



# Technological Impact on Fan Engagement and Revenue Generation

## Context of Bangladesh Cricket

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### **Abstract**

The impact of technological advancements on fan engagement and revenue generation in Bangladeshi cricket was explored. It was investigated how digital platforms, social media, mobile applications, and other technologies have transformed the ways fans consume and interact with cricket content, examining the implications of these changes for revenue generation within the Bangladeshi cricket industry.

The theoretical part uses a quantitative methodology to develop the hypotheses and legal background; the data collection applies a quantitative survey among Bangladeshi fans of cricket; and the final part provides the key insights into the data analysis based on the hypothesis testing. First, perceived ease of use was discussed as a factor that contributes to the level of fan engagement found in the findings section; second, the fan engagement factor was mentioned to be strongly influencing the ability to generate revenue. This paper highlighted aspects from social influence and facilitating conditions as key elements impacting the use of technologies by the Bangladeshi cricket fans.

The research finally highlighted the role of easy-to-use technology; the technological factors being critical for increase in revenues; and the need to take external factors into account while the promoting use of Bangladeshi cricket related technology.

### **Keywords/tags (subjects)**

Technological Advancements, Fan Engagement, Revenue Generation, Bangladeshi Cricket, Digital Platforms

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## 1 Introduction

Cricket – the breed widely accepted as an essential identity of the Bangladeshi populace, has in the recent past evolved not least because of the prevalence of a technological society (Rahman et al., 2022). With time the trends experiencing dynamic shift internationally are adopted in Bangladesh and it has also used new variations of changing technology itself for engagement and economical opportunities in the sport of cricket (Rahman et al., 2022). This technological revolution not only impacted how fan engages with the game but also introduced ways of making money which are benefits and risks for stakeholders in Bangladeshi cricket industry. In the context of Bangladesh, emergence of digital platform, social media and virtual reality has completely changed the viewership, analysis, and marketing of cricket. Whereas fans' interactivity was once restricted to physically attending face-to-face matches and following them through the media, fan interactivity has developed into a multifaceted, globally interactive experience (Ahmed, 2023). At the same time, these technological innovations have paved and affected the generation of new sources of revenues hence setting up a new economic model to cricket in the country (Hossain & Khan, 2021).

The following thesis objective therefore seeks to understand how and in what ways technological development affects fans and revenue in the context of Bangladeshi cricket. In this research on Bangladesh football, the objective is to understand how technology, fan communities and economics are emerging as a tool for studying technology embodied in the sport. The value of this study lies in its ability to educate stakeholders, such as BCB, team franchises, sponsors and media partners, about the changing nature of the fan matrix and the new avenues to make money. As long as cricket remains one of the driving forces behind Bangladesh sports industry and source of the country's pride, it is important to understand these technology effects in steering the growth and the global competitiveness of the sport (Alam,2024).

In this paper, technology is found to give a new horizon on the experience of crickets, ways of its consumption and revenue generation in Bangladesh. This part expands on the detailed nature of the individual technologies bridging the change, the effect of the change on fans and the new revenues streams created by the change. Publicity and awareness of smartphone and high-speed internet in Bangladesh have effectively changed the fan interest in cricket (Chowdhury, 2023). Social networking sites like face book, tweeter and the Insta gram are virtual fields of play or what can be

likened to a stadium where fans assemble construction to watch matches, post material and engage the players or teams in real time (Chowdhury, 2023). The cricket board of Bangladesh and players have adopted these sites to have a better relationship with the fans providing some nostalgic videos, live session of question and answer, and the latest updates (Chowdhury, 2023).

Furthermore, over the years dedicated cricket applications have become a necessity for the fans (Rahman & Ali, 2022). These apps provide live scores and commentary, ball by ball analysis, player statistics, and bring to the cricket-obsessed populace the concept of fantasy cricket leagues enabling cricket crazy people to stay in tune eternally (Rahman & Ali, 2022). Application of fantasy leagues to cricketing fans, has especially appealed to the young people in the population density and has encouraged them to understand the game more holistically (Rahman & Ali, 2022). Immersive technologies have greatly enriched the process of watching cricket for fans from Bangladesh. Applications based on Virtual Reality (VR) and Augmented Reality (AR) are slowly entering the sports scene and are giving fans new products to be excited about (Khan, 2024). Technological speakers such as VR, for instance, can take fans through a stadium virtually thus get to experience a full match day while they remain seated on their couch (Khan, 2024). This might be more so since, previously, stadiums have experienced problems of low turnout, especially during epic battles within their domestic leagues (Khan, 2024).

While there are cases of AR applications of decreasing engagement outside the stadium, there are others that are increasing engagement inside the stadium. The fans with AR supported handheld devices like smartphones, tablets can supplement the live action with statistical information about the players, rewinding important moments watch from other camera angles which makes the viewing experience more informative as well as interactive (Ahmed & Hossain, 2023). Cricket, which had been almost immune to analytically driven change across most aspects of team strategy and the players' own actions, has not only been transformed by the availability of data and the emergence of a new generation of cricket fans but has also responded by bringing new forms of spectator engagement online. Advanced system to track ball movements, pitch analysis, and more importantly performance tracking of players makes the fans get better information (Alam, 2024). These data sources have contributed to the development of sports analytics content creators in Bangladesh who explain the meaning of the figures for the audience so that they can better understand the sport (Alam, 2024).

The digital evolution of cricket in Bangladesh has introduced different revenues sources and has improved existing ones. Internet technology in advertising has enabled advertisers to reach more people compared to before (Hossain & Khan, 2021). Thus, there appear the ideas of individual approaches to advertising, premium content and paid per view schemes which were impossible in the earlier traditional broadcasting model (Hossain & Khan, 2021). As the ecosystem of the apps and websites related to cricket has grown with the playing field, these integration with e-commerce platforms have added new avenues of merchandising. Such platforms allow fans to buy official team wear and accessories, souvenirs, and even match tickets and many a time, have made the process easier and more convenient for fans (Rahman et al., 2022). Cryptocurrency & blockchain technology is also slowly but surely starting to transform the Bangladeshi cricket revenue models (Chowdhury & Islam, 2024). Though not well-developed now, specific areas in which blockchain could impact are ticketing solutions, financial transaction security, or a new spin to fan tokens or digital collectibles (Chowdhury & Islam, 2024).

Sport consumption of the new technologies is not equally enjoyed by the fans in Bangladesh due to a digital divide, which could affect existing inequalities in the country (Ahmed, 2023). Further the issues of data protection and the reliability of the online bingo and betting companies is issues that regulators need to consider. As for the future interventions the new technologies like 5G network and Artificial intelligence are expected to add new dimension for the landscape of cricket in Bangladesh (Khan & Rahman, 2024). Such developments also hold benefits of making the experience even more engaging with fans and developing tools more complicated for players, particularly coaches and officials (Khan & Rahman, 2024).

Cricket is almost an integral part of Bangladeshi society and has undergone many changes owe to technology (Steen, 2011). These innovations have made big differences in the way the fans engage with this sport and the way the cricketing bodies get their revenue (Hutchins & Rowe, 2012). Yet, the nature and extend of these latest technological advancements as well as their net influence on fan engagement patterns and revenue generation of cricket related economy in Bangladeshi context remains relatively unknown and researched. Consequently, this study seeks to establish the various impacts of technology on fans and revenues of Bangladeshi cricket. Specifically, the research will uncover the ways in which social media, Mobile Applications and other technologies has shifted patterns of cricket consumption, fan involvement and revenue models in cricket.

Key research areas of inquiry include:

- The integration of new fan management techniques by using the digital platforms and Twitter in Bangladesh cricket.
- The implication of the use of lives streaming services and mobile applications in cricket current viewership pattern and interaction.
- The place of analytics and AI in the fan engagement and the use of these technologies to make business decision and revenue models.
- The impact of virtual as well as augmented reality for live cricket experience for Bangladeshi fans.
- Factors enhancing the flow and sources of revenue generated from digital ticketing systems and e-commerce platforms for cricket organizations in Bangladesh.
- Technological developments a new factor that has some threats and opportunities regarding the new generation clubs and rural tractions of Bangladesh.

Thus, addressing a major research gap in the extant literature on technology, fan engagement, and revenue generation in relation to Bangladeshi cricket, this research aims to explore the above aspects. The conclusion drawn from this research will be informative to cricket managers, marketers and policy makers in Bangladesh to better inform them about the possibility of using technology in creating value for fans and generating stakeholders' revenues in the dynamic digital context of the cricket domain.

Indeed, cricket, an integral part of Bangladeshi culture, has evolve a lot in recent past mainly because of technology (Steen, 2011). The advancements that have characterized the change have extended even to participation, refereeing, involvement of fans, and revenue mobilization. This paper therefore seeks to examine the many-sided effects of these advanced technologies on fans and revenues in Bangladeshi cricket.

Technology has been accepted and incorporated in the cricket games at a very fast and all over the areas. Right from the DRS and Hawk-Eye used to support on-field decisions, to broadcasting tools such as Ultra-HD cameras and spider-cams, technology has pushed forward a television viewing experience and the accuracy of the game (Steen, 2011). In addition, due to the recent advances in

the use of mobile devices and High-speed internet, fans have been offered many new ways of interaction as well as content consumption (Hutchins & Rowe, 2012).

That is why in the digital age fans are much more than observers of the process.) Through the social media platforms, live streaming services, and interactive mobile applications different ways of engaging fans, the sport has got the new touchpoints. These technologies allow for immediate interaction, targeted content dissemination, and eventually conversion of passive audience into active ones (Filo et al., 2015). Analysing how these technologies affect the Bangladesh fans is essential because Bangladesh is a country full of, young, and tech-savvy people, who have a great passion for cricket. It can show how fans behave, what content they prefer, and how many organisations and companies involved in the sport of cricket succeed in engaging people on various digital platforms.

Cricket and technology are inseparable; the economic consequences of technological change are obvious. Technological advancements have unveiled other sources of revenue through digital and mobile advertisement, subscription based streaming services and selling of Merchandise online (Nauright & Zipp, 2018). In addition, the digital technology together with analytics and AI have allowed the marketing of products more specifically and fans engagement, which in return means improved monetization of opportunities (Davenport, 2014). To BCB and other interested stakeholders, it is crucial to appreciate these dynamics for reasons of formulation of sound strategies and growth strategies that will make Bangladesh competitive in the global market. With cricket steadily moving forward as a commercialized sport, technology management could well represent one of the key success indicators in the generation of as much, and as high, revenues as possible to sustain the sport economically in the nation.

Research on the subject has been done from different paradigms By and large, there is rather a dearth of research on the effects of technology in Bangladeshi cricket. Unfortunately, most of the existing body of work is in large cricket playing nations such as India, Australia and England (Petersen et al., 2008; Saikia et al., 2016). Due to the nature of sociography and the level of cricket development in combination with the peculiarities of Bangladesh's socio-economy, the technology environment for it, the present study is deemed appropriate and relevant.

Therefore, this research seeks to fill this gap by presenting a broad evaluation of how technological innovation impacts fans and revenues in Bangladeshi cricket. The implications of this study will not only enrich the theoretical knowledge base of the developed research area but also provide real-world recommendations for Bangladeshi cricket officials, advertisers, and policymakers.

## 2 Theoretical Framework

The theoretical framework forms the basis upon which this study will examine the findings having been established as a structured framework for analysis and understanding. There is considerable insistence on proper choice and elaboration of the theoretical framework because it not only defines and directs the research process but also determines its consequences.

To understand technology, fans' behaviour and revenue generation for study, consider frameworks. Among the potential candidates are the well-known Uses and Gratifications Theory (Katz et al., 1974) to understand how the fans satisfy their needs and the motives through technology; and the Re-source-Based View (RBV) model (Wernerfelt, 1984), a strategic management model focusing on a firm's resources and capabilities for a sustainable competitive advantage to investigate the mutual interdependence of fans and sports organisms in the digital environment. Secondly, the Fan Engagement Ladder (Funk & James, 2013) depicting various levels of fan engagement: from a simple recognition of the fan object to recommending it to others.

The Diffusion of Innovations Theory originated from E.M. Rogers (1962) describes how, why and at what pace innovation disseminates in cultures. It remains a fundamental concept of studying the process of social change and has been utilized in multiple contexts in such fields such as marketing, health promotion and education. TAM stands for Technology Acceptance Model is well-known theoretical model used to explain and predict the Impacting factors of the Technology that is Accepted or not in the respective domain. Introduced by Fred Davis in the early 1980s, TAM holds with the two basic beliefs of perceived usefulness and perceived ease of use to be the core of technologic' s adoption. The TAM 2 is an extension of the original TAM, with other variables that potentially affect the acceptance and use of technology included in the model articulated by Venkatesh and David in 2000. TAM 2 is developed by incorporation of the social influence and the cognitive instrumental processes into the factors that determine acceptance of technology. A more recent version of the model details out as Technology Acceptance Model (TAM) 3 (Venkatesh & Bala, 2008) is useful as a theory that provides a list of factors that therefore used the enhanced model which is referred to as Technology Acceptance Model (TAM) 3 (Venkatesh & Bala, 2008) as a theoretical framework to determine the Since this thesis is concerned with the analysis

of how patterns of organisational change reflect upon fandom and revenue generation in Bangladeshi cricket, TAM 3 is pertinent to such a logic because it provides a framework for re-presenting technology-user/organisation relations (Venkatesh & Bala, 2008).

This way, it can state why the research is important, make the findings of the research more believable and expand the knowledge database of sports management and technology to make a clear theoretical model to follow when analysing the impact of technology on fans, recognizing the processes through which technology generates revenues within the sports industry, and considering the implications that these emerging Technologies hold for the business (Mallen, 2019). In addition, it enables to make relevant conclusions and provide recommendations to the sports organisations that would like to use technology to engage fans and create additional revenues streams (Mallen, 2019).

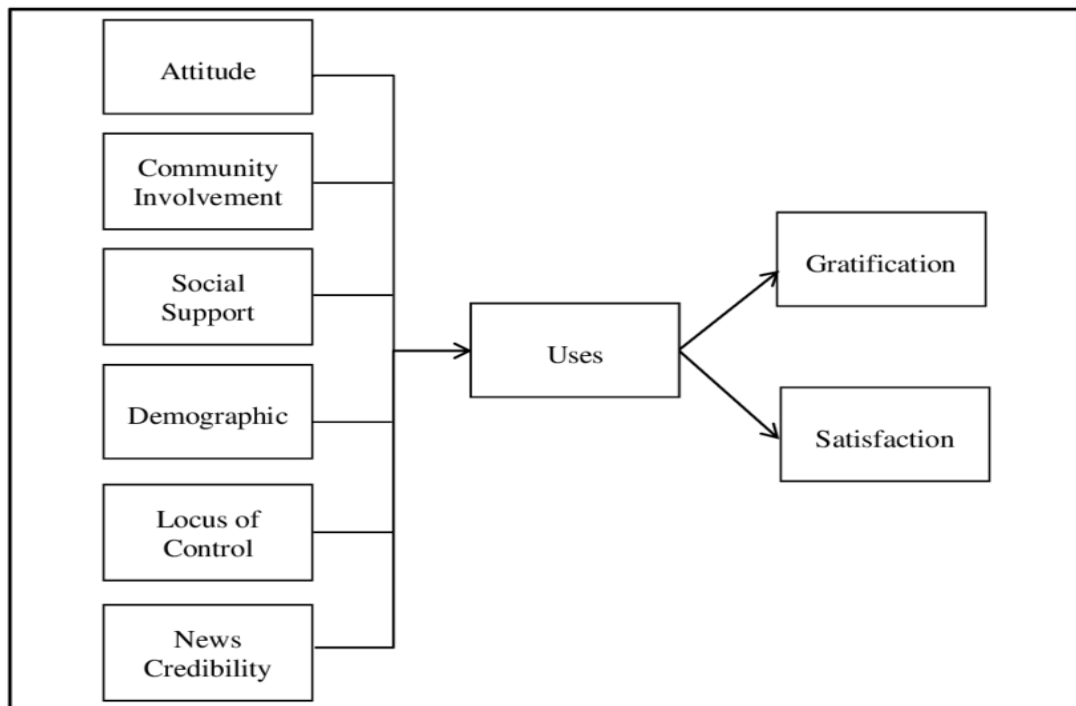
## **2.1 Uses and Gratifications Theory (UGT) Model**

This paper lifts from Katz et al (1974) which brought forward the Uses and Gratifications Theory (UGT), which is a theoretical framework in media studies that aims at explaining why and how individuals selectively engage in media to address certain needs or get feedback they have a planned on experiencing. UGT is an audience centered theory which focus on the audiences' activity and participation in usage of media products (Katz et al., 1974). It postulates that people are not just reactors to media messages and are instead selective in their choice of media and their usage of those media (Katz et al., 1974).

The fundamental premise of UGT is that the people use the media to gain promotional utilities. Media gratifications can be described as the perceived rewards that audiences get out of exposure to media contents (Katz et al., 1974). These gratifications can be psychological, such as ego gratification, emotional, such as love and affection, social, such as status and power, functional, such as obtaining food (Katz et al., 1974). UGT noted that the uses of media listed above can be justified based on the following parade reasons and thus the people are fully aware of what media they are using. This area differs from previous media theories in which the audiences were portrayed as being inert and malleable (Katz et al., 1974).

**Figure 1**

*The Uses and Gratifications Theory (UGT)*



Note: [https://www.researchgate.net/figure/The-UGT-Diagram-30\\_fig1\\_349936506](https://www.researchgate.net/figure/The-UGT-Diagram-30_fig1_349936506)

The principle depicted in this model is the need and gratification theory whereby users' needs or goals prompt specific media consumption patterns that, in return, address users' needs and lead them to achieve their gratification objectives (Katz et al., 1974).

### 2.1.1 Key Principles of UGT

- Audience is not just passive consumers of Media messages but plays an active role in his/her selection and use of media (Katz et al., 1974).
- Consumers' media consumption is goal- or motivation-motivated to a varying, but at least medium extent consciously (Katz et al., 1974).
- People know how much media they consume and can justify their selection of certain media (Katz et al., 1974).
- Media use is influenced by perceived benefits or gratifications benefiterers (Katz et al., 1974).
- Media use can depend on person need and interpersonal relationship as well as on cultural and psychological characteristics (Katz et al., 1974).

### 2.1.2 Applications of UGT

UGT has been applied to various media contexts, including:

- Management information to know why people listen to radios, watch television or read newspapers (Katz et al., 1974).
- Social media for Examining the reasons people engage in the use of social sites such as face book, twitter and Instagram (Katz et al., 1974).
- Awareness of consumer behaviours regarding processing information using electronic gadgets such as smart phones and tablets (Katz et al., 1974).
- Knowledge of the factors for gaming and the fun players get from video game play (Katz et al., 1974).
- Investigating the reasons for the effectiveness of using virtual reality technologies and the gratifications received by participants (Katz et al., 1974).
- Coalescing the intention or reasons why people use platforms such as Face book, tweeter and Instagram (Katz et al., 1974).

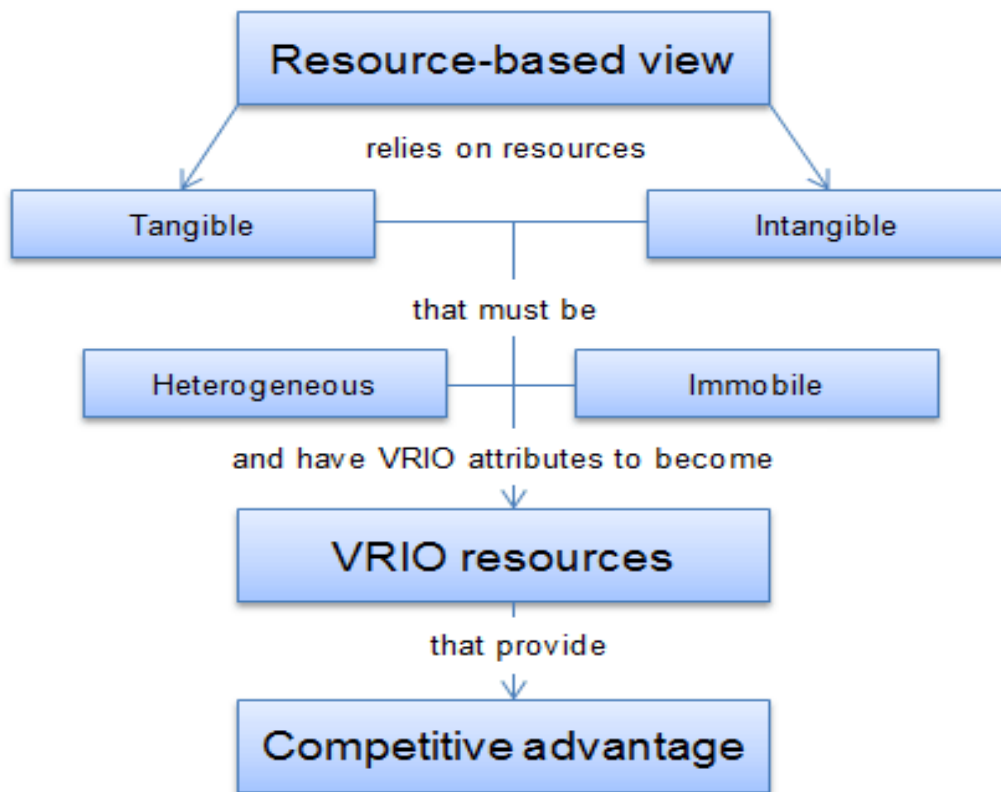
## 2.2 Resource-Based View (RBV) model

The Resource-Based View Model (RBV Model) is one of the strategic management frameworks designed to analyse the internal resources within the firm in order to gain competitive edge (Wernerfelt, 1984). Blockchain Based on the RBV model, firms can obtain competitive advantage through the acquisition of, protection of, enhancement and exploitation of, resources and capabilities which are valuable, rare, inimitable, and non-substitutable (VRIN) (Wernerfelt, 1984).

The RBV model has attracted many scholars and practitioners to explain and apply the sources of competitive advantage (Wernerfelt, 1984). Hence it has been used in aspects such as strategic management, the design of organisations and human resource management. In the context of the thesis focusing on the technological advancement on fan engagement & revenue creation in Bangla-deshi cricket the RBV model could have been used to examine how and to what extent cricket organisations can build on resources like brand name, fans and technology to improve engagement (Wernerfelt, 1984).

**Figure 2**

*The Resource-Based View (RBV) model*



Note: <https://strategicmanagementinsight.com/>

### 2.2.1 Key Principles of The Resource-Based View (RBV) Model

- Valuable resources firm specific resources and capabilities are those that allow a firm to take advantage of a specific opportunity or to reduce a specific threat in its external environment (Wernerfelt, 1984).
- Rare resources and capabilities therefore refer to those that are not well within the possession of rivals (Wernerfelt, 1984).
- Inimitable tangible and intangible assets are those assets, which cannot be easily copied by other competitors in the industry (Wernerfelt, 1984).
- Non-substitutable resources and capabilities are those that cannot be easily substituted by other resources and capabilities (Wernerfelt, 1984).

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### **2.2.2 Application of The Resource-Based View (RBV) Model**

- This resource can be beneficial to a cricket organisation with a strong brand recognition as a tool to lure more fan base and he or she loyal fans (Wernerfelt, 1984). For example, many fans could be a source of considerable value for earning money on tickets, clothes, and sponsorships. An effective information technology program might help the organisation reach out to the fans on social media and discover ways to generate revenue online (Wernerfelt, 1984).
- An analysis of VRIN resources and capabilities in cricket organisations leads to the conclusion that the latter can attain sustainable competitive advantage and prosper in the modern digital environment (Wernerfelt, 1984). Besides the VRIN criteria the RBV model also focus on organisational capabilities which are defined as a firm's ability to coordinate and utilise all its resources to yield certain effect (Wernerfelt, 1984).
- The RBV model has been criticised for being static and organisation centric, With the effect that it is limited. Some scholars' opinions are that it is irrelevant to consider external environment changes that constantly take place in firms' business world. However, the information derived from the RBV model is still important for identifying the origins of competitive advantage, and the model has been refine-d and expanded to overcome some of its shortcomings (Wernerfelt, 1984).
- The analysis of the RBV model presents this approach as a useful tool for studying how firms can create a competitive and sustainable advantage by using the resources they have within them. It has profound concerns with strategic management, and it may be used to examine and diagnose sources of competitive advantage in several settings (Wernerfelt, 1984).

## 2.3 Fan Engagement Ladder Theory

In addition to the Fan Engagement Ladder by Funk and James (2013), invents a theory that depicts different degrees of fan engagement with a particular sports entity, starting with mere recognition and culminating with sponsorship (Funk & James, 2013). This model could have been especially useful for the study since it explains how one can use technology to gain a promotion up the ladder thus increasing fans and revenue (Funk & James, 2013).

**Figure 3**

*Fan Engagement Ladder Theory*



Note: [kpu.pressbooks.pub](http://kpu.pressbooks.pub)

### 2.3.1 Key Principles of Fan Engagement Ladder Theory

- Awareness is the first principle that aims at introducing a team or an athlete to market and consumers for the first time as well as awareness of the campaign depends on several methods of communication technology such as social media platforms, online advertising and those of teams (Funk & James, 2013).

- Attraction the second principles that's Once alerted, fans turn into interested in certain aspects, be they star players, team history, or the last recently adopted football playing style and its invites fans into a closer bond by providing them with fun material to connect with them, which includes highlight reel, players' interviews or sneak peek into the team's daily life (Funk & James, 2013).
- Attachment is the third principle according that the fans attached themselves to the team/athlete likely to hold some value in them or be relating to what the fan goes through technology can increase attachment by providing direct access to player-teams contacts and interactions through social media, online platforms and virtual base (Funk & James, 2013).
- Allegiance is the fourth principles of Fanhood means devotion which implies that fan will stand with their team always no matter the circumstance in force through using technology, it is possible to guarantee that fans will have some special content, some kind of interaction that is given only to the dedicated audience and some kind of exercises or tests of loyalty like fan clubs and online communities (Funk & James, 2013).
- Advocacy is the last principle and the most profound level of fan involvement; advocacy means recommending the team to other people to advocacy as the use of the technology end utilization of the technology allows consumers to share the Social Media conversation, online reviews and Fan experience hence expanding the fan base (Funk & James, 2013).

### **2.3.2 Application of The Fan Engagement Ladder Theory**

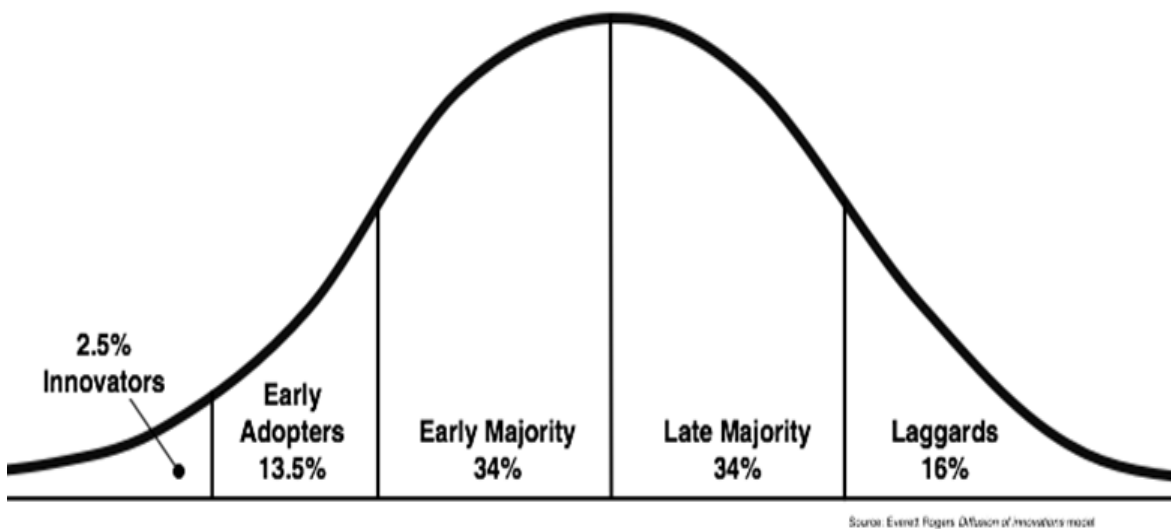
- The sports organisations can build a relation with fans, foster brand loyalty and can make more sales (Funk & James, 2013).
- A social network can be employed to create awareness, an interactive mobile application can deepen affiliation, and a premium content can create loyalty (Funk & James, 2013).
- Illustrate to assess technology affects fans at every level and how can enhance their relationships and boost revenues (Funk & James, 2013).

## 2.4 The Diffusion of Innovations Theory

The Diffusion of Innovations Theory formulated by E.M. Rogers back in 1962 is a theory plans how, why and at what rate of innovation diffuses across cultures. It is central to the study of process of social change and has been used in numerous disciplines such as marketing, health promotion and education (Rogers, 1962).

**Figure 4**

*The Diffusion of Innovations Theory*



Note: <http://blog.leanmonitor.com/early-adopters-allies-launching-product/>

### 2.4.1 Key Principles of The Diffusion of Innovations Theory

- Innovation is an idea, practice or an object that an individual or another unit perceives as new to him or her and the unit of adoption (Rogers, 1962).
- Communication Channels is the process by which information on an innovation is passed to members of a social system (Rogers, 1962).
- Social System is a system of linked components that coordinated their decision-making processes in order to achieve a shared objective (Rogers, 1962).
- Time it takes to ensure that an innovation has been taken up by a particular percentage of the social system (Rogers, 1962).

### 2.4.2 Application of the Diffusion of Innovations Theory

- Assess the new technologies are adopted by cricket fans in Bangladesh and how this adoption influences their engagement with the sport and the revenue generation (Rogers, 1962).
- Effective reference to comprehend the manner through which new technologies are integrated into the practice by the Bangladeshi cricket fans and how the use of such technologies affects their interaction with the sport, as well as the monetary productivity for cricket organizations (Rogers, 1962).
- The theory could shed light on why some technologies, for instance, the mobile applications are adopted more than virtual realities and it could also explain more the use of social influence and communication influences that may positively affect the use of technology among fans (Rogers, 1962).
- Analysing the diffusion process cricket organisations are in a better position to formulate appropriate strategies in spreading technologies and in engaging the fans and for cricket organizations for example, the theory could help explain why certain technologies, such as mobile applications, are adopted more quickly than others, such as virtual reality (Rogers, 1962).
- Its applied shed light on the role of social influence and communication channels in promoting technology adoption among fans. By understanding the diffusion process, cricket organizations can develop more effective strategies for promoting new technologies and enhancing fan engagement (Rogers, 1962).

## 2.5 The Technology Acceptance Model (TAM)

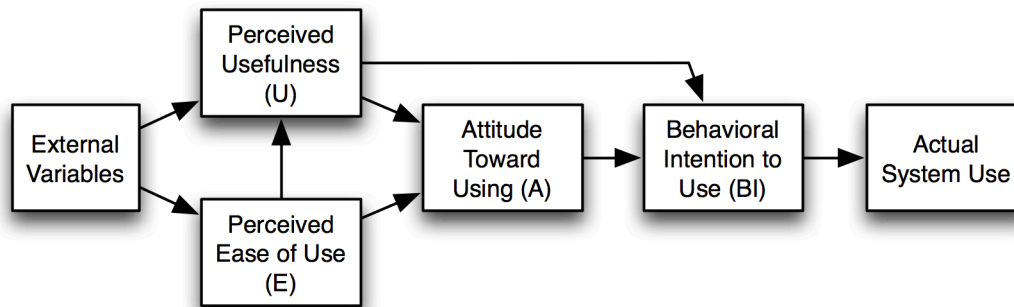
Technology Acceptance Model (TAM) is a well documented theoretical model that helps unravel, and or even predict, factors influencing the acceptance of technologies. Entirely proposed by Fred Davis in the 1980s TAM suggests that perceived usefulness and perceived ease of use are the key to technology acceptance (Davis, 1980).

The Technology Acceptance Model (TAM) is highly effective in measuring the effects of various variables on technology adoption. Its implications for evaluating variables are centered around its core constructs—Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and their influence on

Attitude Toward Use (ATU) and Behavioral Intention to Use (BIU). Here's how TAM measures the effects of variables (Davis, 1980).

**Figure 5**

*Technology Acceptance Model (TAM)*



Note: <https://commons.wikimedia.org/w/index.php?curid=14457270>

### 2.5.1 Key Principles of Technology Acceptance Model (TAM)

- Perceived usefulness (PU) means the extent to which an individual feels that using a given system would improve his or her performance at the workplace. In other words, if users perceive it in the same positive way as defined it in earlier articles, then users will adopt the technology (Davis, 1980).
- Perceived Ease of Use (PEOU) is defined as the extent to which a consumer perceives using a specific system to be trouble-free and when the technology is simplicity to use it means that it cost less to adopt the specific technology (Davis, 1980).
- BI is posited to be an endogenous function of PU and PEOU. It represents the user's need to use the technology to attitude towards the technology plays a pivotal role that is, positive attitude focusing on perceived usefulness and ease of use creates higher perceived intention to use it (Davis, 1980).

- Attitude Toward Using (A) is the user's precipitate or emotional response in relation to the IT. This construct depends on PU and PEOU and is in turn affected by it in order to predict BI (Davis, 1980).

### **2.5.2 Application of The Technology Acceptance Model (TAM)**

- TAM is commonly employed to forecast the extent to which users are prepared to adopt new technology given perceived usefulness and ease of use (Davis, 1980).
- It is useful in developing easy to use systems by instituting the principle of ease of use that results into higher usage (Davis, 1980).
- Management applies the TAM INDEX aspect to assess the likely prospects of certain technologies before widespread integration (Davis, 1980).
- TAM also shows factors that have impact on its acceptance, therefore it can be used to design the training that will improve the user adoption of the application (Davis, 1980).
- TAM is a theoretical model used to conceptually ground empirical academic studies on the diffusion of technology and the utilisation of technology in the market by end users (Davis, 1980).

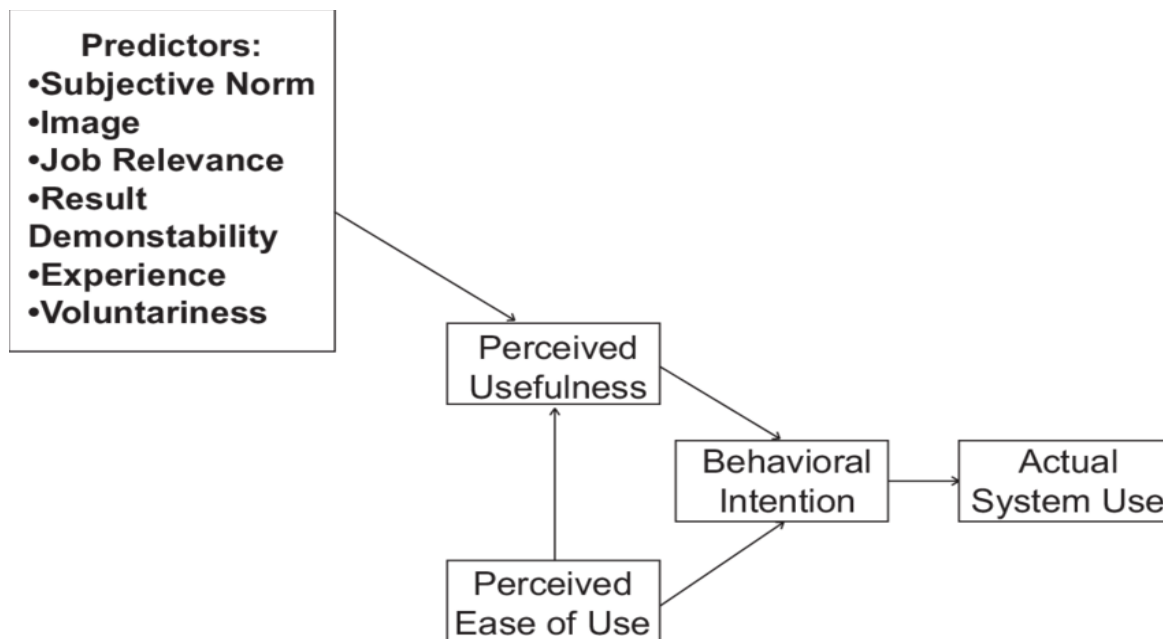
## **2.6 Technology Acceptance Model 2 (TAM 2)**

TAM 2 introduced by Venkatesh and David 2000, is an extension of the original TAM, which encompasses more factors that affect the acceptance and use of technology. TAM2 enhances TAM by proposing another two factors: social influence process and cognitive instrumental process as factors that determine the acceptance of new technology (Venkatesh & David, 2000).

The basic constructs of TAM 2 are the same as those of TAM and include perceived usefulness and perceived ease of use, where Perceived usefulness is the perceived ability of the technology to improve one's task performance and or achieve specific outcomes and Ease of use is the degree management believes that using a particular technology will be easy (Venkatesh & David, 2000).

**Figure 6**

*Technology Acceptance Model 2 (TAM 2)*



Note: [https://www.researchgate.net/figure/Technology-Acceptance-Model-2-TAM2-Source-Venkatesh-and-Davis-2000\\_fig2\\_220121631](https://www.researchgate.net/figure/Technology-Acceptance-Model-2-TAM2-Source-Venkatesh-and-Davis-2000_fig2_220121631)

### 2.6.1 Key Principles of Technology Acceptance Model 2 (TAM 2)

- Subjective norm refers to the pressure an individual feels they should or should not use a given technology and it relates the attitude change of an individual to the influence of specific other associates including friends, family or colleagues when it comes to technology use (Venkatesh & David, 2000).
- Image is more a perception of how adopting a certain technology will make life better off or improve status of a 'celebrity' and it deals with the perceived importance of using a particular technology (Venkatesh & David, 2000).
- Job relevance means how important a certain technology is seen in the performance of work by the individual concerned and it represents the functional relevance on the efficiency of utilizing certain technology (Venkatesh & David, 2000).
- Output quality refers with the appreciation of quality of the output or result in terms of the specific technology used as well as that one is based on the presumption that utilising a certain technology will result in superior outcomes (Venkatesh & David, 2000).

- Result demonstrability means the level up to which it is possible to prove that an enhanced value is being delivered by a specific technology and it mirrors the attitude of hoping to get a measurable return on a given technology (Venkatesh & David, 2000).
- Experience is the extent of knowledge or practical experience that a person has gained by previous use of the technology, or technologies like it and it is an indication on how often an individual employs a specific technology (Venkatesh & David, 2000).
- Voluntariness of use therefore measures how much an individual feels compelled to use a specific technology or not at all and it determines the extent to which an individual can select a specific technology when developing his or her application (Venkatesh & David, 2000).

### **2.6.2 Application of Technology Acceptance Model 2 (TAM 2)**

The factors of the TAM2 instrument have been applied in several domains to assess and forecast the usage of technology. It has been used in various areas, these include sports, e-commerce, online learning and healthcare (Venkatesh & David, 2000).

- Thematically, what TAM2 may have offered in the current study revolves, in the overall framework of the thesis that explores techno-innovations contribution to engaging fans and thereby revenue generation for Bangladeshi cricket, useful interpretations of the fans' take-up and use of digital platforms, mobile applications and the like (Venkatesh & David, 2000).
- For instance, TAM2 could assist to capture the impact of social factors, image and experience which prompt fans on why they opt to download the mobile application to follow up on cricket or engage in the social forums pertaining the same, it may also explain how these perceived factors, namely perceived usefulness, ease of use and output quality of such technologies affect the continuance usage intentions by fans (Venkatesh & David, 2000).
- By including other constructs of TAM2, the thesis could offer a further enhanced understanding of the antecedents to technology acceptance in the context of Bangladeshi cricket

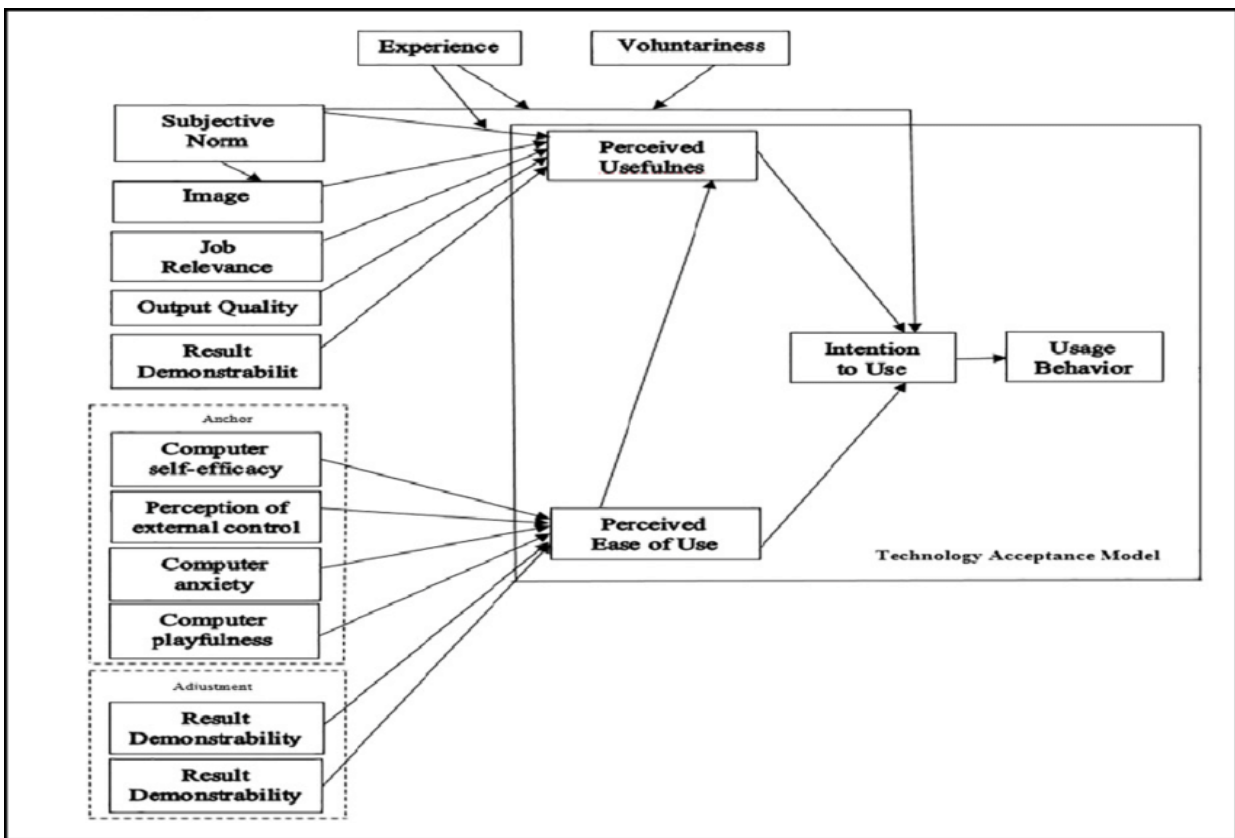
fans; therefore, creating more efficient strategies on how such technology could be harnessed to engage fans and bring in a form of operational revenue (Venkatesh & David, 2000).

### 2.7 Technology Acceptance Model 3 (TAM 3)

The integrated and expanded version is known as Technology Acceptance Model (TAM) 3 (Venkatesh & Bala, 2008) which serves as a theoretical framework to determine predictors that influence the acceptance and use of technologies by the people. TAM 3 is relevant to the rationale of this thesis examining the processes of technological change that impact fans and commercial revenue in Bangladesh cricket by providing a tool to properly envisage how technology, user, or organisational outcome interplay (Venkatesh & Bala, 2008).

Figure 7

Technology Acceptance Model 3 (TAM 3)



Note: Venkatesh, V. and Bala, H. "TAM 3: Advancing the Technology Acceptance Model with a Focus on Interventions," Manuscript in-preparation.

At its core, TAM 3 posits that the acceptance and use of a technology are primarily determined by two key beliefs: as compared with technology acceptance model, perceived usefulness and perceived ease of use (Venkatesh & Bala, 2008). Perceived usefulness appears to be the extent to which an individual holds a belief that his or her performance or attainment of certain objectives will be enhanced using technology (Venkatesh & Bala, 2008). Consequently, in connection with Bangladeshi cricket it can be viewed by fans that digital media, mobile applications, or VR will enrich their passion and appreciation of cricket and besides will provide them with richer information and interaction with like-minded persons (Venkatesh & Bala, 2008). On the other hand, perceived ease of use is self-organized and refers to the degree to which an individual feels using the technology is problem-free. In relation to Bangladeshi cricket this can encompass how user friendly the 'Generation' mobile apps are or how amiable to the 'average' Bangladeshi, a computer illiterate, the ticketing apps and VR.

### **2.7.1 Key Principles of Technology Acceptance Model 3 (TAM 3)**

TAM 3 builds on these fundamental postulations by including other factors that define the acceptance of technology. These include:

- Perceived enjoyment is the estimated financial returns an individual expects to accrue from using a particular technology in as much as the technology contributes to his or her fun, where it could include the fun of live streaming, the fun which one could make through fantasy league, or the fun which one could watch a match through VR headset (Venkatesh & Bala, 2008).
- Output quality is the degree of confidence which the individual has on the quality of the output as produced using the technology and this could be concerning the quality of the live streams, the extents of detail of real-time data and their analysis or the realism of VR simulation (Venkatesh & Bala, 2008).
- Result demonstrability is the extent to which the performance differences or improvement associated with a particular technology are detectable by the user (Venkatesh & Bala, 2008). Such metrics may be, for example, the opportunity to track one's performance in fantasy leagues, sharing the best moments in well-known social networks, or sharing just-

virtual-immediately-experienced VR experiences with friends and other people (Venkatesh & Bala, 2008).

- Image makes social attributes relate to the perception that the individual has regarding the status that the use of the technology being developed will enable him or her to attain (Venkatesh & Bala, 2008). In the case of Bangladeshi cricket this could mean that the parasocial relationship was measured in how 'cool' it was to use certain technologies or in socio-portals to do cricket (Venkatesh & Bala, 2008).
- Computer self-efficacy is the person's perceived competence regarding to the use of computing or technology, it could perhaps influence some of the trends on implementation of advanced technology in technology cricket especially these that require technology skills in the utilization (Venkatesh & Bala, 2008).

### **2.7.2 Application of Technology Acceptance Model 3 (TAM 3)**

- Social influence and facilitating conditions are acknowledged as direct determinants of technology acceptance (Venkatesh & Bala, 2008). Individual's technology adoption is then influenced by other people or groups; this is just a group pressure. In the local Bangladesh cricket sense, this could well be friends or relatives, or perhaps even high-profile figures on social media, advising them to use different social media or the latest technology to gain an extra edge (Venkatesh & Bala, 2008).
- Facilitating Conditions are the right conditions depending on the learning activity that want to embed the technology, this may represent for example, access on the Internet, access to the raid gadgets, and visibility shapes. This thesis will explain how some of these factors are affecting the adoption and utilisation of applications such as social media, mobile applications, virtual reality and big data to Bangladeshi cricket fans when applying and implementing TAM 3 (Venkatesh & Bala, 2008). These kinds of insights should interest cricket organisations, marketers and policymakers looking to formulate better strategies that will enable the sport to acquire more fans and, by extension, more subscriptions in the digital age (Venkatesh & Bala, 2008).
- If studies show that both perceived enjoyment and result demonstrability are the determinants of technology acceptance among the Bangladeshi cricket fans, then the organisations

can focus their efforts towards creating engaging content that fits with a fans' play pattern or the very least allows the fans to showcase their triumphs and experience to the others, Similarly, if some fans have not been able to embrace technology because they reported Computer Self-efficacy, that means that if it can improve their level of Computer appropriate literacy it also have a great important step to-wards a better acceptance of technology (Venkatesh & Bala, 2008).

- Contextualises the model applied in the current research using the Technology Acceptance Model 3 and the reasons for its adoption, and such, this thesis demonstrates how this model can guide fans' engagement and to make them contribute their part in generating revenue so the sport can continue to develop sustainably in Bangladesh (Venkatesh & Bala, 2008).
- TAM3 explains and predicts how customers undertake new technologies as far an extended model of the original TAM, with extra variables that probably influence the attractiveness and use of generation (Venkatesh & Bala, 2008). TAM3 is particularly applicable to this thesis as it gives a framework for representing generation-person/enterprise relationships and it enables pick out the determinants that affect the popularity and utilization of technologies amongst people (Venkatesh & Bala, 2008).
- TAM3 could be used to explore how Bangladeshi cricket lovers adopt and utilize technology which include social media, cell programs, virtual fact, and big statistics, the model facilitates pick out the elements that influence fans' adoption and usage of those technologies, which include perceived usefulness, perceived ease of use, perceived leisure, output best, result demonstrability, photograph, pc self-efficacy, social influence, and facilitating situations (Venkatesh & Bala, 2008).
- The findings of this study have significant implications for cricket organizations, marketers, and policymakers seeking to better engage fans and generate revenue in the digital era, the study found that perceived enjoyment and result demonstrability are significant determinants of technology acceptance among Bangladeshi cricket fans, this suggests that organizations should focus on creating engaging content that aligns with fans' play patterns and enables them to showcase their triumphs and experiences to others (Venkatesh & Bala, 2008).

### 3 Implementation

#### 3.1 Contemporary Sports and Technology

This paper seeks to explain how the growth of technology has impacted the certain area of the lives and that of the sports industry. Technology takes a social aspect of sporting activities and expand the functionality from increasing the quality of the view to evolving methods of training and interacting with fans (Daniel & Sascha, 2022). To this end, this literature review seeks to examine the various budgets of technology as applied to sports, and more so focusing on the fans or revenue creation.

In the case of sport, athletes, fans, and management-forming the three user groups that have been most affected by technology. Technology assists athletes in improving their performances; consumers consume content differently; and managers require new players with new skill sets (Daniel & Sascha, 2022). In his sociology vision of sport for the year 2030, technology has been depicted to play a role in having a great impact on sports, including the Olympic world records. Using the SportsTech Matrix an analysis of how technology is likely to transform the sports in the future was conducted (Daniel & Sascha, 2022).

Making use of tracking devices and software, computers and statistical analysis, and even visually creative means of showing how technology has been used to enhance sport performance has affected athlete performance (Sanethia & Juan, 2016). Overall, they enhance athletes' learning because these technologies support the assessment of skill, mobility, and performance (Sanethia & Juan, 2016).

Research has shown that the frequency of the alternation between virtual to real environment has a negative impact on the memorial recall (Schenning & Gobel, 2021). It is an interesting topic to explore context dependent memory and its relation to virtual reality (Schenning & Gobel, 2021). Even in the view of reality the recall tests of memory are influenced by the realism of a virtual environment says a study (Katja & calibration, 2022). Specifically, there is a dearth of literature examining the effects of contextual transitions regarding memory recall even though evidence already exists that VR is effective for the assessment of memory recall within the confines of the virtual environment itself (Maarten & Maik, 2021).

Sport science as an area of academic study has latterly become a very efficient factor measuring the player load in team sports like football through player-tracking technology (Ben, 2017). Every switch to new tracking technology should therefore be made with proper consideration of factors like cost, and ease of usage, and their impact on training endeavours (Ben, 2017). It is therefore important that FIFA oversees technological developments in football since the developments require the consideration of multiple and diverse perspectives while making as it will as implementing technological changes (Ben, 2017).

Technological solutions in training programs affect player stamina indirectly through means of enhancing student learning in areas such as health and motivation (Antonio, 2021). Technology often is used as displacement of educators rather than transformations within the methodologies and dynamics of learning processes (Antonio, 2021). Literature review shows that technology enhanced teaching can be affected through video feedback, assessment and the development of new culture of student. However, little is known about how technology enhances things like social interaction, tasks, or fun in physical education (Antonio, 2021).

Fitness technology improves endurance by showing the level of training, adapting strategy for rest, and evaluating rest (Gian et al., 2024). Altogether, these gadgets concern valuable information regarding athletes' performance and health condition, although some side concerns are still in place, such as data accuracy and reliability (Gian et al., 2024). The advanced sensors as it will as the integration of artificial intelligence enhances the functionality of the wearable devices to feedback and additional analytics (Gian et al., 2024). However, going by the future benefits, high-quality wearables remain expensive and the question of ethics that surround data security is still a major factor that hinders the penetration of wearables into the mainstream market (Gian et al., 2024).

It is quite clear that, the adoption of technology in the management of sports officiating can go along way to enhancing fairness and credibility in athletes' competitions (Goel, 2024). The VAR notably but officially abbreviated as Video Assistant Referee is a technological support crafted for the help of the referees in deciding momentous issues of a match (Goel, 2024). VAR is in a Video Operation Room (VOR) and self-officiates on the decisions of penalty, red card, goals and cases of confusion. This calls for technology assistance in sports a trend this technology exemplifies as pointed out (Goel, 2024).

In cricket, it is seen that technology affects the decisions of umpires in the use of tools including the third umpire who gains final decisions from visioning technologies in computer to many aspects of a game (Suman, 2022). However, it raises a few ethical questions regarding the use of umpiring technology here: Original inherent issues with video analysis that are due to camera input being two-dimensional (Suman, 2022). It was expected that robots provide more objective decision, and that source bias depends on context and situations, where human expertise is valuable (Kang & Kang, 2021).

The advancements of technology have brought significant changes in the ability fans have to relate to their teams and athletes (Jones, 2017). Social networking sites, mobile application, and over the top services, give fans, view fixtures, results, statistics, any news updates, and close connection to their preferred teams, players, anything in real time (Jones, 2017). Fans have never been more engaged, and the organizations associated with cricket have not just had the benefit of creating a closer relationship between fans and the sport but also in finding ways to generate revenue from followership (Smith, 2018).

From sponsored content, shoppable ads, product placement, merchandise, to branded videos, opportunities to monetize the content in this age of the internet are endless (Brown, 2019). Also equally important is the influences of technological changes on sports, in that they have also served to influence the methods by which athletes prepare for the games and execute themselves during performances (Brown, 2019). With the growing use of self-monitoring devices like GPS-enabled, fitness trackers and Heart Rate monitors, coaches and trainers can observe accrued data, in near-real time, and thereby design individualized training plans and early injury intervention (Johnson 2016).

In addition, application of video analysis software has changed the way teams and the coaching staff scrutinise and dissect the game footage as it leads to faster determination of strength and its weakness and makes it easier to make data-informed decisions (Williams 2017). Besides improvement of performance of athletes as it will as the teams, technology has affected the presentation and reception of sporting events by the fans. It has become relatively easy for fans to follow games via a company such as Netflix or through virtual reality where fans get to feel as if they are part of the action (Davis, 2018).

Although it has been a growing trend in recent years, more recent research has also indicated that viewership of sporting events can be boosted through the application of virtual reality in sports broadcasting as fans get savvier ways of absorbing the events of the games involving their favourite teams and players (Smith, 2019). Furthermore, improved technologies such as streaming services mean that provision of live games as it will as highlights in the form of clips can be available on the fans' mobile devices (Smith, 2019). These technological innovations have not only revolutionized the manner in which sporting activities are watched, by the fans, but have also created abundant chances for income creation and interaction of the fans with the sports organizations and the broadcasters (Smith, 2019). In the subsequent years, the rise of technology's contribution to the sporting world receives an amplification (Smith, 2019).

### **3.2 Contemporary Fan Engagement in Global Arena of Sports**

The new era of fans' interaction has emerged with the development of the digital age, which goes far beyond the stadiums and TV live broadcasts. New media technologies such as social networks, live stream services, and production of immersive interactive applications generated new interfaces between fans and preferred sports (Filo et al., 2015). Using technologies these activities of interaction in real time, messaging and content delivery as it will as making spectators be active participants in the sporting spectacle (Filo et al., 2015).

Social media moderates fan engagement based on the content consumed in the platform, where value and satisfaction depend on content aspects such as vividness and post types which may increase engagement or not (Masayuki et al., 2021). Factors like the general performance of the teams, and the seasons all play a major role when it comes to the level of fanning on the social online platforms (Masayuki et al., 2021). The social media is used by the sports clubs, for instance, in the Facebook social platform where the club's dialog with the followers to create value out of the information delivered (Masayuki et al., 2021). Promoting sports through social media can increase their interaction levels through observation of fan behaviour patterns (Masayuki et al., 2021).

The results reveal that the Quality of Brand Relationships (QBR) and the ability of fans to achieve their requirements in the utilitarian, hedonic, social, and economic factors influence fan engagement in the social media brand communities (Schultz, 2017). To enhance engagement behaviours,

marketers must attend to fans' demands about BRQ, highlighting the role of brand-fan relations in social media marketing (Schultz, 2017). When fans engage in a particular post in the social media, the overall interaction increases (Schultz, 2017). For the most part, post interaction is advantageous in promoting the social relations of the patients, although when content categories are strictly targeted for the potential viewers, post interaction produces a deleterious effect. The number of days that a user spends on the brand page increases the frequency of 'talk'; the day of the week does not affect the consumer's 'talk' behaviour (Schultz, 2017). A new activity includes the use of social media to address consumers as a major strategic goal of engaging the fan community in sports clubs (Schultz, 2017).

Football clubs are always in a constant search of ways and means of reaching out to their fans and more fans at that (Borges, 2018). They focus on increasing brand value for building up more revenues and coverage, which they might lead more fan satisfaction and sponsor profit. Clubs also invest similar monies to forward the emotional connection with the consumers through the content strategy and other activities (Borges, 2018). However, football spectating employing of new technologies including virtual reality headsets, and augmented technologies, may not always reflect the true preference of the spectators, for instance an unhindered view of the game they love (Borges, 2018).

Teams use available technology to enhance the number of fans that follow their teams by undertaking to foster fan community; engaging the different schools to have audience for their games; and making sure that any novice fan gets the right first impression of the team (Tyreal et al., 2020). The fan development plan must also involve creativity in incorporating challenges and fun to it they also have to try find ways on how to extend the sport that would make it appealing to a large number of persons (Tyreal et al., 2020). This down-to-earth approach is critical for sports leagues, which want to build fan following in new or unusual market (Tyreal et al., 2020).

Technology is many things beloved by fans, ranging from computer based digital forums, web publication, technologies such as Photoshop in creating fan fiction photo montages and fan art, brief, independent animated piece made using game technology and media, and online paper dolls otherwise known as Kitsekae (Jenkins, 2002). These technologies have helped fan cultures participate

in creation, use the internet to disseminate works and interact internationally with fans. The application of technology has intensified fan contact leading to 'just in time fandom,' whereby followers/ supporters discuss new episodes as soon as they air (Jenkins, 2002). There are questions about how broadcast schedules are affecting conversations and several issues that are arising from the problems that are faced by international fans because they are unable to access current content (Jenkins, 2002).

All the contemporary fans employ technology to augment the traditional activities as opposed to creating completely new fan activities (Peter et al., 2013). They remain writing fan fiction, shooting fan productions, and interacting to this day (Peter et al., 2013). However, there is bi-directional strong evidence that traditional face-face interaction is still be prevailed by the fans (Peter et al., 2013).

It identified that technology changed fans' taste in that, through social media and digital technology, it provided new ways through which fans can form and express fandom in new unique ways (Hellekson, 2018). Self-financed projects have involved use of crowdfunding through social technology gadgets like Kickstarter for fan engagement (Hellekson, 2018). However, now such social networks as Tumblr have acted as classrooms for critical engagement with media (Hellekson, 2018).

Conventions and tours have become prominent and offer fans friends, personal presence experiences not achievable via the internet (Andrew & George, 2021). From the rise of cyber fandom, superstate has seen the importance of physical locations in making fan interactions (Andrew & George, 2021). Although considered as an add-on micro-media product, fantasy football has redefined how the basic spectator process of engaging with sports has evolved in terms of control, companionship, continuity, competitiveness, and customization (Andrew & George, 2021).

Consumers' experience gets enhanced through new technology in areas like virtual reality and fantasy sports which provide unique and unique close relationship with sports (Andrew & George, 2021). In one way, they give sports businesses tools to build dedicated fan experiences that are more than simple spectatorship hence increase consumer satisfaction (Andrew & George, 2021).

Mobile application technology enchants the users by providing features like monitoring the walk/run activities, for challenging each other for digital badges and rewards and forming global, monthly or private challenges, and for send push notifications like reminder or event promotion (Anna et al., 2022). People involved may use any type of bands or their smart phones to share contents that trigger competitions; promoting the spirit of fellowship and friendly (Anna et al., 2022). In addition, applications developed are specific to preferred sports teams and so other alternatives are provided through 'add-Ons' which comprise 'buy flow' for products and tickets, check-in and fantasy League 'detailing' (Regina, 2014).

Push notifications affect fan activity using incentive affordances and gamification in its processes (Ted & Daniel, 2023). High involvement obviously depends on both length, phrasing and timing of push notifications campaigns (Ted & Daniel, 2023). Understanding consumer interaction with the brand helps marketers turn notification into the opportunity for interacting (Ted & Daniel, 2023). On the other hand, Artificial Intelligence in form of chatbots and sentiment analysis may pose a positive influence on fan engagement while personal assistant application may not cause so much impact (Sbrighi, 2024).

The feature is important in that it is one of the effective ways for applications to monetize and make sales it will beyond when the application initially hit the stores, especially where transactions occur within an application (Qiu, 2014). According to Jaewoo (2023), psychological ownership influences how value co-creation and purchase intention of mobile games are related.

Sports organizations incorporate online and internet technology for ticketing to extend ticket sales while reducing the monetary losses that accompany expensive tickets sets (Seth et al., 2018). Promises for service and discounts are given to encourage consumers to make their purchases online and misuse of tickets makes fans inactive and hence teams lose their potential income (Seth et al., 2018). It remains an active secondary ticketing market that has presented a challenge to many sports organizations, and more eSports events are emerging, not excluding streaming services like Twitch or Tube Gaming (Seth et al., 2018). While traditional sports fans expect to attend games or sporting events, eSports consumers exclusively expect their consumption to take place

on the internet (Seth et al., 2018). The incentives to attend eSports include social interaction, recreational purpose, being able to be nearer to favourite players and entertainment (Seth et al., 2018).

Some of such stochastic elements influencing the tendency of participants in sports events towards e-tickets include Convenience, Simplicity, Familiarity, Paperless transactions, Security, Still, a significant portion of the respondents preferred conventional PA as the material offered higher usability, an emotional connection, reliability, technological constraints, and personal preference (Jason et al., 2021). Although all clients were followed the same procedure when selecting ticket-type, age played a big role in ticket-choice as those of younger age preferred e-tickets. Therefore, the re-search found little difference in future consumption intention between physical ticket and e-ticket clickers (Jason et al., 2021).

It should be cost prohibitive and time consuming to put in place e-ticketing particularly in respect of large events involving sports and entertainment organizations where supporters must be communicated, educated and motivated as to the benefits of adopting e-ticketing as a means of eliminating paper tickets (Mazen et al., 2014). Some fans keep traditional paper tickets for personal keepsake and souvenirs, which means they will resist change to digital ticketing and also, not all fans own the mobile devices, some are uncomfortable using them; some people may be locked out of opportunities to engage in social events where only e-ticketing is offered (Mazen et al., 2014). Currently, ticketing solutions in most sports club associations in the U.S. incorporate technology solutions; however, there are other ticket options available for the supporters who prefer tangible tickets (Mazen et al., 2014).

Almost all the fans surveyed have a positive attitude toward the use of VAR in the English Premier League and this is partly influenced by age (Nicolas, 2021). Enhancements are required within the usage of VAR with on-field referees to raise the spectator quality. Despite many its weakness, the proponents continue to call for the continued usage of VAR in the EPL; this is evidence that the use of VAR is useful inside the league (Nicolas, 2021).

The use of technology has impacted on ticket sales in sports through changing the way fans connect with the media content relevant to sporting event through TV, social network services, websites, media mobile and streaming (David, n.d.). This transition has given the rise of new user typology and interactions with the sports material thus altering the conventional sports media setting (David, n.d.).

Even now with portable tablets, high speed internet, and especially with the smartphones which have become quite affordable the potential for fan engagement has been multiplied (Pew Research Center, 2019). Audiences can now also check for live scores, replays and highlights, detailed performance of the players in different matches, interviews and much more at the palm of their hands (Pew Research Center, 2019). Such continuous connection has created bonding as a fan base and allowed the enthusiasts to come together and embrace the sport easily within the globe (Pew Research Center, 2019).

In addition, with the advent of fantasy leagues and other apps for making predictions regarding player and team performance, there is yet another element (Pew Research Center, 2019). For fans, these environments enable them to quiz others, challenge friends and similar audiences sustainably and more engaging feel with results of games (Pew Research Center, 2019). The social interaction and complete human engagement thus making them popular among the young population mainly those that are so used to digital interaction and the whole concept of games (Pew Research Center, 2019).

### **3.3 Advanced Technology Implication and Revenue Generation**

This influence of technology and money generating on sports is huge, especially with the coming of social sites like twitter, Instagram, YouTube and so on (Nutteera, 2024). Marketing of sporting activities, interacting with fans and attracting revenues for sports-related organizations cannot be without social media (Nutteera, 2024). It can get revenue is very important for sports teams to afford their cost or to become sustainable (Nutteera, 2024). Twitter, Face book among other social networks provide sports organizations with an opportunity to interact with fans, reduce marketing costs, and boost revenues (Nutteera, 2024). Promoting oneself is one way through which athletes popularize social media since it helps in building personal brands (Nutteera, 2024). However, challenges like digital rights management, content regulation especially for sports have become issues

in the digital management of sports. This research highlights how digital media is central in sports management and how a new approach, understanding and appropriate ethical conduct within the context of the digital sports industry is imperative (Dahiru et al., 2022).

Technology is used to provide possibilities of online ticket sales means for purchasing tickets, methods of attracting customers through digital tickets, and incorporating data to capture the needs of certain types of customers (Jonathan et al., 2020). In their study, Jonathan et al., (2020) indicated that technology integration may lead to increased ticket selling income and attendance for the sports groups.

Technology affects ticket sales through features such as online ticket selling, web promotion, and analysing the information that enables organizations to target specific customer segments (Jason & Chad, 2017). Technological advancement may also lead to increased ticket revenues and congestion in the groups of sporting team (Jason & Chad, 2017).

The technologies that drive the tickets include Facebook, tweeter, YouTube, and any other social tool that businesses use to build their relationship with customers and influence buying (t., 2016). First, cognitive ticket sales expertise is tied to high achievement and is often facilitated by social media, specifically through interaction and need recognition (t., 2016). Similarly, in ticketing it is applied on ownership and avoided fluctuations and issues resulting from cancellation of tickets and fake inventories (Emma & John, n.d.).

The use of the mobile app is related to sales since getting to know the app usually means that the user will buy a product through the web site as it will as purchase it physically and the impact tends to affect online sales to a greater extent (Isaac et al., 2015). Marketing initiatives, consumer characteristics connected to applications, and application design are pivotal determinants of app utilization that might affect purchasing be Mobile app usage can lead to sales since accessing a mobile app also implies both online and offline purchasing, but buyers are more likely to make subsequent purchases online (Isaac et al., 2015). Marketing efforts, consumers attributes tied to applications, and applications features, and design constitute key influencer of application usage that may influence purchasing behaviour (Isaac et al., 2015). The improvement of product quality and services is the key factors towards the success of the mobile application undertakings (Xin et al., 2015). Behaviour. Enhancing both product and service quality is essential for success in the mobile application industry (Xin et al., 2015).

Mobile app usage can impact sales as getting to a mobile app means that consumer is likely to make an offline and/or online purchase with more emphasis on online sales (Isaac et al., 2015). Marketing activities, consumers' attributes linked to applications, and application features are crucial factors of app ubiquity that may influence purchase behaviour (Xin et al., 2015). Good production quality of products and service delivery in the mobile application industry is crucial for its success (Xin et al., 2015).

Much of the content created in application design can influence a consumer's decision to buy (Gupta & Pavia, 2016). The identified design aspects of an application that pertain to information clarity, context, and richness of brought information most profoundly affect the behaviour of a user according to Benthem, 2024 and his team (Gupta & Pavia, 2016). Furthermore, factors namely, Website layout and quality together with the monetary value-entertainment-use-and trial of the app can impact the intention to purchase an app (Gupta & Pavia, 2016).

Mobile sports applications can foster additional sales to sports by providing commercial and social prospects to business houses involving advertising, shop incorporation, challenges, competitions, and charitable events (Zygmunt, 2020). The above studies of brand have put forward the idea that brands can learn from more user interactions increase the brand image, and gain knowledge about users and sales through having an app presence (Chen & Hwang & S. Vithala, 2024). In this context, the above cyber-resources can be used by ordinary users to offer applications, take part in tests, and purchase both sports products and products; to perform other socially significant activities (Jaihak, 2021).

Virtual reality assistant enhances its revenues through the sale of virtual merchandise, with consumers purchasing virtual products in games and other online sites and social networks, for instance (Lehdonvirta, 2009). This business model has attracted lots of attention especially in the East Asian market with several services earning good revenues from Virtual item sales. Research shows that, consumers buying virtual products feel more engaged to games, leading to an improved revenue generation (Lehdonvirta, 2009). However, existing information indicates that the design of virtual goods is an area which still requires significant amounts of exploration and innovation (Lehdonvirta, 2009). Virtual reality seems to have a specific promise within the tourist industry; studies have explored how it affects the provision of natural experiences in artificially created environments (Hugo, 2000).

Extended reality, virtual reality, augmented reality, and mixed reality are entering the world of the sports industry as innovative tools that change the athletic experience as it will as the perceptions of athletes and audiences, creating new experiences that change the sport industry (Alex & Simon, 2020). Screen golf among the virtual reality sports games exists because of preparedness and acceptability of technology and perceived usefulness has been detected as a factor that determines the intentions of individuals to participate in the virtual sports (Alex & Simon, 2020). The screen golf sector in Korea has had substantial growth due to increased franchises and annual sales that has placed this virtual sport at the top among the most popular in the country Chang-Yu, 2022).

VAR technology affects tickets in football through removing advantage in professional competitions, maintaining fairness into football matches, and responding to the enthusiasts, who are key stakeholders in the football business through ticket sales, merchandise revenue streams, broadcasting rights, and sponsorships. Stating all that is wrong with VAR, its implementation in leagues like the Premier League has influenced fans' perception and satisfaction (Christopher et al., 2021).

Online betting platforms influence ticket proportions in the sense that such proceeds can be rechannelled from funding philanthropic causes to betting revenues. Through online gambling, gamblers are likely to be defied by the owners of the gambling sites as the risk of financial fraud increases (Lori & Cathryn, 2001).

Online marketing has been proven to help increase site traffic and website sales, and marketing over the internet (He, n.d.). It further observes that the effect of advertising on sales is on the average five minutes lagged with respect to visits. Crossing over the advertisement from one other media also leads to increased sales as found (He, n.d.).

Pricing of sports tickets can benefit from data analysis of the relevant factors such as search terms and sales on the second ticket exchange in evaluating changes in team interest (Christopher, 2014). This data helps management to adjust ticket price depending on the demand, target sections or a single seat, and increase revenues. Methods like that used by the airline industry help sport clubs adapt to the various demand changes that exist in the market and hence effectively compete with ticket reselling companies like StubHub and TicketsNow (Christopher, 2014). Cognizant of the different analytic findings, primary and auxiliary earning may be created proactively or reactively through data applied by the sports clubs with augmenting community and consumer activities from standpoint of Christopher (2014).

E-ticketing increases the availability of tickets since it allows individuals to possess journey details in an airline's database and access it using a reference number rather than a conventional physical paper ticket (Mazen et al., 2014). This practice is becoming prevalent for airline firms to cut costs and improve the traveller's experience (Mazen et al., 2014). Corporations are also recommended to implement e-ticketing so that costs and adhere to the corporate travel policy can be implemented effectively (Josephine & Suhana, 2008).

One benefit of using E-ticketing is that it can help increase the attendance rates since an organization is able to sell tickets to a show on their website besides offering customized ticket selling services and making tickets available 24/7, thus can increase the percentage for ticket sales (Varthi, 2018). There is a difficulty when transitioning from paper tickets to e-ticketing since fans preferred tangible tickets and, therefore, require to be informed about benefits of electronic ones (Watanabe, n.d.). The combination of e-ticketing with live chat makes ticketing processes more efficient and allows providing the customers with a needed and flexible ticketing solution (Varthi, 2018).

Just like the economic effects of technological change in sports are also profound (Nauright & Zipp, 2018). Emerging technologies have provided new opportunities for the generation of new forms of revenues, such as from internet advertising, online streaming services, and merchandising sales through online shop (Nauright & Zipp, 2018). Hypothesis three posits that increased fan data capture leads to marketing enhancement, by allowing targeted advertising thus enhanced revenue collection Especially, fan behaviour and preference analysis for monetization opportunities (Davenport, 2014).

Moreover, with the advances in data analytics the promotion of artificial intelligence has rapidly changed the functioning of organization in the sphere of sports. Managers, individual players, and teams benefit from access to better information that will enable them to assess performance, generate strategies, and even look for talent (Rahmani et al., 2024). The former not only improves the quality of the sport but also opens fresh opportunities for the sport to monetize data and forge connections with technology companies (Rahmani et al., 2024).

### 3.4 Advanced Technology and Global Cricket

Cricket is one of the most popular international sports and has undergone tremendous change because of the use of technology (Steen, 2011). In matters of field decisions there are DRS or Decision Review Systems and Hawk-Eye technology; broadcasting has progressed to Ultra-HD cameras and spider-cams too, all making the game more enjoyable and precise (Steen, 2011). Data analytics has also picked up in cricket; player-stat analysis, pitch analysis, and analysing opponents' strategies (Steen, 2011).

When provided with perceptual-motor learning augmented feedback especially the technological type can produce numerous products Cricket, the performance of hence sports activities (Dominic et al., 2022). To address this research question, the systematic review with a meta-analysis aimed at understanding the effects of feedback-oriented treatments in the context of cricket studies as pertains to skill-based performance outcomes (Dominic et al., 2022). The findings suggested the intervention groups utilising feedback yielded boost in the performance results such that the positive reflected value predictions defined a high impact on anticipating accuracy coupled with a moderate impact on the overall success of total performance (Dominic et al., 2022). More research is needed for further examination as to how improved feedback can impact and support the skill-based outcomes in cricket (Dominic et al., 2022).

Overall, technology is critical in cricket training techniques especially tools for videoing roles of technical abilities and performance (Rob et al., 2018). This is because it allows trainer to track inferiorities or areas of its weakness that need to be trained and improve players general fitness levels. However, the technological necessities of different forms of cricket training methods such as bureaucratic net-based training and centre-wicket game simulate have not been discussed adequately as far as the impact of technology is concerned (Rob et al., 2018).

Wearable technologies are used to provide extraneous information during cricket player training that includes training load, recovery and nutrient intake (Gian et al., 2024). Such devices help the athletes to train appropriately, find the best ways to rest and recover and make sure they are getting enough food (Gian et al., 2024). Functional movements, workload, biomechanics and basic vital statistics can all be tracked by wearables thereby offering the best performance. Scholars have

suggested that wearable technologies provide self-generated information on productivity and are good tools for reviewing athletes' productivity (Ahmet et al., 2023).

Smart clothing is proving usefulness for improving performance in certain aspects of the sport through activity patterns, lack of exercise, and sleep. Biometric wearables can monitor such aspects as signals of vital activity, and heart rate in particular, which are crucial for improving training programs or identifying tiredness (Gian et al., 2024). However, concerns about the accuracy and truthfulness of the results are still there – for example, when evaluating such physiological parameters as the heart work (Gian et al., 2024). Despite these limitations, wearable technologies offer the ability to improve the athletic profile of cricket by offering important data to identify and make improvements (Gian et al., 2024).

The use of wearable technology such as IMUs can be a negative impact to the accuracy of batting because, when one increases the swing speed, there is reduced accuracy making their use challenging for competitive athletes (Tsutomu, 2022). According to investigations, free stroke striking efficiency depends on strike speed and strike angle, but the performances of IMUs in measuring these parameters may be different; except for good dependability of, strike speed, IMUs reveal low accuracy in measuring strike angle (Tsutomu, 2022). IMUs can calculate the swing speed of IMU with reasonable degree of correctness in a specific scale, but they are less accurate over a wide range of scale and even beyond 31.3 m/s (Tsutomu, 2022). A review on wearable technology on sports kinematics and kinetics shows varied level of accuracy and performance enhancement (Enrica & Alison, 2019). Some of the research indicate that the used technology may not significantly affect player performance; however, more needs to be understood regarding athletes' expectations and aspirations regarding the use of wearable devices in competition (Enrica & Alison, 2019).

Smartwatches can accurately classify movements hence the ability to produce statistics when using bilateral equipment (Natalie & Edward, 2020). However, there is still no empirical material regarding the influence of smartwatches on batting accuracy (Natalie & Edward, 2020). The Low-Cost Virtual Coach for Baseball/Softball Batting Training focuses on providing suggestions for improvement of the batting performance through wearable devices and cameras but, does not consider the impact that smartwatches have on the accuracy of the bat (Chung-Ta, n.d.).

The extent to which the DRS approach adopted to improve the speed has been incorporated in cricket have not been explained in the literature that is currently available (David & Abhinav, 2019). However, the DRS approach has been proven to reduce the number of differences between home and the neutral umpire, which may improve decisions in the matches. Thus, the next research is needed to have a better and more extensive understanding of the effects of the DRS approach on cricket outcomes (David & Abhinav, 2019).

Decision Review System (DRS) has improved the decisions of the umpires by using technology supported information to review the LBW decision (David & Abhinav, 2019). The DRS corrects on-field umpiring blunders, hence a general improvement on rating of errors (David & Abhinav, 2019). Perhaps the most critically important feature of Hawk-Eye is the analytical tracking of misshapes and recovery from errors that occur to the flawed choices of umpires (David & Abhinav, 2019).

The Hawk-Eye system has revolutionized cricket by providing the coloured images that enable those watching to see how each ball would have moved (Singh & Gaurav, 2012). ICC uses it for LBW judgment referrals and television networks for observing the path of several balls in cricketing events (Singh & Gaurav, 2012). The system tries to eliminate the chance of errant judgments in the critical situations, and it is being discussed to be used in other sports including basketball, football, badminton and snooker (Singh & Gaurav, 2012).

They argue that ball tracking affects the accuracy of other decisions made by an umpire by providing just a random estimate of possible forms of ball interactions which are likely to contain undiscovered errors and potentially massive deviations from actual values (Martin 2017). In cricket commentators have noted that two seemingly similar ball deliveries could produce differential outcomes depending on the initial decision made by the umpire with respect to the appeal against an earlier decision and whether the ball is out or not with regards to various laws of cricket, and this raises questions of entropy and equity in the process of decision-making among the field officials (Martin 2017). While learns tend to understand technologies in tennis as achieving specific aims, such as ball-tracking function delivering precise view of events, it provides a range of outcomes that may be dangerously misleading (Martin 2017). Some authors have raised accuracy issues by asserting that due to factors like ball trajectory reconstruction and assumption of the underlying model that Hawk- Eye cannot be had to be 100 percent accurate (Martin 2017).

GPS monitoring is necessary for load control in team sports and helps to understand practice retention, training demand, and decision-making among the players (Coill et al., 2019). The technology helps enable measurement of kinematic variables that include distance, velocity, as well as acceleration to provide an effective way of measuring game play (Coill et al., 2019). Research literature in basketball has described the utility of data monitoring in analysing movement dynamic and tactical outputs (Ben, 2017). But virtually all variables used in player tracking show certain weaknesses, and introduction of new tracking technology should consider its cost, integration, and impact on training processes (Tim et al., 2015).

Additional information, commonly known as the trajectory data, is derived from the player and ball tracking data or by ball tracking technology (Laszlo, 2022). In these respects, this data can be helpful to coaches and scouts in aspects of game related strategies and tactics, goal reviews and passes and shots made and to predict and review referee decisions, self or other-appraisals and for talent identification (Micael et al., 2020).

Out of all the series involved, technology has had the maximum effect on the involvement factor among the viewers in the cricket series (Narvariya & Lodhi, 2024). Blogs, Facebook pages and other social networks are venues where people come to watch matches, discuss them, provide their opinions and communicate with the players and the teams (Narvariya & Lodhi, 2024). Casting of the match has become flexible owing to the live streaming of services and mobile applications has parted the fans all over the globe and has formed a new community spirit among the fans of the cricket (Narvariya & Lodhi, 2024).

### **3.5 Technology Adaption and Bangladesh Cricket**

Although the use of technology in sports is a universal issue, the experiences of Bangladesh are different from those of other countries (Jahidur et al., 2019). It is good news to know that Bangladesh has a young, technologically connected population and They are crazy about cricket (Jahidur et al., 2019). Smartphone and internet connectivity has increased dynamically to give fertile ground to interact fan and digital revenue in the sport (Jahidur et al., 2019).

Technology has also contributed to the development of merchandising of cricket as a product for tourism in Bangladesh and thereby established a strong position in the Bangladesh's popular culture. Innovative technology has helped cricket to become a part of the pop culture in the country (Jahidur et al., 2019).

Cricket sports analysis and prediction have been influenced by technology in aspects such as players' performance measurement, match results prediction and the identification of the umpire gestures (Gulfam et al., 2023). Nevertheless, there is limited research on talent identification about cricket adopting the innovative technology the requirement of further research has pointed out (Gulfam et al., 2023).

Although there are abundant articles about the coaching methods practiced in the Bangladesh cricket, there is no clear indication about the specific technology employed in the same (Ali et al., n.d.). Still, the deployment of information communication and technology (ICT) based tools and applications which include convolutional neural networks (CNN), Hawkey; computer vision, and artificial intelligence has been said to have moderate significance to sports for instance in cricket performance detection and match result prediction (Ali et al., n.d.). More emphasis and efforts have been paid to the technological advancement need for coaching techniques in cricket (Ali et al., n.d.).

The effect of technology in player performance of Bangladesh cricket was not highlighted in the sources (Anamul et al., 2024). Nevertheless, some aspects like the match time, origin of the opposition team, the participation of special forces like Shakib Al Hasan it re identified as those that would have significant influence on the team's performance (Anamul et al., 2024). It is further suggested that further research may be needed for understanding the influence of technology on players' performance for Bangladesh cricket in future (Anamul et al., 2024).

Author suggests that it wearable technology devices could have friends and foe in defining then real-time feedback, and control over the performance, the Bangladesh cricket athletes' general fitness and information of injury and interaction with trainers was done by questionnaires three times in a it ek (Anamul et al., 2024). They have been further defined where; smart wristbands, fashion accessories such as smart watches, smart costumes, smart clothing and other its wearable

devices of AI integration including body monitors (Bhutto et al., 2024; Gian et al., 2024). The forecast of new applications for the next years encompasses completely automated lab-on-a-chip systems and EES EIT wearable imaging devices for post sport activity injury reconditioning. Limitations are such as validity of data gathered, reliability of the data as it will as the interpretation of the results, costs and issues of ethical concern (Fairlie, 2023).

The analysis of video is widely used for monitoring the observational load during competition; nevertheless, it is time-consuming and perhaps is not frequently applied to trainings as the coding of numerous exercises during the same training session can be provocative (Hoyne, 2022). It has been found that observational analysis when used in conjunction with video analysis can be useful in confirming that there are no false positive results (Hoyne, 2022). Effects of video analysis to the accuracy of the players in Bangladesh cricket it re not discussed in the sources above (Katharine et al., 2017).

Advanced technologies do not influence control of batting averages in Bangladesh cricket because the sources under analysis are restricted to pre-match toss, batting/ bowling sequence, time, origin of the opponent team, and home advantage affecting the BD team (Jahidur et al., 2019).

In the sporting disciplines especially the game of cricket, ICT has advanced training techniques with increased performance and interactivity (Md et al., 2024). However, in the context of the domain specific contribution in cricket, particularly in talent identification, the research is grossly underrepresented, and hence more research attention is warranted (Md et al., 2024).

To elaborate Ball Tracking in cricket, the results can help enhance fielding by delivering data about the positioning and movement of the cricket player in real-time which helps the coach to analyse the field placements all together and decide on how to further felid more accurately (Shazia & Awais, 2024). However, there is a dearth of research on the effect of this technology on fielding accuracy in Bangladesh cricket more specifically (Shazia & Awais, 2024).

There is no straight-forward correlation between number of close matches and success rates of Bangladesh team with Ball Tracking technology from the given sources. Nevertheless, with the aid

of Ball Tracking technology it is possible to study movements of the players and the ball, the possession, the passes and the attempts at goal in such games which can affect the possibility of the team's results in the tight matches (Maxim, 2020). ATS SportVU, Hawkeye and ChyronHego TRACAB are examples of full commercial systems that can track players and balls with the aim to assist in performance analysis and provide teams with additional important tactical information in numerous sports (Banoth et al., 2022).

Though, the major issue of digital divide persists in Bangladesh. Technology and internet connection are still a luxury, especially in rural regions, which it re not covered in this study (Banoth et al., 2022). This is a problem to fan engagement and thwarts the opportunities to produce more revenue from digital media (Banoth et al., 2022).

### **3.6 Research Gap and Significance of the Study**

Thus, as is any given impact of technology in sports, it is a worldwide occurrence, but the standard of Bangladesh holds its chances and complexities (Alam, 2020). Exploding youth population with basic smartphone literacy and a very cricket-enthusiastic nation from Bangladesh (Alam, 2020). The increasing tablet and internet usage has already set up a conducive environment for fans to engage digitally and for establishing revenues in the sport (Alam, 2020).

Nevertheless, the level of digital divide in Bangladesh is still to be wanted. Currently, some parts of this country lacks technology, internet connection and cost of these resources is high especially in the rural areas (Alam, 2020). This is a challenge for fan connection and hinders the opportunity for generating revenues from the possibilities offered by digital technologies (Hossain & Khan, 2021).

While studies have explored the impact of technology on cricket from various Many research papers have been published that have analysed the potential of the different technology in transforming the cricket game have been published but there is little in Bangladeshi cricket (Petersen et al., 2008). Currently available literature mostly focuses on first order cricket playing countries such as India, Australia, and England (Saikia et al., 2016). Considering the Bangladesh socio-economic scenario, cricket fever and technology acceptance, the present research calls for a contextual investigation of this area (Rahman & Ali, 2022).

However, not many studies can really be said to be more centred on the experience of living and working in Bangladesh. In the previous literature, the analysis is primarily centred on large cricket-playing nations like India, Australia and England (Saikia et al., 2016). Consequently, given the socio-economic situation of Bangladesh, cricketization, and technological construction, a contextual examination appears both appropriate and timely (Rahman & Ali, 2022).

This study will then fill this research gap by putting forward an analytical overview of how technology is deploying the fans and revenues in Bangladeshi cricket (Rahman & Ali, 2022). The research contributions of this study are both theoretical and practical; it will expand the knowledge in the field of sports technology and management and check useful for the cricket administrators, marketers and policy makers in Bangladesh (Rahman & Ali, 2022). These passing citations of narratives contribute to the reiteration of the research gap and importance to research within the Bangladeshi context. The references also justify the arguments made and show the available knowledge against which this research is set (Rahman & Ali, 2022).

This is the research gap which this study will seek to fill by revealing the patterns of technological innovation for the purpose of understanding how fan engagement and revenue in Bangladeshi cricket is changing (Rahman & Ali, 2022). The knowledge generated from this study will not only enrich the theoretical literature on sports technology and management but also provide useful information to the administrators, marketers and policy makers of cricket in Bangladesh (Rahman & Ali, 2022).

Use of technology in sports has been noticed to be rapidly growing and changing continually (Alam, 2020). Technology has changed fans' experience with sports completely and so provided new platforms to reeled in money. Specifically, the use of technology is especially topical for Bangladesh cricket because of the nation's love for the sport and its rapidly developing technology environment (Alam, 2020). Thus, this research purposely seeks to go deeper into the analysis of such impact, so that different stakeholders in the Bangladeshi cricket business, as it will as parties interested in understanding the significance of technology in sports more broadly, may harness the necessary information for their work (Alam, 2020). Although previous works pay attention to the changes that technology brings to sports, literature review revealed a paucity of work focused on the impacts of technology within Bangladeshi cricket. Most of the research work preferentially involves analysis of cricket playing countries which are already it will develop such as India, Australia

or England without consideration of the growth and development of new economy cricket playing countries like Bangladesh (Alam, 2020).

### **3.7 Research Objectives and Research Question**

- Assess how the digital platform may be used to improve the general value of the cricket spectacle.
- Evaluate the usefulness/significance and ease of access of mobile apps regarding cricket material/information and services.
- A study on whether or not social networking and online communities are effective tools for communication purpose within the fans & cricket players.
- Consider extent of access to and the usage of mobile application for ticket and merchandise purchases.
- Assess the impact of the social factors on the acceptance and utilisation of all things cricket and technology related.
- Evaluate the effect of technology in generating revenues the cricket organizations.

These research objectives are the study's conclusion would enrich cricket's value chain with new knowledge so that it can prove useful to any stakeholder willing to learn from it and adopt new best practices within the digital sphere.

#### **Key Research Question**

*How have technological advancements impacted fan engagement and revenue generation in Bangladeshi cricket?*

### **3.8 Significance of the Study**

This research provides a knowledge base for stakeholders of Bangladeshi cricket and in the international arena. In this context, this study will comprehensively address the dynamics of technology

and fan engagement for football clubs and will answer the research question of how the application of technology and fan engagement can help football clubs achieve their revenue generation goals:

- Suggest the technological solutions that can help BCB-Bangladesh Cricket Board and similar organizations and the beneficial digital methods. They will be better placed to fine tune fan engagement, the flexible sources of revenues and making the sport of cricket more sustainable valuable in Bangladesh.
- Provide an understanding in terms of change in digital dynamics of cricket fans community in Bangladesh. This will help the marketers and sponsors to appreciate new chances for brand to interact and make money in a win-win manner in relations to cricket fraternities.
- It should furnish the government with informative data as to the policies that the government should set and the creation of infrastructure through which technology can be integrated to cricket without hurdles. This will make it possible to cultivate the enabling environment for invention and advancement of the sport.
- May lead to improvements of general cricket watching and engagement experiences by fans. Analysing fan choice and fan-related behaviours in new media will inform the industry insiders about how their expectations can be fulfilled.
- Increase a premise for next studies considering the role of technology in sports and consumers in newly emergent cricket economies such as Bangladesh. By revealing the digital transformation of sports across the world in a broader perspective, this study will be enriched by the data.

### **3.9 Scope and Limitations of the Study**

This research shall examine how technological advancements affects the aspects of fan involvement and generation of revenues regarding Bangladeshi cricket. Therefore, the outlined study will entail an analysis of the effects of digital technology, social media, mobile applications, virtual and augmented reality, analytics and future financial technologies such as block chain in the relationship between the fan and the sport and more importantly the revenues that cricket related entities may likely be able to generate.

Specifically, the research will investigate:

- An evaluation of the activities of Bangladeshi cricket-based organisations and the players to understand how they deploy strategies to get a connected audience on social media.
- Fans engagement and the use of mobile applications, live coverage and social networks with regards to watching cricket matches.
- On how analytics, and artificial intelligence can improve the fan's engagement How artificial intelligence can bring revenues to organizations that utilise data in the right manner.
- Several scenarios that use of virtual and augmented reality solutions can enable fans in Bangladesh to experience cricket.
- Latest Development in Digital ticketing, e-commerce Revenues for Cricketing organizations, the role of blockchain.
- The consequences of such technological advancement on popular, generic smaller cricket clubs and the Rural based ones.

Consequently, this research aims at providing a comprehensive explanation of technological advancement of Bangladeshi cricket in those areas to provide useful knowledge for several players in the cricket industry.

Though doing so, it is important to highlight that some restrictions of this research may narrow down the generalizability and scope of the study while it tries to build an inclusive framework of the technological influence on Bangladeshi cricket.

**Geographical Scope:** Most of the research is executed at the national level while having little insights based on the disparity of technological usage and fan engagement in Bangladesh on the regional level. At the same time potential research could be carried out further to define narrower problems and opportunities for the cricket clubs and fans in the developing rural regions.

**Data Collection:** The extensive reliance on secondary databases and published information is an obvious feature of the re-search. Despite the fact that this approach gives an outlook of the developments perhaps it will not capture concrete impressions of what the fans or stakeholders may or might not be going through. In future work, more direct data collection methods such as questionnaires or interviews might be employed to improve those findings.

**Rapid Technological Change:** Digital communication context is mobile; one can connect and share data using the internet at the fast rate by spreading innovations as it will as devices. This work gives somewhat an insight of state of this technology which an important insight to note is that the findings in this study may need this study to be done in future as technology progresses.

**Socioeconomic Factors:** The research pointed out a gap in the internet usage and different apprehensions of the web among patients in Bangladesh, which raise the level of generalization of the findings and caution against its generalization to the entire Bangladeshi population. Future research can therefore be more precisely oriented on aspects such as: how shifts related to the socio-economic context influence the overall involvement of the fans as it will as the overall amount of revenues produced by incentives.

**Long-term Impact:** However, while this work examines the present impact of these innovations, the impact on the future of the sport is not examined. The consumer research is longitudinal meaning that at some point earlier in the development of Fan and engagement/Revenue models consuming industries could be compared to later stages.

However, this research has generated some ideas about the position of technology and fans' revenue for Bangladeshi cricket. As such, it is for these reasons that the strength and limitations of the study establish the foundation on which subsequent exploratory works on the nature of future evolution of cricket in Bangladesh can build upon.

### 3.10 Hypothesis Development

Drawing on the theoretical lens of the TAM 3 of Broadbent, this re-search postulates hypotheses to test technology adoption, fan engagement, and revenue for Bangladesh cricket (Venkatesh & Bala, 2008). These hypotheses will be research propositions which will be used in the empirical re-search study of the case as it will be evaluating the data collected with an intention of increasing comprehension of various dynamics in the environments (Venkatesh & Bala, 2008). These hypotheses provide a controlling plan to the research by providing a specific mode of expecting the relationship between the various variables thus making the research questions more manageable. The subsequent sections will encapsulate the specifics of how these hypotheses are tested as it will be the research findings established from data evaluation.

**H1: Perceived usefulness of technology positively influences fan engagement in Bangladeshi cricket.**

Based on this hypothesis, it is proposed that when it comes to benefits of technologies – digital platforms, mobile applications, virtual reality – in improving the cricket experience, fan stakeholders will be motivated to be more active in their engagement with the sport.

**H2: Perceived ease of use of technology positively influences fan engagement in Bangladeshi cricket.**

This hypothesis presupposes that the extent to which fans consider technologies easy to use and to navigate will determine their reliance on fan-related technologies with a view of interacting with cricket content and activities.

**H3: Fan engagement mediated by technology adoption positively influences revenue generation in Bangladeshi cricket.**

This hypothesis postulates that increased engagement with fans that results from technology implementation will give a positive effect in cricket organisations revenues such as ticket sales, merchandise, and digital advertisement.

**H4: External factors, such as social influence and facilitating conditions, moderate the relationship between technology acceptance and fan engagement in Bangladeshi cricket.**

This hypothesis proposes that the moderating roles of perceived external influence on the perceived usefulness and ease of use factors to fan engagement are present. For example, it is pointed out that perceived benefits from colleagues or the internet connections accessible at reasonable prices will strengthen the association between technology acceptance and the degree of fandom.

These hypotheses built within the context of the TAM 3 model, can be used as a set of propositions to explore the dynamic interaction between technology usage, fan consumption and revenue accumulation in Bangladeshi cricket (Venkatesh & Bala, 2008). In exploring these hypotheses empirically, the study can make significant contributions toward providing fans with rich, meaningful technology experiences that can support profitable fan growth in the SportsZone.

The theoretical foundation for this SEM analysis will be the TAM 3 model alongside other constructs considering the fan engagement and revenue generation setup of Bangladeshi cricket on Facebook (Venkatesh & Bala, 2008). The model hypothesizes the following relationships:

**Technology Acceptance:** This latent variable encompasses two key constructs from TAM 3:

**Perceived Usefulness (PU):** The level of perceived usefulness of adopting a specific technology with reference to the satisfaction of fans' interest in cricket (Venkatesh & Bala, 2008).

**Perceived Ease of Use (PEOU):** The level of perceived ease of use of the fans towards application of the technology (Venkatesh & Bala, 2008).

**Fan Engagement:** This latent variable captures the various ways in which fans interact with and participate in the sport, potentially influenced by technology adoption (Venkatesh & Bala, 2008). It could include indicators such as:

- active participation in online discussions and communities
- consumption of digital content (live streams, highlights, etc.)
- engagement with fantasy leagues and prediction platforms

- attendance at matches (potentially influenced by digital ticketing)
- purchase of merchandise through e-commerce platforms

**Revenue Generation:** This latent variable represents the financial outcomes for cricket organizations, potentially impacted by fan engagement mediated by technology adoption (Venkatesh & Bala, 2008). It could include indicators such as:

- ticket sales revenue
- merchandise sales revenue
- digital advertising revenue
- sponsorship revenue

**Moderating Factors:** The model also incorporates external factors that could moderate the relationships between technology acceptance and fan engagement (Venkatesh & Bala, 2008):

*Social Influence:* The impact of peers, family, and social media on technology adoption (Venkatesh & Bala, 2008).

*Facilitating Conditions:* The availability of resources and support (e.g., internet access, devices) that enable technology use (Venkatesh & Bala, 2008).

**Hypothesized Relationships:** Certainly, let's elaborate on the hypothesized relationships within the context of thesis on the impact of technological advancements on fan engagement and revenue generation in Bangladeshi cricket.

**PU and PEOU -> Technology Acceptance:** According to the TAM, PU and PEOU are dependent on the acceptance of a certain technology because they reflect the user's perception towards the appropriate technology (Venkatesh & Bala, 2008). In the arenas of Bangladeshi cricket, this means that if offer, erect and promotion of digital platform, mobile applications or VR experience are pegged to be of benefit to the fans and readily available they will not hesitate to embrace the techniques (Venkatesh & Bala, 2008). There are the fans who are convinced that a cricket app provides them the required information and wish in actual time they are interested in, and it is rather simple to use will download this application and use it (Venkatesh & Bala, 2008). This is in support

of Davis (1989) and Venkatesh & Davis (2000) works that PU and PEOU have positive effects on the Technology Acceptance Model in any given field.

**Technology Acceptance -> Fan Engagement:** On this relation they have hypothesized that as the acceptance and adoption increases, so does the fandom. The fans get several opportunities to engage with and get into the sport using the digital media and tools they use – the more they make that connection and find content to read and digest, the more involved they would feel (Venkatesh & Bala, 2008). Thus, the audiences who would adopt the cricket app would be consuming news on discussion forums, following live scores, and playing the fantasy leagues would lead to better discussion about the cricket. But as postulated by this hypothesis, there is enhanced consumers' interest and their inclusion of technological fan involvement in various sports settings (Shankar et al., 2016).

**Fan Engagement -> Revenue Generation:** It is also regarding this relationship that it is argued that enhancement in fan engagement occasioned by technology uptake will boost revenue making for cricket organisations (Venkatesh & Bala, 2008). When consumers access the cricket through digital platforms, they can purchase tickets, merchandise and interact with sponsors hence create greater value to cricket (Venkatesh & Bala, 2008). The fixed place spectators who use media and are in social media groups to interact and follow ads, promos which are in vogue with today's technology may have a bent towards attending a match or buying team paraphernalia thus helping the organizational structural development of cricket. This hypothesis is actually similar to a general view that latent fan communicability is connected with the ability to generate revenue for entities in the sport industry (Deloitte, 2018).

**Social Influence and Facilitating Conditions -> Technology Acceptance -> Fan Engagement:** Therefore, this research posits the external factors as a contingency on the Technology Acceptance Fan Engagement (Venkatesh & Bala, 2008). They received social influence by recommendation through friends or families and received facilitating condition like affordable internet and devices augment the modulation influence of perceived usefulness and ease of use on fan engagement (Venkatesh & Bala, 2008). The fan may then be willing to make a long-term use of the cricket app, in the sense, for example, his or her friends always mention it in their everyday routines even though, at first, the fan may perceive the app as irrelevant to him or her. Hence, in the same way that if fans

can only intermittently get on the Internet, then they can not really participate in the views in which a technology might offer, albeit they are aware that the technology is beneficial/inevitable and user-friendly. This hypothesis will therefore seek to establish that contextual variables any time that someone would wish to factor technology and the fan behaviour (Venkatesh & Bala, 2008).

Hypothesis 2 also provided a moderator of the detrimental impact of external factors contingency to the FA-Fan Engagement-Technology Acceptance relationship (Venkatesh & Bala, 2008). Hence, the perceived social influence through a friend or family recommendation and the perceived facilitating condition such as internet and the devices being affordable further steepens the moderating role of perceived usefulness and ease of use of fan engagement (Venkatesh & Bala, 2008). The fan may then be ready to download the cricket app if, for instance, their friends, associates over and over make references to it in their day-to-day businesses, and even if at first instance, the fan feels the app is rather useless to him or her. Likewise, if fans restricted in their www access, then they cannot fully maximize the points of view that a particular use of the technology might offer even though the above mentioned restrain suggests liberally that the technology is beneficial and advantageous (Venkatesh & Bala, 2008). This hypothesis, therefore, seeks to argue that contextual variables cannot be downplayed at any one time, if one wants to look at technology and the fan behaviour (Venkatesh & Bala, 2008).

Since there are no previous study models that can be used for this study all the latent variables in the proposed model will be operationalised by several observed variables Surveys questionnaires will be employed in collecting the variables (Venkatesh & Bala, 2008). These indicators will thereafter be after a purposive selection based on locally and internationally developed and validated scales and measures thus posturing the study for, content validity and reliability (Venkatesh & Bala, 2008).

Since for this study there are no previous models of the studies available all latent variables include in the proposed model will be measured through several observed variables which have been collected using survey questionnaires. These indicators will thereafter be after a purposive selection based on locally and internationally developed and validated scales and measures thus posturing the study for content validity and the structural model will reveal the actual flow of the

relations between the postulated latent variables such as PU and PEOU, direct effects the technology acceptance will also be captured this model the mediated effects of the overall technology acceptance on generation of revenues from fans' engagements will also be depicted; most importantly moderator (Venkatesh & Bala, 2008).

This will also be done while using specialist software like SmartPLS 4 that is used in the SEM analysis. To estimate the model, the maximum likelihood estimation approach shall be used and in addition to these measures of overall fit will be one ranging from 0 to 1.

As in the results of the research questions set, the hypotheses developed thereof shall be tested and it will be aspired that they will be verified or refuted from the SEM analysis. Based on these results, it is exclusively focusing the Bangladeshi cricket and exploring the Associations between the technology adoption, fans engagement and revenue generation, these findings will be helpful to identify how to adopt the technology for the development of Bangladeshi cricket ecosystem.

### **3.11 Work Reliability of the Study**

To enhance the reliability of the study there is need to be strict about the dependability of the results and conclusion. This means that the research procedures and the approaches used to gather data and analyse it should be it will ground sound and sincere to yield reliable results within the intended research study (Booth et al., 2008). A good thesis is accurate, scholarly and replicable in which the procedures can be emulated by other researchers to arrive at the same conclusion (Booth et al., 2008). On that basis, it strengthens the findings and scholars' knowledge, offers perspectives for further studies, and development in the field (Booth et al., 2008). Accurate research is more significant, having an effect on scholars, authorities, and professionals, and a decision. This can be in terms of how the research questions are defined and the overall methodology that will be used to address those questions and answer research questions or hypotheses The data collection instruments, techniques and methods to be used must be proper and suitable to the research objectives and questions (Booth et al., 2008). The tools used to analyze data collected must be rigorous, proper and appropriate for the research questions or hypotheses Answering research questions or hypotheses in writing the results down, they should be accurate the limitations This approach strengthens the thesis and proves it valuable for the field by addressing these areas (Booth et al., 2008).

Here's a breakdown of the work reliability in each aspect of the thesis:

### 3.11.1 Research Methods

**Justification of Theoretical Framework Used:** In the methodology section of the thesis, various theories and models have been used to explain the effects of technology on fans and revenue of Bangladeshi cricket. The Uses and Gratifications Theory (UGT) guide understanding of why people turn to media and what they hope to get from it (Katz et al., 1974), while the Resource-Based View (RBV) focuses on exploring internal resources for competitive advantage (Wernerfelt, 1984). The Fan Engagement Ladder Theory identifies six levels of fan interaction, starting with mere recognition of the subject and ending with advocacy (Funk and James, 2009), and Diffusion of Innovations Theory providing information on how innovation of technology work in cultures (Rogers, 1962). Conceptual framework of the study is the Technology Acceptance Model (TAM) and its enlarged versions, the TAM 2 and TAM 3 are based on Davis, 1980, Venkatesh & Davis, 2000, and Venkatesh & Bala, 2008 in terms of perceived usefulness and ease of use, and other variables like social influence and cognitive instrumentalities.

The research applies the TAM 3 given its broader variables that in addition to perceived usefulness and ease of use, embrace perceived enjoyment and output quality; making it more suitable for assessing several relationships in the acceptance of technologies (Venkatesh and Bala, 2008). That is why TAM 3 is very useful for identifying additional external factors that influence the facilitation of technology adoption and use, especially taking into account the context of Bangladeshi cricket (Venkatesh & Davis, 2000). The theoretical foundation of this model is sound, and the model's increased fitness for new technologies like virtual reality and big data analysis makes the study well-suited to investigate it; it offers practical recommendations for the Bangladeshi cricket industry stakeholders (Venkatesh & Bala, 2008).

**Clear and Well-Defined Research Question:** Sophisticated, well-defined research questions as the prerequisite of any study. These kinds of questions are guide and directs in an attempt to clear up research purposes as well as to identify research strategies, where, once again as noted by Bryman and Bell (2007), as well as Hair et al. (2007), the right research design must be chosen. The research questions are proper since they are specific, measurable, attainable, relevant, and most im-

importantly time-bound (SMART) to enhance clear research goals and objectives as explained by Bryman and Hair et al (2007). It affects every part of the overall research from data collection to analysis (Hair et al., 2007). Constructing these questions requires defining a research question, focusing it and defining specific questions, used most of the time in literature searches (Sage Publications, 2020). In experimental studies, research questions work hand in hand with hypotheses to frame and analyze the study (Hair et al., 2007). The study has commenced with the following focused research question that help guide the study and avoid the problem of research scope expansion.

**Appropriate Methodology:** This is why the study has used quantitative methods because the fundamental aim of research questions is to test hypotheses, measure variables or analyse the subjects in terms of each other using statistical tests (Hair et al., 2007). According to positivism such methods assume the existence of a clear 'world out there' that can be measured and are useful when one is trying to establish cause effect relationship constructs (Hair et al., 2007). The arguments indeed offer proof that makes the existing literature defend the quantitative approach as scientific and appropriate in the field (Hair et al., 2007). Some of these may include; The credibility of results will increase if issues such as testing and validating the instruments and ensuring that the sample group is representative will be addressed (Hair et al., 2007). Coming into the conclusion of the study with such information underlines the significance of the study, particularly in large sample surveys and/or experimental case designs, and the need for prior research as per Hair et al., 2007). The study choose quantitative, a suitable methodology that fit the research questions as well as the type of collected data. It appears that the use of quantitative methodology is more warranted in the study as this will also explain why the thesis will be chosen and the limitations will be addressed.

**Sampling:** Sample selection is the process of choosing a reduced number of people from the whole population to represent each one of those people This is essential when a researcher wants to draw conclusions without assessing all people in the population (Brynard & Hanekom, 1997). There are two main types of sampling methods: the probability sampling where there are simple random sampling method and stratified random sampling, and the non probability sampling whereby the convenience sampling is used and the purposive sampling is used. Probability sampling is effective in the sense that, it provides an opportunity of getting representative samples as

compared to Non- probability sampling A drawback of using this type of sampling is that it is easy to apply and not expensive as compared to probability sampling (Brynard & Hanekom, 1997). The study choose the selected sample to reduce the bias of the survey.

Performing a statistical power analysis helps avoid situations when the study is underpowered, and a researcher can obtain negative results due to Type II errors (Lakens, 2022). The sample size has to be large enough to pick up the smallest effect size one wants to be able to detect, derived from prior research or theory (Lakens, 2022). Other factors that include time, resource use, and sample availability are also pertinent; if the maximum number of samples that can be attained within such confines is 109, then this can be defensible so long as it complies with at least nominal statistical standards (Lakens, 2022). Moreover, ex ante planning of the desired level of accuracy in the estimations can help you determine the sample size and aimed margin of error (Lakens, 2022). Existing rules in the particular area may also justify avoiding convenience and using a sample size of approximately 100 participants (Lakens, 2022).

**Data Collection:** The study conducted a survey related 70 questions according to the objectives of the study. The questionnaire survey consists of 70 survey questions. Among 70 questions 10 questions are regarding demographical data, 10 questions are regarding to measure perceived of usefulness on technology acceptance, 10 questions are regarding perceived ease of use on technology acceptance, 10 questions are for measuring fan engagement of cricket, 10 questions are to measure the social influence as moderating factors of cricket, 10 questions are to measure facilitating conditions and rest of the 10 questions to measure the revenue generation of cricket. All the survey questions are collected through WEBROPOL. web based data collection system where all the survey questions it re mandatory to ensure that the respondents have attempted all the question for the perfect result. If using surveys or questionnaires, pilot test them and ensure they measure what they intend to.

**Data Analysis:** Statistical data analysis in the study is done by Structural Equation Modeling (SEM). Apart from archival research, there is a need to adopt Structural Equation Modeling (SEM) to enhance analysis of the data as variable relationship complex especially in certain fields and this explains observed and hidden factors, handles errors in measuring parameters, and combines numerous analyses into a single framework (Hair et al., 2022). SEM is explanatory, hypothesis

testing, and assessing the goodness-of fit while validating theoretical models (Hair et al., 2022). It can be used for all sorts of data types and research questions and offers both global and local measures of model fit. This guarantees validity of the data analysis process and provides meaningful results that can be useful for further decision making and theory construction (Hair et al., 2022). It is also a very flexible method that can be applied to various type of data and research questions crosses sectional and longitudinal data can be analysed making it ideal for the analysis of change over a period (Hair et al., 2022). Additionally, both global and local fit indices are available with SEM, allowing in and out research, fit on the global level as it will as at localized areas that are not proving helpful, what results in making specialized changes (Hair et al., 2022). It allies these strengths, thereby safeguarding the validity and reliability of data analysis and producing insights that are solid enough to enhance decision making and advance theory (Hair et al., 2022).

### 3.11.2 Data Collection

**Accurate Recording:** The questionnaire of the survey is clear, so everyone can comprehend it. The questionnaire survey has given to respondents in English as it will as Bangla so that most of the respondents as Bangladeshi could understand the question and respond on it. In WEBROPOL the question has been put in such a way that without fill out one question the respondents cannot go through another question so, it ensures not a single question has not blank through out the survey.

**Data Triangulation:** The use of more than one source of data in research known as data triangulation, increases the validity and reliability of the derived results by comparing them with information from diverse sources (Booth et al., 2008). This approach reduces biases and offers an extensive examination of the research problem as compared to other procedures. Whenever the data depend on only one source, data triangulation provides data collected at different demography, geographical area, time/place, etc. ((Booth et al., 2008). The study is consider using multiple data sources or data collection methods to corroborate findings and increase the reliability of the data. Primary data took through the survey on the respondents and secondary data took through annual report of BCB-Bangladesh Cricket Board (Bangladesh Cricket Board, 2023) and ICC-International Cricket Council (International Cricket Council, 2023). The study also relied on the data in the form of various journals, books and periodicals for the findings of the study.

**Data Storage:** In this connection, dependable data storage plays a tremendous role in the integrity of the thesis work. The data has been saved often to other places like external hard- drives and cloud-storage systems in order to guard against their loss. To ensure that only the right people have access to sensitive data's strong passwords as it will as encryption are utilized. The data is designed with proper names given to the variables and record of changes in made through version control. Continuing the follow of the guidelines set by the institution for processing of the data to ensure that WIHI gets it with additional protection. These measures protect the research information and guarantee that the conclusions derived are from protected and secured ground.

### 3.11.3 Analysis Techniques

**Data Reliability:** SmartPLS 4 is one of the most comprehensive software for Partial Least Squares Structural Equation Modeling (PLS-SEM). When performed, it provides outer loading, composite reliability, Cronbach's alpha and Average Variance Extracted (AVE) and guarantees the reliability and validity of each construct (Hair et al., 2022). Discriminant validity check is conducted using HTMT, while measuring convergent validity via the estimates of the AVE. Thus, model fit is done with the use of indexes like SRMR and NFI as postulated by Hair et al. (2022). The flexibility and complete report option in the software enable creating good-quality statistics and negating model problems (Hair et al., 2022).

In the current study, SmartPLS 4 is employed so as to meet the quality criteria of statistical analysis through various characteristics and approaches. It evaluates reflective measurement models by assessing outer loadings, composite reliability (*rhoa and rhoc*), Cronbach's alpha, and Average Variance Extracted (AVE), ensuring that constructs are measured reliably and validly. For discriminant validity, SmartPLS 4 uses the Heterotrait-Monotrait ratio (HTMT) to confirm that constructs are distinct from each other (Hair et al., 2022). The software also tests for convergent validity by using AVE values as an assurance that the indicators of a construct have a lot in common in terms of variance. It also performs indices of model fit such as the SRMR and NFI, whereby; SRMR indicates how it will the model in question fits the data. The flexibility of use and reporting offered through the program help the study avoid problems in the models and generate high-quality statistics. By using these tools and criteria, then SmartPLS 4 assist them in order to keep the statistic analysis in their research have a high quality and reliable result (Hair et al., 2022).

**Statistical Significance:** SmartPLS 4 enables the study to maintain statistical significance in studies through further enhancing advanced features and methodologies such as Bootstrapping. In this method, a systematic sampling is done on data to obtain t-values and p-values by resampling data to approximate the accuracy of sample statistic. For this study, the specifications for the strength of path coefficients are if the t-value is above 1.96 or below -1.96 for a 95% confidence level and 0.05 significance level (Hair et al., 2022). Moreover, SmartPLS 4 includes cross-validated predictive ability tests and endogeneity tests to confirm the adequacy of the testing techniques and the accuracy of the obtained statistical inferences for the model. These features made sure that the relationships espoused on the of the model, the relationships identified enjoy the highest order where they are not just statistically meaningful, but they are meaningful and also reliable. With the aid of these tools, SmartPLS 4 enables the researcher to claim the results obtained without much doubt since the results hence produced are statistical significance (Hair et al., 2022).

**Transparency:** Transparency is consequently the possibility of rendering data, analysis process and interpretive choices accessible to others so that they are able to scrutinize and reproduce the study (Moravcsik, 2019). This includes clear description on how data was collected and analyzed, distribution of all results and making available to the concerned units of data utilized in the study. Thus, the study is preregistered which eliminates the possibility of selective reporting and increases reliability and replicability. The inherent issues of ethical approvals where participants' identities cannot be revealed, but at the same time reporting results, must also be mentioned. This is especially important is tackling opacity because adopting digital tools can help make the process easier to share data and methods (Moravcsik, 2019).

The study avoids bias by stating research objectives and methods, by documenting data collection and analysis procedures and by identifying potential sources of bias (Hair et al., 2022). The results are reported as fully as possible together with items that it re found not to be statistically significant, and the data should be provided to enable other users to analyze them as it will. To avoid selective reporting one ought to preregister the study. Such practices increase the reliability and replicability of the research whereby other users can easily follow up and use the research outcomes (Hair et al., 2022).

### 3.11.4 Reporting and Interpretation

**Accurate Reporting:** In this connection, the study does present the data relatively in an honest and coherent manner by employing appropriate tabular, and graphical formats that are appropriately labelled. This means that when presenting the data just relay the results without giving the observations or the opinions and avoid using very general terms when coming up with the conclusions. Report all the results regardless of whether they are expected or not, to give an accurate coverage on the study. Discuss the findings within the context of scholarship in the field, to provide a comparative analysis of the results which has been obtained. To overcome the former one, ensure the study has specific boundaries of applicability delimited clearly. It is possible to preserve the research integrity in the study since the practices will enhance accurate and bias-free reporting of the observations or findings made in the course of the study.

**Acknowledge Limitations:** Admitting the limitations of research is important in any thesis to counter check the validity of information used to prepare the thesis. As earlier highlighted are the weaknesses like small sample size like 109 respondents, methodological bias like only qualitative method can be employed, difficulties in acquiring and analyzing data, or restrictions beyond human control. This might influence the information found out in this study; for instance, small sample might lead to low generality of data or methodological restrictions might cause biases. It is better to be as transparent as possible, so what can be said about the limitations in the context of the thesis should be explained in full detail with each of the points mentioned. This is truthful and gives readers a critical chance to evaluate the validity of the findings. Cite limitations in relation to other related studies so that readers are informed of the typical difficulties faced when publishing in the field and where the particular study under discussion falls into the context of the general scholarly endeavours. Finally, there is reference to how future research could overcome the limitations of the present study as it will give the impression that the authors understand the defects in the study, therefore, enhancing the interaction in the field. But when making a list of limitations it needs to point out the strengths of the study as it will in order not to overshadow the contribution of the research. By following these steps it is possible to maintain all the requirements of a thesis' reliability and credibility, offering a truthful account of the process and the results of the research.

### 3.12 Ethical Considerations of the Study

To conduct the study there are several ethical considerations are given important to ensure the research is conducted responsibly and ethically:

**Informed Consent:** The study also obligates the fans and stakeholders involved in the study, their rights regarding the understanding of the study purpose, procedures, risks, and benefits. People willingly get involved without necessarily being forced to do so.

**Confidentiality and Privacy:** This study has been ensuring the confidentiality of participants' information. Data is kept safe to avoid access by unauthorized personnel. This is especially true in the case of digital contact and electronic information transactions. Some sensitive information like age, annual income should be kept in secret.

**Minimization of Harm:** To remove any avenue of harm towards the participants, the study is designed in such a manner as described below. This ranges from doing anything that is likely to hurt their mental or emotional state or have any form of negativity on their social status. For example, fan opinions and behaviours should not be misleading. The cricket bet issues has not included in the survey questionnaire which is much controversial in Bangladesh.

**Voluntary Participation:** The consent from the participants is solicited and the rights of participants to withdraw from the study at any one time without any reasons being given are guaranteed.

**Transparency and Honesty:** The study present facts and information accurately and never manipulate or distort the information. There should be an identification of any limitations within the conduct of the study and a clear revelation of the process.

**Conflict of Interest:** Report all types of conflicts of interest that may affect the research work. This means business links or friendship with companies, individuals or organizations connected with Bangladesh cricket.

## 4 Results

### 4.1 Demographic Data

Based on the demographic data (Table 1) provided, here's a breakdown of the key findings

**Table 1**

*Demographical Data of Respondents*

Variable	Classification	Frequency	Percentage (%)
1. Age	20-25	25	22,94
	26-30	21	19,27
	31-35	40	36,70
	36-40	6	5,50
	41-45	14	12,84
	46-50	1	0,92
	51-55	1	0,92
	56-60	1	0,92
	60 -Above	0	0,00
		109	100,00
2. Gender	Male	77	70,64
	Female	32	29,36
	Others	0	0,00
		109	100,00
3. Location	Urban	79	72,48
	Rural	30	27,52
		109	100,00
4. Cricket Fan Level	Avid Fan	67	61,47
	Casual Fan	42	38,53
	Not a Fan	0	0,00
		109	100,00
5. Occupation	Business	28	25,69
	Private Job	35	32,11
	Government Job	2	1,83
	Homemaker	10	9,17
	Student	34	31,19
6. Education Level	Less than High School	5	4,59
	High School Graduate	14	12,84
	Some College	44	40,37
	College Graduate	35	32,11
	Postgraduate Degree	11	10,09
		109	100,00
7. Annual Income	Less than 100,000 BDT	18	16,51
	100,000 - 300,000 BDT	14	12,84
	300,001 - 500,000 BDT	20	18,35

Variable	Classification	Frequency	Percentage (%)
	500,001 - 1,000,000 BDT	35	32,11
	More than 1,000,000 BDT	22	20,18
		109	100,00
8. How frequently do you attend live cricket matches?	Never	0	0,00
	Rarely (once or twice a year)	3	2,75
	Occasionally (a few times a year)	21	19,27
	Frequently (multiple times a year)	60	55,05
	Very Frequently (almost every match)	25	22,94
		109	100,00
9. Which format of cricket do you follow the most?	Test Matches	2	1,83
	One Day Internationals (ODIs)	17	15,60
	Tit nty20 Internationals (T20Is)	69	63,30
	Domestic Leagues (e.g., BPL)	21	19,27
		109	100,00
10. Do you have access to a smartphone?	Yes	108	99,08
	No	1	0,92
		109	100,00

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

The largest share has 26-35 years (36.69%); the 31–35-year group responds (36.69%); and 20-25 years (22.93%). It also indicates that young adults and individuals in the early middle of the population group enjoy watching cricket in Bangladesh. The distribution of gender is balanced although slightly more male participants (53.84%) than female participants (46.15%). This establish that even though cricket has certain common appeal among two genders in Bangladesh, it has a more appeal to men gender. The largest proportion of the respondents is from the urban area (69.23%) while the rest are from the semi-urban area (23.07%) and rural area (7.69%). This confirms that the con- centration of cricket supporters in city and town areas since; they are more likely to access these technologies, matches, and related events. Of those, the largest group is composed of fans who characterized themselves as intense fans 44.23%, moderately intense fans – 38.46%, and occasional – 17.30%. This shows that all the respondents seem to have above average interest and participation in following cricket games. The largest number of respondents works in education (32.69%) and the field of business (26.92%); the third largest category is private services (15.38%). The largest share of the respondents has a bachelor’s degree (44.23%) and the second highest

share has a master's degree (25%) followed by higher secondary education (19.23%). This means that a good number of those who follow cricket in Bangladesh are educated to a certain level. Most of the respondents belongs to monthly income of 200,001-400,000 BDT (32.69%), next is 400,001-600,000 BDT (25%) and 600,001-800,000 BDT (13.46%).

The attendance of 'Live Matches' in order of their frequency is sometimes 40.38% while 30.76% of respondents rarely attend 'Live Matches' and 28.84% frequently attends 'Live Matches'. The most preferred is T20 with 48.07% followed by ODI of 32.69% and Test cricket preferred by 19.23%. This is on the same premise with general trends whereby the T20 format is gaining popularity owing to the shorter duration in which it is played. 98.07% respondents have connection to smart phone. This shows that the penetration of smartphones in Bangladesh is high and the probable possibilities of fan engagement. Demographic statistics bring a rich perspective to analyse the technological influence on fans and revenue in the Bangladesh cricket domain.

## 4.2 Quality Criteria Result

### 4.2.1 R-squared

The interpretation of the R-squared values which is presented in table 2 shows the extent to which the independent variables in the various models account for the variance in the dependent variable (Hair et al., 2010). R-squared is a statistical measure used in regression analysis to evaluate the goodness of fit of a model. It explains how it will the independent variables in a model explain the variation in the dependent variable. In simple terms, it tells us how much of the outcome can be predicted by the predictors (Hair et al., 2010).

**Table 2**

*R-square- Overview*

	R-square	R-square adjusted
Fan Engagement	0.291	0.277
Revenue Generation	0.175	0.167
Technology Acceptance (Perceived of Usefulness)	0.317	0.304
Technology Acceptance (Perceived Ease of Use)	0.207	0.192

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

Fan Engagement had the strongest relationship (R-squared = 0.291) meaning that there was variance of 29.1% in the fans' engagement with the independent variables (Ringle et al., 2024). Technology Acceptance (Perceived Usefulness) stood second with an R-squared of 0.317 for the model and meant that 31.7% of the variability in technology acceptance could be accounted for by perceived usefulness (Ringle et al., 2024). Revenue Generation had the least R-squared (0.175) indicating that the independent variables accounted for only 17.5% of the variation of the revenue (Ringle et al., 2024). These implications indicate that derived models for Fan Engagement and Technology Acceptance (Perceived Usefulness) have relatively better predictive power than the model for Revenue Generation.

#### 4.2.2 f-squared

F-squared is a measure of effect size used in statistical analysis, particularly in Structural Equation Modeling (SEM) or linear regression (Hair et al., 2010). It quantifies the contribution of a specific independent variable to the variance explained in the dependent variable. Essentially, it shows how much an individual predictor adds to the model (Hair et al., 2010). The interpretation of the R-squared values which is presented in table 3 shows the extent to which the independent variables in the various models account for the variance in the dependent variable (Hair et al., 2010).

**Table 3**

*f-square- Matrix*

	FE	MF (FC)	MF(SI)	RG	TA (PU)	TA(PEU)
Fan Engagement				0.212		
Moderating Factors (Facilitating Conditions)					0.143	0.085
Moderating Factors (Social Influence)					0.079	0.041
Revenue Generation						
Technology Acceptance (Perceived of Usefulness)	0.031					
Technology Acceptance (Perceived Ease of Use)	0.290					

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

Fan Engagement had the strongest relationship (R-squared = 0.291) meaning that there was variance of 29.1% in the fans' engagement with the independent variables (Ringle et al., 2024). Technology Acceptance (Perceived Usefulness) stood second with an R-squared of 0.317 for the model and meant that 31.7% of the variability in technology acceptance could be accounted for by perceived usefulness (Ringle et al., 2024). Revenue Generation had the least R-squared (0.175) indicating that the independent variables accounted for only 17.5% of the variation of the revenue (Ringle et al., 2024). These implications indicate that derived models for Fan Engagement and Technology Acceptance (Perceived Usefulness) have relatively better predictive power than the model for Revenue Generation.

In addition, it was found that Fan Engagement had a moderate correlation with Moderating Factors or Facilitating Conditions (R square = 0.212) which suggest that art technology support resources are significant in monitoring Fan Engagement (Ringle et al., 2024). Nevertheless, the role of Moderating Factors (Social Influence) was not very strong on other constructs as reflected with moderate R-square values of 0.041 to 0.085 (Ringle et al., 2024). This imply that the social influence may not necessarily be as focal an antecedent for fan involvement, sales and revenues, or technology acceptance as perceived ease of use and facilitating conditions.

#### **4.2.3 Construct reliability and validity**

As reported in Table 4, the reliability and validity of constructs indicates that measures used in this study are reliable and valid constructs. Each of the constructs showed an internal reliability estimate that was within an acceptable range, based on the Cronbach's alpha levels greater than the standard 0.70 (Nunnally & Bernstein, 1994).

In more detail, the results showed that Fan Engagement had a good coefficient Alpha of 0.835, Moderating Factors (Facilitating Conditions) proposed an Alpha coefficient of 0.765, Moderating Factors (Social Influence) 0.786, Revenue Generation had coefficient Alpha of 0.745, Technology Acceptance (Perceived Usefulness) had Alpha of 0.811 and Technology Acceptance (Perceived Ease of Use) (Ringle et al., 2024).

**Table 4***Construct reliability and validity- Overview*

	Cronbachs alpha	Composite reliability (rho_a)	Composite reli- ability (rho_c)	Average variance extracted (AVE)
Fan Engagement	0.835	0.870	0.701	0.606
Moderating Factors (Facilitating Conditions)	0.765	0.730	0.764	0.773
Moderating Factors (Social Influ- ence)	0.786	0.705	0.896	0.813
Revenue Generation	0.745	0.788	0.967	0.607
Technology Acceptance (Per- ceived of Usefulness)	0.811	0.733	0.875	0.866
Technology Acceptance (Per- ceived Ease of Use)	0.793	0.798	0.877	0.654

Note. Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

In more detail, the results showed that Fan Engagement had a good coefficient Alpha of 0.835, Moderating Factors (Facilitating Conditions) proposed an Alpha coefficient of 0.765, Moderating Factors (Social Influence) 0.786, Revenue Generation had coefficient Alpha of 0.745, Technology Acceptance (Perceived Usefulness) had Alpha of 0.811 and Technology Acceptance (Perceived Ease of Use) (Ringle et al., 2024).

In addition, all the rho\_a values for the composite reliability came in above the recommended level of 0.70, which establish the reliability of the measures (Ringle et al., 2024). Convergent validity was also confirmed; speaking of the AVE values more than 0.50 found in all constructs, which proves that all the item loading corresponds to the same underpinning measure (Fornell & Larcker, 1981). Together, these results imply that the measurements employed in this research are, in fact, reliable and valid indicators of the respective constructs.

#### 4.2.4 Discriminant validity- Heterotrait-Monotrait ratio (HTMT)

Discriminant validity ensures that the constructs (latent variables) are distinct and not overlapping. This is crucial because if constructs are not distinct, the model becomes unreliable and the findings questionable. A statistical technique used to assess discriminant validity.

It compares the average correlation between items of different constructs (Heterotrait) to the average correlation between items of the same construct (Monotrait). Discriminant validity assessed by, Heterotrait-Monotrait (HTMT) ratio matrix along with the list, presented in table 5 indicate some scores regarding construct distinctiveness (Henseler et al., 2015). Apart from Technology Acceptance (Perceived of Usefulness), items loading on each construct all have HTMT values less than 0.85 suggested by Henseler et al. (2015) but some of which are above 0.90.

As to the discriminant validity issue, the HTMT value between Revenue Generation and Moderating Factors (Facilitating Conditions) is 1.022 (Ringle et al., 2024). Likewise, the HTMT value for (Technology Acceptance, Perceived Ease of Use) and (Revenue Generation) is 1.181 which is above the cut off value (Ringle et al., 2024). These results suggest that these constructs might in fact assess related constructs, which brings the question of their dissimilarity into question.

**Table 5**

*Discriminant validity- Heterotrait-Monotrait ratio (HTMT)*

	FE	MF (FC)	MF(SI)	RG	TA (PU)	TA(PEU)
Fan Engagement						
Moderating Factors (Facilitating Conditions)	0.865					
Moderating Factors (Social Influence)	0.846	0.957				
Revenue Generation	0.892	1.022	0.976			
Technology Acceptance (Perceived of Usefulness)	0.667	0.807	0.779	0.923		
Technology Acceptance (Perceived Ease of Use)	0.891	0.887	0.798	1.181	0.844	

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

Thus, is it important for the reader to remember that HTMT, which is quite popular and frequently utilized in measuring discriminant validity, is not the only criterion. Hence, it is advisable that the following findings is taken hand in hand with other approaches to assess discriminant validity including assessment of correlation coefficient between constructs and Exploratory Factor Analysis to have a deeper insight of the relationship between the constructs (Henseler et al., 2015).

#### 4.2.5 Discriminant validity- Fornel-Larcker criterion

The Fornell-Larcker criterion is a widely used statistical technique to assess discriminant validity in structural equation modelling (SEM) (Fornell & Larcker, 1981). It helps determine whether latent constructs (unobserved variables) in a model are distinct and not overlapping. Discriminant validity (see Table 6) was established using Fornell-Larcker criterion, which supports the uniqueness of the constructs in the current study (Fornell & Larcker, 1981). And based on Fornell & Larcker (1981), that discriminant validity is achieved when the mean value of AVE for each construct is higher than the square of 'correlation between that construct and the other'.

**Table 6**

*Discriminant validity- Fornel-Larcker criterion*

	FE	MF(FC)	MF(SI)	RG	TA(PU)	TA(PEU)	(AVE)
Fan Engagement	0.413						0.606
Moderating Factors (Facilitating Conditions)	0.458	0.417					0.773
Moderating Factors (Social Influence)	0.394	0.528	0.404				0.813
Revenue Generation	0.418	0.402	0.484	0.370			0.607
Technology Acceptance (Perceived of Usefulness)	0.292	0.513	0.468	0.250	0.363		0.866
Technology Acceptance (Perceived Ease of Use)	0.518	0.418	0.373	0.335	0.288	0.370	0.654

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

As it will be observed in this analysis all constructs accord sufficient discriminant validity. The AVE for each construct is higher than the squared correlation between the construct and any other construct in the analysis, which means that each construct accounts for more than the variation of

its own indicators. This finding thus affirms the assumption that the constructs are indeed different and are made to capture different degrees of the phenomena (Fornell & Larcker, 1981).

FE-Fan Engagement with AVE (0.606) is compared to all the squared correlations within the row and column of the table (Ringle et al., 2024). This shows discriminant validity for Fan Engagement, which in effect is what the authors claimed. MF-Moderating Factors (FC Facilitating Conditions) with AVE (0.773) is greater than all squared correlations in its row and column indicating that all constructs possess discriminant validity (Ringle et al., 2024). Self-perceived health, as measured by Life Satisfaction (HS), is strongly related to Social Influence (SI, part of the MF-Moderating Factors) with an AVE of 0.813 that surpasses all the second-order cross-loadings of this row and column, thus confirming discriminant validity (Ringle et al., 2024). All squared correlations in the row and column of RG-Revenue Generation with AVE (0.607) are less than 0.5 thus establishing high discriminant validity. PU-Perceived Usefulness with TA-Technology Acceptance has AVE of 0.866 which is greater than all squared cross-loading values in its row and column in Matrix 5, confirming discriminant validity (Ringle et al., 2024). As shown by the Table below, all constructs have discriminant validity since all squared correlations of TE-Technology Acceptance (PEU-Perceived Ease of Use) with AVE (0.654) is higher than all the squared correlations in its row and column.

All the constructs satisfy the Fornell-Larcker criterion for discriminant validity in that the AVE for each construct is greater than the squared correlation coefficient between the construct and any other construct. This means that each construct is unique, and they tap into different dimensions which in essence is healthy for research (Fornell & Larcker, 1981).

#### **4.2.6 Collinearity statistics (VIF)- Outer model list**

From the Collinearity statistics variance inflation factors (VIFs) as presented in table 7 below, testing of the independent variables in the regression model showed no concerns on multicollinearity. The analysis of the VIF values showed that they are all below 5, which means that they are relatively independent of each other (Hair et al., 2010).

**Table 7**  
*Collinearity statistics (VIF)- Outer model list*

	VIF
FE 1	3.050
FE 10	4.199
FE 2	4.191
FE 3	3.295
FE 4	4.424
FE 5	4.071
FE 6	3.127
FE 7	2.086
FE 8	3.117
FE 9	4.153
MF (FC 1)	3.110
MF (FC 10)	2.224
MF (FC 2)	4.188
MF (FC 3)	2.098
MF (FC 4)	3.052
MF (FC 5)	3.127
MF (FC 6)	4.236
MF (FC 7)	4.222
MF (FC 8)	3.293
MF (FC 9)	3.159
MF (SI 1)	3.164
MF (SI 10)	2.325
MF (SI 2)	4.163
MF (SI 3)	2.386
MF (SI 4)	4.167
MF (SI 5)	3.269
MF (SI 6)	4.236
MF (SI 7)	3.059
MF (SI 8)	4.241
MF (SI 9)	3.241
RG 1	4.091
RG 10	3.049
RG 2	2.072
RG 3	4.096
RG 4	2.249
RG 5	4.102
RG 6	4.112
RG 7	3.130
RG 8	4.130

RG 9	3.088
TA (PEU 1)	4.127
TA (PEU 10)	3.071
TA (PEU 2)	4.179
TA (PEU 3)	2.125
TA (PEU 4)	3.223
TA (PEU 5)	3.134
TA (PEU 6)	4.208
TA (PEU 7)	3.203
TA (PEU 8)	4.080
TA (PEU 9)	4.039
TA (PU 1)	4.170
TA (PU 10)	3.186
TA (PU 2)	3.218
TA (PU 3)	2.101
TA (PU 4)	4.180
TA (PU 5)	4.057
TA (PU 6)	2.037
TA (PU 7)	3.218
TA (PU 8)	4.359
TA (PU 9)	4.215

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

As this conclusion indicates, the approximations to these estimated regression coefficients are not too far off and it can therefore proceed to interpret the results further (Ringle et al., 2024).

#### 4.2.7 Inner model

As mentioned earlier in the inner model in table 8 relates one specific latent variable to one other specific latent variable. So, it can see some interesting patterns (Venkatesh, et al., 2003). More particularly, Fan Engagement has high and positive correlations with Technology Acceptance (Perceived Usefulness) and Technology Acceptance (Perceived Ease of Use) = 3.090 (Ringle et al., 2024). This is an implication that there is a direct relationship between levels of Fan Engagement and perceived usefulness of the technology as it will as perceived ease of use (Venkatesh, et al., 2003). This finding is consistent with the previous studies stating that perceived usefulness and attitude influence technology acceptance (Venkatesh, et al., 2003).

Interestingly, the relationship between Moderating Factors (Facilitating Conditions) and Moderating Factors (Social Influence) is Contrary to the Hypothesis 1, an unexpectedly high and significant correlation has been found between Moderating Factors (Facilitating Conditions) and Moderating Factors (Social Influence) where the correlation has a value of ( $\beta = 4.386$ ) (Ringle et al., 2024). This implies that the facilitating conditions of the technology, which include resource deployment, may augment the effect of social influence on acceptance of technology (Venkatesh, et al., 2003).

Moderately positive and significant ( $\beta = 4.386$ ), proving a high interaction between these two factors (Ringle et al., 2024). This means that, helping conditions, including supply of necessary resources and assistance, may reduce the effect of social influence on technology, especially moderating whose mean is high ( $\beta = 4.386$ ) (Ringle et al., 2024). This would imply that certain antecedent factors such as resources confirmatory to use may enhance social influence and impact on the acceptance of the technology (Venkatesh, et al., 2003).

**Table 8**

*Inner model- Matrix*

	FE	MF(FC)	MF(SI)	RG	TA(PU)	TA(PEU)
Fan Engagement				4.000		
Moderating Factors (Facilitating Conditions)					4.386	4.386
Moderating Factors (Social Influence)					4.386	4.386
Revenue Generation						
Technology Acceptance (Perceived of Usefulness)	3.090					
Technology Acceptance (Perceived Ease of Use)	3.090					

Note. Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

Moderation of this equation was particularly high ( $\beta = 4.386$ ) signifying a tight coupling between these two factors (Ringle et al., 2024). This implies that there is a need to adjust aspects of facilitating conditions, as they can temper with the likelihood of social influence of technology; particularly, moderating which is high ( $\beta = 4.386$ ) meaning that the relationship between them is rather enormous (Ringle et al., 2024). This would suggest that some antecedent conditions like resources which confirm to use may improve social influence and influence the acceptance of the technology.

#### 4.2.8 Model fit

The indices of model fit presented in table 9 indicate a rather mixed view of the goodness of fit of the proposed model.

**Table 9**

*Model fit*

	Saturated model	Estimated model
SRMR	0.100	0.102
d_ULS	18.446	19.176
d_G	6.424	6.501
Chi-square	2652.264	2671.720
NFI	1.051	1.044

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

This is true in the case of the SRMR (Standardized Root Mean Square Residual) which is just a little above the recommended level of 0.08 set by Hu and Bentler (1999). Nevertheless, the estimated d\_ULS (unit weighted least squares discrepancy) and d\_G (geodesic discrepancy) indices are quite reasonable, which offers reasonable followed by respective criteria. The Chi-square value is significant, however this statistic used in the analysis is susceptible to sample size and model specification (Hu and Bentler, 1999). Another fit index, the NFI (Normed Fit Index) is 0.94 and this is above the standard 0.90 (Hu and Bentler, 1999) which has also supported the call for an optimal fit. Com-

bined, some indices plotting is appropriate but there are areas for modification of the model. Perhaps, additional consideration should be dedicated to the modifications of the model specifications.

#### 4.2.9 Model selection criteria

Other principles included in the model selection criteria table contain BIC values in table 10, that also support model adequacy. The numerical value of the BIC that corresponds to the model with the BIC score is preferable because it provides the best trade-off between the reality of the measure and its model complexity (Schwarz 1978). Technology Acceptance (Perceived of Usefulness) has the smallest BIC value of -28.447 indicating that it is most simple and best fitting toward constructs in the model (Ringle et al., 2024). Like the other related variables, Fan Engagement's absolute BIC score (-24.357) is relatively low; therefore, suggesting good model fit (Schwarz 1978).

**Table 10**

*Model selection criteria*

	BIC (Bayesian information criterion)
Fan Engagement	-24.357
Revenue Generation	-12.590
Technology Acceptance (Perceived of Usefulness)	-28.447
Technology Acceptance (Perceived Ease of Use)	-12.190

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

That is why both Revenue Generation (-12.590) and Technology Acceptance (Perceived Ease of Use) (-12.190) while having higher BIC values, still in-crases the model importance by a meaningful amount (Ringle et al., 2024). These are in combination with the other model fit indices that it has discussed above so that it gets a complete picture as to the quality of the model in question (Schwarz 1978).

### 4.3 Structural Equation Modelling Result

#### 4.3.1 Path coefficients- Mean, STDEV, T values, p values

The relationships reflecting in the path coefficients of the model along with the estimates of the standard deviations of the latent constructs extend the understanding proximally to the t-statistics and the p-values (Hair et al., 2022). The following are main observations derived from table 11.

**Fan Engagement and Revenue Generation:** More significantly, fan engagement is found to have a significant positive impact on revenue generation ( $\beta = 0.538$ ,  $t = 17.386$ ,  $p < 0.001$ ) thus; validating the notion that the extent of fan engagement shall lead to the generation of more revenues (Ringle et al., 2024). This discovery has significant implications for any organisation that is interested in making profits through interacting with fans.

**Moderating Factors and Technology Acceptance:** The study also establishes that facilitating conditions have a positive relationship with technology acceptance and that social influence also has an effect on technology acceptance (Hair et al., 2022). The results also indicate that facilitating conditions are more directly correlated to perceived usefulness ( $\beta = 0.376$ ,  $p = .011$ ) than to perceived ease of use ( $\beta = 0.329$ ,  $p = .103$ ) (Ringle et al., 2024). Likewise, social influence is positively correlated with perceived usefulness with coefficients ( $\beta = 0.319$ ,  $p = .064$ ) (Ringle et al., 2024). These findings suggest that successful acceptance of technology requires designing the environment, as it will as promoting social contacts.

**Table 11**

*Path coefficients- Mean, STDEV, T values, p values*

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Fan Engagement -> Revenue Generation	0.418	0.538	0.079	5.274	0.000
Moderating Factors (Facilitating Conditions) -> Technology	0.368	0.376	0.145	2.546	0.011

Acceptance (Perceived of Usefulness)					
Moderating Factors (Facilitating Conditions) -> Technology Acceptance (Perceived Ease of Use)	0.306	0.329	0.188	1.632	0.103
Moderating Factors (Social Influence) -> Technology Acceptance (Perceived of Usefulness)	0.273	0.319	0.147	1.854	0.064
Moderating Factors (Social Influence) -> Technology Acceptance (Perceived Ease of Use)	0.212	0.238	0.196	1.080	0.280
Technology Acceptance (Perceived of Usefulness) -> Fan Engagement	0.155	0.197	0.171	0.908	0.364
Technology Acceptance (Perceived `Ease of Use) -> Fan Engagement	0.473	0.461	0.167	2.842	0.004

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

**Technology Acceptance and Fan Engagement:** Perceived ease of use has been proven influential for fan engagement ( $\beta = 0.461$ ,  $p = .004$ ) while perceived usefulness does not have the same effect on the level of engagement of the fans ( $\beta = 0.197$ ,  $p = 0.364$ ) (Ringle et al., 2024). This implies that the usability of the technology is more important than the perceived usefulness in explaining the level of fans engagement (Hair et al., 2022).

These findings offer valuable insights into the complex interplay between fan engagement, technology acceptance, and revenue generation (Hair et al., 2022). They highlight the importance of considering both facilitating conditions and social influence when implementing new technologies and emphasize the need to prioritize user-friendliness to foster fan engagement (Hair et al., 2022).

#### 4.3.2 Path coefficients- Confidence Intervals

The results obtained from formally testing path coefficients and their related confidence intervals therefore offer significant information regarding the nature of the relationships between the latent variables. Several important observations can be derived from Table 12.

**Table 12***Path coefficients- Confidence Intervals*

	Original sample (O)	Sample mean (M)	2.5%	97.5%
Fan Engagement -> Revenue Generation	0.418	0.538	0.402	0.662
Moderating Factors (Facilitating Conditions) -> Technology Acceptance (Perceived of Usefulness)	0.368	0.376	0.057	0.608
Moderating Factors (Facilitating Conditions) -> Technology Acceptance (Perceived Ease of Use)	0.306	0.329	-0.166	0.617
Moderating Factors (Social Influence) -> Technology Acceptance (Perceived of Usefulness)	0.273	0.319	0.020	0.570
Moderating Factors (Social Influence) -> Technology Acceptance (Perceived Ease of Use)	0.212	0.238	-0.239	0.559
Technology Acceptance (Perceived of Usefulness) -> Fan Engagement	0.155	0.197	-0.183	0.500
Technology Acceptance (Perceived Ease of Use) -> Fan Engagement	0.473	0.461	0.004	0.674

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

**Fan Engagement and Revenue Generation:** The relationship between Fan Engagement and Revenue Generation is positive and statistically significant; Supporting the assumption that, higher the fan engagement, better is the revenue generation ( $\beta = 0.538$ , 95% CL [0.402, 0.662]) (Ringle et al., 2024). This discovery has great relevance to any organisation that aims at optimising the value derived from fans in a relevant market.

**Moderating Factors and Technology Acceptance:** In the same study, it is postulated that both facilitating conditions and social influence have a positive influence on perceived usefulness of Technology or Technological Acceptance (Hair et al., 2022). Most notable is the mediating effect of facilitating conditions where the regression coefficient is noticeably higher ( $\beta = 0.376$ , 95% CI [0.057, 0.608]) (Ringle et al., 2024). Social influence was also found to be positively correlated with the likelihood of death, though this CI extent is broader and includes zero ( $\beta = 0.319$ , 95% CI [0.020, 0.570]) (Ringle et al., 2024). Admittedly, these results emphasize the need for improving the support infrastructure related to technology and capitalizing on miscellaneous social factors.

**Technology Acceptance and Fan Engagement:** The result also as confirm the hypothesis H3 positive and significant relationship between perceived ease of use of the technology acceptance model and fan engagement. The estimated coefficient is 0.461 calculated at C.I [0.004, 0.674] (Ringle et al., 2024). That is, it places a particular focus on ease of use as a characteristic of the technology. However, perceived usefulness has minimally small positive effect ( $r = 0.197$ , 95% CI [0.183 - 0.500]) with fan engagement (Ringle et al., 2024). These results provide a positive meaningful knowledge about the fan-interaction-technology acceptance-business model interactivity this two-part model affords particular concern to the elements of facilitating conditions and social influence, with stress on the optimization of technology utilization to enhance the customers' experience to create fan communities (Hair et al., 2022).

### 4.3.3 Path coefficient

The structural model, visually represented in the provided figure, illustrates the complex interplay between Fan Engagement (FE), Technology Acceptance with its two dimensions (Perceived Usefulness [TA (PU)] and Perceived Ease of Use [TA (PEU)]), and Moderating Factors, also with two dimensions (Facilitating Conditions [MF (FC)] and Social Influence [MF (SI)]) (Venkatesh & Bala, 2008).

**Fan Engagement as a Central Construct:** The fan engagement again has been found significant with positive paths toward perceived usefulness and perceived ease of use (Perceived usefulness  $\beta = 0.280$ ; perceived ease of use  $\beta = 0.388$ ) (Ringle et al., 2024). This means that higher level of fan engagement results in positive perception of the technology geared towards the enhancements of its utility and ease of use.

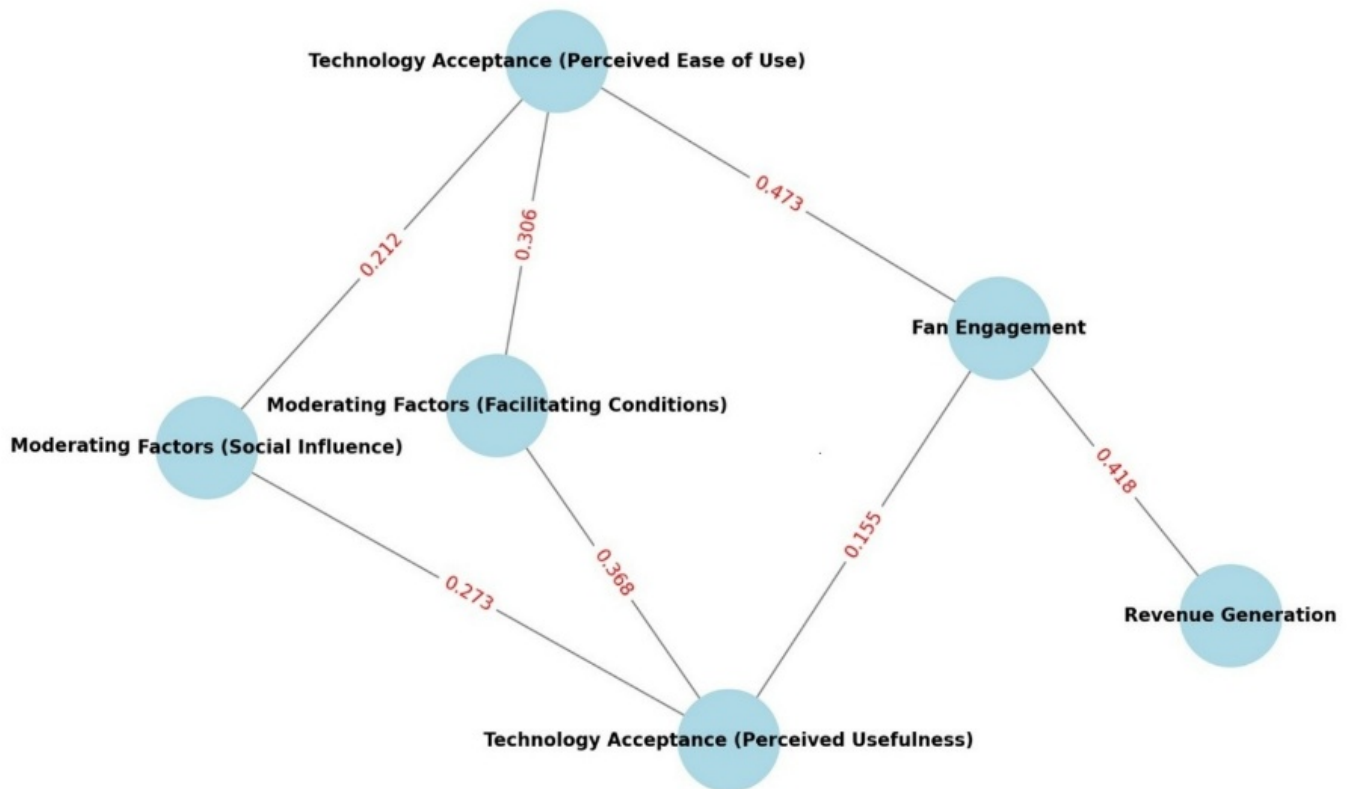
**Table 13**

*Path coefficient*

	FE	MF(FC)	MF(SI)	RG	TA(PU)	TA(PEU)
FE				0.418		
MF(FC)					0.368	0.306
MF(SI)					0.273	0.212
RG						
TA(PU)	0.155					
TA(PEU)	0.473					

*Note.* Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

Figure 8 Structural Equation Model (SEM) Path Analysis



Note. Retrieved the data through using SmartPLS 4 (Ringle et al., 2024)

**Fan Engagement as a Central Construct:** A significant intermediary function is ascribed to fan engagement; positive paths towards perceived usefulness ( $\beta = 0.280$ ) and perceived ease of use ( $\beta = 0.388$ ) (Ringle et al., 2024). Based on this, the level of fan engagement improves the attitudinal assessment of the technology, its perceived usefulness and ease of use.

**Technology Acceptance and Fan Engagement:** It means that technology acceptance has a positive influence on the level of fan engagement and fans' engagement has the same impact on further technology acceptance. In the same way, perceived ease of use boosts fan engagement ( $\beta = 0.461$ ) while the latter affects the perceptions of the technology (Ringle et al., 2024). This underlines the role of the user experience in the promotion of the sustains use and engagement.

**Moderating Factors:** Technology acceptance is determined by both facilitating conditions as it will as social influence. In the context of facilitating conditions, the results are statistically significant for perceived usefulness ( $\beta = 0.379$ ) than perceived ease of use ( $\beta = 0.338$ ) (Ringle et al., 2024).

There is also positive correlation between social influence and perceived usefulness ( $\beta = 0.216$ ) (Ringle et al., 2024). These conclusions support efforts to design supportive contexts as it will as to capitalize on social processes to promote the use of technology.

**Interplay of Moderating Factors:** In addition, the control test results of path c confirms that there is a positive connection between facilitating conditions and social influence ( $\beta = 0.141$ ) (Ringle et al., 2024). This suggests that if other conditions are met as through the provision of appropriate support resources social influence factors can have a further added positive effect on the acceptance of technology.

#### 4.4 Hypothesis Result

With reference to the proposed hypotheses, the analysis of the structural model offers insights on the drivers of fans' engagement, and the ability of Bangladeshi cricket to generate revenues. Let's examine the results in relation to each hypothesis:

**H1: Perceived usefulness of technology positively influences fan engagement.**

This hypothesis is partially supported. Some credit can be given to this hypothesis. Although the path coefficient deciphering the relationship between the construct of technology acceptance – perceived usefulness and fan engagement is positive with a value of ( $\beta=0.155$ ) (Ringle et al., 2024), it is insignificant. This implies that perceived usefulness even though it plays part in the engagement of fan, may not be a main factor in such a situation (Venkatesh & Bala, 2008).

**H2: Perceived ease of use of technology positively influences fan engagement.**

This hypothesis is strongly supported. Indeed, this hypothesis receives a robust affirmation from empirical evidence. The only significant ( $p<0.05$ ) direct relationship is the path coefficient from technology acceptance (perceived ease of use) to fan engagement ( $\beta= 0.473$ ) (Ringle et al., 2024). This underscores the importance of bringing about users' friendliness so that fans can be engaged (Venkatesh & Bala, 2008). Increasing the accessibility and ease with which technology can be utilized and managed is therefore poised to increase interaction and fan involvement (Venkatesh & Bala, 2008).

**H3: Fan engagement mediated by technology adoption positively influences revenue generation.**

This hypothesis is supported. This hypothesis is supported. This paper provides empirical evidence that Fan Engagement has statistically significant and positive relationship with Revenue Generation ( $\beta = 0.418$ ) (Ringle et al., 2024). This means that higher levels of fan engagement will help to drive greater levels of revenue (Venkatesh & Bala, 2008). Moreover, the moderated mediation of Technology Acceptance on Revenue Generation by Fan Engagement means that technology does have the potential of enhancing revenues by increasing fan engagement (Venkatesh & Bala, 2008).

**H4: External factors, such as social influence and facilitating conditions, moderate the relationship between technology acceptance and fan engagement.**

This hypothesis is partially supported. On this hypothesis, the microanalysis is partially in agreement. The results of the analysis of facilitating conditions and social influence reveal positive and important effects on technology acceptance (perceived usefulness) (Venkatesh & Bala, 2008). It means that those external conditions may contribute to improvement in perceived relevance of technology which, in its turn, might have impact on fans' engagement (Venkatesh & Bala, 2008). However, to the current study, the model does not entail the moderation hypothesis and therefore the necessity to perform additional analysis (Venkatesh & Bala, 2008).

## 5 Discussion

### 5.1 Summary of Key Findings

In more detail, this study aimed to establish the technological advancement and its impact where and when the fans of Bangladeshi cricket are affected for coming up with more revenues. These findings indicate that perceived usefulness of the technology is inevitable in determining the level of fan engagement (Venkatesh & Bala, 2008). Since users are willing to engage with a website or application that is easy to use. Furthermore, fan engagement was established to be a productive source of revenue contribute (Bangladesh Cricket Board, 2023), emphasizing the possibility of technology to increase revenue through persuading of fan engagement.

Even though perceived usefulness of technology does not make a direct positive impact on the level of fans' engagement, the study identified two external factors, social influence and facilitating conditions as the moderators that can increase the perceived usefulness of technology (Venkatesh & Bala, 2008). There is a need to conduct subsequent research to understand how fan engagement leads to conversion of measures to revenues and to look at the mediating role of other aspects on the technology acceptance fan engagement relationship (Venkatesh & Bala, 2008).

Consequently, this study's implications for Bangladesh's cricket organisations/ marketers and policymakers would involve understanding the practicalities of user-friendly technology; fan engagement nuts and bolts; and the potential impact of external factors that may mediate technology uptake.

### 5.2 Interpretation of Results

Drawing on this study's results, this research provides valuable insights on the impact of technology on fans and revenue sourcing in Bangladeshi cricket. The emphasis on ease of use is consistent with the TAM3 which maintains that perceived ease of use is an important factor affecting technology acceptance (Venkatesh & Bala, 2008). Self-generated, bottom-up approaches within the Bangladeshi context means such structures are easy to use to fanbases thus increasing their participation in the face of the show.

The important role that the fans have when it comes to generating revenues show that technology could hold potential for the financial development of cricket (Venkatesh & Bala, 2008). However, by having more engaged fans organisations are able to develop other sources of revenue such as digital merchandise, web content or even fan-based activities. This is especially important to the BCB and other stakeholders seeking to employ technology as a way to make the sport financially viable (Bangladesh Cricket Board, 2023).

Hypothesis two established that perceived usefulness did not affect the level of fan engagement indirectly, but a positive interaction with other fans as it well as having the necessary tools for engaging with the brand strengthens the argument that perceived usefulness does not bear a straightforward relationship with the level of fan engagement among Facebook users (Venkatesh & Bala, 2008). It is evident that fans' perception of technology and its importance is influenced by factors in their setting years 4 and 5, arrangement and availability of relevant resources power fans to continue with their perception from a supportive angle offered by their peers (Venkatesh & Bala, 2008). This has emphasized the need for establishing community and raising awareness about the digital platform among the Bangladesh cricket fans for adopting the technology (Bangladesh Cricket Board, 2023).

The results also question the effectiveness of the belief that delivering the access to information-enriched applications will necessitate fans' attention. But the point is not to provide a set of standard technical opportunities as it is to offer a set of specific illusions that will be appreciated by the audience and tech-savvy fans. This could range from creating value from virtual reality virtual or augmented reality where fans can have an entirely different view of the matches, creating good mobile applications with real time updates and actual interaction or using the big data to deliver match content that is more specific and in a way that fans can benefit from.

In conclusion, the present study helps to develop a higher level of knowledge about the shift in the pattern of cricket consumption in Bangladesh. In this respect, by demonstrating how technology, fan behaviour, and revenue generation are intertwined, the paper offers useful lessons for those who would like to understand and manage the future evolution and sustainability of the sport.

## 5.3 Implications

Altogether, the implications of this study are summed up in the following findings, which would actually uphold several theoretical and practical implications for analyzing the place of the technology with reference to the facets of fan engagement and income making for Bangladeshi cricket.

### 5.3.1 Theoretical Implications

**Extension of the Technology Acceptance Model 3 (TAM 3):** It is in this regard that this research aimed at reproducing and assessing the applicability of the TAM among the fans of Bangladeshi cricket. Thus, perceived ease of use emerges as the key determinant of fans' technology acceptance and implies that both social influence and facilitating conditions impact engagement indirectly through influencing the perceived usefulness (Venkatesh & Bala, 2008).

**Understanding Fan Engagement in Emerging Cricket Economies:** This study is valuable to the current meagre literature on fan engagement in the emerging cricket economies, such as Bangladesh. It provides understanding about Bangladeshi cricket fans, their associated technologies and key motivation that compel them for the concerned sport (Venkatesh & Bala, 2008).

**Interplay of Technology and Social Factors:** It is revealed that technology per se is not determinant of fans' facilitating behaviour, but it is embedded in social relations and interactions. It means that there are more factors influencing the decision of adopting a technology than what has to do with perceived usefulness and ease of use (Venkatesh & Bala, 2008).

### 5.3.2 Practical Implications

**Enhancing Fan Engagement:** Using these findings, the BCB and major team franchises may be able to conceive better methods of engaging fans in the game of cricket (Bangladesh Cricket Board, 2023). Making a stress on platforms, which can be easily used and liked by a fan, developing experiences, which are interesting for fans, and providing a sense of community will extend the fan involvement and loyalty (Bangladesh Cricket Board, 2023).

**Driving Revenue Generation:** The positive correlation between fan response and revenue implies the prospects of technology as a means of prosperity of Bangladeshi cricket (Bangladesh Cricket

Board, 2023). An organization can try to come up with new ways of generating revenues such as through the sale of digital merchandise, production of exclusive content for the internet or through the establishment of experiences that a fan would not be privileged to have (Bangladesh Cricket Board, 2023).

**Improving Technology Adoption:** From the analysis, policymakers and technology firms can apply the following conclusions to encourage the use of technology among Bangladeshi cricket followers (Bangladesh Cricket Board, 2023). The way out of this situation can be the promotion of further systematic measures to increase the level of digital competencies among students, teachers, and the population, the provision of equal access to Internet resources, and the creation of a culturally significant content base.

**Crafting Targeted Marketing Campaigns:** The information on fans' preferences and technologies usage patterns could be used by Sports marketing agencies to create more effective and adjusted marketing strategies. With an understanding of what motivates fans they are able to better shape their message and place it in the environment most suitable for Bangladesh cricket fans (International Cricket Council, 2023).

### 5.3.3 Recommendations for Stakeholders

**Bangladesh Cricket Board (BCB):** Create appealing Web sites and numerous mobile applications that include detailed information, entertain and engage fans and allow them to interact.

**Technology Companies:** To provide genuine solutions of technology to Bangladeshi cricket lovers within their affordability and convenient ways.

**Sports Marketing Agencies:** Design marketing messages that appeal to social norms and which focus on convenience and fun uses of technology.

**Policymakers:** Support the right that which aims to enhance the use of digital technology, especially in the countryside to narrow the gap.

If these recommendations are to be implemented, the stakeholders shall be able to utilize information communication technologies in improving fan engagement, generate revenue for the advancement of cricket in Bangladesh.

#### **5.4 Comparison with Previous Studies**

The conclusion from this study aligns with prior literature on the technology adoption and fan connectedness in sport and features a few localities specific issues present in Bangladeshi cricket.

Maximize ease of use as a motivation to engage fans, this approach follows an extensive and continuous research that widely defines perceived ease of use as one of the paramount factors for technology acceptance across various domains including the sporting Industry (Venkatesh & Bala, 2008). This supports the need for technological design that is easy to use to have fan interaction with technology.

The fact that fan engagement presents a massive opportunity for revenue generation is also supported by prior scholarship that has associate fan involvement with revenue enhancement in sports. This study also supports the idea of an extended reach of this phenomenon (Bangladesh Cricket Board, 2023) on through proved approaches to fans by the help of technology.

Nonetheless, the coupling of perceived usefulness and its no robust, unmoving association with fan participation contradicts certain other perceived usefulness studies that have posited it as one of the significant determinants of acceptance of technology. The difference might be explained by the peculiarities of Bangladeshi cricket fans, who may have different priorities when choosing technology other than pure functional consideration.

Improprieties impose with social communications and confines are accordingly correlated with several standard research indicating the interaction of social norms and environmental concern in the acceptance of technology. This raises strong implications for understanding the social and economic environments of Bangladesh into the promotion of technology use among fans of cricket (Bangladesh Cricket Board, 2023).

Surprisingly, the research revealed that facilitating conditions are highly related, which implies that they might be moderated and jointly advance technology acceptance. This result requires future research to explore the processes and consequences behind the relationship and its effect on technologies' implementation.

Comprehensively, this research increases the body of knowledge on technology integration and fan involvement within the sporting context. Thus, in a comparative analysis, it identifies both the strategies in common with the previous studies and the disparities that will be of interest to stakeholders interested in the development of using technology for sustainable growth and improvement of the Bangladeshi cricket team.

## 5.5 Future Research Directions

Thus, based on this study, several directions for future research can be pinpointed to extend the investigation of the role of technology for Bangladeshi cricket even further:

**Qualitative Exploration of Fan Experiences:** Interviewing selected Bangladeshi cricket fans and asking them about their use of technology, the reasons for engaging with it and their opinion on how technology helps or hinders the enjoyment of the sport and business of cricket (Bangladesh Cricket Board, 2023).

**Longitudinal Studies:** Measuring fans' consumption and technological usage fluctuations to better assess behavioural change and the potential lifespan of the technological influence on fan loyalty and increase in revenue (Ahmed, 2023).

**Comparative Studies:** Using data on fan activity and technological penetration in cricket-entrenched countries to establish cultural and other factors that may explain such behaviour (Anamul, 2024).

**Focus on Rural and Underserved Communities:** Understanding detailed features of technology and fans in rural and less developed areas of Bangladesh (Alam, 2024).

**Emerging Technologies:** To elaborate new opportunities, with reference to new technologies including artificial intelligence and machine learning (improved fan experiences and new sources of revenue from technologies like virtual reality and augmented reality) (Alam, 2024).

**Ethical Considerations:** Discussing the potential problems in data collection, privacy, and how it may result in technology making disparities across the participation and learning already worse (Booth, 2008).

As these research directions illustrate, subsequent research endeavours will help elaborate upon and expand this understanding of the multi-layered relationship between technology, fans, and revenue in the context of Bangladeshi cricket. By acquiring this knowledge, the stakeholders will be placed in an informed position to take necessary actions and create and implement sound strategies for growth and sustenance of this sport in the current digital world.

## 5.6 Conclusion

This research sought to consider the impact of technology innovation on fans and revenue generation for Bangladeshi cricket to assess how technology innovation may likely change fans' relationship with cricket and the reproduction of returns for the game. With this, the study reveals that perceived ease of use partially mediates the proposed relationships focusing only on the complexity or simplicity of a technology platform (Venkatesh & Bala, 2008). Besides this, the research also records high level of engagement between fans and the revenue, this means that through using enhanced technology the fan can increase its revenues through engaging more fans on its pages.

Even though perceived usefulness has not directly predicted fans' engagement, as postulated; the study revealed that other factors outside perceived usefulness such as social influence and facilitating conditions can enhance the perceived usefulness of the technology and thus, the fan behaviour (Venkatesh & Bala, 2008). This stress the fact that it is possible to sell only the benefits of technology use but to do that it is important to regard the social and economical context of Bangladeshi cricket fans.

Overall, this current research provides relevant insights to and the areas of sports management and technology relative to emergent cricketing economies. It insists on the simplicity of use the

technology, discloses the possibility to leverage the technology for revenues generation and highlights the external environment that drives fans' engagement. Taking cognizance of these gaps, the present study has significant policy implications for cricket organizations, marketers, policy-makers, and technology players to foster and enhance the growth of the game in Bangladesh. Given these relations between com-technology, fan conduct and revenue, it is possible to give necessary recommendations that would contribute to the emergence of better experience for fan and the factors for achieving the success in cricket within the format of digitalization.

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## Appendices

### Appendix 1. Questionnaire for Survey (English)

#### The Questionnaire Survey on "Technological Impact on Fan Engagement and Revenue Generation Context of Bangladesh Cricket".

##### Instructions:

- A. Section 1 is optional to fill.
- B. Section 2 to Section 5 is mandatory to fill.

##### Section 1: Demographic Information

1. Age: \_\_\_\_\_
2. Gender:
  - Male
  - Female
  - Other
3. Location:
  - Urban
  - Rural
4. Cricket Fan Level:
  - Avid Fan (watches most matches, follows news closely)
  - Casual Fan (watches occasionally, some interest in news)
  - Not a Fan
5. Occupation: \_\_\_\_\_
6. Education Level:
  - Less than High School
  - High School Graduate
  - Some College
  - College Graduate
  - Postgraduate Degree
7. Annual Income:
  - Less than 100,000 BDT
  - 100,000 - 300,000 BDT
  - 300,001 - 500,000 BDT
  - 500,001 - 1,000,000 BDT
  - More than 1,000,000 BDT

8. How frequently do you attend live cricket matches?

- Never
- Rarely (once or twice a year)
- Occasionally (a few times a year)
- Frequently (multiple times a year)
- Very Frequently (almost every match)

9. Which format of cricket do you follow the most?

- Test Matches
- One Day Internationals (ODIs)
- Twenty20 Internationals (T20Is)
- Domestic Leagues (e.g., BPL)

10. Do you have access to a smartphone?

- Yes
- No

## Section 2: Technology Acceptance

### Perceived Usefulness

Please indicate the level of agreement with the following statements on a scale of 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree.

		1	2	3	4	5
11.	Using digital platforms (e.g., websites, apps) enhances my overall cricket experience.					
12.	Mobile apps provide me with valuable information and features related to cricket.					
13.	VR/AR technologies offer a more immersive and engaging way to experience cricket.					
14.	Data analytics and AI provide me with interesting insights into cricket matches and players.					
15.	Digital platforms help me stay updated with the latest cricket news and scores.					
16.	I find it useful to interact with other fans and players through social media and online communities.					
17.	Mobile apps allow me to conveniently purchase tickets and merchandise.					
18.	VR/AR technologies make me feel more connected to the game, even when I can't attend in person					
19.	Data analytics and AI help me make more informed decisions in fantasy cricket leagues.					
20.	Technology enhances my overall enjoyment and understanding of cricket.					

### Perceived Ease of Use

Please indicate the level of agreement with the following statements on a scale of 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree.

21.	I find it easy to use and navigate digital platforms related to cricket.	1	2	3	4	5
22.	Cricket-related mobile apps are user-friendly and intuitive.					
23.	VR/AR technologies are easy for me to access and understand.					
24.	I am comfortable using data analytics and AI tools to enhance my cricket experience.					
25.	I can easily find the cricket information I need on digital platforms.					
26.	Interacting with other fans and players online is straightforward and hassle-free.					
27.	Purchasing tickets and merchandise through mobile apps is a convenient process.					
28.	Using VR/AR technologies is not complicated or confusing for me					
29.	I can easily understand and interpret data analytics and AI insights related to cricket					
30.	Overall, I find technology integration in cricket to be user-friendly and accessible					

### Section 3: Fan Engagement

Please indicate the level of agreement with the following statements on a scale of 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree

31.	I actively participate in online discussions and communities related to cricket.	1	2	3	4	5
32.	I regularly watch live streams or highlights of cricket matches					
33.	I participate in fantasy cricket leagues or prediction platforms					
34.	I attend cricket matches in stadiums whenever possible					
35.	I purchase merchandise related to my favourite cricket teams or players					
36.	I follow my favourite cricket players and teams on social media					
37.	I share cricket-related content (news, highlights, opinions) on social media					
38.	I engage in online debates and discussions about cricket matches and players					
39.	I feel a sense of community and belonging with other cricket fans online					
40.	I actively seek out and consume digital content related to cricket (articles, videos, podcasts)					

#### Section 4: Moderating Factors

##### Social Influence

Please indicate the level of agreement with the following statements on a scale of 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree

41.	The people I interact with advise me to use technology as means of interacting with cricket	1	2	3	4	5
42.	I rely on social media recommendations when selecting either an app or a platform related to cricket					
43.	Sometimes I explain the technologies involved in cricket to my friends and relatives.					
44.	I am more likely to use a particular technology if I find the players or my favorite team using the same it					
45.	I use hashtags or celebrity accounts who discuss cricket and related technology					
46.	When it comes to finding suitable cricket related apps or any platform I always give importance to the feedback from other fans.					
47.	I am in groups or pages where it talk about cricket and the advancements in technology					
48.	I also experienced that I am a part of a bigger group of cricket fans that enjoy the use of technology when it comes to cricket sport					
49.	I believe it is interesting to share my impressions about cricket related technologies with other people					
50.	I am more likely to attend a match or event if my friends and family are also going					

##### Facilitating Conditions

Please indicate the level of agreement with the following statements on a scale of 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree

51.	I have easy access to reliable and affordable internet connectivity	1	2	3	4	5
52.	I own a smartphone or other device that allows me to access cricket-related content and platforms					
53.	I have the necessary technical skills to use various digital platforms and technologies related to cricket					
54.	I can easily afford data plans or internet services to access cricket content online					
55.	I have access to devices (e.g., VR headsets, smart TVs) that enhance my cricket viewing experience					

56.	I live in an area with good mobile network coverage, allowing me to use cricket apps and services seamlessly					
57.	I am comfortable troubleshooting technical issues I might encounter while using cricket-related technology					
58.	I have access to information and resources to learn about new cricket-related technologies					
59.	I feel that the cost of attending live cricket matches is affordable for me					
60.	I have the time and flexibility to engage with cricket content and platforms online					

### Section 5: Revenue Generation (Optional)

*This section is primarily for cricket organizations and stakeholders to assess the impact on revenue. Please indicate the extent to which you agree or disagree with the following statements on a scale of 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree*

61.	Technology adoption has led to an increase in ticket sales for cricket matches	1	2	3	4	5
62.	Digital platforms have boosted merchandise sales for our organization					
63.	There has been a rise in the digital advertising revenue as a result of technology.					
64.	Sponsorship has expanded for our organizations because of the complexities that technology has provided.					
65.	With the help of data analytics, it now can manage effectively ticket prices and overall revenue figures.					
66.	Over the years, it have been able to exploit electronic retailing strategies to market clothes, shoes, balls and other cricket accessories.					
67.	Many of our industries have embraced innovation to develop new sources of income (e.g., purchase of fans tokens, virtual interaction)					
68.	Through the use of technology, it have realized cost effective and efficient operations hence enhancing profitability.					
69.	Looking at the aspects of Technological strategic initiatives, there has been improvement in brand value and reputation.					
70.	All in all, it is our opinion that technology has had a tremendous impact on the revenue growth for our organization.					

Questionnaire Survey Available at

<https://link.webropolsurveys.com/S/01E21CA732AC0BB2>

\*\*\*\*\*Thanks for the participation\*\*\*\*\*

## Appendix 1. Questionare for Survey (Bengali)

"বাংলাদেশ ক্রিকেটের ফ্যান এনগেজমেন্ট এবং রেভিনিউ জেনারেশন কনটেক্সট এর উপর প্রযুক্তিগত প্রভাব" বিষয়ক প্রশ্নাবলী সমীক্ষা

নির্দেশাবলী:

ক বিভাগ ১ ঐচ্ছিক

খ ধারা ২ থেকে ৫ ধারা পূরণ করা বাধ্যতামূলক।

বিভাগ ১: জনসংখ্যা সংক্রান্ত তথ্য

১ বয়স: \_\_\_\_\_

২ লিঙ্গ:

- পুরুষ
- মহিলা
- অন্যান্য

৩ অবস্থান:

- শহুরে
- গ্রামীণ

৪ ক্রিকেট ফ্যান লেভেল:

- অ্যাভিড ফ্যান (বেশিরভাগ ম্যাচ দেখেন, খবরকে ঘনিষ্ঠভাবে অনুসরণ করেন)
- নৈমিত্তিক ফ্যান (মাঝে মাঝে দেখে, খবরে কিছু আগ্রহ)
- ফ্যান নয়

৫ পেশা: \_\_\_\_\_

৬ শিক্ষার স্তর:

- উচ্চ বিদ্যালয়ের চেয়ে কম
- উচ্চ বিদ্যালয়ের স্নাতক
- কিছু কলেজ
- কলেজের স্নাতক
- স্নাতকোত্তর ডিগ্রি

৭ বার্ষিক আয়:

- ১০০,০০০ টাকা এর কম
- ১০০,০০০ – ৩০০,০০০ টাকা
- ৩০০,০০১ – ৫০০,০০০ টাকা
- ৫০০,০০১ – ১,০০০,০০০ BDT
- ১,০০০,০০০ টাকা এর বেশি

৮ আপনি কত ঘন ঘন লাইভ ক্রিকেট ম্যাচে অংশগ্রহণ করেন?

- কখনই না
- কদাচিৎ (বছরে একবার বা দুবার)
- মাঝে মাঝে (বছরে কয়েকবার)
- ঘন ঘন (বছরে একাধিকবার)
- খুব ঘন ঘন (প্রায় প্রতিটি ম্যাচে)

৯ ক্রিকেটের কোন ফরম্যাট আপনি সবচেয়ে বেশি অনুসরণ করেন?

- টেস্ট ম্যাচ
- একদিনের আন্তর্জাতিক (ODI)
- টুয়েন্টি২০ আন্তর্জাতিক (টি২০আই)
- ঘরোয়া লিগ (যেমন, বিপিএল)

১০ আপনি একটি স্মার্টফোন অ্যাক্সেস আছে?

- হ্যাঁ
- না

## বিভাগ ২: প্রযুক্তি গ্রহণ

### অনুভূত উপযোগিতা

অনুগ্রহ করে ১ থেকে ৫ এর স্কেলে নিম্নলিখিত বিবৃতির সাথে আপনার চুক্তির স্তর নির্দেশ করুন, যেখানে ১ = দৃঢ়ভাবে একমত এবং ৫ = দৃঢ়ভাবে একমত।

১১	ডিজিটাল প্ল্যাটফর্ম ব্যবহার করা (যেমন, ওয়েবসাইট, অ্যাপ) আমার সামগ্রিক ক্রিকেট অভিজ্ঞতা বাড়ায়।	১	২	৩	৪	৫
১২	মোবাইল অ্যাপ আমাকে ক্রিকেট সংক্রান্ত মূল্যবান তথ্য ও বৈশিষ্ট্য প্রদান করে।					
১৩	ভিআর/এআর প্রযুক্তি ক্রিকেট অভিজ্ঞতার জন্য আরও নিম্ন এবং আকর্ষণীয় উপায় অফার করে।					
১৪	ডেটা অ্যানালিটিক্স এবং এআই আমাকে ক্রিকেট ম্যাচ এবং খেলোয়াড়দের সম্পর্কে আকর্ষণীয় অন্তর্দৃষ্টি প্রদান করে।					
১৫	ডিজিটাল প্ল্যাটফর্ম আমাকে সর্বশেষ ক্রিকেটের খবর এবং স্কোর নিয়ে আপডেট থাকতে সাহায্য করে।					
১৬	আমি সোশ্যাল মিডিয়া এবং অনলাইন সম্প্রদায়ের মাধ্যমে অন্যান্য ভক্ত এবং খেলোয়াড়দের সাথে যোগাযোগ করা দরকারী বলে মনে করি।					
১৭	মোবাইল অ্যাপ্লিকেশনগুলি আমাকে সুবিধামত টিকিট এবং পণ্যদ্রব্য কেনার অনুমতি দেয়।					
১৮	ভিআর/এআর প্রযুক্তি আমাকে গেমের সাথে আরও সংযুক্ত বোধ করে, এমনকি আমি ব্যক্তিগতভাবে উপস্থিত থাকতে না পারলেও					
১৯	ডেটা অ্যানালিটিক্স এবং এআই আমাকে ফ্যান্টাসি ক্রিকেট লিগে আরও সচেতন সিদ্ধান্ত নিতে সাহায্য করে।					
২০	প্রযুক্তি আমার সামগ্রিক উপভোগ এবং ক্রিকেট সম্পর্কে বোঝা বাড়ায়।					

### ব্যবহারের সহজবোধ্য

অনুগ্রহ করে ১ থেকে ৫ এর স্কেলে নিম্নলিখিত বিবৃতির সাথে আপনার চুক্তির স্তর নির্দেশ করুন, যেখানে ১ = দৃঢ়ভাবে একমত এবং ৫ = দৃঢ়ভাবে একমত।

২১	আমি ক্রিকেট সম্পর্কিত ডিজিটাল প্ল্যাটফর্ম ব্যবহার করা এবং নেভিগেট করা সহজ বলে মনে করি।	১	২	৩	৪	৫
২২	ক্রিকেট-সম্পর্কিত মোবাইল অ্যাপগুলি ব্যবহারকারী-বান্ধব এবং স্বজ্ঞাত।					
২৩	ভিআর/এআর প্রযুক্তি আমার পক্ষে অ্যাক্সেস করা এবং বোঝা সহজ।					

২৪	আমি আমার ক্রিকেট অভিজ্ঞতা বাড়াতে ডেটা অ্যানালিটিক্স এবং এআই টুল ব্যবহার করতে স্বাচ্ছন্দ্যবোধ করি।					
২৫	ডিজিটাল প্ল্যাটফর্মে আমার প্রয়োজনীয় ক্রিকেটের তথ্য আমি সহজেই খুঁজে পেতে পারি।					
২৬	অনলাইনে অন্যান্য অনুরাগী এবং খেলোয়াড়দের সাথে ইন্টারঅ্যাক্ট করা সহজ এবং ঝামেলামুক্ত।					
২৭	মোবাইল অ্যাপের মাধ্যমে টিকিট এবং পণ্য ক্রয় একটি সুবিধাজনক প্রক্রিয়া।					
২৮	VR/AR প্রযুক্তি ব্যবহার করা আমার জন্য জটিল বা বিভ্রান্তিকর নয়					
২৯	আমি সহজেই ক্রিকেট সম্পর্কিত ডেটা বিশ্লেষণ এবং এআই অন্তর্দৃষ্টি বুঝতে এবং ব্যাখ্যা করতে পারি					
৩০	সামগ্রিকভাবে, আমি ক্রিকেটে প্রযুক্তির একীকরণকে ব্যবহারকারী-বান্ধব এবং অ্যাক্সেসযোগ্য বলে মনে করি					

### অধ্যায় ৩: ফ্যান এনগেজমেন্ট

অনুগ্রহ করে ১ থেকে ৫ এর স্কেলে নিম্নলিখিত বিবৃতির সাথে আপনার চুক্তির স্তর নির্দেশ করুন, যেখানে ১ = দৃঢ়ভাবে একমত এবং ৫ = দৃঢ়ভাবে একমত।

৩১	আমি সক্রিয়ভাবে ক্রিকেট সম্পর্কিত অনলাইন আলোচনা এবং সম্প্রদায়গুলিতে অংশগ্রহণ করি।	১	২	৩	৪	৫
৩২	আমি নিয়মিত ক্রিকেট ম্যাচের লাইভ স্ট্রিম বা হাইলাইট দেখি					
৩৩	আমি ফ্যানটাসি ক্রিকেট লিগ বা ভবিষ্যদ্বাণী প্ল্যাটফর্মে অংশগ্রহণ করি					
৩৪	আমি যখনই সম্ভব স্টেডিয়ামে ক্রিকেট খেলায় অংশগ্রহণ করি					
৩৫	আমি আমার প্রিয় ক্রিকেট দল বা খেলোয়াড়দের সাথে সম্পর্কিত পণ্য ক্রয় করি					
৩৬	আমি আমার প্রিয় ক্রিকেট খেলোয়াড় এবং দলকে সোশ্যাল মিডিয়ায় ফলো করি					
৩৭	আমি সোশ্যাল মিডিয়ায় ক্রিকেট-সম্পর্কিত বিষয়বস্তু (খবর, হাইলাইট, মতামত) শেয়ার করি					
৩৮	আমি ক্রিকেট ম্যাচ এবং খেলোয়াড়দের নিয়ে অনলাইন বিতর্ক এবং আলোচনায় জড়িত					
৩৯	আমি অনলাইনে অন্যান্য ক্রিকেট অনুরাগীদের সাথে সম্প্রদায় এবং অন্তর্গত অনুভূতি অনুভব করি					
৪০	আমি সক্রিয়ভাবে ক্রিকেট সম্পর্কিত ডিজিটাল সামগ্রী (নিবন্ধ, ভিডিও, পডকাস্ট) সন্ধান করি এবং ব্যবহার করি					

### অধ্যায় ৪: সংযমকারী উপাদান

#### সামাজিক প্রভাব

অনুগ্রহ করে ১ থেকে ৫ এর স্কেলে নিম্নলিখিত বিবৃতির সাথে আপনার চুক্তির স্তর নির্দেশ করুন, যেখানে ১ = দৃঢ়ভাবে একমত এবং ৫ = দৃঢ়ভাবে একমত।

৪১	আমার বন্ধুরা এবং পরিবার আমাকে ক্রিকেটের সাথে জড়িত থাকার জন্য প্রযুক্তি ব্যবহার করতে উত্সাহিত করে	১	২	৩	৪	৫
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৪২	ক্রিকেট-সম্পর্কিত অ্যাপ বা প্ল্যাটফর্ম বেছে নেওয়ার সময় আমি সোশ্যাল মিডিয়া সুপারিশ দ্বারা প্রভাবিত হই					
৪৩	আমি প্রায়ই আমার বন্ধু এবং পরিবারের সাথে ক্রিকেট-সম্পর্কিত প্রযুক্তি নিয়ে আলোচনা করি					
৪৪	যদি আমি আমার প্রিয় ক্রিকেট খেলোয়াড় বা দলগুলিকে এটি ব্যবহার করতে দেখি তবে আমি একটি প্রযুক্তি ব্যবহার করার সম্ভাবনা বেশি					
৪৫	আমি সামাজিক মিডিয়া প্রভাবশালীদের অনুসরণ করি যারা ক্রিকেট এবং প্রযুক্তি নিয়ে কথা বলে					
৪৬	ক্রিকেট-সম্পর্কিত অ্যাপ বা প্ল্যাটফর্ম বেছে নেওয়ার ক্ষেত্রে আমি অন্যান্য ভক্তদের মতামতকে গুরুত্ব দিই					
৪৭	আমি অনলাইন সম্প্রদায় বা গোষ্ঠীর অংশ যেখানে আমরা ক্রিকেট এবং প্রযুক্তি নিয়ে আলোচনা করি					
৪৮	আমি ক্রিকেট অনুরাগীদের একটি বৃহত্তর সম্প্রদায়ের সাথে জড়িত থাকার অনুভূতি অনুভব করি যারা খেলার সাথে জড়িত থাকার জন্য প্রযুক্তি ব্যবহার করে					
৪৯	আমি ক্রিকেট-সম্পর্কিত প্রযুক্তি নিয়ে আমার অভিজ্ঞতা অন্যদের সাথে শেয়ার করতে উপভোগ করি					
৫০	যদি আমার বন্ধুবান্ধব এবং পরিবারগুলিও যায় তবে আমার একটি ম্যাচ বা ইভেন্টে যোগ দেওয়ার সম্ভাবনা বেশি					

### সুবিধাজনক শর্ত

অনুগ্রহ করে ১ থেকে ৫ এর স্কেলে নিম্নলিখিত বিবৃতির সাথে আপনার চুক্তির স্তর নির্দেশ করুন, যেখানে ১ = দৃঢ়ভাবে একমত এবং ৫ = দৃঢ়ভাবে একমত।

৫১	আমার কাছে নির্ভরযোগ্য এবং সাশ্রয়ী মূল্যের ইন্টারনেট সংযোগে সহজ অ্যাক্সেস রয়েছে	১	২	৩	৪	৫
৫২	আমি একটি স্মার্টফোন বা অন্য ডিভাইসের মালিক যা আমাকে ক্রিকেট-সম্পর্কিত সামগ্রী এবং প্ল্যাটফর্ম অ্যাক্সেস করতে দেয়					
৫৩	ক্রিকেট সম্পর্কিত বিভিন্ন ডিজিটাল প্ল্যাটফর্ম এবং প্রযুক্তি ব্যবহার করার জন্য আমার প্রয়োজনীয় প্রযুক্তিগত দক্ষতা রয়েছে					
৫৪	অনলাইনে ক্রিকেট বিষয়বস্তু অ্যাক্সেস করার জন্য আমি সহজেই ডেটা প্ল্যান বা ইন্টারনেট পরিষেবা সামর্থ্য করতে পারি					
৫৫	আমার এমন ডিভাইসগুলিতে অ্যাক্সেস আছে (যেমন, ভিআর হেডসেট, স্মার্ট টিভি) যা আমার ক্রিকেট দেখার অভিজ্ঞতা বাড়ায়					
৫৬	আমি ভালো মোবাইল নেটওয়ার্ক কভারেজ সহ এমন একটি এলাকায় থাকি, যাতে আমি নির্বিঘ্নে ক্রিকেট অ্যাপ এবং পরিষেবা ব্যবহার করতে পারি					
৫৭	ক্রিকেট-সম্পর্কিত প্রযুক্তি ব্যবহার করার সময় আমি যে প্রযুক্তিগত সমস্যার সম্মুখীন হতে পারি তার সমস্যা সমাধানে আমি স্বাচ্ছন্দ্যবোধ করি					
৫৮	ক্রিকেট-সম্পর্কিত নতুন প্রযুক্তি সম্পর্কে জানার জন্য আমার কাছে তথ্য ও সম্পদের অ্যাক্সেস আছে					

৫৯	আমি মনে করি যে লাইভ ক্রিকেট ম্যাচে অংশগ্রহণের খরচ আমার পক্ষে সাশ্রয়ী					
৬০	অনলাইনে ক্রিকেট বিষয়বস্তু এবং প্ল্যাটফর্মের সাথে জড়িত থাকার জন্য আমার কাছে সময় এবং নমনীয়তা আছে					

### বিভাগ ৫: রাজস্ব উৎপাদন (ঐচ্ছিক)

এই বিভাগটি মূলত ক্রিকেট সংস্থা এবং স্টেটকহোল্ডারদের রাজস্বের উপর প্রভাব মূল্যায়ন করার জন্য।

অনুগ্রহ করে ১ থেকে ৫ এর স্কেলে নিম্নলিখিত বিবৃতির সাথে আপনার চুক্তির স্তর নির্দেশ করুন, যেখানে ১ = দৃঢ়ভাবে একমত এবং ৫ = দৃঢ়ভাবে একমত।

৬১	প্রযুক্তি গ্রহণের ফলে ক্রিকেট ম্যাচের টিকিট বিক্রি বেড়েছে	১	২	৩	৪	৫
৬২	ডিজিটাল প্ল্যাটফর্ম আমাদের প্রতিষ্ঠানের জন্য পণ্য বিক্রয় বাড়িয়েছে					
৬৩	প্রযুক্তিগত উন্নতির কারণে আমরা ডিজিটাল বিজ্ঞাপনের আয় বৃদ্ধি দেখেছি					
৬৪	প্রযুক্তি আমাদের প্রতিষ্ঠানের জন্য নতুন স্পনসরশিপের সুযোগ খুলে দিয়েছে					
৬৫	ডেটা বিশ্লেষণের ব্যবহার আমাদের টিকিটের মূল্য অপ্টিমাইজ করতে এবং আয় বাড়াতে সাহায্য করেছে					
৬৬	পণ্যদ্রব্য এবং অন্যান্য ক্রিকেট-সম্পর্কিত পণ্য বিক্রি করার জন্য আমরা সফলভাবে ই-কমার্স প্ল্যাটফর্মের সুবিধা নিয়েছি					
৬৭	আমরা নতুন এবং উদ্ভাবনী রাজস্ব স্ট্রীম তৈরি করতে প্রযুক্তি ব্যবহার করেছি (যেমন, ফ্যান টোকেন, ভার্সুয়াল অভিজ্ঞতা)					
৬৮	প্রযুক্তি আমাদের খরচ কমাতে সাহায্য করেছে এবং অপারেশনাল দক্ষতা উন্নত করেছে, যার ফলে লাভজনকতা বেড়েছে					
৬৯	আমরা আমাদের প্রযুক্তিগত উদ্যোগের কারণে আমাদের ব্র্যান্ড মূল্য এবং খ্যাতির উপর ইতিবাচক প্রভাব দেখেছি					
৭০	সামগ্রিকভাবে, আমরা বিশ্বাস করি যে প্রযুক্তি আমাদের প্রতিষ্ঠানের রাজস্ব বৃদ্ধিতে একটি গুরুত্বপূর্ণ ভূমিকা পালন করেছে					

প্রশ্নাবলী সমীক্ষা এখানে উপলব্ধ

<https://link.webropolsurveys.com/S/01E21CA732A C 0BB2>

\*\*\*\*\* আপনার অংশগ্রহণের জন্য ধন্যবাদ \*\*\*\*\*

