

# Analysis of the Effective Distribution Channel to Minimize the Risk of Piracy in Computer Game Software Business: Case Study of PT Digital Happiness Studio

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**Abstract:** Gaming industry is a developing industry with bright future ahead. In the entertainment sector, gaming industry is one of the biggest industries there is, alongside movie and music industry. The gaming industry is starting to enter the Indonesian market with many new games developed here in Indonesia by local game developers. However, the risk of piracy in Indonesia is huge because of the difference in price between original and pirated products. Some factors that influence customers to buy video games are the way the games are distributed for example digital or physical distribution, and also the service demand outputs. The purpose of this research is to analyze the effective distribution channel to minimize the risk of piracy in computer game software business. The research is conducted at Digital Happiness Studio, where the primary data is obtained from interview with an employee and also questionnaire is distributed to potential customers. Data analysis is done by two softwares which are SPSS and AMOS, which specified that there is a significant relationship between service output demand with customers' preference channel and also the risk of piracy itself.

**Keywords:** Service Output Demand, Customers' Preference Channel, Risk of Piracy, SPSS, AMOS.

## 1. Introduction

### 1.1. Background

The video game industry in Indonesia is a part of the much bigger creative industry. According to the [globalindonesianvoices.com](http://globalindonesianvoices.com), Creative industry covers various economic activities, which seek to generate or exploit information and knowledge. It is a broad term that includes cultural activities and artistic production including advertising, visual and performing arts, and architecture. Both developed and developing countries have adopted the concept and built industries that utilize skill, talent, and creativity in order to create jobs and wealth through intellectual property exploitation.

There are 14 sectors that comprise the pillars of the industries, including film, fashion, music production, publishing, architecture, arts and antique markets, cuisine and culinary designs, software development, and interactive gaming.

Indonesia's first official game was created in 2004 (Wulandini, 2013). Its target was intended for light and casual gamers with internet connections. The games that are available to play online were games with simple 2D graphics and simple gameplay, but fun and addictive at the same time.

Over time, number of video game developers in Indonesia has grown. Games that are being developed are also improving with better graphics, sound, and gameplay, thus, making a better quality game that will attract more gamers to buy the game.

With the variety of video game developers in Indonesia, many different companies are implementing different strategies, for example pricing strategy. They are forced to minimize their prices, so that people will actually buy their product instead of buying pirated versions that are much cheaper compared to the original product.

Currently, Indonesia is the fastest growing market for games in Southeast Asia. Total revenues from Southeast Asia's gaming industry reached nearly US\$1.1 billion in the year of 2014, with six key countries accounting for 99 percent of the revenues generated from the entire region. In terms of revenue, the six main drivers are Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam (Cosseboom, 2015).

The average Indonesian gamer spends Rp. 200,000 (US\$16) on games per year (Cosseboom, 2015). Indonesia's demographic strength pushes the country ahead of other Southeast Asian countries. Its enormous population of nearly 253 million now accounts for 40 percent of the entire Southeast Asian population. While Indonesia still has the lowest internet penetration rate in the region, it already has the largest online population, indicating huge future growth potential (Cosseboom, 2015).

The video game industry is a very prospective business in Indonesia also because there are options through different channels to enter. Unfortunately, piracy is a huge problem in Indonesia for the entertainment sector, and this includes video games as well. With many pirates able to copy original video games and then sell them at a much cheaper price, gamers in Indonesia are being spoiled. However, if this continues to go on, there will be less and less developers who want to develop their own games here in Indonesia, which could end local developers' careers.

## *1.2. Research Problems*

The problems of this research are as follows:

- In general, the game developer has difficulties in choosing the distribution channels that are preferred by customers. For example, if they create a game that has a large database and requires a lot of memory to be installed, and they put their game up for download on the internet, in Indonesia that might be a problem since the internet connection and speed is not as fast as the global average internet speed.
- There are many pirated versions of the games being released here in Indonesia, and they are sold at a much cheaper price, or are even available for free downloads.

## **2. Literature Review**

### *2.1. Distribution Channel in Gaming Industry*

To achieve a deeper understanding for the video game industry and the upcoming increase in digital distribution it is useful to know how the traditional value chain works for standard games, which usually are priced around Rp 500.000 – Rp 600.000.

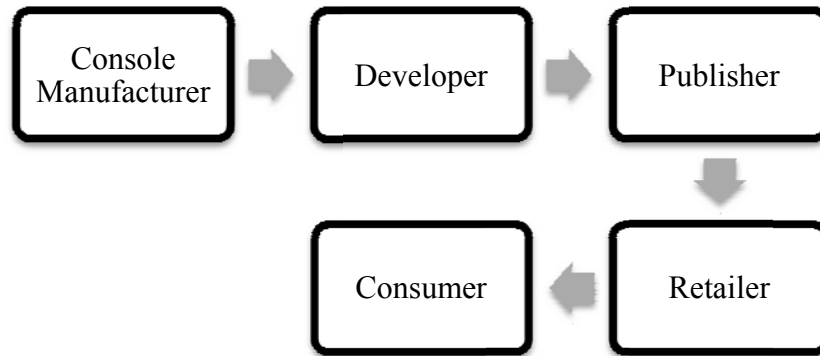
The traditional way of distributing video games has been through retail store sales. However, these last couple of years, game publishers have found new ways of distributing their games, reducing the need for manufacturing plants and cutting costs such as shipping and retail store marketing (Berg, 2010).

### *2.2. Physical Distribution*

Physical distribution of games in retail stores and specialized gamer shops is the common way for game publishers to reach their customers. In fact, before broadband became common property, the only way to distribute games was using the retail channel. Retail games are also sold by online stores such as Amazon, which offer retail games to diversify their portfolio.

Retail games often include a manual together with the game itself stored on a CD, DVD or BluRay. Many gamers are willing to spend the time it takes to go and buy the game in store, even taking the day off work on release day, as they value the box art and the hard copy of the game.

Shelves with games have the advantage of getting noticed by in-store shoppers. Usually, in-store shoppers may be lured to buy games on impulse for many reasons, the game packaging being the most important motivator. Game packaging ought to be creative and descriptive, as it is a more influential form of advertising than commercials, online ads or trailers. In-store demonstrations, and a clerk's or another shopper's recommendations are also factors which may trigger impulse purchases (Berg, 2010).



**Figure 1.** The Traditional Video Game industry Value Chain (Berman-Grutzky&Cederholm, 2010)

### 2.3. Digital Distribution

Today, the gaming industry follows the same steps as the music industry towards digital distribution. This is not strange since digital distribution is cheaper compared to physical distribution. The risk of publisher takes to get a game online is nothing compared to physical distribution costs such as manufacturing, warehousing, and also shipping. This leads to a lower barrier of entry, which is especially important for small development studios. Moreover, online distribution eliminates physical returns, which cost money to process. By digitalizing distribution, game publishers get control of the rental market, and piracy prevention is made easier by requiring online verification, both significantly increasing publishers' revenues. Additionally, digital distribution means the death of second hand market, where publishers see no returns (Berg, 2010).

On the consumer side, sometimes it is easier to download compared to buying in store as long as that consumer have high-speed broadband access. Digital games should also end up cheaper than physical games as one do not have to buy from other intermediaries for example retail store, this saves money since there is no need to stock game on shelves or pay wage to shop assistants.

Steam, the number one online distributor today, was developed by Valve using the cash from their hit games. Gabe Newell, the CEO of Valve in Kirkland, Washington, estimated that "Valve can realize a gross profit of \$30 on a \$50 title by releasing a game using Steam, compared with a gross profit of \$7.50 by releasing a title through the retail channel with a game publisher ". Also, Steam is able to collect data of user's statistics, which are a great value to game developers such as Digital Happiness Studio and other third parties.

### 2.4. Service Output Demand

According to (Fagan, 2010), Service Output Demand is the productive output of the marketing channel that end-users have demand and preferences for. Service Output Demand contains very important factors that affect and show how a customer buys a product in every industry, including the software and gaming industry.

In the service output demand, there are six aspects of the shopping experience that affect how an individual buys a product as opposed to simply what they buy. It is important to take note that Service Output Demand does not involve the quality or price of the product itself. Those aforementioned aspects are:

#### Bulk-breaking

1. Spatial convenience
2. Waiting
3. Product variety
4. Customer service
5. Information provision

Here below are brief explanations regarding those aspects according to (Hutabarat, Sari, & Wijanarko, 2011):

1. Bulk breaking enables customers to buy their desired quantities of product.
2. Spatial convenience reduces customer's transportation requirement search cost.
3. Waiting means time period between ordering and receiving products and services.
4. Product variety shows both the extensiveness of product lines, and also depth of product brand or models offered within each generic product.
5. Customer service means how good the service provided toward customers.
6. Information provision means the education of customers about product attributes, product usage capabilities, pre-purchase service, and post-purchase service.

## 2.5. Piracy

Is Piracy really that common? Piracy has always existed, but now, it is much easier to obtain something without paying for it as compared to, say, 10 years back. This is mostly attributable because of the high-speed internet connections and the channels it has opened up. People can now download something using torrents, FTP, file-sharing hosts, etc(Shahid, 2014).

The act of piracy is the unauthorized copying of software. By buying software, the buyer becomes a licensed user instead of owner. The buyer is allowed to make copies of the program for backup purposes, but it is against the law to give copies to friends and colleagues (Beal, 2015).

**Table 1:**Top 20 Economies in Commercial Value of Unlicensed PC Software (Business

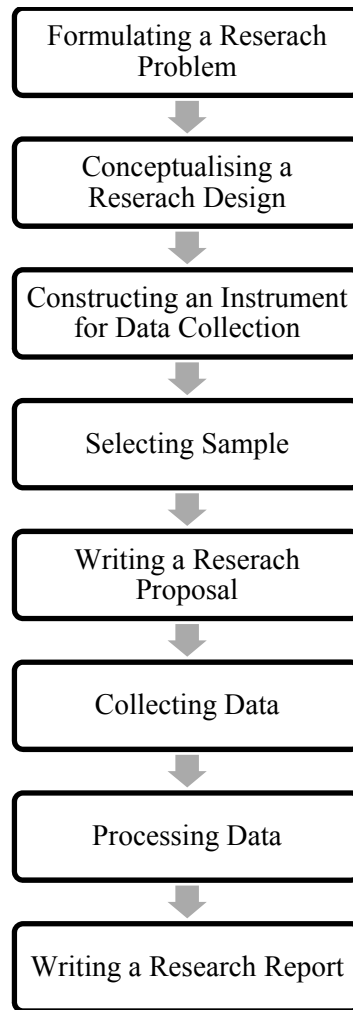
| Country        | Unlicensed Value (\$M) | Licensed Market (\$M) | Unlicensed Rate |
|----------------|------------------------|-----------------------|-----------------|
| United States  | \$9,737                | \$44,357              | 18%             |
| China          | \$8,767                | \$3,080               | 74%             |
| India          | \$2,911                | \$1,941               | 60%             |
| Brazil         | \$2,851                | \$2,851               | 50%             |
| France         | \$2,685                | \$4,773               | 36%             |
| Russia         | \$2,658                | \$1,629               | 62%             |
| Germany        | \$2,158                | \$6,834               | 24%             |
| United Kingdom | \$2,019                | \$6,394               | 24%             |
| Italy          | \$1,747                | \$1,970               | 47%             |
| Indonesia      | \$1,463                | \$279                 | 84%             |
| Japan          | \$1,349                | \$5,751               | 19%             |
| Mexico         | \$1,211                | \$1,032               | 54%             |
| Canada         | \$1,089                | \$3,267               | 25%             |
| Spain          | \$1,044                | \$1,276               | 45%             |
| Venezuela      | \$1,030                | \$140                 | 88%             |
| Argentina      | \$950                  | \$427                 | 69%             |
| Thailand       | \$869                  | \$355                 | 71%             |
| Australia      | \$743                  | \$2,795               | 21%             |
| South Korea    | \$712                  | \$1,162               | 38%             |
| Vietnam        | \$620                  | \$145                 | 81%             |

Software Alliance, 2014)

A trusted source named BSA (Business Software Alliance) has conducted a survey all over the world regarding this piracy matter. The survey shows that according to the Table 1., Indonesia is positioned at tenth position in the "unlicensed value" with \$1,463 millions. However Indonesia is in the second place for the unlicensed rate at 84% behind only to Venezuela at 88%.

This means that from the total numbers of software units installed, 84% of those are unlicensed or pirated version. Therefore there are only 16% of those are licensed or original.

### 3. Methodology



**Figure 2.** Research Process(Kumar, 2010)

#### 3.1. Type of Research

The type of research used in this paper is Causal Research. Causal Research is quantitative in nature and attempts to explain the cause and effect relationship between variables. Causal research has two objectives: 1) To understand which variables are the causes and which variables are the effects, and 2) to determine the nature of the relationship between the causal variables and the effect to be predicted (Penwarden, 2014).

Therefore, this research discusses about the cause and effect relation of several variables including the influence of customers' preference channel which are Physical Distribution and Digital Distribution towards the risk of piracy.

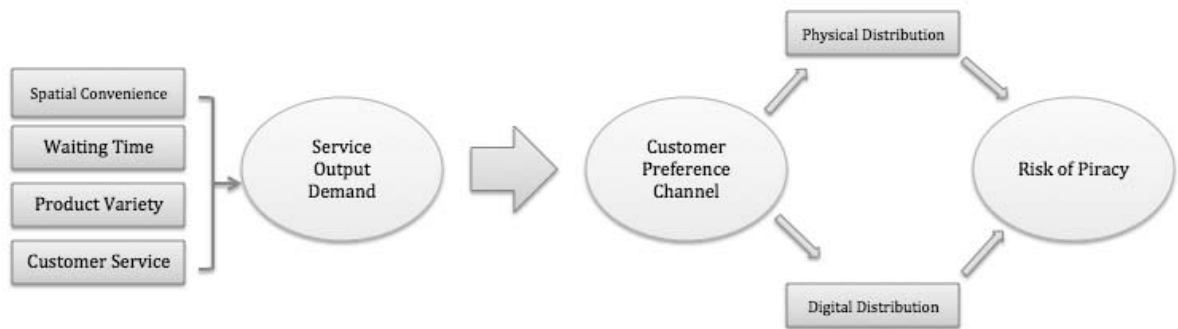
#### 3.2. Data Collection

This research uses the primary data. This is mainly because the data collected came from questionnaires that were distributed to potential customers of Digital Happiness Studio and also from an interview with an employee of Digital Happiness Studio.

The unit of analysis for this research is potential customers and employees of Digital Happiness Studio. Due to the fact that the primary data will be generated from questionnaires that will be distributed to potential customers and also interview with an employee of Digital Happiness Studio, thus the unit of analysis in this research can be categorized as people.

The research was conducted between the months of April and June 2015 by interview and also questionnaires. The interview took place in Digital Happiness Studio's office that is located in Jl. Biologi 22, Bandung, Indonesia. The questionnaires were available online for potential customers.

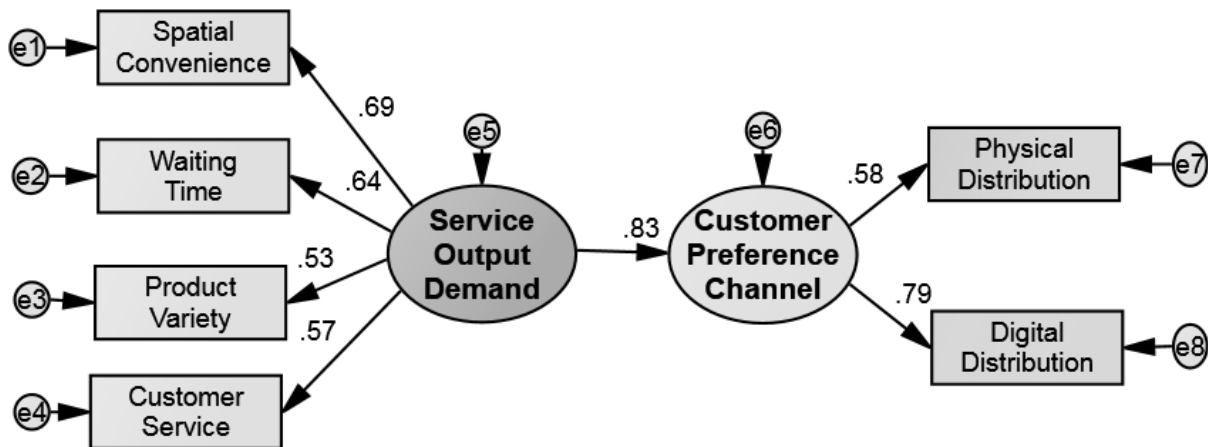
This research was made with the purpose of identifying factors that identify the ideal distribution channels to avoid piracy in the gaming industry. In other words, to see which distribution channels are preferred by customers, and how to minimize the threat of piracy in that particular distribution channel.



**Figure 3.** Research Methodology

In this research model, those indicators from Service Output Demand will influence the Customer's Preference Channel, which also have two indicators like the Physical Distribution and Digital Distribution that will affect the Risk of Piracy.

#### 4. Findings and Discussion



**Figure 4.** Structural Equation Modeling Analysis

The figure above shows the structural model with standardized path coefficients that shows the direct effect of an independent variable on the dependent variable in the path model. The standard regression weight  $r$  is indicated in the path diagram.

The relationship between coefficient range and the strength of association can be viewed in this following table:

**Table 2:** Rules of Thumb of Degree of Correlation Source: Burns and Bush, 2006

| Coefficient Range       | Strength of Association |
|-------------------------|-------------------------|
| $\pm .81$ to $\pm 1.00$ | Very Strong             |
| $\pm .61$ to $\pm .80$  | Strong                  |
| $\pm .41$ to $\pm .60$  | Moderate                |
| $\pm .21$ to $\pm .40$  | Weak                    |
| $\pm .00$ to $\pm .20$  | None/Very Weak          |

A rule of thumb denotes that if the value of  $R^2$  is lower than 20% ( $r < 0.4$ ; weak), the model is not acceptable.

## 5. Conclusion and Recommendation

### 5.1. Conclusion

- 53% of respondents are willing to spend Rp. 500,000 – Rp. 1,000,000 per month for video games. This means, 53% of respondents are willing to pay that sum of money, which is enough to buy 1 original copy of the game every month. 1 original copy of the game usually is sold at Rp. 500,000 – Rp. 750,000 while a limited edition could be more expensive.
- 46% of respondents get their game from retailer. This number is slightly higher compared to the second most preferred place to get video games, which are through online purchase and download with 43%.
- 54% of respondents prefer physical distribution, compared to 46% who prefer digital distribution. A couple of years ago, this number could very well be more one sided compared than this number, due to the availability of internet in Indonesia. However, with the progression of technology here, there are more and more people each year who prefer digital distribution. The majority of people in Indonesia are still used to buy games in retailer. There are several reasons of why this is happening. 1. They have been doing this for years, and are used to buy physical copies rather than download the digital copy. There are also many pirated versions of a game being sold at cheaper prices compared to its original counterpart in many retailers. 2. Internet speed in Indonesia is not fast enough to download games, therefore more people prefer to buy the physical copy of the game which require no downloads.
- The coefficient correlation of Service Output Demand with Customer Preference Channel is at 0.83. According to rules of thumb of degree of correlation, this number can be considered very strong.
- The coefficient correlation of Spatial Convenience with Service Output Demand is at 0.69. According to rules of thumb of degree of correlation, this number can be considered strong.
- The coefficient correlation of Waiting Time with Service Output Demand is at 0.64. According to rules of thumb of degree of correlation, this number can be considered strong.
- The coefficient correlation of Product Variety with Service Output Demand is at 0.53. According to rules of thumb of degree of correlation, this number can be considered moderate.
- The coefficient correlation of Customer Service with Service Output Demand is at 0.57. According to rules of thumb of degree of correlation, this number can be considered moderate.
- Therefore  $H_1 \#1$  is accepted because Service Output demand has a significant positive impact on customer preference channel.
- The standardized regression coefficient of Physical Distribution on the Customer Preference Channel to Minimize the Threat of Piracy is at 0.58, thus, this can be considered as moderate.
- The standardized regression coefficient of Digital Distribution on the Customer Preference Channel to Minimize the Threat of Piracy is at 0.79, thus, this can be considered as strong.

12. Therefore, the hypothesis  $H_0\#2$  which states that “Physical Distribution did not manage to minimize the threat of piracy the most” is accepted and The hypothesis  $H_0\#3$  is rejected and and the hypothesis  $H_1\#3$  which states that “Digital Distribution managed to minimize the threat of piracy the most” is accepted

## 5.2. Recommendation

1. Make the games available in physical copies as well, even though the main focus should still be in digital distribution. In Indonesia, most people still prefer physical distribution because of the limitation of internet speed. However, this is only a short-term solution, because in the long-term, people will be leaning towards digital distribution just like in other countries. This is caused by the advancement of technology which improve the stability and provide better and faster internet connection.
2. Improve customer service. By doing this, customers will feel special and appreciated by the game developer, and therefore increases the chance of customer buying the original copy of the game.
3. Keep innovating with updates and downloadable content (DLC) that can only be accessed by original copies' owner. This will increases the chance of customer buying the original copy of the game.
4. According to *HAKI (Hak Kekayaan Intelektual)*, which also called Intellectual Property in English, there are several ways to minimize the threat of piracy in Indonesia. First, the Digital Happiness Studio should give a copyright protection for their games so that no one can duplicate their games. They could also protect their games by trademarking the title of their games. This will protect the title of their games from being used by other parties.

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