

## Growth of E-Sports Among the Youngsters in Malaysia

**Gan Shaw Herng**

Asia Pacific University of Technology and Innovation  
Email: tp050724@mail.apu.edu.my

**Jugindar Singh Kartar Singh**

Asia Pacific University of Technology and Innovation  
Email: subaashnii@apu.edu.my

### Abstract

E-sports are growing worldwide and in Malaysia. However, there is a dearth of studies that address the factors that influence young people's intention to participate in e-sports. Young people have different needs and interests. The purpose of this study was to examine the influence of government support, hedonic value, social influences, and price on the intention to play e-sports among youth in Malaysia. This was a quantitative study using a survey method to collect data. Based on random sampling, data was collected from 82 respondents. The target population was youth with interest in e-sports in Malaysia. The multiple regression results showed that hedonic value and price value had a positive and significant influence on the intention of youth in Malaysia to use e-sports. Hedonic value had the strongest influence on the intention to play e-sports. However, both social influence and government support had an insignificant influence on the intention to play e-sports. The results of this study will be useful for the government and marketers to promote the growth of e-sports in Malaysia. The results also show that emphasis should be placed on hedonic value. To the researcher's knowledge, this is the only study to examine the combined effect of government support, hedonic value, social influences, and price value on the intention to play e-sports in Malaysia.

**Keywords:** *e-sports, Government Support, Hedonic Value, Price Value, Social Influences, Youth, Malaysia*

### 1.0 Introduction

E-sports are gaining momentum. Competition in e-sports is now considered extremely high, with major e-sports competitions such as Dota 2 and Fortnite paying out prize money of more than \$30 million (ESPN, 2019). Malaysia has also shown a growing interest in the e-sports industry. The government provides funding for the development of the local e-sports sector, which is managed by the Ministry of Youth and Sports. The Malaysian Ministry of Youth and Sports supports the development of e-sports infrastructure. The goal is to make Malaysia the hub for video game-based sports activities. E-sports can have a major impact on the economy and is a multi-million industry (The New Straits Times, 2022). However, the main challenge of e-sports in Malaysia is that, unlike traditional sports players, e-sports players do not have comprehensive retirement benefits, and the growth of e-sports viewership in Malaysia lags behind that of Indonesia, Vietnam, the Philippines, and Singapore, according to Tencent and

Newzoo (2021). In addition, there are limited revenue streams for e-sports players in Malaysia, and transparency in the allocation of funds is a problem (Ragu, 2021).

Previous research has shown numerous factors influencing individuals' intention to adopt e-sports. Doh and Kim (2014) found a positive relationship between government support and e-sports intention. Government financial and non-financial assistance is considered a significant driver of e-sport sector development. This may result in a positive change in the e-sport industry's innovation performance to retain a competitive position. The government provides financial assistance in the form of loans, monetary awards, research funds, and salary payments to players and coaches (Parshakov, 2018). Hedonic value is another significant factor that affects an individual's intention to adopt e-sports. A person who participates in e-sports for hedonic reasons seeks benefits such as ease of product selection and satisfaction gained while playing (Syafita, 2018). Social influences are also critical factors that influence youngsters to adopt e-sports, as individuals who want to play e-sports games consciously may be significantly impacted by social influences (Venkatesh, 2003). Price value is also essential, as consumers trade off the monetary expense of e-sport gaming for perceived advantages (Venkatesh, 2012). Price value may significantly influence consumers' desire to participate in e-sports (Park, 2011). Past studies reveal several predictors of intention to adopt e-sports and findings from past studies are inconsistent.

Despite past studies finding several indicators of intention to adopt e-sports, research on the variables of intention to adopt e-sports among youngsters in Malaysia, is limited. Despite the significant growth of the e-sports industry, studies to compare destinations are still in the infant stage. This study will provide more knowledge on e-sports in Malaysia. This study aims to examine government support, hedonic value, price value, social influence, and intention to adopt e-sports among youngsters in Malaysia. The findings of this study will be useful for the Ministry of Youth and Sport, businesses interested in developing the gaming sector, and academic institutions to develop e-sports as part of co-curricular activities.

## **2.0 Literature Review**

### **2.1 E-Sports Overview**

E-sports, a form of sport in which electronic systems support the basic components, has become one of the fastest-growing types of new media in recent years, driven by the rising availability of online games and online broadcasting platforms such as Twitch.tv (Warr, 2014). E-sport is similar to watching a professional sporting event; however, instead of a real event, spectators watch online video gamers compete against one another (Chen, 2021). The trend of e-sports has grown to the point where games may now be seen in an organized arena event (Chen, 2021).

The Uses and Gratification Theory and Social Motivation Theory can be used to explain the intention to adopt or participate in E-sport. The Uses and Gratification Theory focuses on audience topics, seeking to understand what draws people to a particular type of media and what kind of fulfilment it provides them (Ruggiero, 2000). Participants in E-sport are seen as "Active Smartphone Audiences" who meet their needs (social connection, enjoyment, comfort, and content) with the help of their mobile devices in accordance with the Uses and Satisfaction theory (Moon & An, 2022). According to the Social Motivation Theory, individual motivation is influenced by behavioural, biological, and evolutionary processes (Chevallier et. al., 2012). The theory suggests that people's inherent drives are shaped by the communities in which they are raised (Zlate & Cucui). In addition, the Theory of Planned Behavior (Ajzen, 1991), can be

used to explain the intention to adopt e-sports. According to the Theory of Planned Behavior, a person's behaviour or intention is predicted by the person's attitude, subjective norms, and perceived behavioural controls.

## **2.2 Relationship between Government Support and Intention to Adopt E-Sports.**

The government of Malaysia has shown much support for the development of e-sports. The Youth and Sports Ministry in Malaysia pledged to continue to develop e-sports infrastructure to make Malaysia the hub for video game-based sports activities (The New Straits Times, 2022). Aryanto (2012) argued that there is a significant positive relationship between government support and the intention to adopt e-sports. The results of a study by Songling et al. (2018) revealed that government financial and nonfinancial support have a significant influence on the performance of a business firm. Government support can drive innovation and productivity, and both government support for research and development breakthroughs and connection with international affiliates may help with this (Songling et al., 2018). Organizations or communities that have government support are eligible for a wide range of benefits, including tax incentives, grants, loans, and other forms of government funding for areas like IT, social service, and productivity (Storey & Tether, 1998). Chung et al. (2019) suggest that E-sport has a lot of different kinds of support from governments around the world, with non-authoritarian countries such as the United States and the United Kingdom having active government support towards E-sport, while Hong Kong and Singapore recognize E-sport as an established sport. The following hypothesis was empirically tested:

*H1: There is a significant relationship between government support and the intention to adopt e-sports.*

## **2.3 Relationship between Hedonic Value and Intention to Adopt E-Sports.**

In this study, the Theory of Planned Behavior can be extended by proposing hedonic value influences the intention to adopt e-sports. The other theory is the Uses and Gratifications Theory which focuses on the needs, motives, and gratifications of individuals (Blumler, and Katz, 1974). The delight and experience value that calms the shopper's five senses perception and influences a person's emotions while utilizing the items can be regarded as a hedonic value (Yu & Bastin, 2010). Alternatively, it is described as the entire subjective assessment made (Yistian et al., 2012). Customers base their best-fit purchasing decisions on the experiential benefits and pleasure fulfilment they receive from certain goods and services. Also, a person's perceived multisensory values and attitude throughout the consuming process, which influence consumers' favourable or negative ideas about a brand, can be used to determine the hedonic appraisal of the consumption experience. These factors are feeling, emotion, and enjoyment (Musnaini et al., 2015). Hedonic shoppers are continually interested in entertainment, making impulsive purchases, and focusing on the experience brought by the product and service (Türk, 2018). From an e-sports perspective, the hedonic value may be defined as simply having enjoyment when playing or watching a game and passing time by getting involved in something that one may not experience in real life (Syafita, 2018).

Studies have shown that hedonism is a critical trigger leading to the urge to utilize technology continuously (Venkatesh V. T., 2012; Jang, 2019; Marelić & Vukušić, 2019). When users enter the world of e-sports, they are exposed to new interactions and social topics that they may share with the community and get social fulfilment (Gan and Li, 2018). Hedonic value had an important influence on consumer behavioural intention related to technology utilization in the area of information systems (Jang, 2019). A study by Shin (2010) found that Hedonic value was proven to have a positive and significant effect on consumer willingness to play enormous

online role games. As a result, Hedonic value is often viewed as an important factor in video game intentions (Merikivi, 2017). It was discovered that among youngsters, subjective enjoyment is the most powerful predictor of continue using mobile and video gaming (Merikivi, 2017). Hedonic Value is involved with the desire to spend time and the perception of pleasure (Gan and Li, 2018). Individuals spend a significant amount of time on their computers, and e-sports is one of the key media that they utilize in their leisure time to have fun and relax. In doing so, gamers may discover hedonic value in their E-sport consumption (Gan and Li, 2018). The following hypothesis was developed for further testing.

*H2: There is a positive relationship between Hedonic value and the intention to adopt e-sports.*

## **2.4 Relationship between Social Influence and Intention to Adopt E-Sports**

Social influence can be explained by the Social Influence Theory. Davis et al. (1989) explained the role of social influence in information technology acceptance. Kelman (1958) identified three dimensions of social influence that include compliance, internalization, and identification. For an individual, compliance takes place when the person conforms to the social influence of other people. Venkatesh et al. (2003) stated that subjective norm shows the influence of other people.

Previous studies have shown the relationship between social influence and e-sports adoption. Dongsheng et al. (2011) study found that social influence affects students' opinions about e-sports participation. More individuals are interested in e-sports as a result of the social influence of others (Jang, 2019). Nielson (2017) added that the most important aspect that makes people become e-sports fans is social influence. In a research study conducted by Ferguson (2012), it was found that the reason why adolescents play video games is highly influenced by social influence. The social aspect of gaming is one of the most effective motivators for online gamers to engage in gaming (Ferguson, 2012). Social influences are important in the society because individuals can be motivated by popular culture to play games such as Fortnite with their friends (Jang, 2019). The following hypothesis was developed for further testing.

*H3: There is a significant relationship between social influences and the intention to adopt e-sports.*

## **2.5 Relationship between Price Value and Intention to Adopt E-Sports**

Price value is an addition to the UTAUT2 model (Extended unified theory of acceptance and use of technology). Based on the definition by Venkatesh et al. (2012), price value is the consumer's trade-off of monetary expenses of the E-sport game in return for perceived advantages. Based on the UTAUT2 model, Venkatesh et al., (2012) stated that a person's behavioural intention is influenced by price value. However, studies have also found that price value is not a positive predictor of behavioural intention (Yu, 2012).

Price value has been shown to be positively related to consumer willingness to acquire new technology or a system and this includes e-sports (Jang, 2019). Several past researchers mentioned that there is a significant relationship between price value and the intention to adopt E-sport (Levrini & Santos, 2021; Merikivi, 2017). For instance, if a consumer thinks that the perceived value connected with the exchange of monetary expenditures involved in participating in an E-sport is desirable, they may have a favourable perception of their willingness to engage in E-sport activities. The following hypothesis was developed for further testing:

*H4: There is a significant relationship between Price value and intention to adopt e-sport.*

### **3.0 Methodology**

#### **3.1 Research Design**

Methodology is a comprehensive research strategy that defines how research should be conducted and is made up of a collection of beliefs and philosophical assumptions that shape and direct the choice of research procedures (Saunders et., 2016). The research methodology chosen for this study is the Research Onion by Saunders and Thornhill (2016). The study aimed to investigate the relationship between government support, hedonic value, social influences, and price value on the intention to adopt e-sports. A quantitative study with a positive philosophy will be used to analyze the causal relationship between variables. To collect data, a cross-sectional survey will be conducted using online and self-administered questionnaires. In this cross-sectional time horizon, a snapshot of the data was collected using a survey strategy.

#### **3.2 Target Population, Sampling, and Data Collection**

The sampling method used in this research is convenience sampling, and the target population were young people aged 15-30 staying in Malaysia. The sample size of 82 respondents was determined using the Green (1991) formula. The survey was distributed online via Google Forms through social media platforms. A self-administered questionnaire with three sections was used to ensure accurate data collection. A total of 88 responses were received. Six responses were deleted due to commissions and the presence of outliers.

#### **3.3 Questionnaire and Measurements**

A self-administered questionnaire was used in this research, and the survey was distributed through Google Forms to participants who were sent links by email or other social media channels. The questionnaire was aligned into three sections: Section A verified the respondents' contact details, Section B collected demographic information, and Section C evaluated the relationship between the independent and dependent variables. The questions were adopted and adapted from past studies. Questions on hedonic value were adapted (Ho et al., 2019). The questions for intention to use the e-wallet system were adapted from a study by Junadi (2015). The questions on government support were adapted from Chaudhuri, et al. 2022). Questions on social influence and price value were adapted from Venkatesh et al. (2012).

#### **3.4 Data Processing and Analysis**

After collecting responses, the data were analyzed, recorded, and summarized using the SPSS system's data file. Descriptive analysis was used to investigate the respondents' profiles. Pearson correlation and multiple regression analysis were used to evaluate the impact of the independent and dependent variables and test hypotheses. Cronbach's Alpha consistency and stability tests were performed to examine the measurement's reliability. Inferential statistics were used to deduce what the population believes based on the sample data, and the Pearson correlation test and multiple regression testing were utilized to test the hypothesis developed for this study.

### 3.5 Descriptive Analysis

A descriptive question was asked to gauge the frequency of playing online games that include e-sports. The objective was to better understand our respondents. In this study, there were 82 respondents. Most of the respondents i.e., 54 in total (65.9 percent), played online games 1-5 times a week. This was followed by respondents who played online games 6-10 times a week (20.7 percent). The details are shown in Table 1.

**Table 1: Frequency of playing online games**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1-5 times a week	54	65.9	65.9	65.9
11-15 times a week	2	2.4	2.4	68.3
16-20 times a week	2	2.4	2.4	70.7
6-10 times a week	17	20.7	20.7	91.5
more than 20 times a week	7	8.5	8.5	100.0
Total	82	100.0	100.0	

### 3.6 Demographic Profile of Respondents

This section addressed the general profile of participants, including gender, education level, occupational position, marital status, race, and finally the type of online game played. There were eighty-two good questionnaires. Most respondents, 55 (67.1 percent) were female, while 27 (32.9 percent) were male. Most respondents (65.3%) had a university degree, 5 (6.1%) had a master's degree or higher, 3 (3.7%) had a graduate degree, 6 (7.3%) had a secondary degree, and 3 (3.7%) had a preschool or undergraduate degree. The majority, 75 (91.5%) of the respondents were students. Regarding the race of the respondents, 59 (72%) of the respondents were Chinese, 10 (12.2%) were Malays, and 13 (15.9%) were Indians. The type of online games that participants played included 21 (25.6%) for action games, 16 (19.5%) for puzzles or classic games, 8 (9.8%) for adventure and war games, 7 (8.5%) for strategy, 6 (7.3%) for simulation and sports, and 1 (1.2%) for other types of games that were not reported in the questionnaire.

### 3.7 Reliability

The Cronbach's alpha coefficient, commonly known as the reliability coefficient or coefficient alpha, was used to test the reliability of the data. George and Mallery (2010) defined the rule of thumb for reliability measured by Cronbach's alpha value as follows. Cronbach's alpha values above 0.90 indicate very good internal consistency, above 0.80 is good, above 0.70 is acceptable, and above 0.60 is questionable. According to the test data of SPSS in this study, all variables had a value above 0.7. The variables related to independent and dependent ranged from 0.77 to 0.90, which shows that the reliability of the data was demonstrated. The details are shown in Table 2.

**Table 2: Reliability Statistics**

	Cronbach's Alpha
Government Support	.902
Hedonic Value	.880
Social Influences	.770

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Price Value	.851
Intention to adopt in E-sport	.900

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### 3.8 Descriptive Statistics of Items

Skewness and Kurtosis were tested to establish the normality of the data. Skewness and Kurtosis measure asymmetry as well as the height and sharpness of the central peak. To confirm normal univariate distribution, skewness or asymmetry and kurtosis values between -2 and +2 are considered acceptable (George & Mallery, 2010). Hair et al. (2014) stated that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7. In this study, all the skewness and kurtosis values are below 2. Therefore, the normality of data in this study is established.

**Table 3: Descriptive Statistics of Items**

	Mean Statistic	Std.	Variance Statistic	Skewness		Kurtosis	
		Deviation Statistic		Statistic	Std. Error	Statistic	Std. Error
Govt support	3.3659	1.01144	1.023	-.379	.266	-.266	.526
Hedonic	4.0691	.84739	.718	-1.005	.266	.770	.526
Social Influence	3.8195	.90136	.812	-.244	.266	-.620	.526
Price Value	3.4878	.92547	.857	-.176	.266	-.284	.526
Intention	3.7878	.86942	.756	-1.034	.266	.893	.526

### 3.9 Pearson Correlation

Correlation is used to evaluate the strength of a relationship between two variables (Pallant, 2016). As shown in Table 4, all the independent variables had a positive and significant correlation with the dependent variable. Hedonic value had the strongest correlation with the dependent variable followed by price value. Social influence had a weak relationship.

**Table 4: Pearson Correlation**

		<b>Correlations</b>				
		Govt Support	Hedonic	Social Influence	Price	Intention
Govt support	Pearson Correlation	1				
	Sig. (2-tailed)					
Hedonic	Pearson Correlation	.405**	1			
	Sig. (2-tailed)	.000				
Social Influence	Pearson Correlation	-.013	.236*	1		
	Sig. (2-tailed)	.905	.033			
Price Value	Pearson Correlation	.481**	.710**	.243*	1	
	Sig. (2-tailed)	.000	.000	.028		
Intention	Pearson Correlation	.382**	.680**	.222*	.645*	1
	Sig. (2-tailed)	.000	.000	.045	.000	

### 3.10 Multiple Regression Analysis

Multiple regression is theoretically used to investigate the relationship between a single dependent variable and a number of possible independent variables. Multiple regression analysis is a technique for predicting a single dependent variable using information from multiple other variables (Pallant, 2016).

The model summary shows that the R square is 0.520. This means that the independent variable which accounts for 52% of the variation in depending on the variable which is the intention to adopt e-sports among youngsters. See Table 5:

**Table 5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721 <sup>a</sup>	.520	.495	.61769

### 3.11 ANOVA Analysis

The results present the regression analysis of variances, as well as the sum of squares for the regression and residual models, as well as the DF value, mean square, F value, and significances. The F value for this study is 20.869, and the significance is 0.000. This indicates the model is fit for analysis.

**Table 6: ANOVA**

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.849	4	7.962	20.869	.000 <sup>b</sup>
	Residual	29.378	77	.382		
	Total	61.228	81			

### 3.12 Regression Coefficient

The significance values (p-values) for hypothesis H2 (Hedonic Value) and H4 (Price Value) were 0.016 and 0.000, respectively. This shows that hypotheses H2 and H4 were positive and significant predictors of intention to adopt e-sports. The results also showed that hedonic value is the strongest predictor of intention to adopt e-sports. On the contrary, hypotheses H1 (Government Support) and H3 (Social Influences) had a positive but insignificant impact on the intention to adopt e-sports (p-value more than 0.05). Based on the results of multiple regression analysis, hypotheses H2 and H4 were supported. Hypothesis H1 and H3 were not supported.

**Table 7: Regression Coefficient – Test Hypothesis**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	.644	.424		1.520	.133
	Govt support	.057	.079	.066	.717	.476
	Hedonic	.445	.116	.434	3.827	.000
	Social	.048	.080	.049	.594	.554
	Influence					
	Price Value	.275	.112	.293	2.459	.016

### 4.0 Discussion of Result

The first hypothesis was to examine the relationship between government support and intention to participate in e-sports. The results of this study differ from previous studies (Aryanto, 2012; Songling et al., 2018). One of the main reasons why this hypothesis was rejected could be the low influence of the government on e-sports. Youngsters and adolescents play e-games for entertainment and gratification. The value that youngsters and adolescents derive from their participation in e-sports could be based on their experience of fun and enjoyment of the game.

The second hypothesis aimed to investigate the relationship between hedonic value and intention to engage in e-sports. Moreover, hedonic value had the greatest influence on the intention to play e-sports. In this study, hedonic value was positively and significantly related to the intention to play e-sports. The results of this study are also similar to the results of previous studies (Venkatesh V. T., 2012; Jang, 2019; Marelić & Vukušić, 2019). Previous studies have also shown that hedonic value is a key trigger for the urge to use technology continuously. The results of this study show that youngsters and adolescents engage in e-sports because of hedonic values. This value that youth receive is related to the real-world experience and consumption associated with e-sports.

The third hypothesis sought to examine the relationship between social influence and intention to engage in e-sports. The results of this study deviated from the results of other studies (Dongsheng et al., 2011; Nielson, 2017). The deviation may be related to the respondents of this study, who are mostly educated, young people. The deviation can be attributed to the fact that educated young people are likely to be more independent and not easily influenced by others. Educated young people have more control over their own decisions.

The fourth hypothesis was intended to investigate the influence of price value on the intention to use e-sports. The results of this study are consistent with the findings of previous studies (Jang, 2019; Levrini and Santos, 2021). Previous researchers also mentioned that there is a significant relationship between price value and intention to adopt e-sports (Levrini & Santos, 2021; Merikivi, 2017). The results of this study indicate that adolescents who believe that perceived value is associated with the exchange of monetary expenditures associated with participation in an e-sport may have a positive perception of their willingness to participate in e-sport activities.

## **5.0 Implications**

The main objective of this study was to investigate the determinants of e-sports among youth in Malaysia. The findings are expected to support the growth of e-sports in Malaysia. This study found that hedonic value and price value are the positive and significant determinants of e-sports adoption among youth in Malaysia. Therefore, the Ministry of Youth and Sports, marketers, and retailers of e-sports should focus heavily on hedonic value. Marketers and retailers should implement strategies to increase the hedonic value of e-sports. Marketers should consider hedonic value and price value in their promotions and advertisements to increase youths' willingness to use e-sports.

This study also made some theoretical contributions. New findings were added to the current knowledge, such as the highest influence of hedonic value and the insignificant influence of government support and social influence on youth adoption of e-sports in Malaysia. Based on the theory of planned behaviour and the Uses and Gratifications Theory, it can be concluded that hedonic value and price value are one of the determinants of intention to engage in e-sports. The results of this study open further opportunities for future research to investigate the additional determinants of intention to use e-sports.

## **6.0 Limitation of the Research**

The limitations of this study may help determine the direction of future studies. The first limitation of the study is geographic, as it was limited to Malaysia and the sample consisted of youngsters. Future studies should consider other samples and other countries and other groups such as Generation Z. The second limitation of this study was the use of a self-completed questionnaire. This can lead to bias and the responses are dependent on the honesty of the respondents. Future studies should consider mixed methods to further confirm the results. In this study, a cross-sectional time horizon was chosen, where data were collected at a specific point in time. Future studies should consider longitudinal studies to obtain better results. Finally, moderators were not considered in this study. Moderators such as gender could provide more comprehensive information about the determinants of intention to participate in e-sports. Future studies should consider moderators such as gender.

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