CHAPTER 2

THEORETICAL FOUNDATION

2.1 Theoretical Foundation

Software Piracy is the act of unauthorized copying or distribution of copyrighted software. It includes all form of duplication and distribution in form of copying, downloading, sharing, selling, or installing on to personal computer attained without proper purchase of license is considered Piracy. [3]

Below are the common types of Software Piracy that occurs [20]:

Types of Software Piracy	Description
Softiling	The sharing of software with someone that are not legally authorized. Instances this occurs are usually sharing among friends in which product keys are shared and softwares are put onto more than the devices they are permitted to install. Softlifting is common in both businesses and homes.
Hard Disk Loading	Committed by Hardware dealers, the loading of software into a device without proper authorization.
Internet Piracy	With Increasing adoption of IT rate and the increasing connection speeds and even currently many softwares are sold through internet sites or downloadable through torrents. Thus this is the most widely known channel of piracy.
Counterfeiting	Counterfeiting is the act of creating the product exactly like the original with purpose intention to minimize any noticeable difference even in form of the packaging, manual guides. Usually sold on streets or small retail stores and sold far below market price.

Table 2.1 Types of Common Software Piracy Methods

"In spite of the fact that actions have been taken legally as well as through education of IP law (Intellectual property law) the easiness of duplicating software and the availability of pirated software in the market is an indication that pirated softwares would continue to exist"

Mentioned By Microsoft Anti-Piracy Lead Mr.Sudhimin Mina in an interview on 15th March 2013.

Furthermore with the existence of an imminent demand of pirated softwares and when the mindset of what is available for free or at a lesser price indicates that it is acceptable to be downloaded, undermining the violation happening as proven in a study on student attitudes towards pirated software, shows this problem would expand [21].

This study would therefore focus on the consumer attitude towards purchase decision of non pirated softwares, this includes obtaining software in form of purchasing through cd/dvd as well virtually through torrents or other channels. This study focuses on the prevailing issue of software piracy by constructing a model that weighs the purchase decision circumstances which results into obtaining of non-pirated softwares. The model is formed by the following constructs: attitude towards intellectual property rights and the perceived risk associated to the rights towards the willingness to purchase of non-pirated softwares. Additionally since many studies has proven price as one of the determining factor, further analysis on price as the determinant of consumer behavior would be analyzed. [22]

Prespectives	Variables	Source	Theory
Attitude Towards IP rights	Normative Susceptibility, Value Consciousness and Novelty Seeking.	Ang et. al (2001), Wang et. al (2005), Hsu and Shiue (2008)	Theory of reasoned action
Perceived Risk	Performance Risk, Social Risk and Prosecution Risk.	Chiou et. al (2005), Tan (2002), Wang (2005), Wee et. al (1995), Hsu and Shiue (2008)	Theory of planned behavior

Table 2.2 Author's source for research

In this research, we have focused attitudes towards intellectual property rights on the basis of the following constructs: normative susceptibility, novelty seeking and value consciousness. Additionally Perceived risks are also measured to observe the influence on willingness to purchase based on the following factors: Prosecution risk, social risk, Performance risk. This research would gain insight on the effects these constructs would have towards the willingness to purchase of consumers and simultaneously a price change preference in comparative to the economy level. A detailed understanding of the variables would be illustrated through out the chapter providing theories from various credible sources and research results.

2.1.1 Attitude towards IP rights

Intellectual property is defined as intangible product that are usually generated by the idea of an individual. However are distributed through tangible mediums and virtually as well [23]. Due to the fact that it is intangible often diminishes the ownership value of the product Thus to protect ownership rights copyright, patents and trademarks are originated. Moreover, the advancement in technology has created an easier path for duplication and distribution of softwares. [4] Thus with an existing intention of piracy the software piracy issue would continue. In a study of student attitude on piracy, Robert Siegfried compared his study in 2005 with study of Cohen and Cornwell and by Schuster in 1987 and the result of attitude towards software piracy has not changed through time [21].

This indicates there is lack of concern in the degree of how unethical software piracy is. A study by Swinyard et al compared attitude towards piracy in US and the awareness of law does not necessarily translate to a positive ethical attitude towards software piracy. In the cross-cultural study of Swinyard et al which compared Singapore and US students indicated that even though students in Singapore were more knowledgeable concerning the IP laws the attitude towards piracy was worst than US students. [24]. Based on the Theory of reasoned action, where if an individual does not consider the deed unethical and is simultaneously supported by the surrounding (subjective norms) therefore results in high chances to perform the behavior. [25].

Subjective norms are based on the social pressure to perform a behavior. It is based by what the society view as right or wrong. Thus when the family, friends, government and experts are consistent at proving the deed as unethical, tendencies of performing action would be reduced. Subjective norms are formed by 2 factors Normative susceptibility and Informative susceptibility. [26] . The attitude towards purchase decision of non-pirated softwares would also be further analyzed based on the importance provided to value consciousness and novelty seeking which are antecedents towards purchase behavior. [27]

2.1.1.1 Normative susceptibility

Normative susceptibility is defined as when individuals attitude are highly effected by the opinions and information provided by the surrounding environment [28]. The approval of the surrounding, highly effect the willing ness to purchase at this situation. Normative susceptibility is when the attitude of an individual is based on the positive or negative views of others on the action. Normative susceptibility is composed by 2 components [29].

Normative Susceptibility Factors:	
Utilitarian Influence	When an action is performed to comply as to what the conventional belief.
Value expressive influence	When action is performed to gain a better self-image among the surrounding by abiding the belief.

Table 2.3 Normative Susceptibility Factors

Social views could be a factor that leads to the high rate of piracy, as even a study on Purchasing pirated software: an initial examination of Chinese consumers indicated that normative susceptibility positively relate towards the deterrence of committing an unethical violation. However on informative susceptibility which is based on information retrieved from experts there has not been significant correlation towards the attitude of attaining pirated softwares [30].

Thus normative susceptibility is a valid construct for the observation of attitude of intellectual property rights towards willingness to purchase.

2.1.1.2 Novelty Seeking

Novelty seeking is the demand of innovative product that arise from the consumers. This satisfies consumers that are driven by variety and are trend followers. [22]. There have been different result obtained in different studies over the influence of novelty seeking. Wee et al(1995) indicated that novelty seeking was an important influencing factor among students however minute impact was observed concerning adults [31]. Novelty seeking is regularly concerned with consumers who attain product ensuring low risk. However there is a contradiction in regard to counterfeit products, where by consumers with high novelty seeking preference react positively to piracy. This could be due to the demand of frequent changes thus they neglect the risk as well as IP rights. [32].

Thus this motivates novelty seeking as a factor to be explored on the research to identify whether it influences towards willingness to purchase of non pirated software.

2.1.1.3 Value consciousness

Value consciousness defines consumers that are sensitive towards price and weigh out each purchase on the bases of whether they perceive the product to be valuable its price [22]. In the study by Ang et al (2001), it was clearly specified that value consciousness is the willingness to seek opportunity to purchase at a price worth for the money [27]. Personality characteristics are indicated to influence towards purchase decision of counterfeited/pirated products [27]. Value consciousness consumers perceive counterfeit products as a cost saving mechanism [32]. Individuals with a high value consciousness are inclined to be favouable towards piracy. Since they perceive the functionality of pirated versions are almost similar to that of original ones, in which at least the basic functions are fulfilled. [33]. However by understanding the value consciousness we can determine whether price is a very significant determining factor that cause people to neglect their beliefs. [21]. Based on the findings of Hsu and Shiue, indicated that students with high perceived value of non-pirated software are willing to pay, however if the students feel a higher value in non-pirated software they would be inclined towards the pirated software. Thus we would further induce whether value consciousness positively relate towards willingness to purchase of non-pirated softwares. [4].

2.1.2 Perceived Risk

"Risk perception is the subjective judgment that people make about the characteristics and severity of a risk " [34]

Perceived risk is when an individual is aware of taking the risk due to attaining the pirated software, and of the negative consequences. Perceived risk is considered as one of the ethical determinants towards purchase behavior [35]. In a research by De

Matos et al (2007), it was revealed through the finding that perceived risk is the most important and crucial variable at predicting consumer counterfeits. [26] Perceived risk was first introduce by Bauer in 1960 when he considered choices taken by individuals based on risk taking. [22] This evolved a new characteristic among learning individual behavior [22]. Perceived risk was also incorporated into the Theory of planned behavior which does not only revolve around individuals volatile behavior at decision making but also consider factors above control of the individual. [25]

Factors effecting Perceived Risk	
Financial and Performance risk	Product would not perform as optimally as well as no genuine license or warranty provided.
Physical risk	Product safety not guaranteed
Social risk and psychological risk	Effect towards self-image among society, perspective of how society will perceive the individual.
Time loss	Waste of time and effort due to reparations and re-purchase.

Table 2.4 Factors of Perceived Risk [36].

2.1.2.1 Prosecution risk

Perceived Prosecution risk is violation that is created by committing crime (infringement of intellectual property right – copyright law of owner) [22]. For purpose of this study we would include prosecution risk instead of physical risk since

the harm cost physically by pirated software are negligible, furthermore perceived prosecution positively influence the attitude towards attaining non-pirated softwares. Prosecution risk relates negatively to the unauthorized duplication or downloads or pirated product([37]. Currently government are taking more rapid actions towards the prosecution of software piracy. There has been a law declared Under the act 72 Third amendment no.19, it is specified that for any deliberate duplication of a computer program shall that be a software or application without consent of owner shall be sanctioned for 5 years or fined at amount of Rp. 500,000,000.00 (Five Hundred Million Rupiah). [38].

2.1.2.2 Performance risk

Performance risk is defined as the consequences that the product would not perform as satisfying as the original version or is provided with lesser functionalities [39]. The lack of assurance of product performance and no guarantee or legal licensing provided by the sellers. The pirated software might risk for mal functions and viruses [22].

2.1.2.3 Social risk

Social risk involves the self-image of the individual, where by the actions are driven by the impact towards the social status the individual would like to be perceived in if he commits the purchase decision. [36]. Status consumption are defined as group of people exhibiting their prestige and status by utilizing strictly genuine products to establish a social ranking and respect from others. [40] Perceived social risk therefore in this instance what the individual presumes is the consequences that he will face for the purchase decision. [41] Consumers that are concern with high social

consciousness towards peer image and a certain status among their group tend to have a positive attitude towards purchase of non-pirated softwares. [24]

2.1.3 Willingness To pay

It is a common phenomenon that the factor that has lead to a very high rate of software piracy is due to the price barrier. Studies have proven the correlation between income level and willingness to purchase, a higher income level results into higher willingness [42]. In emerging countries the problem due to unfair pricing with the vast GDP gap are the factors that lead to piracy, in a study by Thatcher (2012) indicated how citizens divert to pirated due to the price. [43] . A study in Singapore also indicated how lowering price would result in reduce purchases of piracy [41]. This issue regarding pricing prevails especially in countries with a relatively low gross national income. As indicated by Kohlsberg's theory price still goes above the importance of ethical attitude in the past studies. [44]. A comparison of study between Thailand and US indicates that to balance the price rate the software should reduce into more than 165 times its current price rate. However Microsoft China had implemented a mechanism to reduce price of windows 7 vista and resulted in a significant boost in sales. [16].

However willingness to pay for non pirated softwares do have positive influence when in circumstances where education of individual is higher. Customer satisfaction also relates positively towards purchase intention attitude, where they view purchases in a cumulative manner instead of per transaction base only. [45]. A study by Huang et al (2004) also determined that customers that belief price reflects quality form a positive behavior towards the willingness to pay. [46]. Thus in this study we would determine the range of price that would be preferred by the respondents towards purchase of Non-pirated softwares

2.2 Theoretical Framework

The framework below is composed of the variables that are present in this study. This framework illustrates the relations between the constructs towards the willing ness to purchase of a non-pirated software. The model is identical as of the initial study, the difference of the research is only the scope of correspondents as well as the location where all research are based in Indonesia. Figure 2.1 below clearly demonstrates the frameworks that are adopted for this study.

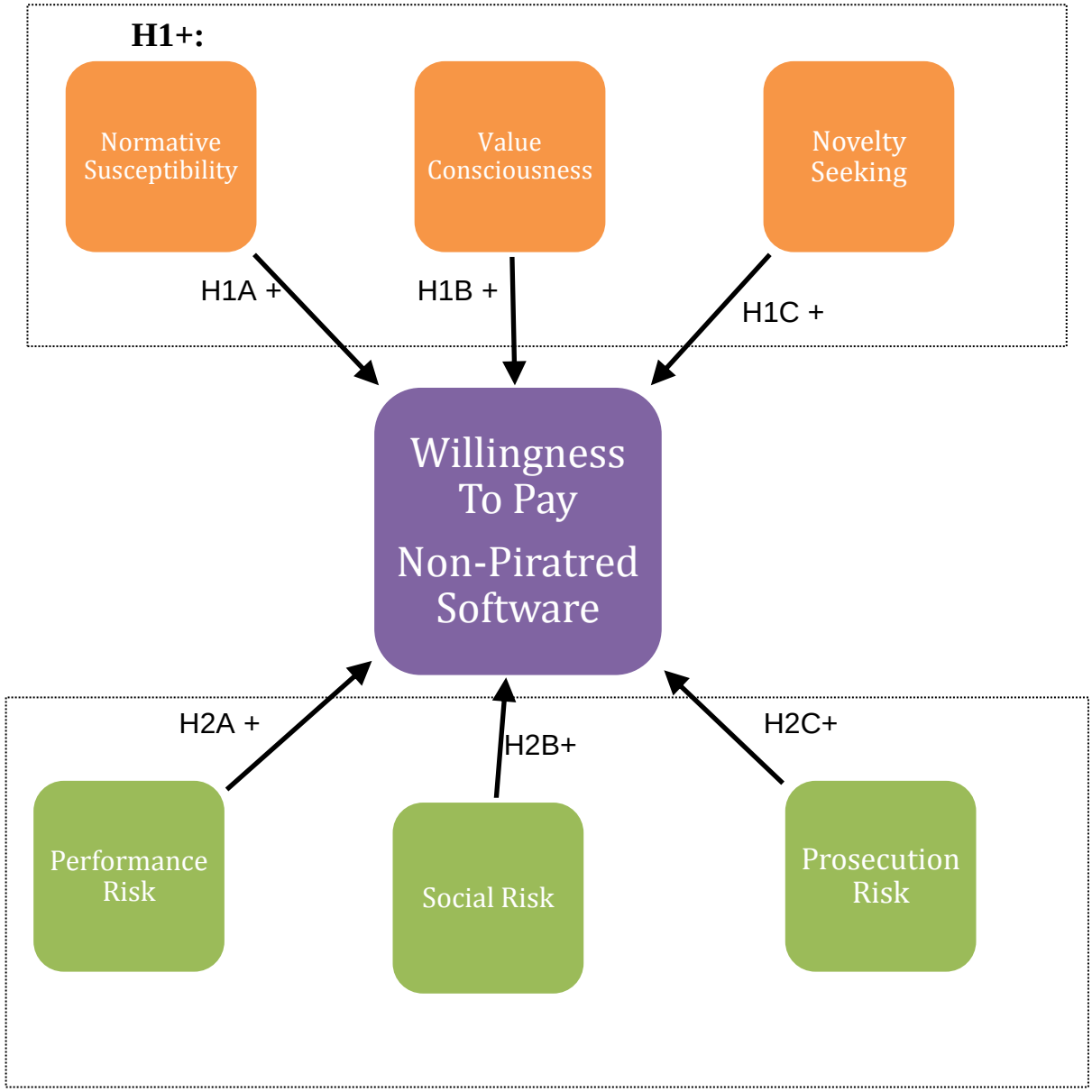

Figure 2. 1 Theoritical Framework

The Model above illustrated the factors that are to be tested in the form of hypothesis, to identify the constructs that contribute towards willingness to pay for a Non-Pirated Software.

Based on a theory elaborated by Ajzen, stating that a consumer's purchase pattern is determined by their intention which is actually effected by attitude [25]. Thus we would like analyze the strength of correlation that might exist between attitude and willingness to pay.

H1: Attitude Towards IP rights is positively related to consumers' WTP for non-pirated software.

Influences towards intellectual property rights that leads to the willingness to pay for an authorized software is first tested based on Normative Susceptibility. A study by Wang et. al (2005) indicated a positive correlation between normative susceptibility and the willingness to pay [30], thus in regard to this study a hypothesis as follows has been developed:

H1: Attitude Towards IP rights is positively related to consumers' WTP for non-pirated software.

H1a: Normative susceptibility dimension is positively related to consumers' WTP for non-pirated software.

Personal characteristics are known to be determinants of purchase decision. Personal characteristics involve personal gratification, integrity and value consciousness.

However in a study by Harun et.al [32], it was identified that integrity and personal gratification does not directly correlate towards attitude to purchase decision (willingness to pay). Thus we focus on value consciousness that affects the attitude. The hypothesis is as follows:

H1b: Value conscious dimension is positively related to consumers' WTP for non-pirated software.

A study by Wee et.al(1995) indicated that novelty seeking is an influential factor towards the willingness to pay [31], Thus we have developed a hypothesis to observe whether Novelty seeking does have a positive relation towards willingness to pay:

H1c: Novelty seeking dimension is positively related to consumers' WTP for non-pirated software.

Apart from the following attitude that triggers the willingness to pay, perceived risk is also considered one of the most crucial determinant factors. It is evident by many studies that perceived risk relates positively towards purchasing of non-counterfeited/pirated products. [47]. Perceived risk is also said to cause a decrease towards piracy and thus forms a positive correlation towards willingness to pay. In this study we focus perceived risk on 3 levels: Performance risk, Social risk and Prosecution risk. (Tan, 2002).

H2: Perceived risk is positively related to consumers' WTP for non-pirated software.

Wang et. al(2005) stated that only a significant difference in functionality between the legal and pirated software would reduce piracy [30], thus we developed a hypothesis based on performance risk to determine the influence:

H2a: Performance risk dimension is positively related to consumers' WTP for non-pirated software.

There are significant cultural and economical differences when we compare the study between Asian countries and US. The attitude towards piracy are varied. In a study by Ponnu and Ratnasingam indicated that the higher the social risk the higher the purchase intention towards non-pirated softwares [22], below is the hypothesis:

H2b: Social risk dimension is positively related to consumers' WTP for non-pirated software.

Lastly is the identification of whether prosecution would result into a deterrent impact to piracy and enhance the willingness to pay. With Government of Indonesia legislating law and the IIPA, we would identify the positive correlation between prosecution risk towards willingness to pay.

H2c: Prosecution risk dimension is positively related to consumers' WTP for non-pirated software.

These hypotheses formed for this study is aimed to meet the aims and benefits of this research study, which has been discussed previously. Therefore, testing of these entire hypothesis stated above, based on the constructs determined is intended to provide an understanding