CHAPTER 1

INTRODUCTION

1.1 Background

This research study is based on the original Journal of Business Ethics titled "Consumer's Willingness to Pay for Non-pirated Software" by Jane L Hsu and Charlene W. Shiue in 2008.

Development of IT is stated to be the current driver to economy growth [1]. This rapid growth of IT is highly driven by Software development [2]. Software being one of the main driver of IT, is considered an indispensible tool utilized in almost all business related activities and as well as crucial components for other industries example the auto-mobile, telecommunication industry, education industry, etc. However, software are also the sector that is prone to create losses towards IT due to Intellectual property rights violation and has been escalating through out the development as IT expenditure increases. [2] Software piracy is defined as the copying or distribution of software applications on personal computers, servers, desktops, laptops, and other portable electronic devices, without the permission of the software author/s or organization who owns the copyright or intellectual property [3]. Due to high rate of software piracy worldwide an association called Business Software Alliance was introduced to help combat piracy. The association is based in about 80 countries in effort to control piracy.

The ease of duplicating software is the reason behind it becoming a global phenomenon. [4]. Furthermore, the improvement in technology such as the high speed of the broadband, the betterment development of the internet and improvements in network technology has facilitated piracy even more. Based on a research by Business Software Alliance, globally at least 7 out of 10 computer users are concerned about intellectual property rights protection however a contradiction is observed as 47% of the global population claim to obtain their software illegally [5]. The value of Piracy is even higher in developing nations such as in Asia would be Indonesia, India, Taiwan, Thailand and even more [5]. Persistence of piracy results into the loss of opportunities to the industries [2]. According to a research conducted by IDC (International Data Corporation) showed a $45 billion acquisition of pirated software leads to a loss of $110 billion in form of revenue, employment and other related sectors [2].

A recent research in May 2013 conducted by Insead for BSA, highlighted the competitive advantage of using a legal software based on data of 95 countries [6]. The results exemplified that for at least 1% of increase in use of legal software would add $53 billion revenue globally.

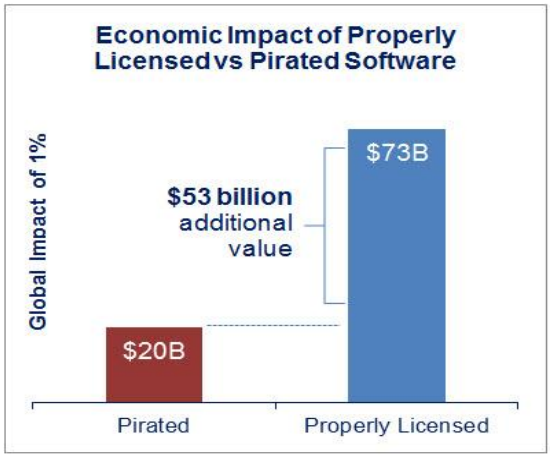

Figure 1.1 Economic Impact of Licensed vs Pirated Software [6]

Developing countries are nations that acquires the highest piracy rate, and this behavior of purchasing a pirated software is also abided by the decision makers in the business sectors [5]. Thus the correlation between countries where the per capita income is lowest and rate of piracy is clearly highlighted. It forms a trend where developed nations such as US has rate of only 20%. [2]

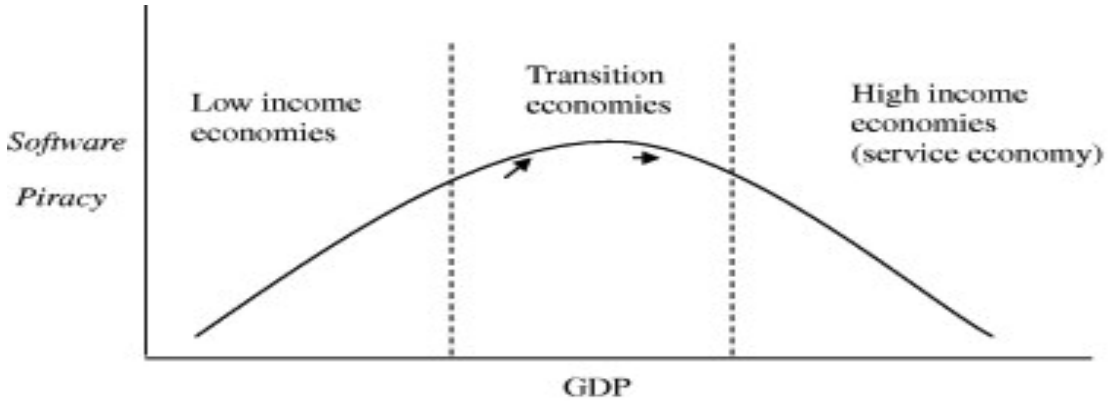

Figure 1.2 Software Piracy Trend

A study by IDC, indicated that a 10% reduction in piracy would lead to the following opportunities for a nation since Adoption rate of IT is at its Peak. [2]

	2009 Piracy Rate	10-pt Reduction: New Jobs	10 pts in First 2 of 4 yrs ($M): Added GDP	10 pts in First 2 of 4 yrs ($M): Extra Taxes	10 pts Spread Over 4 yrs ($M): Added GDP	10 pts Spread Over 4 yrs ($M): Extra Taxes	Rapid-Reduction Dividend, 2 yrs v 4 yrs: Added GDP	Rapid-Reduction Dividend, 2 yrs v 4 yrs: Extra Taxes
Asia Pacific								
Australia	25%	3,786	$3,062	$768	$2,253	$564	36%	36%
China	79%	250,102	$21,053	$5,774	$15,966	$4,397	32%	31%
Hong Kong	47%	2,222	$511	$213	$378	$158	35%	35%
India	65%	59,728	$6,132	$676	$4,662	$512	32%	32%
Indonesia	86%	1,884	$3,175	$162	$2,433	$124	31%	30%
Japan	21%	9,576	$12,286	$2,518	$8,907	$1,829	38%	38%
Malaysia	58%	3,452	$1,360	$306	$1,017	$229	34%	34%
Philippines	69%	1,097	$436	$39	$329	$30	33%	33%

Figure 1.3 Reduction of 10% Piracy Benefit Prediction [2]

Even though GDP of Indonesia has a big gap, the problem which majorly increases piracy are by the large enterprises that do not comply to the IP laws. [7] This unfair competition due to the utilization of pirated software for productivity at lower cost creates the firm at an advantage that ruins business in the domestic and international level due to unfair competition. These enterprises of theses emerging markets afford to acquire factories, sophisticated industrial equipment, buildings and ironically still conduct piracy. This result was confirmed by the Global piracy study conducted by BSA in 2011, that enterprises cut cost through piracy, and affordability is not an issue in comparative to their asset, thus this indicates price is not the only matter but also the value associated to softwares and the legal system. [8]. Indonesia's loss on software piracy has reached $1.46 billion. [9]

Asia Pacific region is stated to have creates a commercial loss of $18.7 billion due to Piracy of software. [10] According to research by BSA in 2011, Indonesia has a piracy rate of 86%, which ranks them at number 11 among other piracy nations [11].

	Piracy Rates					Commercial Value of Unlicensed Software ($M)				
	2011	2010	2009	2008	2007	2011	2010	2009	2008	2007
Asia Pacific										
Australia	23%	24%	25%	26%	28%	$763	$658	$550	$613	$492
Bangladesh	90%	90%	91%	92%	92%	$147	$137	$127	$102	$92
Brunei	67%	66%	67%	68%	67%	$25	$19	$14	$15	$13
China	77%	78%	79%	80%	82%	$8,902	$7,779	$7,583	$6,677	$6,664
Hong Kong	43%	45%	47%	48%	51%	$232	$227	$218	$225	$224
India	63%	64%	65%	68%	69%	$2,930	$2,739	$2,003	$2,766	$2,025
Indonesia	86%	87%	86%	85%	84%	$1,467	$1,322	$886	$544	$411
Japan	21%	20%	21%	21%	20%	$1,875	$1,824	$1,868	$1,495	$1,791
Malaysia	55%	56%	58%	59%	59%	$657	$606	$453	$368	$311
New Zealand	22%	22%	22%	22%	22%	$99	$85	$63	$75	$55
Pakistan	86%	84%	84%	86%	84%	$278	$217	$166	$159	$125
Philippines	70%	69%	69%	69%	69%	$338	$278	$217	$202	$147

Figure 1.4 Piracy Rate and Commercial Value Comparison [8]

The lack of law enforcement is stated to have causes rise in the piracy and hence no fear in committing the acquisition of pirated software. [12] Indonesia has intellectual copyright laws, are member of Trips Agreement and even the WIPO copyright treaty. However they have not really implemented the law aside from organizing raids with the police department however no prosecution or cases are brought to court. [13]

Piracy in Indonesia are widespread not only among individuals but extends to large manufacturing companies, real estate industry, architects, finance industry, hotels and many more. [12] The reason behind this is said to be the lack of education on intellectual piracy rights, where individuals do not potentially understand the violation occurring. The requirement of education, indicates lack in value towards IP rights. According to Robert Holleyman, CEO of BSA, the meaning of software piracy is not interpreted in a

uniform way. There are individuals who are against the idea of violating IP rights however in practice still perform software piracy. This therefore requires further analysis in attitude. Based on research conducted by BSA, only 13% are afraid of prosecution risk and 17% agrees it is ethically wrong while 60% admits to acquire pirated software. This shows the attitude towards IP rights in Indonesia are extremely low and therefore a further study is requires to understand the behavior pattern [14].

Apart from the fact that Indonesia seems posses low IP rights value, The IT expenditure of Indonesia had reached 10.9 billion by 2011 and there is a prediction that it would increase by 18.3% in the upcoming years. The expenditure breakdown is composed of expenditure for hardware, service and software purchase. This amount is definitely excluding the pirated software. If there would be no piracy, Indonesia would be spending 4 times the current price it allocates to software which is roughly 1.46 billion. [9] The graph below illustrates the development of IT spending of Indonesia. We can observe a very rapid gap between hardware and software expenditure which reflects the high piracy rate (pirated software are not recorded thus software expense seems low).

Figure 1.5 IT Spending Rate Of Indonesia 2011- 2015 [9]

Thus due to this rapid adoption of IT, Lack of legal enforcement and attitude towards IT thus it is necessary to address the problem immediately before further losses. Software piracy seems to be surging, annually Microsoft records an approximate loss of US$750 billion due to piracy. [1]. Apart from the fact that global efforts are being carried out the fact that technology has helped to create ease at duplicating software and the imminent existence of demand thus creates a loop for piracy to continue. In a research by BSA(Business Software Alliance) in 2008, have indicated a piracy rate of 85% and in 2011 the research showed an increase to 86%. [2]

Software Companies are not the only compromised sector when it comes to piracy. The following sectors are equally compromised [15]:

- Domestic Software Industries (compromised due to unfair competition of pirated software competition of imported software).
- Domestic Service Provides and Channel Partner (Loss of revenue due to piracy sales).
- Businesses and Enterprises that purchase pirated product and suffer massive loss due to defects and malware.
- Governments Loss of Tax revenue.
- Lower economy that impacts to slower job growth.
- Demotivation of Software developers at performing innovation due to IP rights violation. (Slows down innovation, which is the sole purpose of IT).
- Private consumers effected due to infringement of piracy and malware due to product incompetency.

From the preceding illustration have shown the problem caused by piracy indicates the core problem of piracy or the factors that are involved in decision making of legal software should be investigated. With an alarming rate of 86%, Indonesia has very less research studies investigating the demand for piracy. The discussion above has supported the claim that software piracy is an interplay between economy, social behavior and legal issues associated. [16] Thus in this study we are going to further understand on bases of price, risk and attitude.

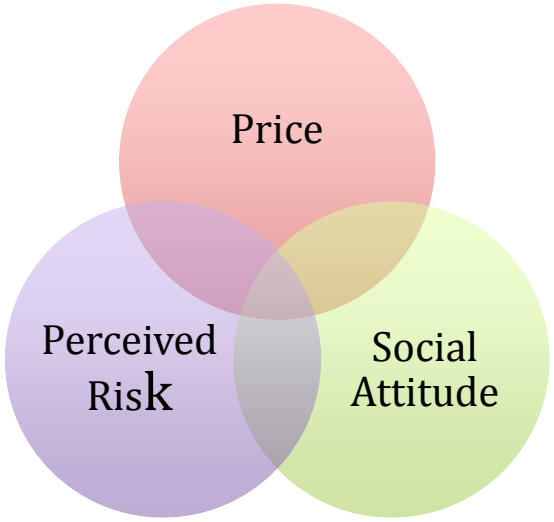

Figure 1.6 Software Dynamic Interplay between Economy, Attitude and Risk.

Software Piracy has always indicated to drain IT innovation, job creation and economy. With software theft at IDR 1.28 trillion in 2011, Therefore Government should take more action and therefore focus more in solving this persistent issue. [17] Annually Microsoft records an approximate loss of US$750 billion due to piracy. [1]. Microsoft Windows is the most pirated software in Indonesia. [18]Followed by Microsoft Office, Adobe Photoshop, Symantec Norton Anti virus and Mc Afee. [19]

Apart from the fact that global efforts are being carried out the fact that technology has helped to create ease at duplicating software and the imminent existence of demand thus creates a loop for piracy to continue. In a research by BSA(Business Software Alliance) in 2008, have indicated a piracy rate of 85% and in 2011 the research showed an increase to 86% [5].

There has been studies of other countries illustrating that the reason is due to the unfair pricing, permissive attitude towards law, collectivism, lack of integrity. Thus the purpose of this research is to focus on the circumstances of Indonesia. Where by we would observe the factors effective attitude towards IP law, the perceived risk associated in the mindset of the people towards their willingness to pay.

The problem of software piracy will not diminish as long as users have intentions to use unauthorized software products [4]. Users of unauthorized software often lack respect for intellectual property rights. The misuse of copyrighted software not only affects the benefits of copyright holders, but also weakens innovation and handicaps economy that could be gained through tax as explained previously. Furthermore, the GDP of Indonesia is relatively low thus the affordability rate differs as well. Thus we are going to identify through this research the gap of pricing at which is appropriate according to the survey.

Would there be factors influencing consumers' decisions about choosing authorized products? How much are consumers willing to pay for the usage of authorized software products? This is what this study would further investigate.

The objective of this study is to understand the main driver of influence based on two broad perceptions; attitude towards IP rights and Perceived risk in its impact towards the willingness to pay for non-pirated software. This is to strategize means of combating piracy appropriately based on the influential factor.

1.2 Scope

The scope of this research is to examine the influence of attitudes towards intellectual property rights and perceived risk towards willingness to pay of the software products that are often pirated as Microsoft Windows and Microsoft office. This research includes all form of attaining the software product without legal consent shall that be transferred through tangible medium or virtually.

This study is conducted in Indonesia and the respondents are Indonesian consumers. A web-based survey is initiated through distribution of questionnaire. The questionnaire was constructed through google docs and the link to be distributed through email and social media's towards respondents. This survey collected 218 respondents composed of High school students, undergraduates, graduate students (under master degree) and general consumers.

The main reason for a varied respondent grouping is to provide a greater insight towards the understanding of behavior towards the drive of willingness to pay for non-pirated softwares. This includes a better comparison towards the price range related to the income level. Consumers filling the survey should have ever acquired a Microsoft windows and office pirated software previously.

In this study we would focus on the most frequent pirated software in Indonesia which is Microsoft Office and Microsoft Windows. This is based on an explarotary research conducted. A sample of respondents were asked the pirated software they have utilized. The choices were between Microsoft Office, Microsoft Windows, Adobe PhotoShop, Mc Afee anti-virus and Norton. Form the finding 14 people out of 15 have ever used a pirated version of Microsoft office and 13 out of 15 people have ever used a pirated version of Microsoft windows .Thus, this study selects two commonly used commercial software products, Microsoft Windows and Microsoft Office, to examine consumers' usage patterns of unauthorized software in addition to evaluating the amount of willingness-to-pay for these two software products.

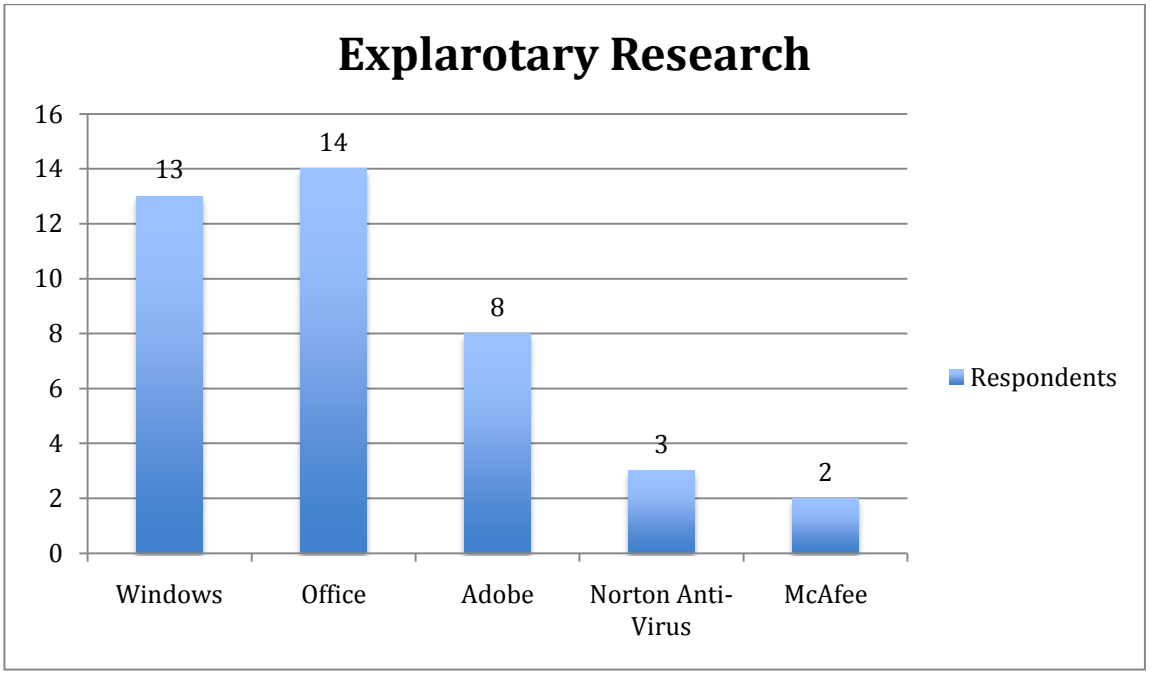

Figure 1.7 Explarotary Research results

1.3 Aims and Benefits

Aims:

- To establish a better understanding on the perspective to be taken between attitude and perceived risk in combating piracy in Indonesia effectively.
- To discover the most influential factor that enhances a consumer's willingness to pay for non-pirated software.
- To identify the difference in pricing among the consumer's perception and current market price. To enable an efficient strategizing scheme for all stakeholders involved.
- To be able to indicate the actions to be taken by Software companies and the Government towards the appropriate demographic group of consumers in order to combat piracy and influence willing-ness to pay for non-pirated software.

Benefits:

- Generates ability for Software companies and developers to enact appropriately after obtaining a further analysis of consumer behavior pattern.
- Provide the Government with a better understanding on means to drives to increase Attitude towards Intellectual Property rights such as by creating campaigns or altering law,etc.
- To determine actions to be taken in influencing consumers to value non-pirated software and enhance the willingness to pay.
- The survey obtained through this study aims to clearly illustrate the demographic profiling, components effecting purchase decision, software

preference as well as the constructs that significantly influence willingness to pay. Thus the solution would be able to address the target more optimally.

1.4 Research Questions

The procedure of the research, involves 8 hypotheses. There are various variables that are tested for their influence towards the willingness to pay for non-pirated softwares. In regard to this research, the variable are as follows: On behalf of the attitudes towards intellectual property rights are Normative susceptibility, Value conscious, Novelty seeking and on belf of perceived risk are Performance risk, Social risk and Prosecution risk. In order to comply to this research requirement a set of research questions are created to asses the factors that influence and to focus on the objective of this research. Here below are the research questions to be answered through this study:

RQ1. Which of the following, between Attitude towards IP rights and Perceived risk indicated a more significant influence towards willingness to pay for non-pirated software?

RQ2. What are the major factors at influencing willingness to pay for non-pirated software?

1.5. Structures

The thesis is composed of 6 chapters.

Chapter 1 – Introduction

The first chapter of this thesis, it contains the background of the research, which provides an introduction towards the piracy issue and the type of piracy occurring in the statusquo. Scope provides a clear insight on the focus of this study on the determination of the factors influencing the willingness to pay of a consumer. Followed by the structures provide a brief description about each section of the thesis.

Chapter 2 – Theoretical Foundation

This chapter provides all the necessary information of the major elements involved in this thesis, including the theoretical foundation on the variables that would be examined thoroughly. The theories that are the basis of the research and relation between the constructs such as effects of the attitudes towards intellectual property rights and the perceived risk that results into the willingness to pay for non-pirated softwares are explicity explained. The Hypothesis is included in this chapter.

Chapter 3 – Research Methodology

The third chapter of this thesis describes on how the research will be carried out. The research objective is explained, the sampling design (i.e. how samples will be collected), the methods that will be used for research. The constraints of the

research, pre-test, reliability testing, validity testing and questionnaire are illustrated in this chapter.

Chapter 4 – Research Findings and Analysis

This chapter 4 discusses the analytical result from the research mehodology applied. The result obtained from the Factor analysis, One Way Anova, Cross-Tabulations, Cluster Analysis and also linear Regression. The correlations and measurements of the hypothesis are illustrated in this chapter.

Chapter 5 – Discussions

This section of the thesis is basically the summary of the findings found in chapter four. This is the chapter where the results and findings of the research are discussed and a compilation of the conclusion is provided. This also includes the limitations and suggestions for any related study in the future.

Chapter 6 – Conclusion and Recommendations

This section of the thesis is basically the summary of the research from the findings and discussion and the thesis is concluded with highlighting the answer to the research questions. Further implementations of the suggested solutions to improve piracy situation in Indonesia are provided. Limitations of the current research and recommendations for the future research are illustrated in this chapter.