



Determinants of digital leisure engagement in e-sports among the Indonesian Generation Z

Determinantes del compromiso con el ocio digital en los e-sports entre la Generación Z en Indonesia

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Abstract

Introduction: This study examines the determinants of digital leisure engagement in e-sports among Indonesian Generation Z. As e-sports rapidly grows as a popular form of digital entertainment, understanding the psychological and social factors influencing engagement becomes increasingly important.

Objective: This study investigates the roles of e-sports motivation, social influence, perceived enjoyment, and leisure satisfaction in shaping digital leisure engagement.

Methodology: A quantitative research design was employed using a survey method. Data were collected from 376 Generation Z respondents in Java, Indonesia, using a structured questionnaire with a 5-point Likert scale. Data were analyzed using PLS-SEM with SmartPLS.

Results: The findings reveal that e-sports motivation, social influence, and perceived enjoyment significantly influence leisure satisfaction and digital leisure engagement. Leisure satisfaction also significantly affects digital leisure engagement. All proposed hypotheses were supported, demonstrating the robustness of the model.

Discussion: The results highlight the importance of motivational, experiential, and social factors in shaping e-sports participation among Generation Z. Enjoyment and peer influence play a key role in enhancing engagement and satisfaction in digital leisure activities.

Conclusions: This study contributes to the literature on digital leisure and e-sports by demonstrating how psychological and social factors influence engagement behavior. The findings also provide practical insights for e-sports developers and digital platforms to improve user engagement and satisfaction.

Keywords

E-sports; leisure satisfaction; e-sports motivation; digital leisure engagement; generation z.

Resumen

Introducción: Este estudio analiza los factores determinantes de la participación en actividades de ocio digital relacionadas con los deportes electrónicos entre la Generación Z de Indonesia. Dado el rápido crecimiento de los deportes electrónicos como forma popular de entrenamiento digital, cada vez es más importante comprender los factores psicológicos y sociales que influyen en dicha participación.

Objetivo: Este estudio analiza el papel que desempeñan la motivación por los deportes electrónicos, la influencia social, la percepción del disfrute y la satisfacción con el ocio a la hora de determinar la participación en actividades de ocio digitales.

Metodología: Se utilizó un diseño de investigación cuantitativo basado en un método de encuesta. Se recopilaron datos de 376 encuestados de la Generación Z en Java (Indonesia) mediante un cuestionario estructurado con una escala de Likert de 5 puntos. Los datos se analizaron mediante PLS-SEM con SmartPLS.

Discusión: Los resultados ponen de relieve la importancia de los factores motivacionales, experienciales y sociales a la hora de determinar la participación en los deportes electrónicos entre la Generación Z. El disfrute y la influencia de los compañeros desempeñan un papel fundamental a la hora de aumentar el compromiso y la satisfacción en las actividades de ocio digitales.

Conclusiones: Este estudio contribuye a la bibliografía sobre el ocio digital y los deportes electrónicos al demostrar cómo los factores psicológicos y sociales influyen en el comportamiento de participación. Los resultados también ofrecen ideas prácticas para que los desarrolladores de deportes electrónicos y las plataformas digitales mejoren la participación y la satisfacción de los usuarios.

Palabras clave

Deportes electrónicos; satisfacción con el ocio; motivación en los deportes electrónicos; participación en el ocio digital; generación Z.

Introduction

The swift advancement of digital technology has drastically changed how people spend their free time. Electronic sports (e-sports), which include organized tournaments and competitive video gaming via online platforms, are one of the fastest-growing types of digital recreation. With millions of players and viewers worldwide, e-sports has grown over the last ten years to become a global phenomenon in digital entertainment (Lin & Khan, 2021). E-sports have grown in popularity among younger generations as a major recreational activity due to increased internet accessibility and the popularity of online gaming platforms.

Generation Z (Gen-Z), typically defined as individuals born between the mid-1990s and early 2010s, represents one of the most digitally connected generations (Jamalulel & Chang, 2025). Growing up in an environment surrounded by digital technologies, Generation Z frequently participates in online entertainment and gaming activities as part of their daily leisure experiences. As a result, e-sports has become an important channel for social interaction, entertainment, and identity expression among young people (Ningning & Wenguang, 2023). Globally, young people's leisure activities have changed due to the accelerating growth of digital technology, particularly through the emergence of e-sports as a digital leisure. Previous studies suggest that participation in e-sports is influenced by several psychological and social factors. E-sports motivation plays a key role in encouraging individuals to participate in gaming activities, particularly motivations related to competition, skill development, and entertainment (Abbas et al., 2019). In addition, perceived enjoyment, defined as the degree of pleasure or fun experienced during an activity, has been identified as an important determinant of continued participation in digital gaming environments. When users experience enjoyment, they are more likely to maintain engagement with digital leisure activities (López-Sintas et al., 2017). Another important factor influencing e-sports participation is social influence, which refers to the impact of peers, friends, and online communities on individual behavior. In digital gaming environments, social interaction often occurs through multiplayer gaming, streaming platforms, and online communities, which can encourage individuals to participate more actively in e-sports activities (Zervas & Maronitis, 2026). Engagement in e-sports can lead to digital leisure engagement, reflecting the degree of involvement and participation individuals experience in digital leisure activities. Higher engagement in leisure activities is often associated with positive outcomes, including leisure satisfaction, which represents the fulfillment and positive feelings individuals obtain from their leisure experiences (Ateca-Amestoy et al., 2008).

E-sports has emerged as a rapidly expanding segment of digital entertainment, transforming from a niche activity into a global industry driven by online platforms and youth participation (Yuan, 2024; Hamari & Sjöblom, 2017). Among digital natives, Generation Z represents the most active cohort in e-sports engagement due to their high digital connectivity and integration into online gaming communities (Jenny et al., 2017). This trend is evident across both Asian and European contexts, where e-sports participation is increasingly embedded in youth leisure culture (Seo & Jung, 2016; Castro, 2021). From a theoretical perspective, e-sports engagement is shaped by motivational, social, and experiential determinants. Motivation theory suggests that individuals participate in digital leisure to fulfill intrinsic and extrinsic needs such as achievement, competition, and social interaction (Ryan et al., 2006). In parallel, social influence theory highlights the role of peers and online communities in shaping behavioral intention in digital environments (Cheung & Lee, 2010). Furthermore, perceived enjoyment has been identified as a critical antecedent of continued digital engagement, reinforcing sustained participation and behavioral loyalty (Venkatesh et al., 2012). These factors collectively contribute to leisure satisfaction, which serves as a key mechanism driving digital leisure engagement. In Asia, particularly Indonesia, e-sports has experienced significant growth due to increased internet penetration and mobile gaming adoption among young users (Jiwandono, 2024). Empirical findings indicate that e-sport engagement is linked to enhanced cognitive performance, with male college students in Thailand exhibiting significantly faster response times in simple reaction time assessments (Chainarong et al., 2025). Similar patterns have been observed in European contexts, including Spain, where youth engagement in digital gaming is strongly influenced by social interaction and enjoyment-based motivations (Castro, 2021). Despite this growing body of literature, limited studies have integrated motivational, social, and experiential constructs into a unified model explaining e-sports engagement among Generation Z in emerging markets.



Although the e-sports industry has experienced rapid growth globally, empirical research examining the determinants of digital leisure engagement and leisure satisfaction among Generation Z in emerging digital markets remains limited. Indonesia represents one of the largest gaming markets in Southeast Asia, with a significant proportion of young people actively participating in e-sports and online gaming. Therefore, understanding the factors that drive Gen-Z engagement in e-sports is important for both academic research and industry development. This study aims to examine the determinants of digital leisure engagement in e-sports among Indonesian Generation Z. Accordingly, this study investigates the relationships between e-sports motivation, social influence, perceived enjoyment, leisure satisfaction, and digital leisure engagement among Indonesian Generation Z. By integrating established behavioral theories with a structural model approach, this research contributes to the literature on digital leisure and provides cross-cultural insights into youth e-sports engagement. By addressing these factors, the study contributes to the broader literature on digital leisure behavior and provides practical insights for e-sports developers and digital entertainment platforms seeking to enhance user engagement and satisfaction.

Literature Review

Digital Leisure Engagement in E-Sports

E-sports are organized competitive video games that are played on digital platforms and online networks, either individually or in teams. In the last ten years, e-sports have expanded into a significant portion of the digital entertainment market and gained popularity among younger generations as a pastime. E-sports participation and viewership have rapidly increased globally due to the growth of streaming platforms, online communities, and multiplayer games (Yuzyk & Seidner, 2022). As digital entertainment evolves, e-sports is increasingly recognized as an important form of digital leisure, allowing individuals to experience entertainment, social interaction, and competition through digital environments (Schroeder, 2010). Digital leisure engagement refers to the degree of psychological involvement and active participation in digital entertainment activities such as online gaming and esports. Studies on digital gaming behavior indicate that engagement is influenced by several experiential and psychological factors, including enjoyment, immersion, and emotional involvement in gaming activities. Higher levels of engagement often lead to continued participation in esports activities and other related behaviors such as online discussions and electronic word-of-mouth (Ribeiro et al., 2023).

E-Sports Motivation & Digital Leisure Engagement

One of the key elements affecting people's involvement in e-sports is motivation. E-sports players are driven by a variety of intrinsic and extrinsic factors, including entertainment, competition, achievement, and social interaction, according to Uses and Gratifications Theory and Self-Determination Theory. Because they satisfy psychological needs linked to competence, enjoyment, and social belonging, these incentives motivate people to engage in gaming activities and esports competitions (Qian et al., 2022). According to earlier studies, motivation is a major factor in determining esports engagement and consumption behavior (Abbasi et al., 2023). Self-Determination Theory posits that individuals engage in activities that fulfill intrinsic psychological needs such as competence, autonomy, and relatedness (Ryan et al., 2006). In e-sports contexts, motivational drivers such as achievement, competition, and skill mastery are expected to enhance users' psychological fulfillment and experiential outcomes. Prior studies confirm that intrinsic motivation is positively associated with satisfaction in digital leisure environments due to enhanced engagement quality and perceived competence (Przybylski et al., 2010). Empirical evidence in gaming research shows that motivation significantly predicts continued engagement and behavioral persistence (Neys et al., 2014). Thus, e-sports motivation is expected to influence the extent of digital leisure engagement directly.

Social Influence & Digital Leisure Engagement

Social influence refers to the degree to which individuals' behaviors are affected by the opinions, expectations, or actions of others, such as friends, peers, and online communities. In digital gaming environments, social influence often occurs through multiplayer interactions, online communities, and social

media platforms where gamers share experiences, strategies, and achievements (Pearce, 2011). Research in esports consumption indicates that social interaction and community participation play a significant role in motivating individuals to engage in esports activities (Macey et al., 2022). The presence of social networks within gaming environments can enhance users' motivation and participation by creating a sense of belonging and shared identity among players. These social factors often encourage individuals to participate more actively in esports communities and digital gaming platforms. In e-sports environments, peer participation, a sense of community belonging, and social reinforcement can enhance users' emotional experiences and satisfaction. Therefore, stronger social influence is likely to enhance leisure satisfaction in digital gaming contexts.

Perceived Enjoyment & Digital Leisure Engagement

Perceived enjoyment refers to the degree to which individuals experience pleasure, fun, or satisfaction while engaging in an activity. In digital gaming contexts, enjoyment is often considered a key factor influencing users' attitudes and behaviors toward gaming activities (Chen et al., 2016). When individuals perceive gaming activities as enjoyable and entertaining, they are more likely to continue participating in such activities. Research in esports behavior demonstrates that perceived enjoyment significantly influences individuals' attitudes toward esports and their intention to continue participating in gaming activities (Leung et al., 2021). In e-sports, enjoyment derived from gameplay, immersion, and emotional stimulation enhances users' satisfaction with their leisure experience (Meeprom et al., 2025). Enjoyment experienced during gaming sessions contributes to positive attitudes toward esports platforms and encourages sustained engagement in gaming environments. Therefore, higher perceived enjoyment is expected to lead to greater digital leisure engagement.

Leisure Satisfaction & Digital Leisure Engagement

Leisure satisfaction refers to the positive feelings and sense of fulfillment individuals experience as a result of participating in leisure activities. In digital leisure contexts, satisfaction can be derived from entertainment, social interaction, achievement, and personal enjoyment gained through gaming activities (Wang et al., 2008). Previous studies suggest that higher levels of engagement in leisure activities often lead to greater leisure satisfaction (Kuykendall et al., 2015). When individuals are deeply involved in esports activities and derive enjoyment from them, they tend to experience greater satisfaction with their leisure experiences. This satisfaction can enhance overall well-being and encourage continued participation in digital leisure activities. Digital leisure engagement refers to the extent to which individuals are cognitively, emotionally, and behaviorally involved in digital leisure activities. In the context of esports, engagement reflects the level of immersion, participation, and interaction that players experience while engaging with esports games or related content (Bouvier et al., 2014). Studies on esports consumption highlight that experiential factors such as enjoyment, emotional involvement, and sensory experiences significantly influence esports engagement (Qian et al., 2020). Individuals who experience higher levels of involvement in esports activities are more likely to continue playing games, share gaming experiences, and participate in online communities related to esports.

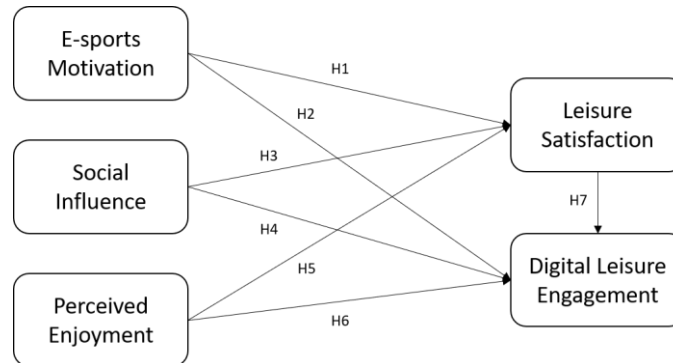
Hypothesis Development

The proposed model integrates e-sports motivation, social influence, and perceived enjoyment as key antecedents of digital leisure engagement, with leisure satisfaction conceptualized as an outcome of sustained engagement. This structure is grounded in behavioral and motivational theories, which suggest that digital leisure participation is shaped by a combination of intrinsic motivation, social context, and experiential evaluation (Ryan et al., 2006; Cheung & Lee, 2010; Venkatesh et al., 2012). From a theoretical perspective, e-sports motivation reflects intrinsic and extrinsic drivers that stimulate participation in competitive digital environments. Social influence captures the role of peer groups and online communities in shaping behavioral norms, while perceived enjoyment represents the hedonic value derived from gameplay experiences. Together, these factors are expected to explain variations in engagement behavior and subsequent satisfaction outcomes. Although prior research has examined these constructs individually in the context of gaming and digital media, limited studies have integrated them into a unified explanatory model linking motivational, social, and experiential dimensions to digital leisure engagement and leisure satisfaction simultaneously. This gap is particularly evident in emerging digital economies, where Generation Z exhibits distinct patterns of technology-driven leisure behavior, including Indonesia. Accordingly, this study proposes that e-sports motivation, social influence, and perceived



enjoyment influence digital leisure engagement, which in turn enhances leisure satisfaction among Indonesian Generation Z. The model is intended to provide a more comprehensive understanding of how psychological and social factors jointly shape digital leisure behavior in contemporary e-sports environments, as shown in Figure 1.

Figure 1. The Research Model



Based on the literature reviewed, the following hypotheses are proposed:

H1: E-sports motivation positively influences leisure satisfaction.

H2: E-sports motivation positively influences digital leisure engagement.

H3: Social influence positively influences leisure satisfaction.

H4: Social influence positively influences digital leisure engagement.

H5: Perceived enjoyment positively influences leisure satisfaction.

H6: Perceived enjoyment positively influences digital leisure engagement.

H7: Leisure satisfaction positively influences digital leisure engagement.

Method

Research Design

This study uses a cross-sectional survey design and a quantitative research methodology to investigate the factors that influence Generation Z in Indonesia's digital leisure participation in e-sports. When examining causal models through statistical analysis and testing relationships between variables, quantitative methods are suitable. The research model examines how e-sports motivation, social influence, and perceived enjoyment affect digital leisure engagement, which in turn affects leisure satisfaction. The suggested relationships between variables are tested using a structural equation modeling (SEM) approach. Because it enables researchers to concurrently examine several relationships between latent constructs and observed indicators, SEM is frequently employed in behavioral and social science research (Hair et al., 2019).

Population and Sampling

The target population of this study consists of Generation Z individuals in Indonesia who actively participate in e-sports or online gaming activities. Generation Z in this context refers to individuals aged 18–27 years who are digital natives and regularly engage in online sports (e-sports) and interactive gaming environments. The study focuses on respondents located in Java, Indonesia, which represents the country's most densely populated and technologically developed region. Java is also the central hub for digital adoption, internet penetration, and e-sports communities, with major urban centers such as Jakarta, Bandung, Yogyakarta, and Surabaya hosting active gaming ecosystems. This geographic focus is

considered appropriate for capturing relevant behavioral patterns of e-sports engagement among Indonesian youth. A purposive sampling technique was employed due to the specific requirement of selecting respondents with direct experience in e-sports or online gaming. This non-probability approach is suitable when the research aims to target a specialized population, it allows for deeper insight into behaviorally relevant respondents within the defined population. Respondents were included based on the following criteria:

- Belong to Generation Z (18–27 years old)
- Reside in Java, Indonesia
- Have experience playing e-sports or online games

This sampling approach ensures that the data reflect individuals who are directly involved in the phenomenon under study, thereby increasing the internal validity and relevance of the findings for understanding e-sports engagement behavior among Indonesian Generation Z.

Data Collection Procedure

A structured online questionnaire was used to gather data for this study. The survey is disseminated via online forums, gaming communities, and social media groups that are commonly used by Generation Z gamers. To verify the validity, reliability, and clarity of the questionnaire items, a pilot test with about thirty respondents is carried out before the main survey. The questionnaire's overall structure is improved, and ambiguous questions are revised based on feedback from the pilot test. Google Forms is then used to distribute the final survey online, enabling respondents to voluntarily fill it out. Participants are informed about the purpose of the study and assured that their responses will remain confidential and will be used only for academic research purposes.

Research Instrument

The measurement items used in this study are adapted from validated scales in previous research related to esports behavior, digital engagement, and leisure satisfaction. All items are measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The research instrument consists of a structured questionnaire designed to measure five latent constructs: E-Sports Motivation (EM), Social Influence (SI), Perceived Enjoyment (PE), Leisure Satisfaction (LS), and Digital Leisure Engagement (DLE). E-Sports Motivation is measured using four items adapted from Juho Hamari & Max Sjöblom (2017) and Qian et al. (2020), capturing the psychological drives that encourage individuals to participate in esports activities, including entertainment, achievement, and competition. Social Influence, measured with four items, is adapted from Venkatesh et al. (2003) and is the degree to which individuals' esports participation is affected by friends, peers, and gaming communities. Perceived Enjoyment is captured through four items based on Chen et al. (2016), the degree to which individuals experience fun and pleasure when playing esports games. Leisure satisfaction refers to the positive feelings and fulfillment individuals gain from participating in esports activities and is measured using four items adapted by Walker & Ito (2017). Finally, Digital leisure engagement, measured with four items adapted from Abbasi et al. (2023), evaluates the level of involvement and participation individuals experience when engaging in esports activities.

Data Analysis

Partial Least Squares Structural Equation Modeling (PLS-SEM), which can handle non-normal data distributions and examine intricate relationships between latent constructs, will be used to analyze the gathered data using SmartPLS 4.0. To evaluate validity and reliability, the analysis starts with the measurement model (outer model). Cronbach's Alpha and Composite Reliability (CR) are used to assess reliability; values greater than 0.70 are regarded as acceptable. Average Variance Extracted (AVE) is used to evaluate convergent validity; values greater than 0.50 show that the items accurately reflect their latent constructs (Hair et al., 2021). Following confirmation of the measurement model, path coefficients, t-values, and p-values from bootstrapping with 5,000 subsamples are used to evaluate the structural model (inner model). All proposed direct and indirect relationships between E-Sports Motivation (EM), Social Influence (SI), Perceived Enjoyment (PE), Leisure Satisfaction (LS), and Digital Leisure Engagement (DLE) can be tested using this method, which provides empirical evidence to support or contradict the hypotheses.



Results

The data analysis included 376 valid responses in total. The respondents were members of Generation Z who actively engage in online gaming and e-sports across multiple Java provinces in Indonesia. Gender, age, education level, frequency of e-sports gameplay, and province of residence are among the demographic factors gathered for this study. Table 1 presents the demographic characteristics of the respondents. The results show that the majority of respondents were male (62.5%), while 37.5% were female. In terms of age, most respondents were 21–23 years old (36.2%), followed by 18–20 years old (33.0%). Regarding education level, the majority were undergraduate students (63.6%). In terms of gaming frequency, most respondents reported playing esports games 3–5 times per week (41.5%), indicating active participation in digital gaming activities. Regarding geographical distribution, the respondents were mainly located in provinces across Java, with the largest proportion coming from West Java (31.6%), followed by Jakarta (24.7%), Central Java (20.2%), East Java (12.0%), Banten (6.6%), and the Special Region of Yogyakarta (4.8%).

Table 1. Demographic Overview of Respondent

| Variable | Category | Frequency | Percentage (%) |
|-------------------------------------|------------------------------|-----------|----------------|
| Gender | Male | 235 | 62.5 |
| | Female | 141 | 37.5 |
| Age | 18–20 years | 124 | 33 |
| | 21–23 years | 136 | 36.2 |
| | 24–27 years | 116 | 30.8 |
| Education Level | High School | 102 | 27.1 |
| | Undergraduate | 239 | 63.6 |
| Frequency of Playing E-Sports a Day | Postgraduate | 35 | 9.3 |
| | 3–5 times | 86 | 22.9 |
| | 5–10 times | 156 | 41.5 |
| | More than 5 times | 134 | 35.6 |
| Province (Java) | West Java | 119 | 31.6 |
| | Central Java | 76 | 20.2 |
| | Jakarta | 93 | 24.7 |
| | East Java | 45 | 12 |
| | Banten | 25 | 6.6 |
| | Special Region of Yogyakarta | 18 | 4.8 |

Table 2. Construct Validity and Reliability

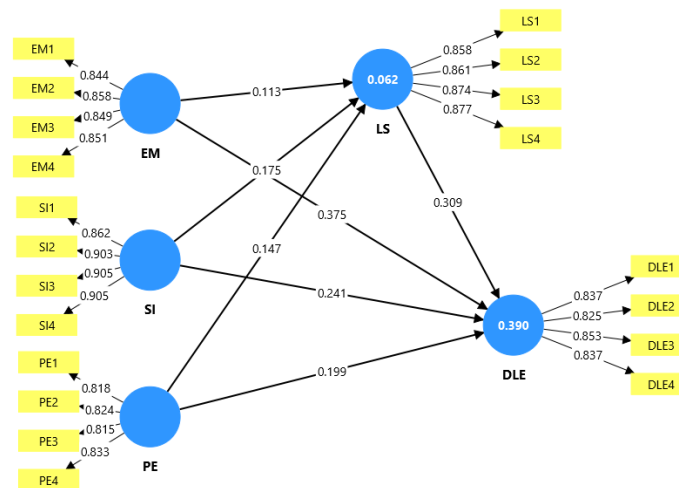
| Construct | Items | Outer Loadings | Cronbach's Alpha | Composite Reliability (CR) | Average variance extracted (AVE) |
|----------------------------------|-------|----------------|------------------|----------------------------|----------------------------------|
| E-Sports Motivation (EM) | EM1 | 0.844 | 0.873 | 0.876 | 0.724 |
| | EM2 | 0.858 | | | |
| | EM3 | 0.849 | | | |
| | EM4 | 0.851 | | | |
| Social Influence (SI) | SI1 | 0.862 | 0.917 | 0.929 | 0.799 |
| | SI2 | 0.903 | | | |
| | SI3 | 0.905 | | | |
| | SI4 | 0.905 | | | |
| Perceived Enjoyment (PE) | PE1 | 0.818 | 0.841 | 0.847 | 0.676 |
| | PE2 | 0.824 | | | |
| | PE3 | 0.815 | | | |
| | PE4 | 0.833 | | | |
| Leisure Satisfaction (LS) | LS1 | 0.858 | 0.891 | 0.894 | 0.753 |
| | LS2 | 0.861 | | | |
| | LS3 | 0.874 | | | |
| | LS4 | 0.877 | | | |
| Digital Leisure Engagement (DLE) | DLE1 | 0.837 | 0.859 | 0.861 | 0.702 |
| | DLE2 | 0.825 | | | |
| | DLE3 | 0.853 | | | |
| | DLE4 | 0.837 | | | |

The measurement model was assessed for convergent validity, internal consistency reliability, and indicator reliability. All of the indicators' outer loadings, which ranged from 0.815 to 0.905 and exceeded the suggested threshold of 0.70, are displayed in Table 2 and Figure 1, demonstrating that each item

strongly reflects its corresponding construct (Hair et al., 2021). Excellent internal reliability was confirmed by Cronbach's Alpha values for all constructs, which ranged from 0.841 to 0.917, exceeding the minimum criterion of 0.70. In a similar vein, the Composite Reliability (CR) values ranged from 0.861 to 0.929, indicating a high degree of internal consistency among the items used to assess each construct.

Additionally, all of the Average Variance Extracted (AVE) values were above 0.50, specifically between 0.702 and 0.799, indicating strong convergent validity, which means that the latent constructs underlying the indicators account for a significant amount of the variance in the indicators.

Figure 2. Measurement Model Results



Discriminant validity ensures that each construct is empirically distinct from others within the model. It was assessed using the Heterotrait-Monotrait ratio of correlations (HTMT) as suggested by Henseler, Ringle, and Sarstedt (2015). Table 3 displays the HTMT values among the latent constructs: E-Sports Motivation (EM), Social Influence (SI), Perceived Enjoyment (PE), Leisure Satisfaction (LS), and Digital Leisure Engagement (DLE). All HTMT values are below the conservative threshold and well under the liberal threshold of 0.90, indicating strong discriminant validity among the constructs. This means that the constructs such as E-Sports Motivation, Social Influence, Perceived Enjoyment, Leisure Satisfaction, and Digital Leisure Engagement are conceptually distinct and do not exhibit significant overlap. The measurement model satisfies the requirements for both convergent and discriminant validity, confirming that each latent construct represents a unique theoretical concept in the model.

Table 3. HTMT Ratio Results

| Construct | DLE | EM | LS | PE | SI |
|-----------|-------|-------|-------|-------|----|
| DLE | | | | | |
| EM | 0.452 | | | | |
| LS | 0.475 | 0.119 | | | |
| PE | 0.274 | 0.054 | 0.161 | | |
| SI | 0.303 | 0.05 | 0.184 | 0.046 | |

Table 4. R-Square Statistics Model Goodness of Fit Statistics

| Construct | R ² | Adjusted R ² | Q ² predict | RMSE | MAE |
|----------------------------------|----------------|-------------------------|------------------------|-------|-------|
| Digital Leisure Engagement (DLE) | 0.390 | 0.384 | 0.285 | 0.851 | 0.688 |
| Leisure Satisfaction (LS) | 0.062 | 0.055 | 0.043 | 0.984 | 0.798 |

Table 4 presents the structural model, which was evaluated by examining the coefficient of determination (R²), adjusted R², predictive relevance (Q²predict), and prediction error indicators (RMSE and MAE). These indicators help determine the explanatory power and predictive accuracy of the model in explaining the endogenous constructs. The R² value indicates the proportion of variance in the endogenous construct explained by its predictor variables. For Digital Leisure Engagement (DLE), the R² value



is 0.390, meaning that 39.0% of the variance in digital leisure engagement is explained by the independent variables in the model, such as e-sports motivation, social influence, and perceived enjoyment. Therefore, an R² value of 0.390 indicates moderate explanatory power, suggesting that the predictors reasonably explain engagement in digital leisure activities. For Leisure Satisfaction (LS), the R² value is 0.062, indicating that 6.2% of the variance in leisure satisfaction is explained by digital leisure engagement. This value is considered weak, implying that although digital leisure engagement contributes to explaining leisure satisfaction, other factors not included in the model may also play an important role in determining individuals' satisfaction with their leisure activities. The Q²predict statistic assesses the model's predictive relevance using a holdout sample approach in PLS-SEM. A Q²predict value greater than zero indicates that the model has predictive relevance for the endogenous construct. The predictive accuracy of the model is also evaluated using Root Mean Square Error (RMSE) and Mean Absolute Error (MAE). Lower RMSE and MAE values indicate better predictive accuracy. The results show that the model predicts Digital Leisure Engagement more accurately than Leisure Satisfaction, as reflected by lower error values.

Table 5. Hypothesis Testing Results

| Hypotheses | Path | T-values | P-values | Decision |
|------------|-----------|----------|----------|-----------|
| H1 | EM -> LS | 1.997 | 0.046 | Supported |
| H2 | EM -> DEL | 9.773 | 0.000 | Supported |
| H3 | SI -> LS | 3.659 | 0.000 | Supported |
| H4 | SI -> DEL | 6.18 | 0.000 | Supported |
| H5 | PE -> LS | 2.947 | 0.003 | Supported |
| H6 | PE -> DEL | 4.963 | 0.000 | Supported |
| H7 | LS -> DEL | 7.851 | 0.000 | Supported |

Figure 3. Structural Model

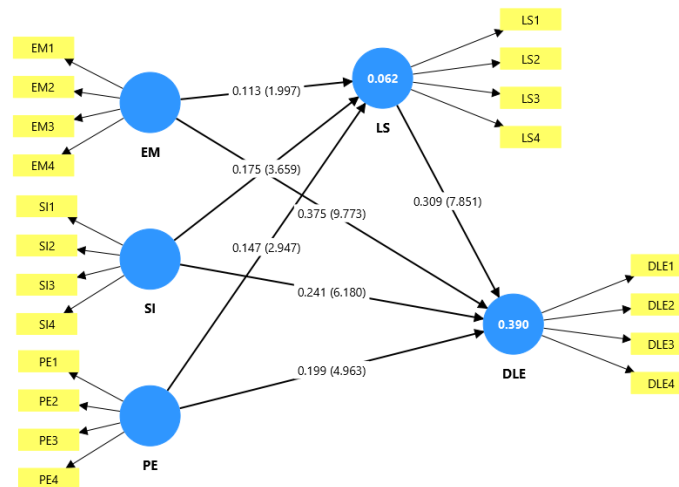


Table 5 and Figure 2 explain the structural model that was tested to examine the hypothesized relationships among Marathon Experience (ME), Social Media Engagement (SME), Destination Image (DI), and Travel Intention (TI). All hypothesized relationships were found to be statistically significant, confirming the proposed conceptual framework. Hypothesis testing was conducted using the bootstrapping procedure in SmartPLS to determine the significance of the relationships between the constructs in the proposed model. The significance of each path was evaluated using t-values and p-values. The results indicate that e-sports motivation has a significant positive effect on leisure satisfaction (t = 1.997, p = 0.046), supporting H1. E-sports motivation also significantly influences digital leisure engagement (t = 9.773, p < 0.001), supporting H2. Social influence is found to have a significant positive effect on leisure satisfaction (t = 3.659, p < 0.001) and digital leisure engagement (t = 6.180, p < 0.001), supporting H3 and H4, respectively. Perceived enjoyment significantly affects leisure satisfaction (t = 2.947, p = 0.003) and digital leisure engagement (t = 4.963, p < 0.001), supporting H5 and H6. Finally, leisure satisfaction

has a significant positive effect on digital leisure engagement ($t = 7.851, p < 0.001$), supporting H7. Overall, all hypothesized relationships are statistically significant, indicating empirical support for the proposed conceptual model.

Discussion

This study examined how e-sports motivation, social influence, and perceived enjoyment shape digital leisure engagement and leisure satisfaction among Indonesian Generation Z. The findings provide empirical support for all proposed hypotheses and offer both theoretical and contextual insights into e-sports-related leisure behavior.

E-sports motivation was found to significantly influence both leisure satisfaction and digital leisure engagement. This result is consistent with Self-Determination Theory, which posits that intrinsic motivation enhances sustained engagement in activities that satisfy psychological needs such as competence and autonomy (Ryan et al., 2006). The finding aligns with Hamari and Sjöblom (2017), who emphasize that achievement-oriented and competitive motivations are key drivers of continued esports participation. Additionally, the significant effect of e-sports motivation on leisure satisfaction indicates that individuals who participate in e-sports due to strong motivations tend to experience greater satisfaction during their leisure time. This finding aligns with the principles of Self-Determination Theory, which suggest that intrinsic motivation contributes to positive psychological outcomes such as enjoyment and satisfaction (Ryan & Deci, 2000). In the Indonesian context, this relationship may be strengthened by the growing accessibility of mobile gaming and competitive online platforms, which provide frequent opportunities for skill development and achievement recognition.

Social influence significantly affected both engagement and satisfaction. Empirical esports research also confirms that subjective norms and social interaction strongly influence gaming behavior and engagement intensity (Xiao, 2020). It is also consistent with prior esports research indicating that online gaming communities and peer interactions are critical determinants of continued participation (Wohn & Lee, 2013). From a contextual perspective, the strong effect of social influence in Indonesia may reflect the collectivist orientation of youth social structures, where peer approval and group participation play a central role in leisure decision-making. Similar patterns have been observed in European and US contexts, where social interaction and community belonging significantly shape gaming engagement among young users (Zervas & Maronitis, 2026; Okazaki et al., 2008). These findings are consistent with technology adoption research, which emphasizes the importance of social influence in shaping individuals' behavioral intentions and technology use (Venkatesh et al., 2003). In the context of esports, the influence of social networks and gaming communities helps strengthen players' engagement and increases their satisfaction with digital leisure activities.

Perceived enjoyment significantly influenced both leisure satisfaction and digital leisure engagement. This finding is consistent with the Technology Acceptance and hedonic motivation literature, which emphasizes enjoyment as a key predictor of continued use in digital environments (Venkatesh et al., 2012; Hsu & Lu, 2004). Enjoyment in esports is often derived from immersion, competition, and emotional stimulation, which reinforce continued participation (Hsu & Lu, 2007). Enjoyment in gaming environments has been widely recognized as a key predictor of sustained engagement and emotional gratification. Previous research highlights that enjoyment is one of the most important determinants of user engagement in digital platforms and gaming environments (Davis et al., 1992). For Generation Z, who are highly familiar with digital technologies, enjoyable gaming experiences are essential in sustaining participation in esports activities.

Finally, leisure satisfaction was found to significantly influence digital leisure engagement, suggesting that positive evaluation of gaming experiences strengthens continued participation. This is consistent with satisfaction-loyalty frameworks, which argue that satisfied users are more likely to develop behavioral commitment and repeat engagement (Oliver, 1999). This suggests that individuals who feel satisfied with their esports leisure experiences are more likely to continue engaging in gaming activities (Mechelin & Liu-Lastres, 2025). In esports environments, satisfaction acts as an evaluative mechanism that consolidates motivational, social, and experiential benefits into sustained engagement behavior. Overall, this study contributes to the growing literature on digital leisure and esports by providing a



theoretically grounded and empirically validated model of engagement behavior, while also highlighting the importance of motivational, social, and experiential factors across different cultural contexts. These findings contribute to the growing literature on digital leisure behavior and e-sports participation, particularly in emerging digital markets such as Indonesia.

Conclusion

This study examined the determinants of digital leisure engagement in e-sports among Indonesian Generation Z, focusing on the roles of e-sports motivation, social influence, perceived enjoyment, and leisure satisfaction. Using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with SmartPLS, the results demonstrate that all hypothesized relationships are statistically significant. The findings indicate that e-sports motivation significantly influences both leisure satisfaction and digital leisure engagement. This suggests that individuals who are motivated by competition, achievement, and entertainment tend to engage more actively in esports activities and experience greater satisfaction in their leisure time. Similarly, perceived enjoyment plays an important role in increasing both engagement and satisfaction, indicating that enjoyable gaming experiences encourage continued participation in esports. The study also highlights the importance of social influence, as peer encouragement and interaction within gaming communities significantly enhance both leisure satisfaction and digital leisure engagement. Furthermore, leisure satisfaction was found to significantly influence digital leisure engagement, suggesting that individuals who feel satisfied with their esports experiences are more likely to maintain or increase their participation in digital gaming activities. The results demonstrate that psychological and social factors are key determinants of esports-related digital leisure behavior among Generation Z. These findings contribute to the growing body of research on esports participation and digital leisure activities, particularly in the context of emerging digital economies such as Indonesia.

Implications

This study provides several important theoretical contributions to the literature on digital leisure behavior, esports participation, and technology-mediated entertainment. First, the study expands existing research on esports engagement by integrating motivation, social influence, perceived enjoyment, and leisure satisfaction into a single conceptual model. Previous studies have often examined these factors separately. However, this research demonstrates how these variables interact to influence digital leisure engagement among Generation Z. Second, the findings support the relevance of intrinsic motivation and enjoyment theories, which emphasize that intrinsically motivated activities contribute to greater satisfaction and engagement. The study confirms that enjoyment and motivation are critical psychological drivers in the context of esports. Third, the results reinforce the importance of social influence in digital behavior, which aligns with the technology adoption framework. In esports environments, social interactions within gaming communities play a crucial role in shaping participation and engagement. This study contributes to the theoretical understanding of how motivational, psychological, and social factors jointly influence digital leisure engagement in esports contexts.

The findings of this study provide several practical implications for game developers, esports organizers, digital entertainment platforms, and policymakers. First, game developers and esports platforms should focus on enhancing gameplay enjoyment by designing engaging game mechanics, interactive environments, and immersive experiences. Since perceived enjoyment significantly influences both satisfaction and engagement, improving the entertainment value of games can increase player participation and retention. Second, esports organizations and digital platforms should strengthen social interaction features, such as multiplayer collaboration, online communities, and competitive tournaments. Social influence plays a crucial role in motivating players to participate in esports activities and enhancing their satisfaction with gaming experiences. Third, esports event organizers and gaming companies should create competitive and achievement-oriented opportunities, such as ranked systems, tournaments, and reward mechanisms. These features can increase motivation among players and encourage deeper engagement with esports activities. Finally, policymakers and educational institutions can recognize esports as a growing digital leisure sector among Generation Z, which has potential for economic

and social development. Supporting esports communities, digital literacy programs, and responsible gaming initiatives may help foster a positive and sustainable esports ecosystem.

Limitations and Future Research

There are a number of limitations to this study that should be noted. The results may not be as applicable to other areas or demographic groups because the data were gathered from Generation Z respondents in Java, Indonesia. Participation in esports and digital leisure practices may be influenced by cultural and regional variations. The study employed a cross-sectional research design, which records respondents' opinions at one particular moment in time and prevents the analysis of behavioral shifts over time. The study concentrated on three primary predictors: e-sports motivation, social influence, and perceived enjoyment; the model did not account for other possible factors like gaming experience, personality traits, or technological accessibility. To improve generalizability, future studies should think about increasing the sample size to include respondents from various nations or cultural contexts. To learn more about the evolution of digital leisure engagement in esports, longitudinal studies may also be carried out. In order to provide a more thorough understanding of esports participation and digital leisure behavior among younger generations, future research may also include additional variables like gaming addiction, digital well-being, or competitive orientation.

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