

Video Games and Its Economy Impact in Southeast Asia Country

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Abstract

Society negate that video games is an important part of their life and decline that video games can bring income and also job opportunity to humans. Therefore, lesser amount of teenager are encouraged to enroll themselves to the relevant field. The objectives of this study are to discover the economy impact brought by video games, the possible job opportunity that is relevant to video games, and the impact of advertisement in video games. It was found that video games is becoming a part of Southeast Asia economy and will continue to grow as gamers are increasing. Meanwhile, video games also provided a lot of job opportunities and advertisement in video games is effective in promoting service and products.

Keywords: *Video games, job opportunity, advertisement, economy*

1. Introduction

Video games is a kind of entertainment that required the user to interact directly with the user interface on the screen or monitor using an electronic devices. The word *video* in video game referred to display device. The first video game is a simulated tennis game of two persons on an oscilloscope screen in 1958 [36, 42]. To put in simple, the games on smartphone, personal computer or even on television, is considered as video games.

Video games growth rapidly over the time. Evolving from only able to play on a big immobile devices, an oscilloscope until the hand held mobile devices like smartphone, video games. This evolution of technology caused video games become a part of the human life.

The main purpose of video games is to entertain human. Other than that, many researchers found that

video games actually is a good tool that can be used for education [22]. Papastergiou says that the use of digital games, video games is effective on education [23]. There are also many other researcher that study on this topic supported that games bring positive impact on education but doesn't have enough proof to support their research [10]. Among the application of game based learning including health education [37], conduct assignment on mechanical engineer curriculum [6] and many more. However, there is research showed that the impact of video games in education is not significant [30]. Using video games in a non-game context are called gamification [7].

Even though, the first impression of many people when hear the word "Video Games" is "Bad Impact" [26]. This judgment is made so easily because of the possible negative impacts such as addiction [19], violent and aggression [4] which cause a person to be easily provoked [2]. This is just like Roger Ebert making "Video games can never be art" statement, which negate any opportunity to looking the bright side of video games [8]. It is seldom to hear people discussing the benefit of video games like enchanting cognitive, increase motivation, increase emotion intelligent and also improve social skill and many other aspects [11]. Even though game based learning is welcomed in many educational institution, pure entertainment video games are still disproved in society.

Are there any benefits or impacts of video games brought to a country? It would be constructive to judge video games from another perspective. This paper aims to show the economy values of the video games which include four categories. The first category is exploring the value of games selling worth in Southeast Asia country published by NewZoo Company [47]. The second category is the number of job opportunities that are relevant to the

video games such as video gamers [35] and software engineer [13]. Next, the third category is opportunity of advertisement through video games' virtual environment as suggested by Heckel [39]. Finally, the forth category is games hardware sales such as game console [38].

Literature review on published journal papers, articles on website and also real time reports provided by companies are carried out. This report is presented in four sections according to the four categorizer.

2. Video Games Sales

Everything that have a price definitely bring income. Video games do bring a high amount of income to a country. This part is more specific toward the sales of Games Software and the in game's item. Many of the current video games tend to generate income based on in games item such as energy used to play games on *Facebook* games and in game costumes. Moreover, the existence of online video games increase the player social activity (friends influence or social influence). As a result, the gaming environment are becoming more competitive and gamers are more willing (or influenced) to pay as statement in the theory of team-based weight loss competition [15]. Due to this reason, free to play games are becoming a trend of videos games. After free to play, the next may be pay to win such as *Maple Story* [1, 29]. Table 1 summarizes the contribution of video games in term of revenue based on the Southeast Asia Games Market Report in 2014 [46] and NewZoo Global Games Market Report in 2016 [47].

Table 1: Video games revenue report [46, 47]

	Country	Population (M unit)	Gamers (M unit)	% of Gamers	Revenue (M \$)
2014	Malaysia	30.2	14.3	47.4	214.2
	Thailand	67.2	14.7	22.9	230.3
	Indonesia	252.8	34.0	13.4	181.1
	Philippines	100.1	27.2	27.2	96.8
	Singapore	5.5	2.8	51.0	201.6
2016	Malaysia	30.8	22.8	74.0	539.5
	Thailand	68.1	28.7	42.1	521.3
	Indonesia	260.6	56.7	21.8	704.4
	Philippines	102.8	48.3	47.0	258.2
	Singapore	5.7	4.9	86.0	294.1

$$Average = \frac{\sum Revenue}{Number\ of\ Country}$$

Table 1 shows that the average amount of revenue brought by video games to this country is 463.5 M \$ in 2016 from 184.8M \$ in 2014. The revenue generated increased by about 2.5 time in 2 years from 2014 to 2016. This has transformed video games into a spotlight of the world among Southeast Asia Countries.

People tend to addict to the video games with the emergence of the Internet [21]. The revenue generated by these video games will definitely increase over time as it is not easy to break the addiction toward video games just like smoking or drug addiction [24]. It is foreseen that Southeast Asia Games revenue will increase for the next couple of years.

3. Video Games Job Opportunity

In the beginning of the electronic-sport era, children and teenagers are interested to become a professional gamers, a person lives by playing games. This is not as easy as thought of. A person need to be very skillful in playing video games compared to others and having a potential of self-improvement in order to be funded by some video games club to recruit them as club's representative just like a soccer player [25]. After all of these achievements, professional gamers are tested to earn recognition from public and acceptance by the family members [14]. Nevertheless, there are other job opportunities other than becoming a professional gamers.

One of the most common job opportunity of video games is the development and maintenance of video games. Video games consist of software and hardware. Software consists of user interface and the background program. User interface requires designer or artist to design the interface that attract the players. Meanwhile video games program requires many experts from computer sciences to support their website, database and the video games source code. Thus, students majoring in art and computing have opportunity in getting their job in video games industry. These jobs are commented to have higher and more reliable income [3, 33]. New courses in games development are required in higher education institutions and thus positions for associating lecturers are emerging [13].

The next area of video games job is on the entertainment related programs brought by video games. People can be a caster who reports the happening of games, an event manager or a video

games streamer to earn money. As most video games tournaments are streamed live on the video streaming website such as *YouTube* and *Twitch*, the caster is the most important person to explain the details about the videos games, and making jokes to entertain the audience. Mehdi Kaytoue showed that there are more people interested to watch a Casting tournament live stream than the gameplay of the professional gamers. They are getting the chances to travel all across the world to cast the real time big video games tournament such as The International [45]. However, video games streamer and caster do not earn a fixed salary. Their income comes from the advertisement during their video streaming or contract with Advertisement Company. The salary is calculated based on cost per click or cost per action on the streaming website [12].

Another job opportunity is called event planner, a person who creates the environment for specific event to run. A structural event is important as it gives the first impression to continue joining the future event. An event planner and manager definitely are required for Video Games event. Event planners are more flexible as they are having alternative income to take up other events that are not related to video games industry.

Lastly, video games requires console tools - hardware [38, 40]. Hardware market and industry demand are increasing with the increase of gamers every year. These hardware required engineers to design. Meanwhile, the new hardware requires marketing strategy. For example Nintendo uses two marketing strategies to sell a new product which are price skimming and price penetration [17]. Price skimming is a way to set the price of hardware higher and reduce it later on after satisfy the first demand group. Price penetration strategy will sell the product at lowest price to penetrate the market [18]. The hardware might be selling cheaper but the games definitely will earn back the money for the game company. This marketing strategy require specialist to plan which again provides an area of job opportunity.

4. Video Games Advertisement

Definition of advertising is a notice or announcement in a public medium promoting a product, service, or event or publicizing a job vacancy. In the world of video games, it refers to the publicity of a product or service using the game medium. A company's product template can be placed inside video games content or buying the advertisement space on the game's website. As the gamer percentage increases,

the viewers of advertisement in the games will increase too. Yang et al. (2002) stated that in game advertising is less effective in promoting a brand [28]. Nonetheless, Cauberghe et al. and Wise et al. showed a positive effects of advertising in video games [5, 27].

Other than that, the rising of the E-Sport, also known as electronic sport era, has increased the effectiveness of advertising product brand. E-Sport is getting more favorite and continued to rise as a new economy market [20]. Many big IT companies such as Asus and Razor are sponsoring the E-Sport event. This indicates that video games events actually increase the income by indirectly attracting more players. Besides that, with the support of online streaming website such as *YouTube* and *Twitch*, audience get to know the latest news although physically not in the event [37]. Advertisement will be displayed while the games are not being played or in the end or beginning of the games. The statistics provided by www.statista.com showing that the highest viewer count of one of the most popular games reaching 75.86 million of average viewer with average of 1.5k channel as shown in Figure 1 [48]. This shows that the advertisement promotion in video games are effective.

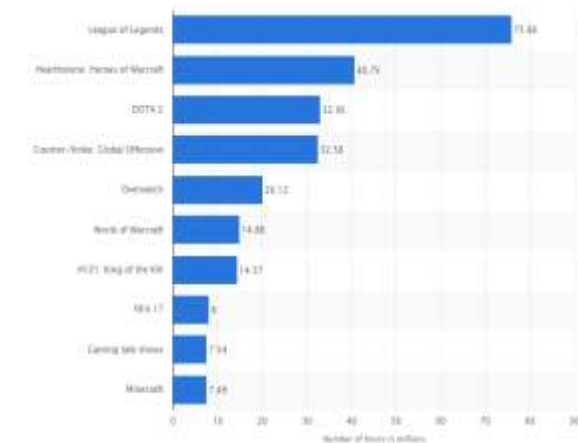


Figure 1: Top 10 viewer population of games in Twitch [48]

Of course not all the advertisement content is acceptable in video game. The advertisement content must be relevant to video games to avoid players' irritation [9, 16]. This will create a link between sponsor and the video game developer which partner together in promoting a brand and guarantee a fixed income to the video game developer.

5. Future of Video Games

A video game, starting from a tennis game on oscilloscope until mobile phone video games, it has

changed a lot and it will be continuing changing in the future. Video games have evolved into the age of Virtual Reality (VR) [34]. Many games started to develop using VR. One of the first game that design in VR environment name "The Lab" [44] is available at the stream application of Valve Company [43, 41]. This game gets a high rating from users even the game is just a balloon shooting game in a small square area due to the limitation of current technology and safety. Video games definitely will continue to grow. Other than that, due to gamification [7], everything can be converted into games. Education can utilize game content which are more effective [24]. Even pilot training is available now in VR. Video games will last as long as there are the gamers. Some apply the winning will in playing a game into their real world. The only difference between playing games and reality is that games can be re-played if one does not do well in the first round. However, one would not get a second chance in life. Life is a games, a big one, and it will grow bigger and bigger next to life [32].

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