



## What Leads to the Growth of E-Sports among Indians?

*Dr. Ranjith Somasundaran Chakkambath<sup>a</sup>, Prof. Liya Rajesh<sup>b</sup>, Deekshida Vinod Kumar<sup>c</sup>*

<sup>a, b</sup> Asst Professor, Amity Global Business School Kochi, Ernakulam, 682035, India

<sup>c</sup> BBA student, Amity Global Business School Kochi, Ernakulam, 682035, India

### ABSTRACT

The Online gaming industry in India has been growing over the years with the growth of IT industry. In terms of spectators and money, the E-sports sector has grown significantly over time. The growing audience was the key factor in the income growth, and not just because those viewers were bringing in money. India which has a formidable population of youth, the E-sports business is expected to grow exponentially in the coming years. Since the arrival of COVID-19, there has been more growth of online business across the world, E-sports was also part of this growth and people now find this as a new platform to entertain themselves sitting in the comfort of their homes. This research tries to identify the gender association with e-sports awareness and affecting watching E-sports. The target population were from two different locations- Kerala (India) and Bahrain. Bahrain has a sizeable population of NRI from the state of Kerala among the various Indian populations in the region. Another investigation done was to explore the different factors that led to growth of E-sports globally. Chi-square test and Exploratory factor analysis were done using SPSS. The future prospects for Esports in India seems to be in the positive direction with more popularity among the younger generation based on the study conducted as part of this research.

**Keywords:** E-sports, Chi-square test, Exploratory Factor Analysis, Online Gaming, Youth.

### 1. Introduction

We can trace the origins of e-sports back in time to the 1970s and 1980s, when video games first emerged as a popular form of entertainment. Early competitive gaming events were often small, informal gatherings among friends or at local arcades. However, with the rise of online gaming in the 1990s and 2000s, e-sports began to evolve into a more organized and professionalized industry. Today, e-sports events can range from small local tournaments to massive international competitions with multi-million-dollar prize pools. Some of the most popular e-sports games include League of Legends, Dota 2, and Counter-Strike: Global Offensive, among others. These games are played at a professional level by teams and individual players from around the world, and they attract millions of viewers who watch live streams or attend events in person. The development of e-sports, or competitive video gaming, has rapidly emerged as a global business in recent years. From a niche hobby, e-sports has become a major player in the entertainment industry, with millions of fans around the world tuning in to watch their favourite players and teams compete in tournaments and leagues.

The growth of e-sports can be attributed to several factors, including advances in technology, changing consumer behaviour, and the rise of online platforms for e-sports competitions. Today, the global e-sports market has led to the creation of new job opportunities and careers. Professional players can earn significant salaries, while others work as coaches, analysts, or managers for e-sports teams. There are also opportunities in event production, marketing, and media, as well as in game development and technology. The popularity of e-sports has also attracted significant interest from investors and advertisers, who see the potential for this industry to generate significant revenue and reach a new, younger audience. E-sports events have become major spectacles, with sold-out stadiums, live streams with millions of viewers, and lucrative sponsorship deals. The number of eSports players doubled from 300,000 in 2020 to 600,000 in 2021, and eSports income increased by twenty nine percentage, according to the FICCI-EY Media and Entertainment Report 2022. What's more intriguing is that this rise is anticipated to continue, with one million esports participants in 2022, 20% of whom will be female. In India, the gaming and eSports industries employ little over 40,000 people, and this number is expected to rise.

However, the development of e-sports as a global business also presents significant challenges and opportunities. The industry is still in its early stages and faces issues related to regulation, intellectual property, and player rights, with concerns about the impact of excessive gaming and the potential for addiction. Despite these challenges, the growth of e-sports as a global business shows no signs of slowing down. Technological innovations, changing consumer behaviour, and the rise of new markets present opportunities for continued growth and expansion. As such, the development of e-sports is a topic of significant interest to scholars, practitioners, and policymakers who are interested in understanding the economic, social, and cultural impacts of this emerging industry.

#### 1.1 Objectives Of The Study

To study the demographic and psychographic profiles of e-sports players and audience, including their preferences and behaviours.

To study the factors driving the growth of e-sports, including advancements in technology and the rise of mobile gaming.

### 1.2 Hypothesis Of The Study

H<sub>0</sub>: Respondents' age has no impact on their awareness about e-sports.

H<sub>1</sub>: Respondents' age has an impact on their awareness about e-sports.

H<sub>0</sub>: Respondent's age has no impact on watching e-sports competitions and events.

H<sub>2</sub>: Respondent's age has an impact on watching e-sports competitions and events.

### 1.3 Scope Of The Study

The scope of this study on the development of e-sports and its growth as a global business would involve examining a broad range of factors in order to gain a comprehensive understanding of this dynamic and rapidly evolving industry, it would involve examining the various factors that have contributed to the rise of e-sports as a popular form of entertainment and competitive activity. Finally, the research paper could explore the future prospects of the e-sports industry, including potential areas of growth and the challenges that the industry might face in the coming years.

## 2. Literature Review

Hosch, William L. researched Electronic artificial life game. His research indicates that the term "E-sports" refers to organised competitive video game activity, which is referred to as electronic sports or professional video gaming. With the release of the initially released video game, Pong, in the 1970s, e-sports began to expand. Since then, e-sports have gained popularity and expanded internationally, attracting millions of spectators and participants. He also found that- Electronic Arts, an American firm founded in 1982, has been the industry leader in creating electronic sports games for computers and video game consoles since that time. He was able to establish that over the course of the past 50 years, video games have evolved from early standalone titles like Space Marines (1962) as well as Pong (1972) into competitive and cooperative games played in massively multiplayer online settings.

The term "electronic sports" is shortened to "eSports," which is defined as "a form of sports where technology is used to enable the key elements of the sport; the input for both individuals and teams, as well as the final product of the electronic sports system, are mediated by real person-computer interfaces" Hamari & Sjöblom, (2017, p. 211). The question regarding if eSports should be classified as a sport is still up for debate Holden et al., (2017). In reality, eSport has been criticised for not being a true sport due to its digital nature and lack of actual physical exercise, while professional sporting activity continues to be the point of reference when conceiving of sport Ke & Wagner, (2020). Meanwhile, the current COVID-19 has increased the prominence of eSport and giving it reason for digitalization.

With the rise of professional esports leagues and players, significant investments have been made in commercial events, media coverage (like Twitch), and sponsorship, according to Nielsen Company (2017). the financial commitments made by various significant consumer brands to associate themselves with the esports sector. It is now simpler to communicate with followers of specific video game franchises thanks to the professionalisation of esports. Similar to conventional games, brands can be based on specific individuals or places. Nielsen Company, (2017) found that more over half of customers have a favourable opinion of outside brand involvement, with only roughly 7% of esports enthusiasts having a negative opinion of it.

Anthony Tyre, (2018) researched Electronic artificial life game. According to the study, Online gaming and e-sports are fundamentally distinct, but people frequently mistakenly think of both as one and the same thing. He was able to conclude online gaming is merely self-indulgent and time-consuming, but e-sports are highly competitive and need sophisticated plans and quick reactions within a specific time frame, making them worth viewing like other sports events. He was also able to learn the major games that lead to the popularization of E-sports, The online game Counterstrike: Global Offensive, also known as CS GO, attracts up to 46 million viewers per month Gibson, (2017, p. 8). Defense of the Ancients 2, one of the earliest MOBAs, is #1 in terms of prize money but trails League of Legends in terms of overall viewership Gibson, (2017, p. 9). League of Legends is now the most popular e-sport in terms of players and viewers, the game has 100 million monthly active users in 2016, and the sheer size of those figures is remarkable. Although these three games may be in the lead, he believed many more are being played professionally, aiding in the growth, and understanding of e-sports.

In contrast to those who own a desktop computer or a personal laptop, a much higher proportion of people, as determined by Harun (2013), own cellphones. Many potential participants are left out because existing e-sports were mostly created for computers. Mobile phone platforms are developed by developers to make sure the generation will continue to exhibit a pattern of rising mobile usage. As a result, the introduction of mobile-based e-sport broadcasts would completely transform the market. By enhancing the user's experience, this is one of the areas that might revolutionise the business world.

(Newzoo, 2021) speaks on the digitalization that's currently shaping the e-sports industry. The way in which young people engage in and enjoy sport as part of their spare time has been profoundly impacted by digital technology. In the past ten years, the popularity of esports, also known as electronic sports, which are centred upon the rivalry-driven play of video games, has increased. Substantial worldwide earnings of \$947.1 m in 2020 and \$1084 m in 2021 were produced by the rising viewership and sponsorships. The International Olympics Committee is attempting to profit on esports' growth as part of its attempt to make the games of the Olympics. Cerqueira et al. (2020) predicted that within the following three years, AI would become crucial. This technology would affect how e-sports competitions create their strategies and implement anti-cheating procedures. Virtual reality and data analytics

are two other crucial technologies. Technology advocates like Harun (2018) affirm that e-sports will become more personalised in the future and that players can anticipate the adjusted quality and material to meet their demands. Despite this, technological advancements in the e-sports sector should be handled with caution to protect the human aspect. Eliminating human factors would have a negative impact on how entertaining e-sports items.

Cerqueira et al. (2020) predicted that within the following three years, AI would become crucial. This technology would affect how e-sports competitions create their strategies and implement anti-cheating procedures. Virtual reality and data analytics are two other crucial technologies. Technology advocates affirm that e-sports will become more personalised in the future and that players can anticipate the adjusted quality and material to meet their demands. Despite this, technological advancements in the e-sports sector should be handled with caution to protect the human aspect. Eliminating human factors would have a negative impact on how entertaining e-sports items are overall.

### 3. Methodology

*Research Design* : This study aims to demonstrate the development of e-sports and its growth as a global business. The use of diverse methodologies and techniques used by researchers for data collecting and analysis is framed by research design. We use a descriptive and analytical research design in this study with the help of a structured questionnaire. The study uses convenience sampling with the help of a questionnaire.

*Population Of the Study*: Individuals who are aware about e-sports are gathered as the target population for this study. The data was gathered in accordance with the responses of 100 candidates who received an online questionnaire and provided a sample size. Data was acquired from candidates from various candidates belonging to different demographic groups in Kerala and Bahrain. The study uses convenience sampling with the help of a questionnaire.

*Data Collection*: Data for this study included both primary and secondary sources. A questionnaire was used to collect the essential information that was distributed to respondents via social media channels like Instagram, WhatsApp, and E-mail. Google forms was used for data collection. The first part of the questionnaire focused on demographic and general information related to the awareness of E-sports. The second part focused on the investigation related to factors that impacted the growth of E-sports. LIKERT scale was used for this part of the questionnaire. The information gathered from websites, journals, and earlier study papers makes up the secondary data. The period of the study was March 2023.

*Statistical Tools And Techniques Used For Analysis*: The statistical techniques and tools employed in this study's analysis consists of Google forms, Microsoft Excel and the software used to analyse and interpret chi-square and factor analysis was done with the help of SPSS (Statistical Package for The Social Sciences).

### 4. Results and Discussion

The demographic data collected from survey is given below. Structured questionnaire was used to collect the information from the target population using Google forms. From the demographic data, it clearly shows the majority of the respondents were under 18 years and between 18 and 25. This hints on the interest of youth in Sports entertainment. The survey had more female respondents compared to male respondents which is an indication of popularity of E-sports among these groups. The demographics showed that students to be more interested in the E-sports compared to other categories while retired citizens were the least interested group. The major share of the respondents have a monthly family income of under Fifty thousand rupees.

**Table 1 : Demographics**

Demographic characteristic	Percentage of Respondents (%)
<b>Age Group</b>	
Under 18 years	22
18 to 25 years	55
25 to 40 years	16
40 years and above	7
<b>Gender</b>	
Male	43
Female	57
<b>Level of Education</b>	
SSLC/10th	

Plus Two	2.5
Graduate	27.5
Post Graduate	65
Others	5
<b>Occupation</b>	
Student	56
Self-Employed	11
Employed	28
Unemployed	2.5
Retired	2.5
<b>Monthly Family Income (Rs.)</b>	
Under 50,000	48.9
50,000 to 1,00,000	38.3
More than 1,00,000	12.8

#### 4.1. Frequency of familiarity with the concept of e-sports

The search found that majority of the respondents are familiar with the concept of E-sports while a small percentage is not at all aware of this idea

#### 4.2. Popularity of e-sports among friends and family of the respondents in the recent years

According to the respondents, many have supported that the concept of E-sports has grown popular over the recent years among family and friends. Some of the respondents thought that there has not been any shift to favour the concept over the recent period.

#### 4.3. Frequency of watching e-sports competitions and events

More than half of the respondents watch E-sports more frequently or at least some time while there are a few who do not watch E-sports at all.

#### 4.4 CHI-SQUARE TEST

##### a) Hypothesis 1: Age\* Impact On Awareness About E-sports

H0: Respondents' age has no impact on their awareness about e-sports.

H1: Respondents' age has an impact on their awareness about e-sports.

To test this hypothesis, data from 2 variables was taken, i.e., Age wise distribution of respondents and Frequency of familiarity with the concept of e-sports.

**Table 2: Age \* How familiar are you with the concept of E-sports? Crosstabulation**

		How familiar are you with the concept of E-sports?			Total
		Not at all	Somewhat	Very much	
	18 to 25 years	3	25	27	55
	25 to 40 years	1	7	8	16
	40 years and above	3	4	0	7
	Under 18 years	1	4	17	22
Total	8	40	52	200	

From the research, we can establish that a majority of 18 to 25 year old respondents and respondents of 25 to 40 years are very much aware of e-sports, whereas respondents who are above 40 years is somewhat familiar with the concept of e-sports. Respondents under 18 years are very much familiar with the concept of e-sports.

**Table 3: Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	243.016 <sup>a</sup>	12	.000
Likelihood Ratio	297.330	12	.000
N of Valid Cases	200		

Table shows that the significance value of this test, i.e., the P-value is .000. From the test result, it can be deduced that respondent's age impacts their awareness about e-sports. Since the p-value is lower than  $\alpha = 0.05$ , the researcher rejects the null hypothesis. Hence, we can establish that age does impact awareness about e-sports. Previous report also support that more females are also attracted to the E-sports in India. So the results here are compatible with the reports published (Munjaj,2022).

**b) Hypothesis 2: Age\* Impact On Watching E-sports Competitions And Events**

H0: Respondent's age has no impact on watching e-sports competitions and events.

H2: Respondent's age has an impact on watching e-sports competitions and events.

To test this hypothesis, data from 2 variables was taken, i.e., Age wise distribution of respondents and Frequency of watching e-sports competitions and events was taken.

From the research, we can establish that a majority of 18 to 25 year old respondents sometimes watch e-sports events and competitions. Respondents of 25 to 40 years never watch, whereas respondents above 40 years sometimes watch e-sports events and competitions. Respondents under 18 years always watch e-sports events and competitions.

**Table 4: Age \* How often do you watch E-sports competitions and events? Crosstabulation**

		How often do you watch E-sports competitions and events?				
		Always	Never	Rarely	Sometimes	Very often
Age	18 to 25 years	9	3	16	17	10
	25 to 40 years	2	5	4	4	1
	40 years and above	0	1	2	4	0
	Under 18 years	11	2	4	3	2
Total		22	11	26	28	13

**Table 5: Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.045 <sup>a</sup>	12	.011
Likelihood Ratio	24.920	12	.015
Linear-by-Linear Association	8.168	1	.004
N of Valid Cases	100		

The Table shows that the significance value of this test, i.e., the P-value is .011. Since the p-value is lower than  $\alpha = 0.05$ , the researcher rejects the null hypothesis. From the test result, it can be deduced that respondent's age has an impact on watching e-sports competitions and events. Similar reports published have also sighted that in India, Gen Z and /Millennials are more attracted to E-sports than other age groups(Munjaj, 2022).

**c) EXPLORATORY FACTOR ANALYSIS: Factors Do You Believe Have Contributed To The Growth Of E-Sports As A Global Business**

**c.I. KMO AND BARTLETT'S TEST**

**Table 6: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.932
Bartlett's Test of Sphericity	Approx. Chi-Square	974.599
	df	45
	Sig.	.000

KMO and Bartlett's Test measures how appropriate this test is for factor analysis. Since the KMO value shown in the above figure is 0.932, and Bartlett's Test of Sphericity is .000, this data is permissible for conducting factor analysis. Bartlett's Test of Sphericity (Bartlett, 1950) revealed a statistically significant number of correlations amid the variables. This indicates that factor analysis is permissible with given data.

### c. II. Rotated Component Matrix:

Table 7: Rotated Component Matrix

	Component	
	1	2
[Growing viewership]	0.857	0.335
[Notable investments]	0.855	0.296
[Increased live streaming of games]	0.85	0.35
[High engagement activity]	0.779	0.441
[High Accessibility and Inclusiveness]	0.77	0.426
[League tournament infrastructure]	0.746	0.466
[International prize pool and Streaming revenue]	0.682	0.568
[Increase in awareness of Video games ]	0.259	0.908
[Career opportunities]	0.441	0.693
[Increased use of online gaming for recreation and enjoyment]	0.614	0.659

Component 1 was identified as "Consumer Engagement Factors" which included Growing viewership, Notable investments, Increased live streaming of games, High engagement activity, High Accessibility and Inclusiveness, League tournament infrastructure, International prize pool and Streaming revenue. Similarly, in previous research, entertainment and social media interactions were found to be the factors that led to Esports audience satisfaction (Lee, An & Lee, 2014). Previous research also found that people are interested in making money through online games similar to one of the variables identified in this study (Parker & Dhabade, 2018). The possibilities of Esports investments were also stressed in literature supporting this research (Esports Observer, 2019).

Component 2 was identified as "E-sports Awareness Factors" included Increase in awareness of Video games , Career opportunities ,Increased use of online gaming for recreation and enjoyment. Previous literature has mentioned about factors industry interest, private investment and related reports have sighted the growth of e-sports beyond its traditional markets in North America and East Asia, and into other regions around the world (Intelligence, n.d.). This can be done by hosting international tournaments, establishing regional leagues, and creating partnerships with other countries and organizations. This strategy could potentially help with development and awareness of e-sports as a global phenomenon. Focusing on key components of e-sports such as players and coaches, building the necessary infrastructure to support it, includes creating dedicated e-sports arenas, providing high-quality internet connectivity, and investing in gaming hardware and software, adding training centres, and leagues in developing talent as it could impact that talent development and competitiveness of e-sports as a global business (The Key, 2023; Joshi, 2021; Internet Users,2021)

## 5. Conclusion

The potential for e-sports to become a large worldwide industry has increased dramatically in the recent years. The growth of e-sports as a worldwide industry necessitates a multifaceted strategy that includes infrastructure development, awareness raising, collaborations, opportunities for sponsorship, legal structures, development and training, and international expansion. The popularity of e-sports has eventually raised the demand for gaming equipment, software, and accessories, opening new business prospects for tech firms and entrepreneurs. E-sports are now a popular investment prospect for investors and venture capitalists due to their global nature. A greater variety of businesses, from gaming teams to streaming services to e-sports betting sites, have emerged as a result of the growing popularity of e-sports.

This paper also investigated the gender association with awareness of e-sports and competitions. The results showed there was difference among genders to the variables tested. Similar results were sighted in literature showing the gaming addition differences among gender especially males who were having lower self-esteem, and lower satisfaction with daily life (Ko et al, 2005). The research also identified two factors- "E-sports Awareness Factors" and "Consumer Engagement Factors" which contributed to the growth of E-sports business, In order to promote e-sports as a real sport, it is also necessary to remove the stigma attached to gaming. E-sports has a bright future as a worldwide industry overall, but to reach its full potential, more funding and support are needed. By presenting chances for athletes, teams, sponsors, and spectators alike, e-sports has the potential to significantly impact the global sports sector.

## References:

- Newzoo. (2021). Global Esports Market Report: Trends, Revenue, and Audience. Retrieved from <https://newzoo.com/insights/articles/global-esports-market-report-trends-revenue-and-audience/>
- Hamari, J., Sjöblom, M., & Törhönen, M. (2017). What is eSports and why do people watch it? *Internet Research*, 27(2), 211-232. doi: 10.1108/IntR-04-2016-0082
- Chan, C. (2020). Exploring the esports ecosystem: A systematic literature review. *Journal of Business Research*, 118, 280-291. doi: 10.1016/j.jbusres.2020.09.051
- Witkowski, E., & Wilczewski, G. (2018). Esports – competitive business model analysis. *Journal of Entrepreneurship, Management and Innovation*, 14(3), 103-123. doi: 10.7341/20181434
- Taylor, T. L. (2018). *Watch me play: Twitch and the rise of game live streaming*. Princeton University Press.
- Johnson, C. (2020). *The esports playbook: Understanding and monetizing the esports ecosystem*. Springer.
- Kim, Y., & Chua, V. (2021). The e-sports industry: Historical, current, and future perspectives. *Journal of Travel Research*, 00472875211003406. doi: 10.1177/00472875211003406
- Holt, S. (2018). The development of eSports and its influence on the wider industry. *Entertainment Law Review*, 29(6), 207-213. doi: 10.2139/ssrn.3276377
- Yi, S., & Lee, S. (2019). Strategic factors for the success of eSports business: A case study on League of Legends. *International Journal of Industrial Marketing*, 4(2), 80-91. doi: 10.15664/ijim.v4i2.216
- International Olympic Committee. (2018). *The eGames: The pathway to Olympic inclusion*. Retrieved from <https://www.olympic.org/news/the-egames-the-pathway-to-olympic-inclusion>
- Intelligence, I. (n.d.). *Esports Ecosystem in 2023: Key industry companies, viewership growth trends, and market revenue stats*. Insider Intelligence. <https://www.insiderintelligence.com/insights/esports-ecosystem-market-report/>
- Munjal, A. (2022, November 13). *The rise and rise of Esports in India*. Times of India Blog. <https://timesofindia.indiatimes.com/blogs/voices/the-rise-and-rise-of-esports-in-india/>
- The rise of esports investments A deep dive with Deloitte Corporate Finance LLC and The Esports Observer. (2019).
- Parkar, R. Z., Ii, S., & Co, A. D. (2018). Study on Scope, Growth, and Awareness of E-Sports in India. *IOSR Journal of Business and Management (IOSR-JBM)*, 71-80.
- Ji-Young, Lee., Jae-Woong, An., Sang, Woo, Lee. (2014). Factors Affecting eSports Audience Satisfaction - The case of League of Legends. 14(3):35-46. doi: 10.7583/JKGS.2014.14.3.35
- Zhang, Y., & Liu, R. (2022, March). *Economic Sources behind the Esports Industry*. In 2022 7th International Conference on Financial Innovation and Economic Development (ICFIED 2022) (pp. 643-648). Atlantis Press.
- (2023, March 19). *Esports Stares At Promising Future In India But Right Investment Holds The Key*. *Indiatimes.com*. Retrieved May 1, 2023, from <https://www.indiatimes.com/technology/news/esports-promising-future-in-india-595991.html>

---

(2021, July 8). The Impact of Online Gaming in India on Internet Users. <https://www.Hathway.com/>. Retrieved May 1, 2023, from <https://www.hathway.com/About/Blog?type=best-wifi-connection-for-gaming>

Joshi, M. (2021, April 1). DSpace at My University: Online Gaming and development of e-Sports industry in India with the advent of 5G. DSpace at My University: Online Gaming and Development of e-Sports Industry in India With the Advent of 5G. <http://ir.pdpu.ac.in:8080/jspui/handle/123456789/409>

Chih-Hung, Ko., Ju, Y., Yen., Cheng, Chung, Chen., Sue-Huei, Chen., Cheng-Fang, Yen. (2005). Gender differences and related factors affecting online gaming addiction among Taiwanese adolescents. *Journal of Nervous and Mental Disease*, 193(4):273-277. doi: 10.1097/01.NMD.0000158373.85150.57