

Theory Of Planned Behaviour – Assessing The Factors That Influence The Intention To Perform An In-Games Purchase By The Tertiary Learners In Johor

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Abstract : *Malaysia has been encouraging the rapid growth of virtual gaming; as it has been making a significant contribution to the economy. The gaming industry has changed its strategy to gain a competitive advantage by selling in-game purchase to their clients to give either an aesthetic appearance to the characters in the games or to enhance the playing experiences. This research intended to assess the factors that influence the intention of tertiary learners in Johor to perform an in-game purchase. A quantitative method of research was conducted on 384 purposive samples utilising a 5-point Likert scale questionnaire which measured both the independent and dependant variables. SmartPLS 2.0 and SPSS 22 was utilised to analyse the data. The results indicate that Attitude and Perceived Behavioural Control has a strong significant influence on the intention to perform the in-game purchase. Furthermore, coefficient values for Subjective Norms showed less significant influence than Attitude and Perceived Behavioural Control. This implies that the respondents were less influenced by any important person or group of people to do an in-game purchase.*

Keywords: In-Games Purchase, Theory of Planned Behaviour, Intention

1. INTRODUCTION

The gaming industry around the world has expanded massively with a revenue amounting to US\$248 million in 2020 and it has been expected to register a 33% of Compound Annual Growth Rate during the forecast period of 2020 – 2025 (Mordor Intelligence, 2020). The gaming industry is growing in high-speed that Forbes believes that it will reach over USD300 billion by 2025 (Koksal, 2019). In a study analysed, gamers enjoy 20 times more in online games and it becomes very convenient comparing to traditional alternatives (Lehdonvirta, 2009). Online games are games that have action like shooting, racing, adventure, puzzle, war-strategy or role-play. Role-playing is the most popular online game followed by war-strategy games (Lehdonvirta, 2009).

It had been recorded in 2018 that the gaming industry has contributed USD 100 million to the Malaysian economy. Thus, Malaysia has also jumped on the virtual bandwagon. The market

is expected to grow at a rate of 10.9% (USD168 million) by 2023 (MIDA, 2019). MIDA and MDEC have given enormous support to Malaysian companies that have ventured in the gaming industry (MDEC, 2020; MIDA, 2019).

To increase the user's interest and to generate more income, the gaming industry sells virtual goods in their role-playing or war-strategy games (Hamari et al., 2017). These virtual goods are sold as an in-games purchase; it is an integral part of the free-to-play model. Massive Multi-Player Online Role Play Games (MMORPG) are the most popular genre of the free-to-play model. Weaponry and decorative tools are the two categories of items sold in free-to-play games (Park & Lee, 2011). These items are used to enhance the powers of their characters; giving the character extra weapons to finish their task or merely giving the character an aesthetic appearance (Wu, Zhu, Wu, & Ding, 2013).

1.1 Purpose of research

The study focused on the following areas:

- i) analysis of the attitude of tertiary learners in Johor and their intention to perform an In-Games Purchase.
- ii) analysis of the subjective norms of tertiary learners in Johor and their intention to perform an In-Games Purchase.
- iii) analysis of the perceived behavioural control of tertiary learners in Johor and their intention to perform an In-Games Purchase.

2. THEORETICAL FRAMEWORK

Theory of Planned Behaviour (TPB) is an extended version of the Theory of Reasonable Action (Fishbein & Ajzen, 1977, 1980) by introducing 'Perceived Behavioural Control' as a non-volitional behaviour to the theory (Icek Ajzen, 1991). Perceived Behavioural Control comprises of control belief and self-efficacy that has improved the prediction of intention (Icek Ajzen, 1991). Many researchers have suggested that this theory has predicted and supported the behavioural intentions in consumer behavioural studies (Southey, 2011). Attitude, subjective norms and perceived behavioural control have made a positive impact on an individual's intention (Brouwer et al., 2009).

TPB has been utilized in many information technologies-based research to measure the intention of the users like online stock trading (Gopi & Ramayah, 2007), using mobile pc among students (Ramayah & Suki, 2006), online bill payment and technology-assisted teaching (Teo & Lee, 2010). Lee (2009), used TPB to analyse the players' behavioural intention and concluded that 75% variance have been observed in the intention to play online games. Researchers have also discovered a significant relationship between attitude and intention to play online games (Hong et al., 2011; Lee, 2009). Though, TPB has been utilised to study the intention of users to play online games; relatively very little research has been made on the exploration of performing In-Games Purchase. Armitage and Conner (2001), discovered that TPB have determined approximately 27% - 39% of variance pertaining to intention and behaviour. Therefore, intention is a better predictor of behaviour.

TPB has best predicted the human behaviour but some researchers have concluded that this theory is less predictive of the intention with an average of 28% variance in behaviour (Sheeran & Orbell, 1999). However, 72% of the unexplained gap have declared the theory as an incomplete model (Sheeran, 2002). Therefore, past researchers have included past behaviour as an additional variable to explain the proportion of the explained variance (Mullan, Wong, & Kothe, 2013).

2.1 Attitude

Attitude is articulated as the overall judgement and assessment of an individual's behaviour (Icek Ajzen, 1991). Attitude is the evaluation of behaviour with its expected outcome. Therefore, the intention to perform a specific behaviour is built upon the perceived attitude. If an individual's attitude towards playing online game is positive then they may spend more time in playing the game (Lee, 2009). Thus, based on this discussion, it is theorised that:

H₁: Attitude will positively influence on behavioural intention.

2.2 Subjective Norms

Subjective Norms are the perception of the individual to perform or not to perform the alleged behaviour in accordance to their peer pressure (Francis et al., 2004). It is the suggested behaviour and individual's perception of the social influence (Vermeulen et al., 2011). This perception can pressure and influence the individual to perform the alleged behaviour. Subjective Norms plays an eminent role in enhancing users' intention and encourage participation among the online communities (Hsu & Lin, 2015). Chang, Liu, and Chen (2014) have discovered that subjective norms have 63% variance among the player's continuous intention to play the video games. Therefore, subjective norms will influence an individual's behavioural intention; as many invites their friends onto the online game platform. Based on this aforesaid assertion, it is hypothesised that:

H₂: Subjective Norms will positively influence behavioural intention.

2.3 Perceived Behavioural Control

Perceived Behavioural Control is the individual's control belief that focuses on the action (Brouwer et al., 2009) and an accurate reflection of the actual control (Icek Ajzen, 1991). Thus, the individual must have relevant control factor-like habits (Ouellette & Wood, 1998), opportunity to perform the behaviour (Wong & Mullan, 2009), relevant knowledge and media exposure (Icek Ajzen, 2002). Furthermore, researchers have concluded that Perceived Behavioural Control will be better predicted by the relevant past behaviour (Sritharan et al., 2019) otherwise the intention will not be translated to action (Knussen, Yule, MacKenzie, & Wells, 2004). Therefore, a person's past behaviour of performing In-games purchase will influence their behavioural intention. Therefore, this study proposes that:

H₃: Perceived Behavioural Control will positively influence behavioural intention.

2.4 Research Framework & Hypothesis

The researchers adopted the Theory of Planned Behaviour in this study. The model consists of three key constructs; Attitude, Subjective Norms and Perceived Behavioural Control. Attitude exhibits psychological feelings towards certain acts of behaviour. Subjective Norms refer to the belief of the individual's peers' approval of the particular behaviour. Perceived Behavioural Control measures an individual's perception of the level of difficulties to perform the action based on the environment and their self-efficacy (East, Singh, Wright, & Vanhuele, 2016).

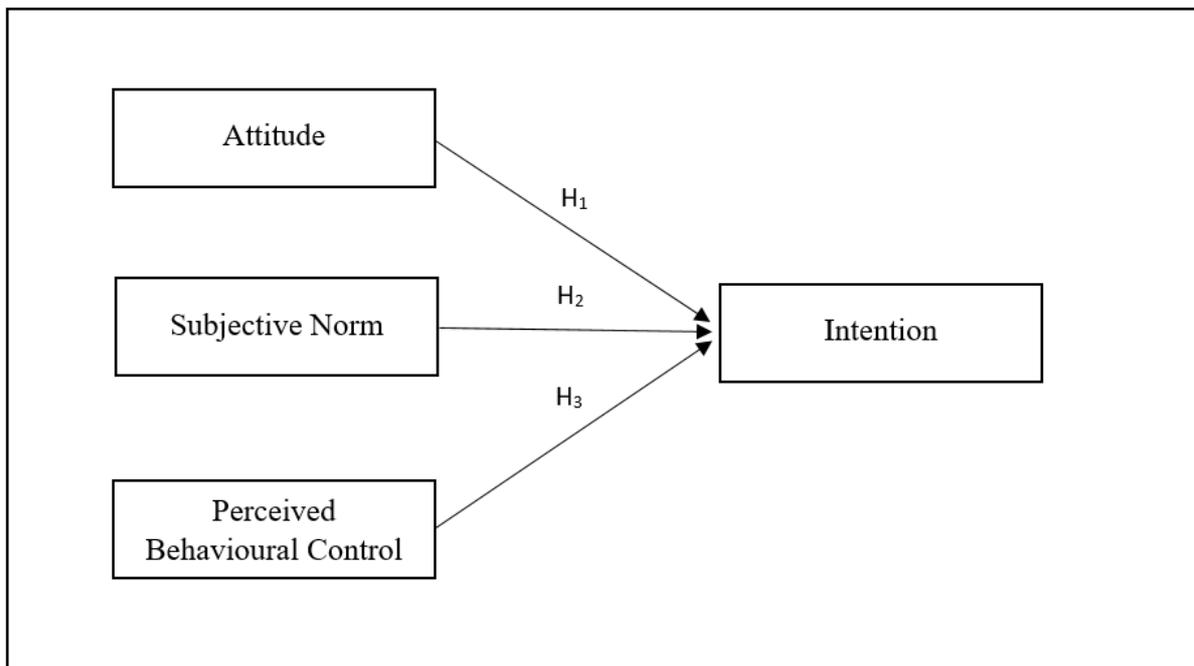


Figure 1. Research Model & Hypothesis. Source: Researchers own construction based on the Theory of Planned Behaviour (Icek Ajzen & Driver, 1992)

3. METHODOLOGY

The research has utilised a quantitative research method with the usage of a Likert scale questionnaire. Purposive sampling was used in this research, as the researchers were looking for participants who have previous knowledge in an In-Game Purchase. 384 tertiary learners from Johor was surveyed following Krejcie and Morgan (1970), sample size table.

The questionnaires comprised three sections with 14 items measuring both independent and dependent variables. Five items of the questionnaire will analyse attitude, three items will gauge subjective norm, three items will be used to measure perceived behavioural control and another three items will be used to assess the intention of tertiary learners in Johor to perform In-Games Purchase. All items for measurement were adapted from Ajzen (2013). The questionnaire also elicited demographic details namely gender, age, race, education and monthly allowance. The questionnaire was arranged with the descriptive question placed in front and the demographic item placed at the end of the questionnaire. This is in line with previous researchers believing that respondents will be motivated to finish the questionnaire more accurately, in the beginning, compare to the end of the questionnaire (Roberson & Sundstrom, 1990).

The questionnaire was distributed using both hard and soft copy. The respondents were required to indicate whether their level of agreement with the statements provided with regards to the in-game purchase of the studies using a 5-point Likert scale.

Data were analysed using SmartPLS 2.0, a structural equation modelling (SEM) package. For measurement model assessment, the PLS algorithm method was applied by examining the construct validity and reliability. In this assessment, the two most commonly used tests were Cronbach's Alpha and Composite Reliability.

4. FINDING AND DISCUSSION

Table 1: Reliability table

Construct	Composite Reliability	Cronbach's Alpha
Attitude	0.8422	0.7665
Subjective Norm	0.9090	0.8492
Perceived Behaviour Control	0.9196	0.8693
Behavioural Intention	0.9246	0.8778

In this study, Cronbach's alpha value was higher than 0.6 (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014) and the composite reliability value was also greater than 0.6 for a particular construct. In accordance with Hair, Sarstedt, Ringle, and Mena (2012) composite reliability measure of 0.7 and over is acceptable. Therefore, the construct is acceptable.

Table 2: Hypothesis testing

Structural Path in the Model	Path Coefficient	P-value	Test result
H ₁ : Attitude → Intention	0.3637	< .001***	Significant
H ₂ : Subjective Norm → Intention	0.1978	< .001***	Significant
H ₃ : Perceived Behaviour Control → Intention	0.2894	< .001***	Significant

The hypotheses were evaluated by examining the PLS results. The R² value of the model on the dependent variable was 0.57 indicating significant productiveness of the model. To accept the proposed hypotheses, the path coefficient value should be at least 0.1 to account a certain relationship (Hair et al., 2014).

The standardised path coefficients that represent the strength of the contribution of independent variables (attitude, subjective norm and perceived behaviour control) on dependent variable (intention) where $\beta_{H1} = 0.3637$, $\beta_{H2} = 0.1978$ and $\beta_{H3} = 0.2894$ respectively, with demonstrating significance of $p < .001$.

Table 3: Descriptive Analysis

Demographic	Mean	Standard Deviation
Age	1.40	0.492
Gender	1.36	0.481
Race	2.05	0.483
Education Level	2.14	0.436
Allowance Support	1.73	1.207
Monthly Allowance	2.55	1.114

In addition to the study, the researchers analysed the descriptive analysis by employing IBM SPSS 22. The descriptive analysis (Table 3) was utilised to evaluate and explained the research. Mean value, frequency and standard deviation were used in this research to expound the average value that the respondents have agreed along with the item that is most descriptive with the research. Male learners of the age group of 18 to 20 with a monthly allowance is from RM 501 to RM 1000 has a high frequency in the intention of In-Game Purchase.

5. CONCLUSION

This research aimed to gain a better perception of factors influencing the intention of tertiary learners in Johor to perform an in-game purchase. The quantitative method research was conducted on 384 non-probability samples using a 5-point Likert scale questionnaire which measured both independent and dependant variables.

Cronbach's Alpha has been effective in checking the reliability test. The results showed that both Attitude and Perceived Behavioural Control has a strong significant impact on the intention of tertiary learners in Johor to perform an in-game purchase. However, Subjective Norms value was slightly lower than Attitude and Perceived Behavioural Control, suggesting that it is less significant to the intention of tertiary learners in Johor to perform an in-game purchase. The respondents have the intention to do in-game purchase and less influenced by any important person or group of people to the respondent. The respondent does the in-game purchase to give an extra weapon or an aesthetic appearance to their character. Thus, it is an individualistic decision and less influenced by others. Gender and monthly allowances provide elucidations for the difference in specific findings of the research.

This study suggests that the Theory of Planned Behaviour is an effective tool in perceiving the factors that influence the intention of tertiary learners in Johor to perform an in-game purchase. Thus, this theory can be utilised to predict the self-reported behaviour over a short period of time (McEachan et al., 2011, Sniehotta et al., 2013).

5.1 Limitation & Future research

In this study, the researchers adopted the Theory of Planned Behaviour model to analyse the Attitude, Subjective Norm and the Perceived Behavioural Control the intention of tertiary learners in Johor to perform an in-game purchase. This study had limitation and that gave some possibility for future research that could be adapted to allow greater confidence with the results obtained.

The first limitation the study has face was the population used; it was limited only to Johor. Therefore, future research could be adopted to increase the number of locations for the study by expanding it to other states of Malaysia so that it provides a better representation of the Malaysian population.

The second limitation is the results of the study; it is a self-report data. The issue here is whether the respondents have answered all the questions in a socially desirable manner. This will remain a potential threat to the conclusions due to biasness.

Finally, to further find if Subjective Norms is less significant toward the intention; future researchers may consider collecting qualitative data to gather a more in-depth of the findings. On the whole, this study itself has paved more opportunities for future research.

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