across seven parameters that are Price, Hardware requirements, Active and passive form of entertainment, time consumption, Marketing and advertisements, social approval and piracy within the Indian context. We conclude that PC and console games are unable to grow in India due to higher prices, expensive hardware requirements and time requirements to complete a game when compared to other entertainment means. Social awareness and approval and need for active participation may also reduce consumer interest in Video Games. Impact of piracy and marketing and advertising is difficult to ascertain due to unavailability of enough data on the same. This paper emphasizes the need for pricing the video games according to purchase power parity and growth of cloud gaming in India among other things to make India one of the largest PC and console Video game Markets in the world.

Key Words: Video Games; Digital Entertainment; PC Games; Console Games; Piracy

I.   Introduction-

In recent years, digital entertainment has seen phenomenal growth globally. The emergence of subscription based Over-The-Top (OTT) entertainment applications like Netflix and Amazon prime made a paradigm shift in how digital entertainment is consumed around the globe. The Corona pandemic and the subsequent lockdown also helped in unprecedented consumption of digital content. The video game industry also had a growth spurt largely backed by new console launches by Sony (Playstation 5) and Microsoft (Xbox Series X/S).

The Global video game Console and PC industry is forecasted to be valued at $160 billion in 2023, which is around 48% of overall Video Games market of $334 billion. The overall video game market (including mobile games) is expected to grow at a CAGR of 8.74% from 2023 to 27 to be valued at $467.00 billion in 2027. (Statista Market Insights, 2023)

Indian video game market is valued around $1 billion in 2020 and growth rate is forecasted to be around at CAGR of more than 20% (Mordor Intelligence, n.d.) but according to experts only around 14% of the total players are console and PC video game players, the traditional PC market is also similarly stagnant and most of the growth in the Indian video game market is seen in online mobile video games. (Mondal, 2021) Further, there is limited data available on Indian PC and Console market and growth rate of the same. If we consider most of the growth in Indian Video game market in mobile sector, then it will be more than growth rate of (CAGR) 11% for mobile games worldwide. (Researchandmarkets.com, 2021)

 The growth in other digital entertainment sectors is also in sync with or better than the global trend. The market size of OTT in India is valued around $3 Billion in 2022 and is expected to grow at CAGR of 36%. (Suhani T, https://marketfeed.com/read/en/an-overview-of-indias-booming-ott-market). This is better than the global growth rate at CAGR of 10.08% (2023-2027) (STATISTA, n.d.). The Music Industry in India is valued at $237 Million in 2021 and is growing at the rate of 15% CAGR (Basuroy, Value of the music industry in India from 2007 to 2021, with estimates until 2024, 2022). On the other hand, the global music industry is expected to be valued at US $ 10.33 billion in 2022 and expected to grow at a CAGR of 10.41% from 2022 to 2027. (Statista, n.d.)

This data shows that while India has seen a tremendous growth in OTT, music and online video game market especially in mobile sector, the traditional PC and console market has remained stagnant both in terms of consumers and revenue generation. This study attempts to figure out the factors that differentiate PC and console video games from other digital entertainment sources and how those factors may affect the overall growth of video game industry in India.

II.   Previous Studies

There has been no previous study comparing video games with different digital entertainment platforms. A study on OTT and movies compared the preferences of consumers in Guwahati, Assam (India). (Anindita Dey, 2022)

This study will try and find out the factors which may be hindering the development of video game industry in India vis a vis other digital entertainment.

Research by the European Union found that unlike other digital entertainment, Video game piracy may help in generating revenue for the publishers since publishers were able to convert pirates into paying customers. (Martin van der Ende, 2015). A research concluded that Video game piracy has no effect on revenue generation. (Nobuya, 2011). Studies on piracy in music industry have concluded that the industry may lose significant revenue due to piracy.   (Hui, 2003) (Bhattacharjee, 2003). Similarly, research also indicates that a successful Hollywood movie may incur a loss up to $40 Million due to piracy. (De Vany, 2007)

III.   Research Gap

Most studies have regarded piracy as the major factors that have stunted the growth of video game industry. But most of the research has neglected other factors such as convenience, skill requirement Etc. This study attempts to explore all factors and bring new dimensions and context to the previously studied factors to provide a holistic view which may help the video game industry grow in India.

IV.   Research Question
1.   What are the differences between video games and other forms of digital entertainment?
2.   What are the factors that have led to stagnancy In the Indian video game industry?
3.   What have the other digital entertainment sources done better to achieve phenomenal growth rate when compared to console and PC video game industry in India?

V.   Research objectives
1.   To compare and analyze the differences between video games and other forms of digital entertainment in Indian context.
2.   To find out the factors and policies that have resulted in stunted growth of video game industry in India.
3.   To compare and analyze the factors that lead to Growth in other forms of digital entertainment via-a-vis video games in India.

VI.   Research methodology

Since this is a comparative study, Secondary data is used to analyze and compare the differences amongst the various types of digital entertainment. Websites, Reports, Studies and entertainment applications have been studied for analysis. Apart from comparing different forms of digital entertainment, comparisons with USA prices of the same content is also made for better clarity in price differences. Use of purchase Power Parity in salaries between USA and India is also taken to further contextualize the financial comparisons in Indian aspects.

Primary data was collected through a survey posted on the through r/crackwatch subreddit especially for piracy section of the study since it is one of the largest subreddit for discussion regarding gaming and piracy. This platform was selected purposively to access a large and highly engaged population of Indian PC and console gamers relevant to the study's focus. The respondents selected differ in age (from teens to above fifties) and income (no income to income more than $100,000 per year) to get a holistic view of Indian gamers. Data is also collected Total of more than 2500 responses were received of which around 300 responses were from India which are taken for this study.

VII.   Structure

*   A total of seven factors have been taken for analysis. They are Price, Hardware requirements, Active and passive form of entertainment, time consumption, Marketing and advertisements, Social approval and piracy respectively.

*   Various forms of digital entertainment like OTT, Movies, E-Books, Mobile Games are compared with Video Games using available data.

*   Price and Hardware requirements are analyzed in USD and comparison is made between Indian and US prices.

*   Various tables and charts are made by the author for such analysis.

VIII.   Data Analysis

After a thorough review of various sources, the following are the major factors of difference between Video Games and other forms of digital entertainment in India.

1.   Price

Indian consumer is considered price sensitive (Bureau, 2016). Most product across industries price their products competitively in India to provide the best value for money to the consumers. While most products have a fixed cost of manufacture, digital products have a unique property that every additional copy requires negligible additional cost to produce. This theoretically allows the publishers and producers to price their products as per the market conditions to find the perfect balance between number of consumers and price per unit of content.

Table (1) compares the pricing of different digital entertainment sources in India and US-

Table 1. (Amount in USD, Exchange rate taken as 1$ = 82.5 Rupee) (Prices as on 13.02.2023)

| Entertainment Source	Price in India ($)	Price in USA ($)	Difference	Indian Pricing as Percentage of US Pricing
Netflix (OTT)	$7.85 per month	$20 per month	$12.15	39.25%
Amazon Prime (OTT)	$2.17 per month	$15 per month	$12.83	14.5%
Disney Plus* (OTT)	$18.18 per year	$110 per year	$91.82	16.53%
YouTube Premium	$1.56 per month	$23 per month	$21.44	6.7%
Spotify (Music)	$1.44 per month	$10 per month	$8.56	14.4%
You Tube Music	$1.56 per month	$23 per month	$21.44	6.7%
Kindle (Books)	$2 per month	$10 per month	$8	20%
Steam (Video Game)	$36 on Average for a new game	$60 for a new game	$24	**60%**
PS Store (Video Game)	$55 Average for a new Game	$70 for a new game	$15	**78.5%**
Game Pass Ultimate (Video Game)	$6 per month	$15 per month	$9	**40%**
PS Plus Essential (Video Game)	$36.36 per year	$60 per year	$23.64	**60.6%**
Movie Ticket Avg Price	$1.44 per ticket	$9.57 per ticket	$8.13	15%
Google Play Pass (Mobile Games)	$1.21 per month	$5 per month	$3.79	24.20%
Apple Arcade (Mobile Games)	$1.21 per month	$5 per month	$3.79	24.20%

Note-

a.   Table made by the author by taking data from various sources.

b.   All subscriptions prices are considered for individual.

c.   Netflix premium 4K plan is considered.

d.   Disney+ is compared with Disney+ Hotstar in India. 4K Plan is considered.

e.   Average price of video games is considered since different publisher follow different regional Pricing.

f.   Video Games prices are for newly launched AAA games since these are the most sold games.

g.   YouTube music and YouTube premium are offered as a bundle.

h.   Some content might be different in both the countries with various subscriptions.

i.   Prices have been rounded off for convenience.

j.   Source: Official websites (statista for movie tickets).

k.   Individual Mobile games are not considered due to Free to Play model in highest grossing games. (Keith D, 2023)

As is clear from the above table, all digital content gets a significantly reduced regional pricing in India when compared to similar service in USA. Still Video games are priced significantly higher than other digital entertainment sources in India. Only 4k subscription of Netflix (priced at 39.25% of USA) is comparable to Game Pass Subscription at around 40% of US prices. The below chart (1) shows differences in regional pricing as average of Video Games sector compared with other sectors-

Chart 1. based on Table (1)
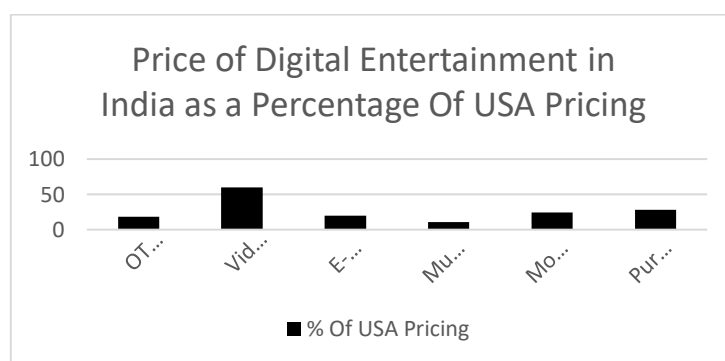
On average, regional prices of Video Games and related subscription services are more than three times higher than regional prices of OTT, Movies and Books. The price gap rises to more than seven times when compared to Music. Even Mobile games subscriptions are priced significantly lower than Console and PC Video games. In fact, Video Games in India are priced at 2.3 times of comparable salary adjusted for Purchase Power Parity between India and USA as on 19-02-2023. (chrislross, 2023).

Further, many of the OTT and music subscriptions are available to the consumer through different bundled packages in India. For example, a 300 Mbps Plan of Jio Fiber broadband connections comes with subscription of Netflix and Amazon Prime apart from other local subscriptions in India. Such bundles are not available with Video Game options.

Figure 1. Still from Jio Broadband Website which offers bundled subscriptions
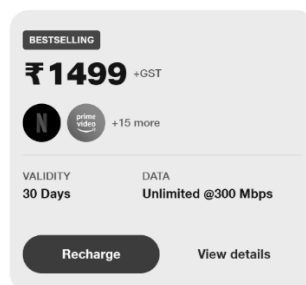
Source: https://www.jio.com/selfcare/plans/fiber/fiber-prepaid-plans-home/

This relative disparity in prices hampers the ability of potential consumers to buy Video Games, especially at a young age when the consumers must rely on their parents or guardians for their financial needs. This makes high prices of new video games and subscription services one of the factors in slow growth of PC and Console video games in India.

The survey data further cements the position regarding price as a major factor in stunted growth of video games in India. For majority of respondents (more than 50%) high cost of games and lack of affordable, region-specific pricing make games unaffordable to play.

Some of comments of the respondents are provided for reference-

"Regional pricing is so important. In my case, I have to pay a triple-A game 1,100 units when my salary is 3,500 units. If I pay, I can't eat food."

"A videogame shouldn't cost 10% of my monthly salary."

"Price >$50 for a game is insane for a country, where average salary is $250-300."

"The only way to play a game is to buy a console and console game physically which is ridiculously expensive"

2.   Hardware Requirements

All digital entertainment requires a hardware device to consume content. Traditionally, the consumer needed different devices for different types of content. Movies required a CD or DVD Player to play apart from a television. Music required a Walkman or a MP3 player while books required a hard copy. With the advancement in technologies and devices like smartphone and iPad, the hardware requirement for content consumption has taken a drastic turn in last decade in India.

In recent times, any device like a smartphone or other smart display devices like iPad and smart Television with an internet connection can theoretically be used for consuming all content like Movies, books, music, and even mobile Video Games. It has resulted in reduced cost of entry into these digital entertainment sources for the consumers, resulting in growth and penetration in more price sensitive consumers.

Video Game Console and PC Video Games on the other hand, require specific hardware apart from a display device to be able to play games. PC players need a Graphic Card, more ram than a normal use PC and generally a faster processor to be able to play Video games. Similarly, Console players need to buy a Play Station 5, Xbox or Nintendo apart from a Television or Monitor to play Games.

On the flip side, most digital content requires an internet connection to view or download, a Video Game console can technically be used to play offline without the use of internet. But since Price of Internet is one of the lowest in India ($.17 per GB of Data (Sunilkumar, 2022)), the possible saving in cost due to less data use is negligible.

In recent times there has been some interest in cloud gaming through internet and subscription model but the same has not being started in India as of February 2023. This puts an extra burden of cost on the consumer who wants to play video games.

The cost of such hardware is also a defining factor in the Indian context. While console Video Game hardware are considered expensive worldwide, the Prices for such hardware in India are much more than most developed nations due to import duties, taxes, Exchange Rate differences and no domestic manufacturing units. Combined with the higher prices charged for Video Games vis a vis other content in India, high hardware cost may be an important factor in low consumers for Video Games in India.

 The chart (2) shows cost of an average gaming PC and consoles in India and USA.

Chart (2)
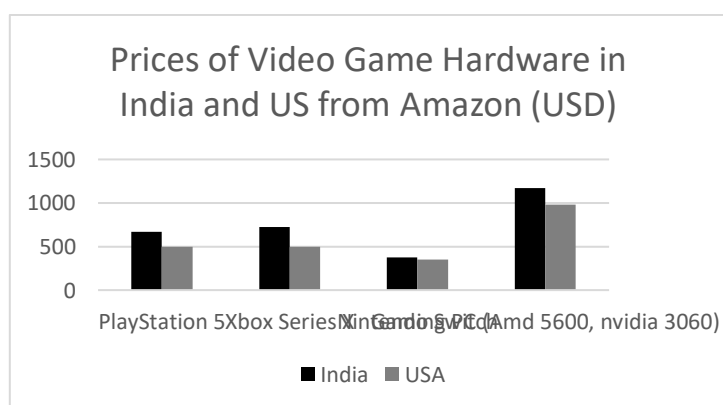
Note-

a.   Chart made by the author taking www.amazon.com and www.amazon.in as source.
b.   Gaming PC is taken with similar but not exactly same specifications.
c.   Prices as on 20th February 2023.
d.   Exchange rate used – 1 USD = 82.5 Rupees

   Apart from being expensive, gaming hardware in India also cost more than other developed countries. PlayStation 5 and Xbox Series X cost around 33% more in India. Nintendo Oled model cost around 7% more while a gaming PC cost around $1200 in India which is around 20% more than USA.

Chunky hardware requirements also make Console and PC gaming less flexible. For example, a consumer may watch a comedy show, listen to music, or play mobile games during a break in the office. But a gamer cannot play Video Games anywhere due to unavailability of hardware. Some recent hardware like steam deck may allow some flexibility for consumers to play games but its demand is still limited due to limitations like limited battery life, small screen, and insufficient processing power to play modern games at high graphical settings and resolution.

Many respondents in the survey felt that steep hardware requirements for new AAA games make gaming unaffordable. As per data collected, a gamer spends around $ 460 per year on hardware alone, making gaming too expensive for most Indians. Some comments for respondents are as below-

"You have to spend 1-1.5k USD every couple of years for hardware, and then buy games priced for people in western countries (easily 2-3x salaries than in my country). When summed up, it gets quite expensive..."

"In weak country its hard earn enough money for both: normal PC with recommended performance and modern AAA games. And with low fps many games Are unplayable."

"I have a low-spec PC that cannot run most AAA games"

"My computer is from 2010 so anything new wouldn't run on it. So I play older games."

3.   Active vs Passive Entertainment

Unlike other types of content, Video Games are a more active form of entertainment. Most Video Games require constant input from the gamer. Most Console controllers use around upward of ten buttons apart from two direction pads which the user should be able understand and use on the fly.

The image (2) below describes control scheme for Ghost of Tsushima, a game on PlayStation which requires a total of 13 button inputs and two directional sticks to be able to play properly. Many of such buttons must be used simultaneously during gameplay.
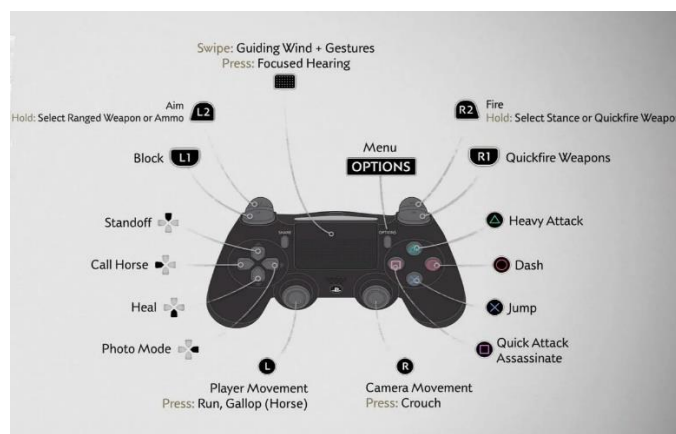

Image (2), controller layout for Ghost of Tsushima, a Video Game for PlayStation
Source: https://static.wikia.nocookie.net/ghostoftsushima/images/9/9e/Ghost-of-Tsushima-Controls.png/revision/latest?cb=20200717180258

Other content like movies, Music, Books don't require much participation from the user apart from their concentration. Their casual nature and passive participation enable an easier entry point for consumers. Also, passive participation allows consumers to undertake other activities while enjoying such entertainment. For example, A user may listen to music while driving or read a book or watch movies while eating dinner. This level of multitasking is not possible when playing Video Games.

Mobile Games do ask for input from the user, but they require limited actions due to their casual genre. Limited availability of screen on smart phones also makes providing too many controls on mobile phones inconvenient as touch controls also take part of the display area.

Apart from the physical inputs, many Video Games also contain elements like puzzles, platforming, multiple endings based on gamer's choices etc. which requires constant active participation by the gamer. Further, different types of games require different aspects and control schemes which should be learned by the user. All these aspects make Video Games a less relaxing alternative to Movies or Music.

In conclusion, Video Games, due to their active nature may create a barrier to entry for new consumers, specially at an older age when the consumers have already acquired their active hobbies and skills and may want to use digital entertainment only as a tool for relaxation.

In the Indian context, High cost and expensive hardware already alienate the gamers at a young age when they have limited financial resources. A barrier to entry in the form of active participation may deter consumers who may have the means and resources to play Video Games.

4. Time Commitment-

Consumers have limited time to focus on different aspects of their life. On average, an Indian consumer spends around 171 minutes per day on digital entertainment including TV but not including music and eBooks. (Axis My India, 2022). In table (2) below we compare on average it takes to fully complete the entertainment source.

Entertainment Type	Average Time to complete	Source
Indian Movie	150 minutes	(Sequeira, 2020)
US Movie	130 minutes	(Statista Research Department,, 2023)
TV Series (Average per Episode)	45 minutes (Including Advertisements)	Observation
OTT Series (Average per Episode)	45 minutes	Observation
eBook (300 Pages)	500 minutes	(Capitalize My Title, 2023)
Song	3.5 minutes	(Kopf, 2019)
Single Player Video Game (Average)	**3000 minutes**	(NATIVIDAD, 2022), https://howlongtobeat.com/

Table (2) Average time to Completion

Note-
1. Table made by the author by using data from various sources.
2. Since Video Games vary in length, Average completion time for top selling 10 modern single player games have been taken for the comparison. Average Main Game + Extra time is taken for all the games from howlongtobeat.com to get the results.

3.　　　Mobile Games, Multiplayer Games, MMOG etc. don't have a traditional structure of start to finish hence are not considered for this comparison.

As is clear from the comparison, the best-selling video games take approximately 3000 minutes to complete on average. An average Indian consumer can watch around 20 movies or more than 65 episodes of TV series in the same period. Further, while a movie or multiple episodes of a Series can be completed by the consumers in a single day, a Video Game will require more than 17 days to complete on average when all time given to digital entertainment is given exclusively to gaming. Time constraint may be one of the factors which may deter the consumer, especially at working age to take up gaming as a mean to entertainment.

Another way to analyze the time commitment is to understand the average daily time of a particular type of entertainment i.e., on average how much time is given to Tv, Movies etc. in one day. The following Table (3) compare the same for different sources of digital entertainment-

Entertainment Type	Daily consumption	Source
Tv/Web Series/Movies	180 minutes	(Basuroy, Average daily television consumption* across India from 2018 to 2020, with estimates until 2022, 2022)
Music	188 minutes	(IFPI, 2021)
eBook*+ (Reading)	16 minutes	(BLS Beta Labs, 2023)
Mobile Games	23 minutes (Android)	(Zandt, 2021)
Console/PC Video Games	**72 minutes**	(Combs, 2021)

Table (3) Comparison of average session time made by the author taking data from various sources

*Leisure reading time is taken for readers of USA due to limited availability of data.

+ Reading time includes all sources like eBook, novels, comics etc. The actual time on eBooks may be lower.

Most users spend their leisure time on TV series/Movies and music. The high daily consumption is also indicative of the fact that these activities can be paired up with other daily chores like driving, eating food etc. Average mobile game session last little more than 20 minutes, most likely because most mobile games are of casual/arcade genre. While most movies, songs, mobile games, and other TV series Episode can be completed by consumer in a single sitting, eBooks and Console/PC Video Games require a long-term commitment of 31 days and 42 days respectively. The Below Chart (3) shows this comparison.
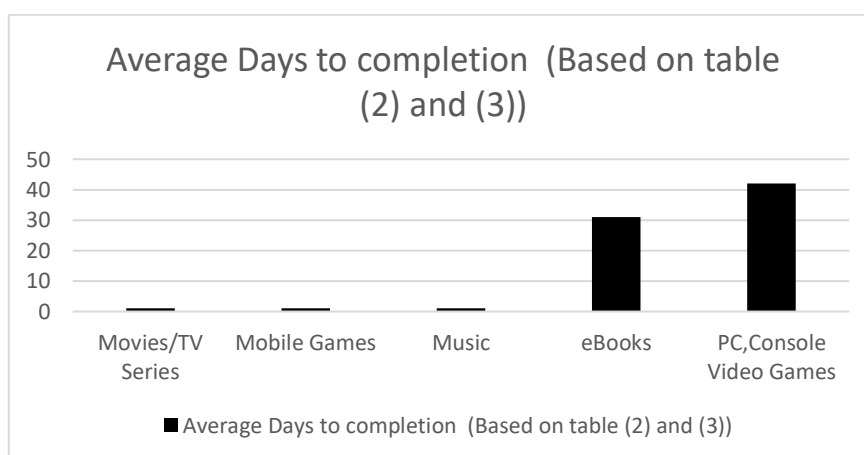

Chart (3) Days it takes to complete an Entertainment activity based on data from Table (2) and Table (3)

While Video games require significant time commitment which may impede some casual consumers, they have the potential to generate a loyal and long-term consumer base. This theory is further discussed in Conclusion section.

95% of the gamers surveyed said that they play games every week and spend on an average $ 230 on video games yearly. This indicates that time commitment by gamers may increase growth in Video Game industry if others factors like price and hardware requirements are tackled effectively by the industry.

## 5.	Marketing and Advertisements-

Right Marketing and advertising are an essential part of the success of any new product. Products related to Digital entertainment are the same. Most OTT Platforms like Netflix, Prime Videos, Disney plus Hotstar and YouTube spend millions of dollars on advertisements at prime locations in India as well as on prime-Time TV like during Indian Premier League season or Cricket World cup etc.

Hotstar spent more than 58 million dollars on Promotions in 2020-21. (BrandWagon Online, 2021). According to estimates, amazon spent around 18 million Dollars in 2018 to promote Prime Video in India. (Tewari, 2018). Most AAA video games cost on average around $80 million to develop. (Rocket Brush Studio, 2022) The marketing budget for most AAA games is kept around 75% to 100% of the development cost (Koster, 2018). While many new movies and OTT platforms are advertised on physical space, TV and digital media in India, advertisements for video games have not been observed in the country despite massive marketing expenditure on these games in other countries like USA and whole of Europe. Further, there is no information available on marketing budget for either Video Games or for the hardware Industry in India. This makes it very difficult to compare marketing expenses of Video Games with movies and OTT Platforms but from observation, Video games industry don't spend enough on marketing in India. Even on social networks like Instagram and Facebook, which are more sustainable, cost effective and eco-friendly are not utilized by PC and Console Game Industry. From observation, most advertisements on social networks even for gamers are for mobile games rather than PC or Console video games.

Image(3) front page advertisement of movie Pathan and OTT platform Prime Video on Dainik Bhaskar, a premier Hindi newspaper in India.

Image (4), a rare promotion of Video Game 'God of War Ragnarök' by Sony in Mumbai Metro. Source-
https://www.reddit.com/r/IndianGaming/comments/yd3pf6/god_of_war_ragnarok_ps_promotion_in_mumbai_metro/

Since not enough data is available regarding Marketing in India by Video Game industries, a more through research is necessary on how marketing and advertisement expenses by video game industry may compare to other digital entertainment sources.

6.   Social approval-

Video games grew in popularity in India largely in mid to late 1990s. Most video game consoles sold were a reverse engineered version on Nintendo Super. It was followed by SEGA and PlayStation consoles in India. Mobile games are even more recent and have been popular in the last decade due to a decrease in internet charges by the telecom providers.

It has created a unique situation where most of the Video game consumers in India are first generation gamers and many are young gamers. Since most parents and guardians have little to no knowledge about Video games and are not able to supervise and instruct their child on the safety and best practices to be followed while playing video games. Sometimes, young consumers may play games that are not age appropriate for them and may include depictions of violence, Nudity, and blood. The increase in graphical power of the Consoles and PC have made such depictions realistic. These factors bring a sense of apprehension in the minds of the parents regarding video games. Further, there is a perception that Video game addiction is resulting in Obesity, aggressive and criminal behavior, and other mental illness in minor gamers. (HT TECH, 2022) (Sharma, 2023)World health organization considers 'gaming disorder' as one of the health problems. It is estimated that only around 1 to 9 percent of gamers suffer from Video game addiction. (WebMD Editorial Contributors, 2023). Although gaming addiction may result in unhealthy long sessions of video gaming and symptoms like social isolation and depression, long-term research has proven no relation between gaming and increase in tendency or aggressive or criminal behavior. (Gaël Fournis, 2014). Nevertheless, lack of support of video games from a large section of the society may be one of the reasons that restricts growth of Video Games industry in India. Other digital entertainment sources don't appear to face similar level of scrutiny.

The responses from the survey indicate the issue further. The younger respondents who don't have their own income and are dependent on their parents and guardians for their expenses state that parents feel that parents often think video games as a wasteful expenditure and children are discouraged from the hobby. Responses of some gamers are given below-

"parents don't like video games"

"video games are not always seen as a "priority" in tight economic conditions"

7. Piracy-

Piracy refers to unauthorized access to a licensed product. The term piracy is generally used to denote downloading and use of Software by the consumer without buying its license from the publisher. Even though India has made stringent laws to control piracy, implementation of those rules and laws has been poor. This has made pirating content convenient. It is not uncommon to find most movies, music, books available to download on telegram as soon as they are launched/released. Most Video Games which are not protected by modern DRM can also be downloaded through torrents as soon as they are released. Therefore, it is important to analyze how piracy effect the growth of digital entertainment in India.

Piracy has traditionally been associated with loss of revenue and decreased profits for the creators and owners of digital content. Most research has found out that piracy indeed hurts the music industry. (Hui, 2003) According to an estimate, piracy in the music industry resulted in a loss of $3.1 Billion to the music industry in 2005. (Bhattacharjee, 2003) Similarly, research estimated loss of up to $40 Million per movie to the producers due to piracy. (De Vany, 2007)

On the other hand, most researchers have concluded that piracy of video games has little to no effect on revenue generation. (Nobuya, 2011) Research by European Union concluded that piracy does result in loss for Movies, Music and books but may increase Video game sale. (Martin van der Ende, 2015)

This data from global research suggests that piracy may impede growth of Movies/TV Shows, music, and e-books while it may help in growth of video game industry. Even with rampant piracy, all digital entertainment content has seen tremendous growth in India except Console and PC Video Games. Since enough research data is not available for India, no conclusion can be formed on effect of piracy on Video game sales, but based on global research it does not appear that piracy has a major impact on reduced growth of Console and PC Video game Industry in India. Further, it has been observed that pirating movies/music is easier in India due to their availability on social networking sites like telegram. On the other hand, Video Game and mobile games piracy is almost exclusively through PC using torrents and file sharing sites that are often blocked by the Internet Service Provider on copyright grounds. This makes pirating Video Games inconvenient and harder when compared to other content.

The survey provides some crucial information regarding 'how piracy may effect Indian gamers and gaming industry?

As per survey Most gamers in India pirate due to unaffordability of games and lack of regional pricing. Many respondents started buying games when they were regionally priced on steam. Gamers also bought games on sale and bought subscriptions like game pass.

The survey responses align with the global research that piracy may not affect video game sales like it affects music or movie revenues. In fact, piracy is making games more affordable to play in India and may actually increase the revenue of gaming industry in long term.

VIII. Findings and Conclusion

This study compares the differences between Console and PC Video games with other forms of digital entertainment in India across 7 parameters. The analysis shows that price is one of the biggest factors that may have shunted the growth of Video games in India. Video games are significantly expensive than other content available to Indian consumers. Most digital content are priced significantly cheaper in India with respect to USA considering the price sensitive market of India which has resulted in tremendous growth in sectors such as Movie, OTT and Mobile Games. This study suggest that Video game should be priced according to purchase power parity between USA and India to eliminate price as a hinderance to Video Game growth. As per analysis, all other digital content has been priced well below the purchase power parity of 28% between USA and India.

The study finds that apart from been expensive, specialized hardware requirements also separates Video Games from other digital entertainment. The cheapest modern console (Nintendo Switch) costs around $400 in India. Further, all consoles and PC are priced much higher in India when compared to USA. Considering the huge gap in per-captia income, this upfront cost makes Video Games prohibitively expensive for most Indian buyers. While reduction in taxes and local Manufacturing may reduce the cost of console in India, we suggest that investment in cloud gaming may eliminate the need of expensive hardware and has the potential to provide a big boost to the consumer growth rate of Video Game Industry around the globe.

The active nature of Video Games is yet another factor that separates it from other digital content. Due to the fact that Video Games require active participation and constant attention from the consumer, it becomes quite difficult to multitask

while gaming. Further, gaming may not be as relaxing as other passive activities like listening to music or watching a movie. This may lead the consumer towards passive entertainment sources and leave less time for video games.

The issue is further exaggerated since a video game takes more time to complete. A video game takes more than 40 days to complete, which is significantly more than any other digital content. It is important to note that this trait exclusive to Video Games can work in its favor. Being an interactive form of entertainment, video games are better suited to develop a long-term consumer base since interaction may lead to more attention span and interest. For that to happen, Video games should be marketed as a skill. Internationally, many online gaming tournaments are held with substantial price money which has allowed some gamers to be professional gamers and earn substantial income through video game tournaments. (Esportsearnings, 2023) Such tournaments are still in infancy in India and can be promoted by the Video Game Industry.

While the Movie, music and OTT industry are spending significant amounts for promotion of its content, not enough data is available on amount spent on Video Games and consoles by publishers. But it can be observed that the quantum of promotion is much less than other content in India. Since Video Game industry spend more than $100 million on promotion per AAA game, even a small percentage of this expenditure can go a long way in ensuring better visibility of Video Games in Indian mainstream market. A Green marketing mix of ecofriendly digital marketing may have a deep impact on young generation of India which is learned and careful of what they are investing and are quite environmentally conscious as per studies (Premi. H, 2021)Further research is needed to better understand the potential demand that may be unlocked through the right publicity.

Society's approval is crucial for any new entertainment medium to grow and flourish. While most apprehensions towards video games in India stems from rising popularity of causal mobile games among children, it also affects traditional video game industry due to lack of knowledge among parents and guardians regarding video games and how to moderate and prevent children from playing unsuitable games. Research has shown that video games may have multiple mental health benefits and parents should play video games with their children. (Granic, 2014) While problems like video game addiction should be worked upon, it is myopic to blame all video games for the same. This study observes that lack of information is the primary reason for societies' fear regarding video games. More awareness among parents should help in eliminating negative bias towards video games which may result in its growth in India.

This study didn't find any substantial evidence that piracy affects growth of video game industry in India. Further, survey suggest that piracy may in fact help in increasing revenue of video game industry in long term. While from a legal standpoint piracy is illegal, more research is needed to understand the effect of piracy on the Video Game Industry in India.

IX Limitation:

The authors acknowledge certain limitations in this study. The primary data was collected from the r/crackwatch subreddit. While this provided access to a large sample of engaged Indian gamers and pirates, the findings may not be generalizable to the entire Indian population that consumes digital entertainment. The sample may be skewed towards more male, and more urban demographic typical of the Reddit user base. Furthermore, as a community of enthusiasts, their habits and opinions may differ from more casual gamers, particularly in the mobile gaming sector. Therefore, the survey findings should be interpreted as being representative of the dedicated PC/console gaming community in India rather than the entire market.

Author's Contribution

Author has collected and analysed data from various sources to try and find the reasons for the stagnant growth of Video Game Industry in India with respect to other digital entertainment sources. Author ha also collected primary data through a survey.

Conflict of Interest

Author has no conflict of interest to report.

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