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The Future and Development of E-Sports

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Abstract

E-sports have been growing exponentially since the launch of StartCraft in 1998. Their growth was first observed in South Korea, where the national government incorporated it into the cultural mainstream. South Korea established several e-sports competitions, which encouraged the youth's widespread acceptance of e-sports. The culture quickly spread to other nations, such as neighboring China. With the proliferation of smartphones, consumption of e-sports increased in countries such as India and Africa – this technology led to the introduction of e-sports in new regions. The Chinese government was also researching 5G to increase the consumption of e-sports in the country, where government policy plays a significant role in such consumption. Accordingly, infrastructure must be constructed to support participation in e-sports. The policies surrounding e-sports are key to its growth and development. Since existing global federations lack control of all e-sports stakeholders, vital regulations that establish and govern a common arena are not followed. This allows large firms to monopolize tournaments and leagues. Consequently, small firms struggle to penetrate the industry. Additionally, sponsors for e-sports events are very challenging for the organizers. This is mainly attributed to the variation in players' skills and tournament quality. Quality teams and leagues, such as Liquid Team and League of Legends, will attract many sponsors. Like traditional sports, e-sports teams need stadia to increase their revenue collection. They can also establish their own e-games and leagues, thus disrupting the monopoly of the publishers. Furthermore, developing young e-sports talents offers a promising future for e-sports. Organizations such as the North America Scholastic e-sports Federation (NASEF) are key for transforming young talents into pro-gamers. Establishing a single umbrella body for all e-sports activities will offer necessary guidelines on nurturing young talents.

CHAPTER 1: INTRODUCTION

The world of sports has changed significantly over the last few decades. E-sports are slowly overshadowing traditional sports. This change has been observed due to the rapid improvement of technology and the ubiquity of the internet. Since large companies are known for supporting notable organizations to improve their brand image to potential customers, traditional sports rely upon sponsorship and product promotions during live matches. Accordingly, traditional sports events have been used as a source of entertainment and highly commercialized. According to Burk (2013), sports have created more job opportunities for players and other supporting activities that ensure the event operation is financially successful. Since e-sports have gained more fans in the past few years, businesses target them to retain their relevance in the industry – the high viewership increases public awareness of the products or services. In that regard, Zhou et al. (2013) believe that companies advertising their products or services during live matches are willing to pay more. This sport-based approach has been prevalent, especially when the company wants to retain its superiority in the market or launch a new product. Entrepreneurs have benefitted from traditional games' live broadcasts by gaining the chance to reach their target audience internationally.

Technological advancement has enabled people to mimic live matches on the screen. Now more than ever, the younger generation is attracted to electronic sports, defined by Cerqueira et al. (2020) as competitive video gaming. The gamer competes with the computer that has been installed with coded information resembling real-world contests. In a real sense, the entire match appears like an actual competition on the pitch, and it is more attractive than watching matches on television. Over the years, e-sport technology diffusion has sporadically grown, and the entertainment service is widening its reach. China has long been the superior consumer of video gaming. Yue et al. (2020) suggested that China earns the most revenue

generated from video gaming, and the government has supported the industry. This has been achieved by implementing policies that support video gaming development, including reducing taxes and promoting the industry's local talents. The research further noted that by the end of the year 2019, China was home to more than 400 million local consumers of video games and generated revenues close to 102.8 billion Yuan. Furthermore, it is expected that China has entered a critical period of integrating professional e-sports, incentivizing the government to institute workable measures to support local developers in growing e-sports.

China's case is indicative of the change occurring in the sports industry. The shift leans toward booming e-sports, and youths comprise the highest portion of consumers. The situation has been facilitated by easy access to the internet (Maciej & Weronika, 2020). Regions that previously lacked internet connection can now enjoy virtual products and services. Developing nations are slowly being linked, and e-sports encounter many opportunities in those regions. Still, a considerable proportion of the global population is unable to enjoy electronic sports packages. This is due to the initial capital outlay required to buy the broadcasting boxes.

Besides, as exposure grows, e-sports are becoming further demystified. The cost of loaded games is decreasing as computer access improves worldwide. It is anticipated that e-sports will continue to grow from that angle, and new versions would be unveiled as time progresses. In the growing online market, e-sport related firms dealing with the design and development of such games have capitalized on online marketing strategies to further appeal to consumers. The idea is to be innovative in establishing the target consumers and using the right channels, such as social media, to reach them. Regardless, marketing for e-sports

products requires innovative and flexible strategies to ensure that new market dynamics do not overtake the products.

Problem statement

The e-sport industry is witnessing a surge in global popularity. While competitive gaming has existed since the 1970s, superior platforms and high-speed internet changed the system. The industry has become more widely accessible and attracted large corporations, such as Facebook and Amazon, establishing the financial foundation for more competition. Local developers have faced a challenge from established companies with substantial financial resources, thus threatening their survival. Simultaneously, increased consumption of e-sports products has created an opportunity for many aspiring players to approach the opening avenue for business. As such, the industry faces several challenges relating to product and customer service quality. Progressively, it is expected that more developers of e-sports gaming would emerge, thus jamming the broadcast site with traffic and lowering the quality of user experience. In the same vein, data security is another concern due to technological diffusion and advancement, in which hackers would find effective tactics against online service providers. The present paper will examine the issues surrounding the future of e-sports, considering the concerns of efficiency and online security.

Aim of the Study

This study aims to examine the progress that e-sports has made compared to the traditional form of sports. It would entail looking into the reasons for its popularity and whether the current technology changes would impact its performance in the future. The paper referred to the secondary sources of information to address the issues identified, including peer-reviewed journals revolving around the area of e-sports live broadcast. The

selected literature was critically analyzed and constructed to have a broader perspective regarding the issue under consideration.

CHAPTER 2: LITERATURE REVIEW

The previous chapter provided an overview of live e-sports broadcasting and narrowed it down to the topic's areas of interest. The current chapter discusses the extant literature, which offers considerable and relevant information. This chapter's primary purpose is to shed insight into theories that rationalize the current study, guided by four themes: impacts of technology on the future of e-sports, advantages of e-sports, challenges facing the e-sports industry, and policies that would sustain the e-sport industry in the future.

The growth of e-sport live broadcast

Since 2016, online broadcast platforms used to access the tournaments have surged. These platforms' growth has created competition among service providers and likely improved the final user experience. It is argued that innovation is the real game-changer in the quality of services or products (Kim et al., 2020), thus forcing companies to meet the customer's needs. In the gaming industry, the highest concentration of users is found in younger generations. Young people need products that can load faster, and more importantly, cost less. A survey by Hutchins et al. (2020) revealed that the observed consumption of electronic sports among the youth leads developers to capitalize on social media to advertise their products.

According to Harun (2018), e-sports will continue to form a symbiotic relationship similar to that of traditional TV. An increase in demand for competitive gaming would result in increased supply, likely to occur as multiplying game titles contribute to a more competitive environment and improve the consumer experience. Byon et al. (2010) also noted that due to the increased demand for electronic sports, the supply for such content has grown by 40% since 2017. This figure suggests that more people are participating in e-sports, which is anticipated to increase in the future. However, the main challenge limiting such growth in

that industry is the disparity in technological developments. Emerging countries have lagged in e-sports, and the primary reason given by Summerly (2020) is the lack of modern technologies and local developers. These countries rely entirely on imported products, with China topping the list of e-sports providers to developing countries. A similar observation was made by Burk (2013), who conducted a study to examine the global trend of e-sports participation. Adopting a document review method of research, the author concluded that developing countries had been left behind in e-sports, leaving opportunities for e-sport businesses to enter those markets. The new wave of e-sports development may attempt to fill this usage gap in third world states.

Furthermore, as e-sports have become mainstream entertainment, the arrival of more sophisticated and advanced versions is imminent. Sports gaming is currently supported by PCs and consoles, leaving a massive gap for streaming from mobile devices. This is one of the areas that would revolutionize the industry by personalizing the user's experience. In support of the observation, Ayas (2020) proposed that gaming with mobile gadgets is more convenient than gaming with personal computers. The portability of the phone device provides the user with the flexibility to play the game at any time. According to Harun (2013), a significantly higher percentage of people have smartphones, compared to those who own a PC or a personal laptop. As current e-sports were mostly designed for computers, many potential users are excluded. Developers create platforms supported by mobile phones to ensure that gamers can participate in live matches through their mobile devices. Additionally, Kim et al. (2020) confirm in their study that the younger generation would continue to show an increasing pattern of mobile usage. As such, the development of mobile-based e-sport broadcasts would revolutionize the industry.

Impact of technology in the future of e-sports live broadcast.

The improvement of technology is a notable factor of consideration here. Gamers are demanding a higher resolution experience and faster content loading. They prefer complex games, which can only be supported by fast internet speed and a blend of other technologies. Hannich (2020) believes that technology is not static and is rapidly changing, calling for developers to be innovative to understand consumer needs. At the very least, fast loading excites the gamers, generating a better user experience. As a result, game designers must research and aim to meet their consumers' needs. To establish the impact of technology on e-sports, Egliston (2020) conducted a secondary study to determine why companies offering e-sports platforms often change content with time. The result of this study noted that gamers have diverse tastes. They demand a better experience from the previous game, thus requiring creativity from developers. Changes in technology have also increased online security platforms and services to avoid user data from being compromised. The study conducted by Cerqueira et al. (2020) illustrated that the current threat to any online content is access to personal privacy data. A hacker could gain access to e-sports platforms and breach the system regardless of the service provider's security systems.

Additionally, Cerqueira et al. (2020) expounded that artificial intelligence would become integral within the next three years. This technology would impact strategy development and anti-cheating measures in e-sports events. Other critical technologies include data analytics and virtual reality. Proponents of technology, such as Harun (2018), confirm that e-sports would be personalized in the future – and that gamers should expect the modified quality and content to satisfy their needs. Despite this, technological solutions should be cautiously handled in the e-sports industry to avoid compromising the human

element. The elimination of human variables would negatively affect the overall entertainment value of e-sports products.

Characteristics of e-sport compared to the traditional sport

The differences between e-sports and traditional sports are significant, since they are played differently. According to a study conducted by Dilek (2019), traditional sports matches consist of two teams playing against each other in a physical location. These matches involve a high level of physical interaction among the players and a considerable size of participants and spectators. In e-sports, players are not required to be physically present. Instead, a virtual environment is necessary, allowing participants to play against the computer. However, Kim & Kim (2020) showed that e-sports, while lacking physical meetings, creates competition among the grouped individuals. They tend to compete against each other, as opposed to playing with computers. E-sports have resultantly attracted an enormous fan base, becoming popular in most countries that are currently enjoying high-quality internet infrastructure. The same argument is supported by Kim et al. (2020), who noted that e-sports products find appreciation mostly by young people. The product eliminates the need to attend traditional competitions, allowing the industry to grow exponentially.

Traditional sports are governed by already established protocols, which are held with absolute authority. This is contrary to the modern e-sport, where the game's format is determined with some creativity. Game characters, for instance, and game settings may be changed. This is done to provide a more individualized consumer experience, which traditional sport competitions lack. There is more flexibility in e-sports, thus attracting a considerable base of consumers who want to engage in a flexible game. In fact, the creativity and appeal of e-sports grows steadily (Ayas, 2020). The author further noted that a significant

disparity between e-sports and traditional sports lies in financing. Large e-sports organizations operating outside of a physical location can generate revenues from ticket sales and broadcasting rights. E-sports have more avenues through which to generate revenue than their traditional counterparts, whose primary source of funding comes from mainstream media, such as TV.

Furthermore, a study by Kim et al. (2020) revealed some unique traits of e-sports. The author noted that there are fewer limits on a participant's gender, age, or culture, which has contributed to the popularity of e-sports. Their emphasis is on intellectual competition – therefore, participants compete using strategic decision-making skills. In the same vein, the author alluded that weather conditions do not limit gamers from participating in e-sports. Therefore, the flexibility of participating in e-sports has made it easy for the product to reach several regions and received notable appreciation from consumers. Qian et al. (2020) noted that approximately 60% of China's youth engages heavily in e-sport gaming, with other countries following suit. Despite this, a considerable gap in opportunities lies in developing regions, which should be more considered by game developers in creating service content.

Sponsorship strategy

Endemic sponsors (sponsors from within the e-sport ecosystem), such as software, computer components, and manufacturers, have continually invested in e-sports since its beginning. Presently, non-endemic brands control 60% of the e-sport partnership. According to Kim et al. (2020), e-sport has experienced tremendous growth in the past years and competes more than just equally with traditional sports viewership and fan monetization. The popularity of e-sport from the period of COVID-19 is much higher than conventional sports, making it attractive to the sponsors. The author further noted that e-sports sponsorships could

reach a broad base of target audiences and most of all appeal to the younger generations.

Harun (2018) noted that a rigorous marketing ROI framework could help track the outcome, compare it with the traditional sport, and refine the sponsorship strategy. The merit of e-sport to reach the target audience more easily help establish efficient sponsorship strategies.

However, the main challenge with the e-sport sponsorship is the reputational risk (Ayas 2020). This can be mitigated by demystifying the misconceptions and focusing on more effective communication with customers.

BCG Analysis

Stars	Cash Cows
<p>The young generation is adopting e-sports due to increasing smartphone ownership across major developed economies of the world. Also, the work-from-home policy during the pandemic led to increased time in the house, thus joining the e-sports platform.</p> <p>Many e-sport firms have created multiple platforms and products for virtual gaming.</p>	<p>The firms that have long been existing in e-sports have continuously generated steady revenues throughout their operations.</p> <p>There has been a continuously upgrading the e-sports gaming gadgets due to technological advancement, thus giving consumers a more individualized consumer experience.</p>

Dogs	Question marks
<p>The former technologies in e-sports are still finding a market, especially in less and middle developed economies.</p> <p>There are still some games being developed using obsolete technologies such as 2D, which have become unpopular among prolific gamers.</p>	<p>Some e-sports firms have created games that rival the traditionally known products in e-sports. Some of these games played using gadgets such as smartphones, thus not using traditional gaming equipment.</p> <p>The less developed economies are slowly joining the e-sports gaming platforms.</p>

Table 1; BCG Analysis.

Challenges that the e-sport industry is facing and the role of policy formulation

As shown from the previous paragraphs, e-sports are growing more popular. The current pandemic has contributed to the increase in the number of people interested in e-sports, and this could be the prime time for companies that hope to test their products and services through e-sports platforms. Although the sector appears profitable in terms of its general financial status quo, it is essential to note that it is marred by some of the challenges of traditional sports. One of the difficulties is standardization (Gee, 2020). E-sports is a relatively new form of gaming, and compliance is a significant issue facing its investors. Contractual disputes are common in such cases, and it is advisable to be familiar with the threatening legal matters (Ayas, 2020). Having a legal team in place for consulting on contract and content issues is ideal to avoid potential loss of income. This observation is supported by Kim et al. (2020), who believes that many startup e-sports companies use the clubs' content without proper authorization or license. In such cases, they find themselves in

legal problems that result in unnecessary challenge – a situation that could have been averted if appropriate legal protocols were in place.

The other challenge lies in determining the best way to enter the market. According to Qian et al. (2020), there are several ways to popularize gaming products, including advertising, franchising, and advertising. Many companies invest in e-sports because of its vast potential market, especially on the African continent. Resultantly, many investors have taken a keen interest in e-sport, creating stiff competition and the need for companies in the industry to establish the best strategy to enter new markets. In formulating strategies for marketing, companies must do so uniquely to beat similarly-situated industry rivals. Harun (2018) noted issues of cybersecurity caused by e-sports' reliance on internet infrastructure. In modern times, as technology has advanced, hackers' targets have diversified. Consequently, e-sports have become a target for these aggressors, who take advantage of the younger generation with little knowledge of the sophisticated technological security issues. Data breaches are a threat to any company that has invested in e-sports. To avoid such issues, it is prudent to have various measures in place to protect gaming data.

To avert some of the challenges mentioned above, it is indispensable to consider policies that ensure gamers' data and tightly secure service provider's platforms. To start, it is necessary to compel investors to integrate measures of consumer data protection since the advanced technology's connectivity has increased the risk of intrusion. Further, Byon et al. (2010) noted that a higher number of young people embrace e-sports, which to some extent has negatively affected their concentration capacity and cognitive readiness for educational tasks. Some prescient measures would enable companies to avoid legal and ethical dilemmas in countries where content for young people is strictly regulated.

Governance policies of e-sport leagues to bring more success to the business

A governance model in the sports industry is essential to ensure its stakeholders' rights. Existing structures for traditional sports have existed for decades, alongside the development of e-sports. One of the main obstacles facing the regulation of e-sports is that the variation among the sports. Each game has its own internal rules, and more so, some countries do not consider e-sport a sport. E-sports, therefore, cannot take advantage of existing governance structures. Several considerations may ensure the success of e-sports and benefits for stakeholders. A governing body can adopt the ESIC Integrity Program by becoming a member or through collaboration (Ayas, 2020). The ESIC Integrity Program sufficiently covers integrity issues, thus boosting the loyalty of all involved parties. Other considerations would include enforcing regulations which address contractual stability and establish a dispute-resolution mechanism (Harun 2018). All these changes would promote the success of e-sports.

SWOT Analysis

Strengths	Weaknesses
<p>The industry has a huge fan base, mostly comprising of the youths.</p> <p>Competitive games are being created, thus making them more enjoyable to the players.</p> <p>E-sport is becoming social gaming, and the number of audiences is continuously increasing.</p>	<p>Possibility of including the underage population in the game.</p> <p>Too many alternative games are being developed.</p> <p>Lack of proper internet connectivity in some of the countries.</p> <p>Lack of proper regulation since e-sport is not one sport.</p>

	<p>Issues of cheating, including playing under another player's name, using crowd, drug usage, and match-fixing.</p>
<p style="text-align: center;">Opportunities</p> <p>Professionalism has been raised as an issue in the e-sport ecosystem. Establishing training programs is a massive opportunity for the e-sports ecosystem.</p> <p>Structural and efficient plays. There is a chance to develop e-sports in schools and prepare students early enough to engage in professional e-sports.</p> <p>Monetizing e-sports by coming up with e-sport betting is an area that has less been explored.</p>	<p style="text-align: center;">Threats</p> <p>The segmented fan base is a potential risk for the sponsors. E-sport's audience is widely spread, and it becomes difficult to establish whom to target. In that case, the sponsors' return on investment is not guaranteed, discouraging them from participating in the industry.</p> <p>E-sports is disrupted by the newly introduced games rendering older games irrelevant. This means that the players to be flexible and adaptive to new changes.</p>

Table 2; SWOT analysis.

Global E-sports market size

The e-sports industry has been growing exponentially in the coming of the internet age. Kim et al (2020) conducted extensive research on the size of the global e-sports market. The total size was found to have doubled between 2018 and 2021. In 2018, there were 165 million e-sport spectators and fans and 192 million viewers. This number sharply increased to

250 million e-sport enthusiasts and 307 million occasional viewers in 2021. The share of this was mainly between the most technologically advanced countries. The United States claimed a share of 32%, South Korea claimed 30%, and China claimed 17%. Germany – the only European country on the list – came fourth in the global ranking (Kim et al 2020). The author further compiled data on global e-sports streaming. China occupied the top rank with more than 50% of the revenue generated from e-sports video streaming. China streamed more than 11.1 billion videos of e-sports streaming in 2020. Globally, the Asia-Pacific accounts for more than 57% of global streaming, while Europe consists of 16% and North America comprises 12%. The rest of the world comprised only 15% of e-sports streaming, as it relies on the technology and demographics of a country. China's high e-sports streaming market may be correlated with its relatively younger population compared to that of the EU and North America.

Year	Occasional views	E-sports enthusiasts
2016	121 million	160 million
2017	192 million	143 million
2018	215 million	165 million
2019	307 million	250 million

Figure 1; E-sports market size

According to Yang (2018), some factors promote a country to increase its e-sport acceptance rate. Investigating South Korea – ranking second in e-sports adoption – as a case study, he notes that technology was the steppingstone for the county's adoption of e-sports. South Korea is considered to have introduced e-sports to its citizens and the rest of the world when it released state StartCraft in 1998 (Yang 2018). StarCraft was the first of its kind, and

South Korea went further to organize the e-sports World Championship in 2000. It also branded the event as an e-sports Olympics, providing a significant boost to the industry and e-sports as part of the country's culture. E-sports became part of South Korea's tourism industry, attracting gamers from across the majority of the developed economies. Various investments were quickly made in the industry, with gaming giants such as Nintendo leading the country's massive investments. Several video games were launched after Starcraft, leading to today's vast and wide selection of video games originating from South Korea.

Continent	North America	EU	Asia Pacific	Rest of the World
Percentage	12%	16%	57%	15%

Figure 2 E-sports market's share per continent

Eventually, e-sports gaming flowed to neighboring China. However, China adopted mobile e-sports, which differed slightly from South Korea's computer video gaming. The first gaming platform to be established in China was the China Mobile e-Sports Games (CMEG) (Kim et al 2020). The government supported the event, which was being held annually and attracted players across China's major cities. Additionally, the government created the World Cyber Area, which was constructed in 2014. The World Cyber Area aimed to support e-sports and grow the national industry. With the rapid expansion local smartphone manufacturers, China aimed to reach its young population and encourage the youth to join sports. Most of the smartphone brands manufactured in the country would be installed with multiple games, enticing the owners to play. This strategy proved successful as the country's e-sport adoption quickly rose to be the highest among the region. The number of e-sports enthusiasts in China

promptly surpassed that of South Korea, making China the new home of e-sports in the Asian Pacific (Yang 2018). The growth of e-sports in China led to an increase in the country's investors, as they sought to capitalize on the growing industry. Despite diversified investment – the majority of which was on smartphone games – most of the games developed for smartphones targeted beginners and less knowledgeable gamers. Smartphones exported to other developing and less developed countries offered various video games meant to attract more players from these countries.

While the Asia Pacific claimed the highest number of e-sports consumers globally, North America and Europe had a considerable investment in e-sports by the end of the 20th century. For example, the United States became home to the largest e-sports league in the world in 1997. The Cyber Athlete Professional League (CPL) currently serves as the largest professional league globally (Kim et al 2020). Europe shares the same history with the United States in terms of e-sports development. Initially, the development of the Electronic Sports World Cup (ESWC) was held in France to boost the growth of e-sports in the country, but the strategy was not successful. However, the event is now held annually across different cities in the world. Failure for e-sports to be adopted as part of the mainstream culture in the USA and Europe is mainly due to weaker governments campaigns for public adoption of e-sports.

China's milestones in increasing the consumption of the e-sports in the country

China has provided a massive investment in e-sports since the beginning of 2004 after the successful introduction of the China Mobile e-Sports Games (CMEG). Several strategies were laid in place by China's General Administration of Sports in seeking to make e-sports part of the national sports and culture (Yue et al., 2020). This council also aimed to make e-sports a revenue-generating industry with the capacity to compete with the North American

market. Despite the Asia Pacific having the second-largest number of e-sport players, most niches cannot be monetized for high revenue generation. The municipal and local governments had been incorporated in the ambitious plan to grow e-sports alongside traditional sports. E-sports were recognized as the official sport in the country to increase consumption, growing the number of professional e-sports players in the country and leading to a considerably higher niche (Yue, et al 2020). Consequently, firms would develop video games suitable for professionals from other economies to consume. The consumption of e-sports products in other economies would ensure job creation in China and increase the industry's valuation.

Years	2014	2015	2016	2017	2018	2019
Value of the Industry (RMB 100 million)	226.3	374.6	504.6	752.8	972.7	1028
Jobs created (10,000's)	3.6	4.7	5.9	6.8	9.5	14.5

Figure 3; Value and jobs created through e-sports in china

Introduction of 5G

The introduction of 5G technology was one part of the strategy in which China aimed to improve the country's e-sports consumption. Promoting other e-sports technology requires a technology that will guarantee higher streaming speeds. Fittingly, 5G would guarantee higher consumption since players could become professionals in top niche games due to higher loading speeds (Yue, et al 2020). The technology guarantees a higher ultra-high definition of the videos. A resolution of 2K and higher would ensure that the players enjoy the experience. More importantly, 5G has the opportunity to offer Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) experiences (Grandviewresearch.com).

2021). The player can enjoy the large-scale commercialization of e-sports through these opportunities, including artificial intelligence. 5G users in China currently total more than 200 million, comprising more than 40% of total users globally. The integration of 5G in e-sports will be an important milestone, as it will lead to the development of more professional platforms and enhance China's role as a consumer and an exporter of e-sports.

Cloud gaming

According to a global e-sports report by Newzoo released in January 2021, cloud gaming grew as a form of e-sports in 2020 among professional gamers. The rise of cloud gaming was mainly driven by global e-sports giants from the USA and China. Amazon, Google, Microsoft, and China's Tencent had launched cloud e-sports gaming platforms in 2020, which involve apps based on Android or iOS. The popularity of these gaming platforms skyrocketed during the stay-at-home order of the COVID-19 period. One of the major e-sports released on cloud platforms is *Cyberpunk 2077*, characterized by high fidelity for the player. The players enjoy a stadia version of the games without using expensive software, and the Standia version will give professional players a less expensive way of playing without having to acquire gaming gadgets, such as an Xbox and PS5 (Grandviewresearch.com. 2021). Despite cloud gaming being in the infant stages of development, it presents a reliable and efficient gaming option to players who cannot afford expensive gaming hardware. Consequently, cloud gaming will increase e-sports consumption in most economies. Cloud gaming technology will also increase revenues for e-sports firms, since they will not incur taxes on hardware gaming gadgets. The optimized graphics for cloud gaming products act as a marketing tool, attracting most e-sports enthusiasts to become professional gamers. According to Newzoo's report, cloud gaming is expected to generate more than \$1.2 billion in revenue.

The domination of PC on e-sports seems to be threatened from cloud gaming, operated chiefly from smartphones.

Technology plays a crucial role in the increased diversification in e-sports. Most e-sport structures are currently based on traditional sports (Grandviewresearch.com. 2021). Firms in the e-sports industry are investing in technology advancement for players and teams to expand their niches. Professionals will thus have a chance to create a lifestyle in gaming. The Newzoo report further notes that traditional sports will have to observe e-sports once a diversified ecosystem is established.

Pokemon World Series

Pokemon is one of the first video games to grace the e-sports industry. Produced in Japan by The Pokemon Company, Pokemon's popularity has grown exponentially, with firm establishing a world championship for players to compete in. In the championship, the games played are the Pokemon video games, Pokemon Go, and the Pokemon Trading Card Game (Han 2017). Tournament attendance is based on invitation only, with the players earning invitations by qualifying through online competitions. The tournament participants range from 150-200 total, with the participants coming from nearly all continents.

The tournament was designed to increase the royalty of the players and reward the winners. In this case, the winner earns more than \$5,000 in scholarships – other participants are eligible to receive smaller prizes. The annual tournament has seen a tremendous increase in popularity among the players, with many people participating in the qualifying tournament (Han 2017). As a result, the Pokemon championship is an example of e-sports directly challenging traditional sports. However, the tournament suffered the same fate as traditional sports after the COVID-19 health crisis, leading to its cancelation in 2020 and 2021. The firm

is now changing the championship's organizational strategy, so that the championship will be conducted entirely online. This demonstrates the benefit of technology in providing ease and flexibility for e-sports firms in their operations. Despite the health crisis, Pokemon lovers continued to play the game at home. Compared to traditional sports, the tournament may resume online with no interruptions from factors such as public health protocols and health-related issues.

North America Scholastic e-sports Federation (NASEF)

The North America Scholastic e-Sports Federation (NASEF) is a body that oversees the promotion of e-sports in the high schools of North America. The body mainly organizes e-sports tournaments among the high schools in the USA, Mexico, and Canada (AP NEWS 2021). The organization aims to create a unique educational platform that incorporates e-sports into schools alongside career options to the students, thus offering a more educative ecosystem. Additionally, the students are offered multiple skills such as communication and problem-solving skills. The organization has a subscription of more than 1,000 schools across North America.

NASEF has been supported by small e-sports firms that create games for students, such as Skillshot Media and Hi-Rez Studios. It also receives grants from various schools which have NASEF clubs. The grants' aim to manage the day-to-day operations of the clubs, the purchasing of the jerseys, and the purchasing of computer equipment required in e-sports (AP NEWS 2021). These are essential components to run e-sports in a school. As a result, the students in these schools have a complete ecosystem for e-sports activities and competitions. NASEF also organizes student tournaments across the three countries and has begun extending its wings globally – primarily to developed economies. In 2019, NASEF entered a

partnership with the Japan High School e-Sports Federation (JHSEF) to promote e-sports platforms among students in the US and Japan (Businesswire.com 2021). Through this partnership, the two bodies will create e-sports competitions among the high schools, believing that this partnership will lead to integration and the promotion of e-sports culture.

NASEF's impact on students' educational progress has been immense. The creation of opportunities for students to compete for scholarships positively impacts the students in their education and skills concentration. Scholastic e-sports are a steppingstone for students to become professional gamers. Parents have also highly supported the activities of the NASEF, encouraged by student testimony of the impact NASEF's e-sports ecosystem has had on their school life. Students engaged in the NASEF club demonstrate an increased level of motivation and improved performance in studies after joining the club (Businesswire.com 2021). A principal from a school in California, for instance, gave an example of a student who was on the verge of dropping out of school due to poor performance. However, when the student joined the NASEF club, his performance dramatically improved. Other students have also shared how they managed to overcome their anxiety levels through e-sports, and the NASEF competitions helped the students improve their confidence levels due to their newfound anxiety management. The students' motivation from e-sports surpasses their motivation from traditional sports. NASEF clubs are a crucial component for e-sports promotion among the young generation across the three countries. Eventually, through this ecosystem, students can become professional gamers.

Standardization and other challenges in e-sports

Standardization involves identifying the most suitable sector where they can focus their energy and strategy. In a report published by the UK's e-sports department, new start-ups

were found to be challenged by choosing the most profitable niche in the e-sports industry. The failure to find the right niche threatens long-term sustainability due to a lack of reliable revenue streams for the operation (WIPO Magazine, 2021). The report stated that a lack of knowledge on which leagues to participate in present start-ups' main challenge in e-sports. Also, most firms in e-sports are unfamiliar with changes in the industry due to the industry's frequency dynamicity framework. The competition landscape of e-sports is also very challenging to most start-up firms in the industry. Consumers in the industry are mainly interested in consuming products that have high levels of satisfaction. Also, the players in the industry are reluctant to try new products. This presents a huge challenge for the firms whose products are yet to be released in the market, as penetration will be an obstacle amid the big firms that invest considerable resources in research and development.

The Johan Cruyff Institute of sports states that monopolism is the greatest threat to the development of e-sports. The e-sports sector, like any other industry, is comprised of firms with massive funding and start-ups (Bernardich, 2018). Firms with deep pockets tend not to be involved in activities that seem to publicize smaller brands. Therefore, it will play above most of the activities concerning e-sports. These firms fail to cooperate with various e-sports competition organizers, thus complicating the use of their products in such competitions. In most scenarios, these monopoly firms will fail to coordinate with the world governing bodies of e-sports – the World e-Sports Association and the International e-Sports Federation. In such a scenario, e-sports events are threatened as clubs and organizers fear the intellectual property rights owned by these firms. When the global regulating bodies are unable to control and regulate players in the sector, it indicates weaknesses in the general growth of the sector.

The small firms in e-sports, on the other hand, face the challenge of accessing legal services, especially while signing a sponsorship strategy. Legal advice is crucial for start-ups in the e-sports sector, as copyright infringement is a common scenario in the e-sports industry (WIPO Magazine, 2021). Start-ups will find themselves either copying existing products or having their products being duplicated by other firms. These are some of the reasons which make legal services imperative for firms in e-sports. Legal procedures for small firms can be costly, and quickly driving these firms out of the market. Moreover, accessing reliable legal services is critical during the sponsorship process.

Sourcing sponsors in e-sports can prove to be a great challenge for firms, especially start-ups. This does not affect the firms alone, however. Players also find it difficult to participate in championships despite their level of experience. Some sponsors for the championship require significant experience, which can exclude most players from competitions. According to the Johan Cruyff Institute, Johan Cruyff himself stated that players eligible to join his dream team must have trained more than 10,000 hours. If an organization takes such a stand in selecting the players, most of the players will be excluded without a platform to showcase their skills (Bernardich, 2018). The Institute further states that such a scenario will cause a failure for e-sports to nurture enough professionals for the next generation.

Another challenge, stated by the European E-Sports Magazine, is the excessive betting on e-sports – which is, in most cases, illegal. In e-sports, the player can willingly fail to win and allow the other partner to win. This makes betting on e-sports illegal since it is difficult to control such a scenario. Therefore, various black-market forms have emerged, as firms or clubs can organize a competition to collect money illegally from the public. Another

imminent issue in e-sports is the underage consumption of e-sports products. The European E-Sports Magazines calls this one step closer to immorality among many societies. It notes that underage users of e-sports products do not have money to buy them in most cases. They use money from their parents or guardians. Spending too much time and attention on e-sports could lead to addiction (Bernardich, 2018). This could lead children to behave immorally and start stealing from parents and their friends – leading to moral decay in society. Lastly, e-sports struggle with brand loyalty from fans. E-sports is characterized by a highly unique fanbase, composed of individuals who identify themselves with a particular niche. This fanbase can make it impossible for marketers to promote other e-sports products. The Newzoo research report termed these fans as 'nerds' who are unwilling to try other products in the sector. In the long run, these fans can influence new fans joining the e-sports platform to become nerds too. This will make intensify the obstacle for marketers and start-ups, thus spelling death or slow growth of the industry.

Regulations within the e-sports

The International Olympic Committee (IOC) recognized e-sports and other competitive video gaming as a sporting activity. Therefore, various rules have been established for the activity. The two global bodies with the mandate to regulate e-sports are the World e-Sports Association and International e-Sports Federation. However, the organizations lack a policy framework for parties to follow. Mainly, the policy surrounding intellectual property rights lowers the performance of the two bodies. Combined with the monopoly powers of the main stockholders of the e-sports sector, the regulatory bodies' functionality is highly minimized (WIPO Magazine, 2021). These bodies lack power over the players to ensure the centralization of rules and policies, thus establishing a common ground

in e-sports. It would prove easier to use the one policy framework to grow the industry and mitigate ethical dilemmas, such as black-market betting. Another aspect requiring authoritarian policies is the players' data privacy. Firms making e-sports equipment should place more emphasis on protecting the privacy of the consumer's data. In the digital era, consumer's data and their privacy while online should be the topmost priority for any firm. The research done by Chikish et al. (2019) found that the existing policy frameworks in e-sports are disorganized in such a way that most stakeholders are not held accountable for their deeds. One e-sport publisher can control the whole sports competition. In this scenario, it may be impossible to observe policies, including ones that serve to protect the players' privacy. The research found that the chief reason for the policies' failure is the lack of individually organized teams, such as those in traditional sports. Organized independent teams will force other stakeholders to form policies that will guarantee a common playing ground in e-sports.

Literature review analysis

The literature review provides in-depth insights into the growth and development of e-sports. Technology, for instance, is the main factor for the growth of e-sports alongside effective policy formulation. South Korea's case is a perfect example of how growth in e-sports can be attained through technology and government policy. As the finding of Lee (2020) suggests, e-sports can become a pillar of modern culture if well managed in the country's frameworks. The research results also mirror the results of Kim et al. (2020), who found that e-sports would continue to experience tremendous growth due to the advancement of technology globally. Enthusiasts and players will continue to soar, while the culture of e-sports will most likely spread to other regions slowly, like in South Korea and China. The Asia Pacific accounts for more than 57% of the e-sports global streaming. This was most

prevalent with the young people in countries such as China and South Korea. A study by Yang (2020) also makes similar conclusions that a country with a relatively young population stands to be the largest market in the coming future. Events such as the E-Sports World Championship may boost the global growth of e-sports. The study results indicate that South Korea's first step to introduce e-sports to its citizens was holding a global e-sports event and making a video game StarCraft. Accordingly, Kim et al. (2020) states that government is the primary vessel for the growth of e-sports in any given circumstance.

When the government's will to promote e-sports is very low, the private sector is also positioned to create awareness among the public. Through such intervention, e-sports consumption in a country increases with the players finding new niches. A good example is the North America Scholastic e-sports Federation (NASEF), which has decided to bring e-sports competitions among high school teens. Through such interventions, the expansion of professional gamers in e-sports will be a common scenario. AP News (2121) stated that NASEF has managed to enhance the players' skills through these competitions. Additionally, e-sports motivate the students, which causes an improvement in their academic performance. E-sports thus occupies a special societal position in encouraging players. Interaction among the players during the competitions can also serve the same purpose as that of traditional sports. For a long time, traditional sports have been fostering peace and coexistence in diverse societies. Consequently, e-sports were disdained as a form of bringing peace to society. NASEF's strategy is an indication that e-sports are destined to occupy the societal role long occupied by traditional sports. Collaboration with similar organizations across different continents will positively impact the growth of e-sports culture globally.

The growth of 5G technology is a factor that will have overreaching effects on the development of e-sports. Cloud gaming and streaming will offer a great experience to e-sports players, bringing a balanced growth of e-sports. The e-sports electronics and games being developed will run on high-speed internet, offering a better experience for the players streaming or playing on the cloud. Globally, the technology's adoption will offer a platform where e-sports players can efficiently play against participants from all parts of the world without traveling to meet physically. During the COVID-19 pandemic, most sports tournaments and events were canceled – e-sports and traditional sports were likewise affected by the restrictions put in place to curb the spread. Pokemon canceled all its events despite attracting a mass following in North America. However, 5G technology presents a solution for future pandemics that may curtail the movement of people. Firms will be positioned to hold the majority of e-sports tournaments online. Streaming will be highly effective with high speeds facilitating a well-organized tournament. Furthermore, WIPO Magazine (2021) stated that promoters would be more attracted to place their promotional material for online streaming e-sports than traditional sports events. With more e-sports being held online, firms will experience increased revenues, thus organizing more e-sports events. Additional revenue will allow these firms to improve the quality of their products, and start-ups facing the growth challenge will manage to keep their operations running through the funds collected from online tournament promotions.

A Newzoo magazine report on e-sports established that the growth of e-sports will produce a niche of players who will make it impossible for firms to market their products. However, this research proves that after the growth of 5G technology, there will be various niches among the e-sports players. For example, players using a smartphone for gaming will

establish their niche. Different niches will offer a breeding ground for new and improved e-sports products in the market. The black market in e-sports will be eliminated in such a scenario. Betting and the promoters will be effectively prevented from meeting at an event to influence the outcome's decision. The resulting niches will provide an advantage to players due to the high probability of forming an umbrella organization to protect their interests. The current research established that the lack of an umbrella organization was among the stumbling blocks in e-sports. Umbrella organizations will also enhance the elimination of monopolies in e-sports. Such conclusions are supported by Bernardich (2018), who found that the lack of umbrella organizations in e-sports has led to monopolists' rise. Players forming umbrella organizations will have the power to dictate rules which the firms should follow. Such rules could also be used to tackle the IP menace, which is highly affecting e-sports. All firms in the sector must make products that meet the specifications set by these organizations. Traditional sports have long held such rules which regulate the industry and offer a level playing ground for all stakeholders, and the establishment of ethics in e-sports will only be possible through umbrella bodies. Chikish et al. (2019) state that there is close to zero universal ethics in e-sports. Tournaments, such as the ones held by Pokemon, are set using the firm's internal ethics. Other tournaments, such as the e-sports World Championships and NASEF tournaments, will follow suit in establishing their standards and ethics. Umbrella bodies will establish ethical standards primarily to protect players, especially from privacy breaches. Firms can use the player's private data and sell it to third parties, as is common practice on online platforms. Players will see improved privacy and the security of their gadgets under universal ethics. Due to the improved use of ethics and user protection, more standards will be established, leading to the streamlining of e-sports in general.

The pricing of e-sports is another factor that requires regulation. The introduction of smartphones led to the entry of firms creating e-sports products that fall far below industry standards. Such products' pricing needs to be controlled since they are intended for new markets not familiar with e-sports. Umbrella bodies will serve in this scenario, protecting consumers from exploitation and ensuring that they can access quality products. China, for instance, built a common area called the World Cyber Area to promote e-sports culture among young people. Such initiatives should be under the management of local e-sports umbrella bodies. While traditional sports typically have playing stadiums and other physical facilities, e-sports players will only access such amenities if there are practical policies put in place. Most governments are reluctant to develop amenities targeting e-sports players. Lack of effective government strategy was the main reason Europe and North America lost control of e-sports to the East Asian countries of South Korea and China. Therefore, significant effort will be needed from all stakeholders to ensure that e-sports is highly competitive against traditional sports.

CHAPTER 3: SUGGESTION AND CONCLUSION

This research was organized into three chapters, ending with suggestions and conclusions. This chapter provides suggestions and discussions of the literature review in Chapter 2. The literature review analyzed data from multiple e-sports journals and publications, thereby providing much-needed data concerning the development of e-sports. The data analyzed in Chapter 2 answers the aim of the study in Chapter 1. This chapter will provide an insightful conclusion of the data analyzed in Chapter 2 and provide a well-analyzed suggestion.

Suggestion

The research uses its analysis and collected data to make suggestions for e-sports teams, using the best e-sports team in the world, Team Liquid. Team Liquid was established in 2000 in the Netherlands and has grown to be the largest and most decorated e-sports team globally. It was established after StarCraft II's release, opening doors for professional e-sports players to be signed. In addition to being the best, Team Liquid was a pioneer e-sports team. E-sports competitions were few during that time since the industry was in its infant stages. There was also a limitation of the e-sports games available to play.

Today, Team Liquid has players for all e-games that offer team competition. The team has a total of 19 divisions, with each division specializing in a certain e-game. The total earnings for the team are USD 35.3 million. The top-earning division is Dota, with earnings of \$22,916,431, Counterstrike with \$4,661,425, Fortnite with \$1,271,866 and League of Legends with \$854,963. Bruce Stein, the CEO, manages Team Liquid. It has headquarters in the Netherlands and the USA.

The team operates as a single franchise under one management. Due to its exemplary performance in e-sports, the team has attracted several sponsors. Among the sponsors associated with the team are Honda, Twitch, and Monster. However, the team does not have affiliations to an umbrella body or control of the external body. Based on the research, several suggestions can be made to Team Liquid concerning management, organization, and competitions to participate in.

Management

Team Liquid has collectively participated in more than 1,900 tournaments, making it the most experienced e-sports team globally. In a study done by Abanazir (2018), he explored the possibility of institutionalizing e-sports. Institutionalization involves growing one's own players and growing loyalty from spectators. Institutionalization also involves an organized sports fraternity, in which all the tournaments follow a set calendar. The study also states that institutionalization will encompass all the licensing in e-sports to avoid black market and intellectual property disputes in e-sports.

Institutionalization

Team Liquid must be on the front line to realize the institutionalization of the broader e-sports context. Despite bureaucratization being termed as the source of complexity in the running of sports, it has the benefit of increasing formalization and regulation of all the institutions in the sector. Similarly, extant research found out that having a single body in charge of e-sports globally will transfer the monopoly from manufacturers to e-sports players. To have the body running with low mismanagement issues, Team Liquid needs to train more players to replace the current players in the future. In this regard, Team Liquid has taken the first step with sponsors' help to train players in the US franchise. Through such steps, Team

Liquid will not have to poach players from other e-sports teams. Currently, the team depends on signing the best players from other teams, especially from South Korea. To manage this resource-intensive strategy, signed players must be offered better salaries and better conditions than they were offered with their previous team. The cost of running the team increases due to buying and signing players, thus risking sustainability when the team encounters a winless streak. Abanazir (2018) emphasizes skills growth as well as physicality and stability in e-sports teams. The development of these aspects requires collaborating with the umbrella body or the sponsors. Team Liquid should expand its approach to training new players in all its franchises. Having a ready team will positively impact the running of the team and win the competitions. More importantly, the management will avoid signing players rejected by other teams on doping and non-binging cases. Abanazir (2018) states that e-sports experience doping cases from time to time, just like in traditional sports. However, these issues are detected by game publishers. The lack of an umbrella body makes the industry porous since another publisher may easily accept these players. In this case, Team Liquid can easily find itself having a team made up of players banned by another publisher. To avoid such a scenario, Team Liquid's management should champion the formation of an Umbrella body in e-sports to punish or establish a universal code for such players. The study gives an example of the Korean e-Sports Association (KeSPA), which has authority over the players and tournaments. The same should be duplicated to a global body to ensure there is sanity among the players and other stakeholders. Team Liquid, together with other teams, should work towards forming such a federation.

Asset ownership

Sustaining spectators is another tool that Team Liquid should prioritize. The team currently uses Twitch to reach most of the spectators. Funk et al (2018) propose using stadiums as a form of institutionalizing the e-sports teams similarly to the teams in traditional sports. The sports teams across major football leagues in Europe have built stadiums to attract spectators in the stadium. E-sports teams need to take a similar approach where they increase their revenue collection through ticketing. Team Liquid needs to focus on having its own stadia in all its franchises. Its performance, and many teams, has attracted several promoters who provide the much-needed capital in preparing for competitions. Through the sponsors, the team can raise capital for acquiring an e-sports stadium. Such assets will cement the Liquid Team's place as the most successful club in e-sports.

Another measure that Team Liquid can take is to develop its own e-games. Currently, there are 32 divisions, with each division specializing in a specific game. Venturing in the production of its own video games will place it in a competitive position in the e-sports sector. Abanazir (2018) insists that when playing their own e-games, they will have the freedom to hold tournaments and the number of teams to play. Thus, this will open the chance to involve all e-sports teams that do not get a position to play in other competitions. Such e-games will be developed according to the user experience, thus offering the player a better user experience than most existing games. It will also solve problems such as underage gaming, which has been the largest threat to e-sports. More importantly, the team will establish rules and regulations governing the game. A more inclusive model will be established with a possibility of having a tournament for the smartphone gamers who, in most cases, find it hard to qualify for a tournament. When clubs are the rule-makers on holding e-sports tournaments,

there will be less stringent rules to give amateur gamers who do not qualify for most tournaments. The game publishers, such as those with electronic sports leagues (ESL), have comprehensive rules for their tournaments, which mainly push the new teams away. Competition from teams will push the publishers to relax their rules and offer friendly platforms and competitions.

Forming an e-sports League

Abanazir (2018) mentions the need to establish well-organized e-sports leagues to promote and grow grassroots talents. The study points out various leagues, both for traditional sports and e-sports, that have failed due to poor organization. The Liquid Team can thus focus on establishing its own league due to its impressive history in e-sports. Having participated in the highest number of leagues and competitions, the team can now effectively establish and organize an e-sports league. Through the league, the Liquid Team will be able to expand the franchise to countries where e-sports are in the infant stages. Cultivation of the global culture in e-sports will lead to the growth of many other e-sports leagues. The current state of e-sports allows any stakeholder to start leagues. Therefore, the Liquid Team can establish a league and dictate the rules and regulations to be followed. Their expertise will make the running of the league more professional, avoiding potential failure. Besides League of Legends, other leagues were started but failed to remain competitive. These rival leagues' failure is mainly pointed to mismanagement or lack of the organizers' actual e-sports experience. Another advantage that Team Liquid possesses to manage the league is knowing the players' needs. These include advancement in technology or making the league more user-friendly. As technology in e-sports advances constantly, pro-gamers always need to have the best product on the market. A good example is Sony's gaming equipment, PlayStation, which upgrades

regularly to offer a better experience to the players. Every player always aspires to have the latest PS. In this case, the Liquid Team will track the latest technology in the leagues, thus making it remain competitive.

Conclusion

Impact of technology on E-sports

Technology has been a pillar for the growth of e-sports globally. The internet's growth also served as a welcoming note of e-sports to grow its wings to both served and underserved populations. The advancement of technology led to the relentless manufacturing of more technologically-advanced gaming equipment. E-sports tournaments and competitions have also been easy to organize and to market to the gamers. As seen in South Korea, the proliferation of the internet and the availability of technologically-advanced gaming equipment were the first steps to growing e-sports culture in the country. Today, most of the e-sports champions come from South-Korea due to the advancement of technology. Lee (2020) states that e-sports form part of childhood games for almost all South Korean children. The economic factors of different families do not affect the children since they can rent e-sports gaming equipment for less than \$1. The culture becomes more rooted with the coming of smartphones and the reduction of PC prices across the world. Technology growth also explains the reason for the spread and growth of e-sports in China. More significantly, smartphones have been key to the spread of e-sports to particular parts of the world, such as Africa. Most markets had could not access e-sports due to economic and technological factors of those countries. The growth of smartphones was an answer and the perfect solution in such economies which would not afford gaming equipment. There was also the entry of many players in e-sports due to the increase in the market – initially, the industry was dominated by

few firms that exercised a monopoly over their production. Smartphones made it possible for new players to make their e-sports products available to consumers without using e-sports gadgets. More importantly, the advancement of technology has been vital in accessing remote markets unpopular with e-sports. These markets are now accessing e-sports using smartphones which is a far cheaper means of purchasing e-sports gaming equipment or PC.

Lastly, the research also established that technology was a steppingstone for enhancing the consumer experience in e-sports. E-sports are now accompanied by enhanced features exclusively designed to make the sport more attractive to players. One such feature is streaming technology. The feature allows players to compete with other participants around the world without a physical meeting. The study established that the Pokemon Tournament qualification is done online. Participants will play against each other online, and the best players are selected to play in the final tournament. To enhance and increase the efficiency of players streaming e-sports, more resources should be directed to the research of 5G technology. The research established that 5G would increase streaming speeds of e-sports. Gamers will derive more experience since there will be close to zero buffering, and the games will be played using very high definition. E-sports players will train to become pro-gamers since the technology will enable them to play with other pro-gamers from various parts of the world.

Advantages of e-sports against traditional sports

The advancement of technology in recent years has led to the increase in the adoption of e-sports at a higher rate more than traditional sports. The research found significant advantages of e-sports in comparison with traditional sports, such as convenience.

Firstly, there is a requirement of the team in traditional sports. The research established that such a requirement excludes most interested players since they must join the team to participate. E-sports eliminate this requirement since a person can play alone without needing to join a team. Additionally, the research established that traditional sports involve a physical location and activity. E-sports players do not need to travel or be involved in physical activity since they can play in their houses. This increases the convenience of e-sports over traditional sports. More importantly, the lack of physical requirements makes the e-sport favored by select groups in society which are excluded by traditional sports. The only condition which is needed for success is the virtual environment. The virtual environment is enhanced by the presence of a high-speed infrastructure and more advanced technology. With the increase in technological advancement across the world, the research established that e-sports are finding a higher appreciation among the young generation than traditional sports.

Secondly, the research established that traditional sports are comprised of more stringent rules held by a body with absolute authority. The use of absolute control leads to less flexibility among the players and participants. However, e-sports provide a less stringent environment for the players due to the lack of one umbrella body developing rules. Players and teams within the e-sports sector have more flexibility since there are nearly no rules that govern all e-sports. Most of the tournaments are organized by organizations and firms that are meant to attract more players. The research found that these firms will be reluctant to follow rules that appear not to attract consumers. The qualification process will also be dictated by the firms that have organized the e-sports event. The qualification will have less bureaucracy, such as the one witnessed in traditional sports. Therefore, e-sports are continually observing a higher acceptance rate among young people compared to traditional sports.

Thirdly, the research found that there are fewer age requirements in e-sports than in traditional sports. Age is not a requirement in e-sports – making all ages legible to take part. The study done in South Korea found that children begin playing e-sports at a very early age, allowing them to become professional gamers as teenagers. Eventually, this enables South Korea to produce most of the e-sports champions in the world. Traditional sports have age limits since various competitions are strictly meant for people at a certain age.

Lastly, the research established financial requirements as a factor defining the advantage of e-sports and traditional sports. The ticketing and registration requirements make it impossible for most players to participate in e-sports. The participants' ticketing, both the players and firms, is a financial barrier in traditional sports. This barrier does not exist in e-sports. Participants of an e-sport event or a competition are not required to make a financial commitment. The study noted that only the players' skills in the specific game are needed for qualification. However, firms in e-sports generate more revenue than the firms in traditional sports. The broadcasting rights, subscription, and update purchases of various e-sports games record an increased revenue resulting from many people joining e-sports. The firms in traditional sports can only raise funds by selling tickets and sponsorships, which are not reliable in most cases. Therefore, firms in e-sports are destined for financial success – more than their counterparts in traditional sports. The study established that these increased resources can be invested in a more advanced gaming experience, thus giving players a more personalized experience. In the long run, such an experience will have the effect of bringing more players into e-sports than in traditional sports.

Challenges of e-sports

The research found out that various factors hinder the growth of e-sports. The main challenge pointed out was the lack of sponsorship. Many of the teams participating in e-sports find it challenging to obtain sponsors in e-sports events. Most of the sponsors of the sport are involved with the traditional sports teams. The teams in this sector, if not sponsored, are forced to finance themselves in e-sports leagues. This poses a threat to the growth of e-sports since pro-gamers may choose to pursue careers elsewhere. Sponsorship challenge does not only apply to players and teams but also the firms making e-sports products. Substantial resources are needed to develop e-sports products. If firms do not receive sponsors for upcoming projects, it may be difficult for them to continually improve existing products. The research found that these firms need to have resources to finance obligations like legal matters. As a firm can be taken to court for copyright infringements by another firm, these processes will need many resources, and a firm can be forced out of the market if it lacks sponsors for its products. Additionally, e-sports firms require sponsors to promote their products. In most cases, these firms will not be able to sponsor everything during these tournaments. Obtaining sponsors makes the firm hold such events regularly, thus promoting the growth of e-sports.

The other challenge facing e-sports is the poor entry strategy by firms. Firms need an excellent sponsorship strategy whereby they target the niche that will guarantee them growth. Some niches in e-sports do not offer higher returns, thus risking failure. Establishing a more lucrative niche is a guarantee for the success and growth of the e-sports sector. Additionally, the development of e-sports must accompany the constant advancement of technology globally. Firms creating e-sports products will thus be able to enter all markets due to globally

uniform technology. However, they face the challenge of accessing these markets since some markets are more technologically advanced than others. One notable example lies in Africa and some parts of Asia, which are less technologically advanced. Lastly, e-sports are facing the problem of under-age players. Most of these players spend significant time in e-sports, leading to addiction and posing a threat to the growth of society.

Policies in e-sports

The Chinese government has been among the top governments to develop a clear strategy for the growth of e-sports. One of these policy frameworks is forming local e-sports firms and creating most e-sports products for local and export markets. Additionally, its strategy guides all the municipal and state governments in establishing processes for the growth of e-sports. The other policy that the study outlined developed a powerful umbrella body to govern e-sports. Through such a body, monopolies in the e-sports sector will be suppressed by imposing various regulations. Also, the body will be mandated to provide policies regarding intellectual property rights in e-sports. E-sports are primarily affected by intellectual property (IP) rights, with small firms stealing the IP belonging to the existing products. Lastly, policies for the growth of e-sports must be enacted by the government. Government policy has a significant effect on the development of e-sports. South Korea sought to promote e-sports as a form of tourism, thus leading to the growth of e-sports as a culture in the country. Such policies largely depend on the government's support of the global development of e-sports.

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