CHAPTER 5

DISCUSSION

In this chapter the author would discuss and interpret the results concerning the evaluated respondents data. The first section would be the descriptive analysis that would include analyzing the demographic and computer behavior pattern of the respondents. To further indicate any existing correlations between the demographic characteristics and the variables or computer usage behavior, we would analyze the observed results that was performed through cross-tabulation and One-way Anova. The second section of the discussion would be followed by the inferential statistic analysis, where a comprehensive deliberation of the accepted and rejected hypothesis of this study would be illustrated.

5.1 Descriptive analysis

There were a total of 218 valid samples that were utilized in this study. Criteria of valid samples were indicated by respondents that complied to the filter questions provided in the questionnaire. The criterion essentially requires a respondent to have a personal computer and have previously purchased pirated software of windows or Microsoft office. In regard to the demographic profile of the respondents, as it can deduced from the previous chapter majority of the respondents for this study were males(69%). Concerning Age most of the respondents belonged to the age group within 20-24 years of age. This indicates that most of the students are varied between high school students, undergraduate students or recent graduates.

Respondent occupations were of majority under graduate students and followed shortly by general consumers. 46% of the respondents of this study claimed to have an average expenditure of Rp.1,000,000 – Rp.3,000,000 every month. The author checked for any correlation between monthly expenditure and cross tab however the result indicated no significant correlation thus we can conclude that expenditure does not lead to a higher or lower willingness to pay for non-pirated software(Appendix G).

From the data retrieved through the respondents, it indicated that currently 126 respondents (57.7%) are still using pirated version of windows and 82 respondents (37.6%) are also still using pirated Microsoft office. This affirms on how in Indonesia windows are pirated more highly pirated. To further understand the types of software pirated, it was observed that highest piracy were in form of games, followed by operating systems then editing and multimedia software. Acknowledging the demand and high distribution of pirated software, respondents claimed that majority of the attained pirated software through virtual distributions (peer to peer websites, torrents, etc.). Second highest were through sharing among family and friends and then followed by shops. This result is similar to the original journal where respondents commonly attain pirated software through the internet or friends and family, furthermore even a study conducted by Moores (2011) on Socialization of pirated software indicated that sharing of piracy among family and friends and peer to peer networks virtually are one of the roots for piracy to continue to dominate [16].

Majority of the respondents claimed price as the factor that mostly influence their purchase decision of software. This findings are even supported by the a research conducted by Eric Kin-wai Lau on the subject of factors motivating people toward pirated software where price was the main consideration. [53] Aside from price, convenience, source reliability, up to date features, free updates and technical support also influence the respondents considerations.

To further understand the general preference of consumers, the respondents were asked whether they generally preferred pirated version over original version and majority actually prefers authorized legal version. The author conducted a cross tabulation to check for any association between software preference with willingness to pay for non-pirated software and normative susceptibility. In the first cross-tabulation for software preference and willingness to pay, the findings suggested an association where respondents that preferred a non-pirated software indicated to be a majority of having “high” willingness to pay for non-pirated software. While respondents who preferred a pirated software were part of the majority in the “low” willingness to pay. This showed how the preference reflects their willingness to pay, Under the second cross-tabulation between software preference and normative susceptibility, an association was found whereby respondents with higher normative susceptibility indicated to prefer a non-pirated software and consumers with lower normative susceptibility seemed to prefer a pirated software. This goes in line with behavior of people who by nature have normative susceptibility in which they are more sensitive to the impression of the surrounding and values of the people around them.

Based on the findings of future purchase intention of the respondents, majority had a 20-40% chance of attaining pirated software in the future. The author conducted a cross-tabulation between future purchase intention and willingness to pay, an association was found where consumers with higher future purchase intention does have a lower willingness to pay for non-pirated software. This positively proves consumer which lesser chances to obtain a pirated software were more willing to pay for a non-pirated software.

5.2 Inferential statistics discussion

Based on the statistical analysis that is summarized in table 5.1, the summary table indicates Normative Susceptibility, value conscious, novelty seeking and performance risk influences the willingness to pay for a non-pirated software. Meanwhile, Perceived Social risk and Perceived Prosecution risk does not significantly influence willingness to pay for non-pirated software. Furthermore, it can be inferred from the table below that Attitude towards IP rights prove to significantly influence willingness to pay in comparative to Perceived risk.

Table 5.1 Summary of Independent Variable Relationship

Variables		**R^2**	**Sig.**	**Unstandarized Beta**	**Result**
Attitude towards IP rights		.362	.000	.766	Accepted
H1	Normative Susceptibility	.357	.000	.346	Accepted
H2	Value Conscious	.357	.000	.228	Accepted
H3	Novelty Seeking	.357	.001	.210	Accepted
Perceived Risk		.362	.049	.169	Accepted
H4	Performance Risk	.137	.000	.355	Accepted

H5	Social Risk	.137	.328	-.068	Rejected
H6	Prosecution Risk	.137	.665	.030	Rejected

This study has examined two broad perspectives on factors that influence towards piracy. One perspective is from the attitude towards IP rights, where we investigate the behavior that affects the willingness to pay of the society in Indonesia. Based on findings by Wang et al. (2005) we analyzed if a positive correlation exist between the following variables, normative susceptibility, value conscious and novelty seeking with willingness to pay for a non-pirated software [30]. The second perspective is based on the perceived risk that exist among the society. The variables include perceived performance risk, social risk and prosecution risk. These variables are supported from the findings based on research conducted by Chiou et al. (2005), and Tan (2002) [41] [37]. The author of this study initially conducted a regression analysis between attitude towards IP rights and Perceived risk against willingness To Pay for non-pirated software. The result obtained indicated that both factors positively correlates towards willingness to pay for non-pirated software. However it can be inferred from the result attitude towards IP rights are a bigger influence towards willingness to pay in comparative to perceived risk. This observation can be concluded from the unstandardized beta that showed Attitude towards IP rights has a value of .766 while perceived risk resulted in a smaller value of .169. This observation differs from the findings of De Matos et al. (2007) that indicated perceived risk as the strongest predicting factor. [26].

The findings suggest that attitude towards IP rights does positively correlate with willingness to pay, this result is as well supported by a previous study conducted by

Wee et al. (1995) that affirms there is a link between consumers attitude and their purchase. [31]. Based on theory of planned behaviour it is confirmed that purchase behavior and decision is determined by purchase intention which is in turn determined by attitude. [25]. A study by Chiou et. al(2005) had also supported the relevance of a correlation between attitude and purchase decision of pirated products. [37]. Thus an increase in attitude towards IP rights would result in a higher willingness to pay and worst attitude towards IP rights would thus result into lower willingness to pay. Acknowledging the high rate of Intellectual property right violation through piracy in Indonesia, we can conclude there is lack of value provided in respecting intellectual property rights. This result is consistent with a study conducted by Ian Phau on Pirated Software: Ethical Attitudes and Purchase Behaviour of Consumers in Indonesia, where it resulted that even consumers who showed high value of integrity and honesty still pirate softwares [54]. Thus this reflects there is a lack in concern towards IP rights in Indonesia, previous studies conducted by Siegfried (2005) had stated people do not considering software piracy as form of stealing which could be due to the fact it is not a tangible item. [21]These findings indicate that we should further understand the behavioral characteristics of Indonesian consumers since it majorly influences the willingness to pay in compared to the perceived risk. Hence the author conducted another multiple regression to examine the specific variables under attitude towards IP rights that essentially influences willingness to pay.

The hypothesis: Normative susceptibility is positively related to consumers' WTP for non-pirated software is supported from the results obtained in the findings and in fact is the most influential variable at predicting willingness to pay for non-pirated

software. Normative Susceptibility refers to consumers who are highly influenced by the surrounding's belief and base their actions on what would impress their surroundings. From the regression result we can therefore indicate the consumers that are more normatively susceptible would have a higher willingness to pay. This result is consistent with the research in the original journal by Hsu and Shue (2008) where normative susceptibility is stated to have the highest influence towards willingness to pay for non-pirated software. [4] Normative susceptibility as one of the dominating factors are supported by studies conducted by Ang et al (2001) and Ramayah et al. (2003) where consumers with higher normative susceptibility have lesser attitude towards piracy software or even music. [27] [55] This is particularly due to the mindset of normative susceptible consumers where they have high expectations and concerns on the impression of others, since pirated software do not create good impression thus results into choosing legal authorized products. [27]. Based on theory of reasoned action where an individual's behavior depends on their attitude and subjective norms [25], thus results into individual motivation to perform a behavior is influenced by the opinion of the surroundings approval or disapproval. [56]. Therefore this means since consumers are concerned with the surroundings belief and impression, more actions are supposed to be taken among the community to influence friends and family and in turn combat piracy as a whole among the society.

Value Conscious is the second most determining factor of willingness to pay for non-pirated software. The second hypothesis: Value conscious is positively related to consumers' WTP for non-pirated software is supported based on the regression results obtained. Value conscious consumers are consumers that are concerned of the

price paid as to the quality received [57]. This indicates that consumers would have a higher willingness to pay as long as the value obtained from the product is worth the price. The consumers are mainly concerned with the ratio of the quality that they receive from the amount that is paid in a purchase transaction. Thus in the original study by Hsu and Shuie (2008) indicated that students still pursuing education would be willing to pay higher for a legal software if they consider it is worth the price. [4]. Similarly the findings suggest such that if the consumers perceive the software as valuable and worth the price they would obtain the original version otherwise if in their opinion the product is overpriced meaning the quality received does not balance the amount spent they would find a cheaper alternative. These findings is also consistent with a research by Summers et al. (2006) where value conscious is positively correlated with their purchasing. Furthermore, it is to be noted that value conscious consumers are not only price sensitive but also quality sensitive, thus incase of price cut promotions, they would not only consider it is a better value for the money but would may be upgrade to a better version since quality value is also considered. [58]

In regard with novelty seeking, it is the third influential factor in determining willingness To Pay. This is align with the result obtained in the original journal where novelty is seeking is less significant in comparative to normative susceptibility or value consciousness. The third hypothesis: Novelty seeking is positively related to consumers' WTP for non-pirated software is also supported based on the findings of the regression analysis. Novelty seeking is defined as the human behavior based on the curiosity and keen interest towards innovation [30]. Novelty seekers tend to purchase legal software due to their need of the innovation could be for job related

purposes or purely curiosity due to their product satisfaction. [22]. This means the higher the willingness of the consumer to try the new product innovation whether subject to their requirement or curiosity would lead to a higher willingness to pay for a non-pirated software. Thus if consumers are not very concerned towards that specific innovation they would potentially have a lower willingness to pay. This finding is aligned with research by Harun et al.(2012) and Phau et al.(2009) where novelty seeking is positively correlated with purchasing decisions [32] [40].

Apart from analyzing based on the perspective of attitude towards intellectual property rights, the author also focused on perceived risk since even though it resulted not as significant as the influence of attitude however the influence is still significant.

Perceived risk is defined in terms of how consumer takes into consideration the consequences that will be faced due to the purchase decision [59]. This means when consumers perceive a high risk in taking the decision their willingness to pay for a non-pirated software increases. However if a consumer perceives a low risk at the purchase decision then they would potentially have a lower willingness to pay. From this study we have proved a positive correlation between perceived risk and willingness to pay. This result is aligned with research conducted by De Matos et al (2007) and Tan (2002) [26] [41].

In regard to investigate further the variables under perceived risk, the author conducted a third multiple linear regression analysis for the variables performance risk, social risk and prosecution risk. It can be inferred from the result that only perceived performance risk proved to be a significant in determining willingness to pay for a non-pirated software. The fourth hypothesis: Performance risk is positively

related to consumers' WTP for non-pirated software is supported by the findings attained in this study. Perceived performance risk is defined as the probability that there would be a malware in the product purchased under the perception of the consumer [41]. The result obtained in this study is even supported by the findings in Tan (2002) and Ponnu and Ratnasingam (2008) where higher perceived performance risk leads to lower purchase of pirated software and thus a higher tendency to purchase original software. [41] [22]. This asserts when a consumer perceives a high risk of performance failure in the pirated software thus the perceived performance risk increases and simultaneously the willingness to pay for non-pirated software also increases. Performance risk is commonly faced in terms of pirated software due to the absence of any warranty or the ability to be repaired in case of mal function such as in terms of virus, damage to the computer systems or loss of data since there is no assurance provided by the seller since the product is gained illegally and not from the company thus risk is bigger. As being proven by this study that consumers in Indonesia are concerned with performance risk thus they could utilize this as a strategy by providing more awareness of the consequences of malfunction or another option could be to create a mutually exclusive performance functionality that are only able to be carried out by authenticated authorized software.

Perceived Social risk which means the perception of consequences on how others would think or behave about the consumer for making the purchase decision and in this case the effects of purchasing a pirated software. [41] The fifth hypothesis: Social risk is positively related to consumers' WTP for non-pirated software is rejected, the result obtained proved perceived social risk is not a significant factor in determining willing ness to pay for non-pirated software. This result obtained has

differed from the original journal where social risk proved to be a significant factor. [4]. Regarding the insignificancy of social risk, this could be due to the fact that piracy is not considered a crime in Indonesia. This statement is well supported by a research conducted by Ian Phau among Indonesia consumers that indicated people who have proven to have high integrity and claim would not commit any crime as theft still conduct software piracy [54], this shows the permissive behavior of the society towards piracy where they consider it an acceptable action and not a crime. Siegfried (2005) stated on his research on Student attitudes on software piracy and related issues of computer ethics based on the study by Christoph et al(1987) those who commit piracy do not consider their action illegal even those who claim to have a high ethic code. [21] Thus due to the situation in Indonesia where even though the consumers are concerned with the impression they create among the society as proven through normative susceptibility however since there is no threat of a deterrent impact or objection from the society, thus perceived social risk is not a valid variable at determining willingness to pay for a non-pirated software.

In regard to perceived prosecution risk, the hypothesis Prosecution risk is positively related to consumers' WTP for non-pirated software is rejected based on the findings in this study. This result is aligned with the result obtained in the original journal by Hsu and Shiue (2008) where prosecution risk proved insignificant in predicting willingness to pay [4]. Perceived prosecution risk which is defined as the probability that the acquisition of a pirated software would result into imprisonment, fine or any type of legal prosecution towards the person who committed the piracy [37]. The legal law in Indonesia do have a law that prosecutes those who commit software piracy. Under the act 72 third amendment no.19, which specifies any intentional

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] However there has not been any piracy cases that have been brought to court, the software companies mostly only conduct raids and no further legal actions or punishments are provided. Thus due to lack of law enforcement and lack of feasibility to prosecute private users of pirated software, perceived prosecution risk seem to be invalid at determining willingness to pay for non-pirated software.

Aside from regression analysis, the author conducted a One-Way Anova to observe difference behavior of occupations among variables. It can be inferred from the result there was a difference in behavior for only the variable value conscious, where the mean values of the high school, higher graduate, general consumers were 3.3, 4.1, 3.9, respectively.

This shows that higher education students have highest value conscious. This suggest they are most cautious in terms of price and quality received, where they would only conduct a purchase if they see the item to be worth its price. This means they do respect value and thus would purchase original software if they consider it is worth the price and afford the price. This could be due to the fact they are in the age of getting familiar with software and still utilizing for study purposes thus they do have value for software and simultaneously have a budget constraint thus they are most cautious. A study by Kini et al (2000) indicated that attitude towards piracy is effected by age. [60]. Secondly General Consumers (consumers who are no more students) have revealed a mean of 3.9 in which they are value conscious, this could

be because they are earning already thus more conscious in the amount they spent for the value of the item. However they are not as cautious as higher education students, the reason could be due to their better earning ability thus they might pay more for products without considering the value or to purchase pirated products with higher tendency to compromise the quality. Lastly are the high school students with mean of 3.3 which indicates they are least price and value sensitive, this could be due to the fact that they are not the sole decision makers or generate any income yet and do not fully understand the associated value of software as stated by Siegfried. [21] Thus one of the reasons could be that they have not yet developed the understanding and concern with pricing and value in comparative to higher education or general consumer population, since majority high school students are still dependent towards their guardian or parents thus they are least value conscious.

Cluster Analysis was also conducted to observe behavior between consumers with high willingness to pay and those with lower. The result indicated that the higher the consumer willingness to pay the more positive attitude they had to Normative Susceptibility, Value Consciousness, Novelty Seeking and Perceived performance risk. Below is a figure of the cluster observation of low willingness to pay category. The diagram shown in the appendices illustrates how the overall mean of the 218 respondents is denoted by a white line and therefore consumer with low willingness to pay have mostly values behind the overall mean or mostly in line with the mean. While consumer with high willingness to pay is indicated in front of the mean line denoted by the small blue box. The result from the cluster confirms our hypothesis on how individuals with high willingness to pay positively correlates towards the hypothesis H1a, H1b, H1c and H2a.

Future purchase intention to purchase pirated software was also relevant to the cluster analysis. Results indicated that consumers with high willingness to pay had lower future purchase intention in comparative to consumer with high willingness to pay. A similar behavior was also indicated in current usage of pirated Windows and Microsoft office as well as software preference, individuals with low willingness to pay had shown higher preference to piracy overall.

Another analysis was done to compare price gap between an overall average of willingness to pay of consumers to Windows and Microsoft Office. The result significant showed a price gap of more than 4 times the market price. This therefore confirms price issue as one of the factors to piracy as well. Studies by Block et.al (1993), Alberts Miller (1999) and Cheng et. al (1997) indicated price as the drive to piracy. [4] Thus this might be the reason of piracy. However price does not seem to be the main factor since even through cluster analysis demographic result there was no pattern indicated from monthly expense to software willingness to pay, in fact results has shown how significant was the difference in attitude towards IP rights and Perceived performance risk and nor was there any correlation as we analyzed between monthly expense and willingness to pay.