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## Factors Affecting Customers' Attitudes to Purchase Garena ROV Products in Thailand

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### Abstract

The research was aimed to study the influence of price utility, functional quality, playfulness, perceived technology security, effort expectancy, trust, performance expectation and perceived risk towards customers' attitude to purchase products of ROV (Arena of Valor), the popular mobile multiplayer-online-battle-arena (MOBA) game, in Thailand. The respondents were 630 people. The data collection was done in January-March 2020. The data were analyzed using multiple regression analysis.

The results found that the majority of respondents who answered the questionnaire were male aged 21 – 35 years, and single status. Most of them were private employees / professional contractors, and some were studying. The frequency of buying ROV products was 3-4 times per month. The pre-paid card was used as main purchase channel. The equipment used to purchase ROV products was smartphones. The average amount spent on each purchase was 25 – 2,000 baht. The regression analysis results found that price utility ( $\beta = 0.719$ ), playfulness ( $\beta = 0.630$ ), and perceived technology security ( $\beta = 0.523$ ), explained 85.1% of the positive effect toward attitudes' customers to purchase Garena ROV products with statistical significance at level .001. Consequently, an entrepreneur or a marketing manager should plan strategies by focusing on such issues since it will attract the customers to purchase mobile game products.

**Keywords:** Garena ROV; Mobile MOBA; Attitudes to Purchase

**Type of Article:** Research Article

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## ปัจจัยที่ส่งผลต่อทัศนคติในการซื้อสินค้าในเกม ROV ของผู้บริโภคในประเทศไทย

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### บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาอิทธิพลของราคาอรรถประโยชน์ คุณภาพการใช้งาน ความสนุกสนานการรับรู้ความปลอดภัยของเทคโนโลยีความคาดหวังในการใช้งาน ความไว้วางใจความคาดหวังในประสิทธิภาพ และการรับรู้ความเสี่ยง ที่มีต่อทัศนคติต่อการซื้อผลิตภัณฑ์ของเกม ROV ของลูกค้าในประเทศไทย จากผู้ตอบแบบสอบถาม 630 คน เก็บแบบสอบถามในช่วงเดือนมกราคม ถึง มีนาคม 2563 วิเคราะห์ข้อมูลโดยใช้การวิเคราะห์การถดถอยพหุคูณ

ผลการวิจัยพบว่าผู้ตอบแบบสอบถามส่วนใหญ่ที่ตอบแบบสอบถามเป็นเพศชายอายุ 21-35 ปี มีสถานภาพโสด ส่วนใหญ่เป็นพนักงานเอกชน / ผู้รับเหมามืออาชีพ ในขณะที่บางคนกำลังศึกษาอยู่ ความถี่ในการซื้อผลิตภัณฑ์ในเกม ROV อยู่ที่ 3-4 ครั้งต่อเดือน บัตรเติมเงินถูกใช้เป็นช่องทางการซื้อหลัก อุปกรณ์ที่ใช้ในการซื้อผลิตภัณฑ์ในเกม ROV คือสมาร์ทโฟน ยอดการใช้จ่ายเฉลี่ยต่อการซื้อแต่ละครั้งคือ 25-2,000 บาท ผลการวิเคราะห์การถดถอยพบว่าอรรถประโยชน์ของราคา ( $\beta = 0.719$ ), ความสนุกสนาน ( $\beta = 0.630$ ), และการรับรู้ความปลอดภัยของเทคโนโลยี ( $\beta = 0.523$ ), อธิบาย 85.1% ของอิทธิพลเชิงบวกต่อทัศนคติต่อการซื้อผลิตภัณฑ์ของลูกค้าในเกม ROV ของลูกค้า โดยมีระดับนัยสำคัญทางสถิติที่ .001 ดังนั้นผู้ประกอบการหรือผู้จัดการด้านการตลาดควรวางแผนกลยุทธ์โดยเน้นประเด็นดังกล่าว เนื่องจากจะสามารถดึงดูดลูกค้าให้ซื้อผลิตภัณฑ์เกมมือถือได้

**คำสำคัญ:** เกมมือถือ; ทัศนคติในการซื้อ

**ประเภทบทความ:** บทความวิจัย

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## Introduction

Digital games are a part of the entertainment media, which can be accessed by every age of people. Although, there are some games that may be limited to the age to play. This may be due to their content and language use within the game that may not be suitable for specific age.

Market of digital games has grown steadily. The global game market has a year-on-year growth rate of approximately 30% with money circulating as over 16 billion US dollars. In 2018, the value of the global game market consisting of online games, computer games, and console games has a combined figure up to roughly 140 billion US dollars. The number is approximately a quarter in Chinese game market. Digital global game market in 2018 showed revenue of nearly 125 billion US dollars or 91% of the global revenues from mobile games are rated virtually 70 billion US dollars, while tablet games valued almost 14 billion US dollars, whereas smartphone games earned practically 56 billion US dollars. According to forecasts in 2021, mobile games have a half share of the entire game market or reach a 100-Billion-Dollar Market (Wijman, 2018).

For PC, Console, and Handheld Games, in the past, it was necessary to install or insert discs to play the game, called Boxed Game or Physical Purchase Game. It may be a complicated matter for some people. In addition, it is very difficult to find the game discs you want. Besides, it is problematic to find a store that has the game discs for sale.

There is changing into an online ordering system to remove the disadvantages at this point. Playing the game using the disc, however, still has many drawbacks, for example, game disc maintenance or the necessity to change game discs to play another game. For the price, rare game discs had higher price than popular game discs in the market, or those games were created for Niche Market. Currently, this creates a new way to buy new games, Digital Download Games. The game is online and there is no need to use discs anymore. Once purchased, the gamer can download and install to play the game immediately. When wanting to change a game, just exit that game to open the new game you want instantly without having to change the disc anymore. For buying games in today's digital age, consumers can buy through various websites, distributors, social media or applications on a computer, console and handheld game machine. When consumer behavior has changed, the Box Game has decreased its revenue due to changes in consumer gaming behavior (CBS Interactive Incorporated, 2020).

As analyzed above, buying digital download games, including mobile games, is more appropriate for today's era than buying boxes or discs. When dividing game console types, each game console will have a digital distribution software service to assist as a service center for consumers to purchase licensed game software via the internet. As a result, mobile games are very interesting in the game market.

In Thailand, Garena RoV (Arena of Valor): Mobile MOBA, MU Origin, and LINE Let's Get Rich are the popular mobile online-games in turn. Approximately 30 million Thais play these game (Prachachat, 2020) Therefore, the researchers are interested in studying that what are the factors that positively affect the attitude of buying Garena ROV products of consumers living in Thailand. The researcher used various factors that were studied in foreign countries come to apply this study as shown in the conceptual framework. The researchers expecting that the findings from this study will benefit the business related to digital games download to be a guideline for developing online products and meeting the needs of consumers.

### Research Objectives

The study aims to investigate factors that affect customers' attitude to buy Garena ROV products in Thailand. This can lead to understand consumers and develop marketing plans that affect customers' attitude to buy products in online games in Thailand.

### Scope of the Study

This study focuses on 630 customers who buy Garena ROV products in Thailand.

This study has eight independent variables and one dependent variable. The independent variables comprise price utility,

product performance, playfulness, enological security, effort expectancy, performance expectation, trustfulness, and perceived risk. The dependent variable is the attitude to purchase Garena ROV products.

### Conceptual Framework and Research Hypotheses

There are eight hypotheses, as shown in Figure 1 – the conceptual framework, as follows:

H1: Price utility positively affects to attitude to purchase Garena ROV products.

H2: Product performance positively affects to attitude to purchase Garena ROV products.

H3: Playfulness positively affects to attitude to purchase Garena ROV products.

H4: Technological security positively affects to attitude to purchase Garena ROV products.

H5: Effort expectancy positively affects to attitude to purchase Garena ROV products.

H6: Trustfulness utility positively affects to attitude to purchase Garena ROV products.

H7: Performance expectation positively affects to attitude to purchase Garena ROV products.

H8: Perceived risk utility positively affects to attitude to purchase Garena ROV products.

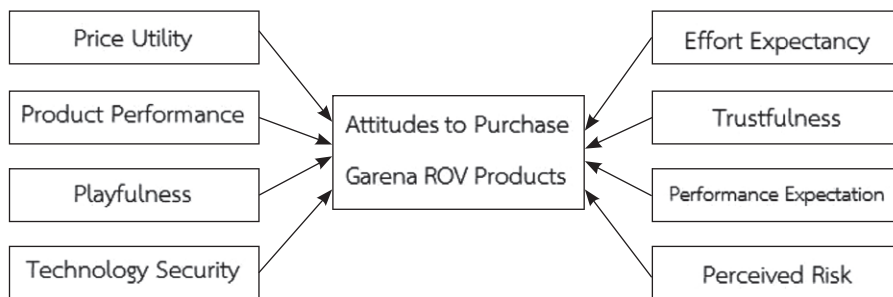


Figure 1 Conceptual Framework

## Related Literatures

### 1. Mobile Games

Mobile game is a game the players can play on their smartphones and it is very popular today. So, selling the digital products in game is interesting business at the moment. The customers can buy such products via several methods, such as prepaid card. Google Play is a service provider for mobile game payment. It is developed by Google, using the Android operating system on the mobile device. The users can browse to buy and download applications from the Google Play page. Google Play also functions as digital media that provide music, magazines, books, movies, and television programs - not just selling digital games download. The application can be downloaded and installed on smartphone (Google Play, 2020). Downloading digital games, whether on whatever platform, is based on the product's copyright (Department of Intellectual Property, 2020).

### 2. Garena ROV

Garena RoV is a Multiplayer Online Battle Arena (MOBA) or a game that many players

participate in at the same time. This game is similar to the world-famous online games such as Dota 2. Within the game, players can choose hero with the different characteristics as needed. Each hero has different abilities and features. This game is popular due to the graphics of the game that can display beautifully and excellently, as same as the computer games.

### 3. Garena ROV in Thailand

ROV leads Thailand e-sports team to push ecosystem mobile game development. The Incomes of Thai e-sports athletes are between 800,000-5,000,000 baht per year. In Thailand, it is found 11.4 million e-sports audiences, the fastest growth in the world. Garena joins True to push the ROV into the national sport competition. E-sport ecosystem in Thailand has grown in all areas, especially the number of 'athletes' that have increased significantly, as revealed by regional strategist, Garena Online Company Limited.

ROV is a very popular e-sports game and it has generated the highest profits for Thailand's gaming industry which is ranked

as the 19<sup>th</sup> country that generates the most revenue from the gaming industry in the world. Thailand gaming industry is valued at 667 million US dollars, or about 21,344 million baht, with 18.3 million players. In addition Thailand has the potential to develop to be the hub of e-sports in Southeast Asia (Marketeer, 2020).

#### 4. Attitude to purchase

Das (2014) defined that consumer attitudes can be regarded as an assessment of the likelihood or usefulness of operations. Attitude plays an important role in consumer education because it influences the thoughts, feelings, and steps of consumers' decisions, which is the most important thing. The attitude to purchase has a connection between attitude and intention to buy products and services differently.

#### 5. Determinants affecting attitude to purchase

Ziestman et al. (2019) found that price utility positively impacted the customers' decision to use the services. Wibowo et al. (2019) found that product performance was important to customers in making decision to purchase dairy products. Ryu and Park (2018) found that perceived playfulness affected the customers' attitude to pay to download movies. Oliveira et al. (2016) indicated that technological security concerns are a deterrent to the intention to use e-commerce. Chopra (2019) found that effort expectancy motivates

young consumers in shopping decisions. Oliveira et al. (2017) stated that trustfulness refers to the attitude of people who have expectations about the risks on trading online that can be benefits to the reliability of people who sell products online. Abrahão, et al. (2016) suggested that firms needed to respond the performance expectation of customers to motivate the usage of products and services, for example, the improvement of technological online service can provide smartphones users with the convenience. Harbeck et al. (2017) presented the risk perception theory by proposing the processes which may lead to risks, such as recognition and awareness of risks, risk level assessment, and willing behavior to accept risk levels.

#### Methodology

The sample size was calculated according to Partial  $R^2$  of Cohen (1977) to ensure the sufficient samples. As a result, 630 samples were asked to answer the questionnaire. In this study, the sample selection is based on non-probability sampling by using convenience sampling as consumers, who used to buy Garena ROV products, in Thailand during the January-March 2020.

The questionnaire used five-rating Likert scale to measure interval scale data. It comprised 36 items divided into 9 dimensions, comprising Price Utility (PU), Product Performance (PP), Playfulness (PF) Technological Security (TS), Effort Expectancy (EE), Trustfulness (TF), Performance Expectation (PE),



Perceived Risk (PR), and Attitude towards Purchase (AP). Each dimension consisted of 4 items, as detailed as follows.

First, PU's 4 items included "The ROV items sold are reasonably priced", "The ROV items sold are money worthwhile", "The ROV items sold are good priced when compared to other products", and "The ROV items sold are considered economical price". These items were adjusted from the previous study by Lee et al. (2011).

Second, PP's 4 items included "The ROV items sold have acceptable standard quality", "The ROV items sold are reliable in their performance", "The ROV items sold are good in terms of their overall excellence", and "The ROV items sold possess the satisfactory quality". These items were adjusted from previous study by Lee et al. (2011).

Third, PF's 4 items included "Using the ROV items sold arouses my imagination", "Using the ROV items sold gives me fun", "Using the ROV items sold is interesting to me", and "Using the ROV items sold stimulates my curiosity". These items were adjusted from previous study by Lee et al., (2011).

Forth, TS's 4 items included "I would feel secure sending sensitive information across ROV mobile payment", "ROV Mobile payment is a secure means through which to send sensitive information", "I would feel totally safe in providing my sensitive information over ROV mobile payment", and "Overall ROV mobile payment is a safe".

These items were adjusted from previous study by Oliveira et al., (2016).

Fifth, EE's 4 items included "I would feel secure sending sensitive information across ROV mobile payment", "ROV Mobile payment is a secure means through which to send sensitive information", "I would feel totally safe in providing my sensitive information over ROV mobile payment", and "Overall ROV mobile payment is a safe". These items were adjusted from previous studies by Khalilzadeh et al. (2017) and Abrahão et al. (2016).

Sixth, TF's 4 items included "I believe ROV mobile payment service providers keep their promise", "I believe ROV mobile payment service providers are trustworthy", "I believe ROV mobile payment service providers keep customers' interests in mind", and "I believe ROV mobile payment service providers secure transactions for users". These items were adjusted from previous study by Khalilzadeh et al. (2017).

Seventh, PE's 4 items included "I believe ROV mobile payment would be a useful service in my day-to-day activities", "I believe ROV mobile payment would make me perform my financial transactions more quickly", "I believe ROV mobile payment would save time so I can do other daily activities", and "I believe ROV mobile payment would bring me greater convenient". These items were adjusted from previous study by Abrahão et al. (2016).

Eight, PR's 4 items included "I wouldn't feel completely safe by providing personal

information through ROV mobile payment system”, “I’m worried about the future use of ROV mobile payment services because other people might be able to access my data”, “I don’t feel protected when sending confidential information via ROV mobile payment system”, and “The likelihood that something wrong will happen with ROV mobile payment systems is high”. These items were adjusted from previous study by Abrahão et al. (2016).

Ninth, AP’s 4 items included “Using the Internet to buy ROV products is good idea”, “I like the idea of buying ROV products via the Internet.”, “It is favorable for me to purchase ROV products online.”, and “It is a pleasant experience in using the Internet to purchase ROV products”. These items were adjusted from previous study by Law et al. (2016).

Index of Item Objective Congruence (IOC) was used to inspect the content validity of questions, including clearness, coverage, and language accuracy. Some questions, however, were unclear so that the experts gave recommendations in adjusting those questions to be consistent with the context of customers buying ROV products. The researchers, moreover, tried out research instruments with 30 customers who were not the sample to inspect reliability by considering internal consistency based on Cronbach’s alpha coefficient of summed scale questions, which were between 0.86-0.94 so that it was acceptable, as suggested by Streiner and Norman (1995).

Inferential statistics are used to analyze bivariate correlations among variables by Pearson’s correlation coefficients. The varianceinflation factor (VIF) and Tolerance analysis wasconducted to check for multicollinearity. The result indicates that VIF values rangedfrom 1.617 to 4.344, which were lower thanmaximum limit of 10, and Tolerance ranged from 0.549-0.634, which were close to 1. As a result, it was acceptable for multicollinearity check (Dohoo et al., 1997). Then, the multiple regression analysis was performed by specifying statistical significance atLevel .01, which the researcher collected the questionnaire from the sample and then processed by using SPSS. The descriptive statistics uses percentage to describe general information of respondents.

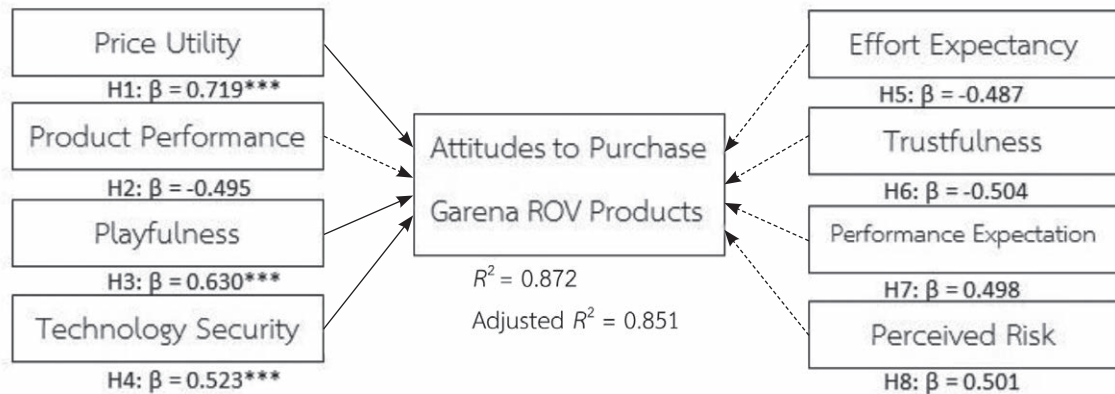
## Results

The results found that the majority of respondents who answer the questionnaire are male aged 21 – 35 years old, single, with education in bachelor and master degree, most of them are private employee / professional contractor occupation, frequency of buying ROV products is 3-4 times per month, purchase channels is pre-paid card, the equipment used to purchase ROV products is smartphones, average amount spent on each purchase is 25 – 2,000 baht. The regression analysis results indicated price utility ( $\beta = 0.719$ ), playfulness ( $\beta = 0.630$ ), and technological security ( $\beta = 0.523$ ), explaining 85.1% of the positive effect



toward attitudes to purchase Garena ROV products of the customers with the significant level at .001, as shown in figure 2. While, it was found trustfulness ( $\beta = -0.504$ ), perceived

risk ( $\beta = 0.501$ ), performance expectation ( $\beta = 0.498$ ), product performance ( $\beta = -0.495$ ), and effort expectancy ( $\beta = -0.487$ ) had no statistical significance.



Notes: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$   
Solid lines represent significant paths.

Figure 2 Regression Results

## Conclusion and Discussion

The results indicate that price utility, playfulness, and technological security affected the customer's attitude to purchase Garena ROV products. As a result, hypothesis 1 - Price utility positively affects to attitude to purchase Garena ROV products, hypothesis 2 - Product performance positively affects to attitude to purchase Garena ROV products, and hypothesis 4 - Technological security positively affects to attitude to purchase Garena ROV products are supported. Moreover, the findings depicts that hypotheses 2, 5, and 6, representing the negative effects of product performance, effort expectancy, and trustful-

ness on attitude to purchase Garena ROV products, and hypotheses 7-8, representing the positive effects of performance expectation and perceived risk on customer's attitude to purchase Garena ROV products, are not supported. These findings are consistent with the studies of Zietsman et al. (2019), Ryu and Park (2018), and Oliivia et al. (2016). However, the results is not in line with the study of Harbeck, et al. (2017), which found that the perceived risk, consisting of the risk awareness, the risk assessment, and the willingness to accept risk, impacted the customer's attitude to buy goods. This might cause by the security in sustaining the ROV account. It is difficult to

steal others' accounts since they are linked with email and Facebook. It reflects that the customers had the confidence towards online products by now.

### Recommendations

For the practical recommendation, entrepreneurs or marketing managers should use the results of this research to plan and develop marketing strategies by focusing on the recognition of price utility, playfulness, and technological security. Moreover, future studies on factors affecting the customer buying decision, especially in the context of online-game products in Thailand, are still required. The followings are interesting issues:

first, marketing promotion by creating proposals or conditions to encourage the fun and follow-up in using the service continuously, second, excellent customer care by using the strategy of customer retention process with the quality of services. The firms need to offer customers impressive products and services to maximize the customer satisfaction, and finally, as marketing efficiency will occur and can be sustained with the confidence and trustfulness (Aunyawong et al., 2018). Therefore, the business must emphasize and show its position to the customers by providing transparent services, fair follow-up, and regular monitoring.

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