The Mediating Role of Anticipated Guilt in Consumers’ Textbook Piracy Intention

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Abstract

The intellectual property issue of textbook piracy in Taiwan affects Taiwan’s reputation and possibly its industrial development. Many college students in Taiwan make a photocopy of the textbooks they need rather than purchase them. Based primarily on the framework of Theory of Planned Behavior, this article investigated the mediating effect of anticipated guilt on the relationship between attitude, social influence, perceived behavior control and textbook piracy intention. A total of 361 Taiwanese college students from two major Taiwanese universities were recruited for this study. The results showed that the textbook piracy intention of these students was determined by cost, benefit, peer influence, societal influence and opportunity. It is worth noting that the effects of cost, benefit and societal influence on a student’s intention of textbook piracy were found to be partially mediated by the anticipated guilt. However, the effect of peer influence on textbook piracy intention was not mediated by the anticipated guilt.

Keywords: Attitude, anticipated guilt, societal influence, textbook piracy intention.

1. Introduction

The aim of this study was to develop an improved theoretical framework for the understanding of book piracy behavior by college students in Taiwan. In 2004, the International Intellectual Property Alliance estimated that 20 million U.S. dollars in trade losses were due to copyright piracy (Book Publishing Report, 2004). U.S. publishers lost 40% of their potential sales to book piracy, based on a report from the International Intellectual Property Alliance (2004). In Taiwan textbook piracy is so common in the schools that the continuous increase of intellectual property infringement has impacted Taiwan’s international reputation and the development of its cultural industry (Liu and Liu, 2004). Therefore, how to prevent textbook piracy in Taiwan, as well as in mainland China and other neighboring Asian countries such as South Korea has become an urgent issue.

The Theory of Planned Behavior (TPB) is an established attitude-behavior theory that is considered to capture the requisite components for explaining a social behavior. The TPB postulates three conceptually independent determinants of intention. The first is the attitude toward the behavior and refers to the degree in which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. The second predictor is a social factor termed “subjective norm”. It refers to the perceived social pressure to perform or not perform the behavior. The third antecedent of intention is the degree of perceived behavior control. It refers to the perceived ease or difficulty of performing the behavior and is assumed to reflect past experience as well as anticipated impediments and obstacles (Ajzen, 1991). Thus, the role of norms in the TPB could explain social behaviors such as textbook piracy.
The TPB has been applied to the study of health behavior, such as smoking (Hanson, 1997; Inness, Barling, Rogers, and Turner, 2008; Nguyet et al., 1998), the ethical behavioral intentions of public accountants (Buchan, 2005), the fraudulent financial reporting of corporate managers (Carpenter and Reimer, 2005), physical activities (Godin and Kok, 1996; Hagger, Chatzisarantis, and Biddle, 2002; Hausenblas et al., 1997), and to substance use (Carvajal et al., 1997). However, there is scant literature available that is focused on textbook piracy.

The role of emotions in ethical decision-making has recently been stressed by Gaudine and Thorme (2001) and Connelly et al. (2004). They indicated that avoiding actions that will have negative consequences, and following social norms may prime positive emotions. In the context of ethically questionable consumer situations, the importance of anticipated guilt feelings has been suggested by some researchers (Marks and Mayo, 1991; Strutton et al., 1994; Steenhaut and Van Kenhove, 2005). Various studies on ethically questionable behavior have identified the potential impact of guilt when evaluating the possibility of engaging in an unethical activity (Marks and Mayo, 1991; Strutton et al., 1994; Steenhaut and Van Kenhove, 2005).

The present study departs from previous investigations in two ways. First, unlike previous studies framed in Western cultural settings, the findings of this study provide some insights into the issue of book piracy within the Greater China region as well as neighboring Asian countries such as mainland China and South Korea, all of which have been identified as book-piracy hotspots (Book Publishing Report, 2004). Second, previous studies have focused mainly on the behavioral effect of current emotional experiences (e.g. Frijda, 1986; Lazarus, 1991). However, guilt may not only come into play during actual consumption (experienced emotion) but also prior to consumption, when consumers form their expectations (anticipated emotion) (Klaaren et al., 1994; Phillips and Baumgartner, 2002; Wilson and Klaaren, 1992; Wilson et al., 1989). The current study incorporates the anticipated guilt as a mediator to better explain the pirating behavior of students.

2. Literature Review

2.1 Anticipated guilt

Bagozzi et al. (1998) investigated the role of positive and negative anticipated emotions that are elicited by the prospects of success or failure in goal attainment. They found that the more intense the positive and negative anticipated emotions, the more people were motivated to perform behaviors that were needed to achieve success or avoid failure. Guilt is considered to be one of the negative anticipated emotions potentially affecting one's intention to perform a certain behavior (Marks and Mayo, 1991; Perugini and Bagozzi, 2004). Guilt refers to an individual’s “unpleasant emotional state associated with possible objections to his or her actions, inactions, circumstances, or intentions” (Baumeister et al., 1994, p. 245).

Anticipated guilt is experienced as one contemplates a potential violation of internalized standards (Rawlings, 1970). Nonetheless, anticipated guilt motivated by interpersonal circumstances does not have to involve direct “harm to others”. An individual will experience anticipated guilt as long as that individual feels some sense of indebtedness or responsibility towards the situation (Hoffman, 1982; Cunningham et al., 1980). O’Keefe (2002) noted that people will avoid actions which they anticipate will make them feel guilty. Consistent with this thinking, various studies on ethically questionable behavior have identified the potential impact of guilt when evaluating the possibility of engaging in an unethical activity (Marks and Mayo, 1991; Strutton et al., 1994; Steenhaut and Van Kenhove, 2005). This reasoning is consistent with the psychology literature denoting guilt as a behavioral interrupt or action.
control mechanism that insures that an individual’s goals and interests are met (Baumeister et al., 1995).

2.2 Ethically Questionable Behavior (EQB)

Fukukawa (2002) stated that “EQB is inclined to assume that the ethical judgment of ethical issues significantly influences subsequent behavior, and that an ethical judgment may not fully explain the causes of behavior on certain occasions (p.101).” Fukukawa asserts that consumers who believe in an ethical judgment (it is unethical to purchase counterfeit products) may still buy the product because of price and availability. This shows that having ethics may not produce ethical behavior. Kraus (1995) supports this argument by stating that there is inconsistency between judgment and behavior. This inconsistency is subjected to the moderator effect on behavior (Fukukawa, 2002). However, Fukukawa still questions as to “which variables modify ethical judgments and how they then become intentions (and therefore behavior) in a given situation” (p.101).

According to Fukukawa (2002), there are two streams of study in EQB. The first follows the specific kinds of EQB, such as shoplifting (Krasnovsky and Lane, 1998), insurance fraud (Litton, 1998), tax evasions (Hessing et al., 1988), counterfeiting (Albers-Miller, 1999), and software piracy (Wagner and Sanders, 2001). The second stream is focused on the ethically questionable behavior of consumers from a holistic point of view, and centered on the consumer’s ethical judgments of EQB. Moreover, factors such as social and peer influence, the degree of possible harm to others, perception of cost involved, and the perception of fairness in relation to businesses affected by EQB decision making depend on specific situations. For example, Muncy and Vitell (1992) found that there were four ethical judgments for EQB, including proactively benefiting at the expense of the seller, passively benefiting at the expense of the seller, deceptive practice, and no harm/no foul (Muncy and Vitell, 1992). The focus of this study is on one special kind of EQB, textbook piracy behavior.

2.3 Theory of Planned Behavior

The results of many studies have shown that the Theory of Planned Behavior can predict individual behavior better than the Theory of Reasoned Action (Husted, 2000). For example, a study of university students engaging in activities like running, hiking, rowing, and cycling showed that their attitudes, norms and perceived behavioral control can predict their behaviors (Ajzen and Driver, 1992), and is the approach adopted for this study. In that study, the perceived behavioral control of the students plays an important role in rowing while intention is more important in running and cycling. This shows that attitudes, norms and perceived behavior control are three variables predictive of behavior.

2.3.1 Attitude – Textbook piracy intention

Ajzen (1991) defined attitude as the mental attitude of a person with a favorable or unfavorable evaluation or appraisal of a behavior being contemplated. Both the Theory of Reasoned Action and the Theory of Planned Behavior suggest that the attitude and the behavioral intention of a person are highly consistent.

Attitude determines the intention towards behavior (Ajzen, 1991). The General Theory of Marketing Ethics (Hunt and Vitell, 1986) extends the Fishbein model to show that there is a relationship between belief about (un)ethical behavior outcomes, ethical judgment and EQB intention (Cherry, 2006). Moreover, Wang et al. (2005) suggested that “different attitude attributes have a different level of influence on the consumer’s purchasing intention” (p. 346).

In a teleological (or consequentialist) evaluation, the key issue is the individual’s assessment of how much good-versus-bad will result from the decision. In terms of book piracy behavior, “bad” could be considered the cost the consumer must absorb while “good” could be
considered the benefit the consumer will obtain. Consistent with the teleological (or consequentialist) evaluation, the cost-benefit theory suggests that a consumer will pirate the textbook if the marginal benefits outweigh the marginal costs. Consumers who pirate textbooks will have an immediate benefit (e.g. saving money) and may or may not suffer the consequence (or cost, e.g. a penalty) later on. Due to the time lapse between cost and benefit, this study will forsake an overall attitude measurement and instead divide the overall attitude into two components: risk taking and benefit. This breakdown is consistent with the teleological (or consequentialist) evaluation proposed by Vitell et al. (2001).

Cost of book piracy: According to Fukukawa (2002), cost taking can affect consumers’ attitude towards EQB. Cost taking is defined as the extent to which an actor is motivated to take risks to gain thrill or excitement (Fukukawa, 2002). Even though there are seven different costs, financial cost (e.g. cost of original software, Lau, 2007), performance cost, social cost (DelVecchio and Smith, 2005; Tan, 2002; Dowling and Staelin, 1994; Taylor, 1974), prosecution cost (Tan, 2002), time cost, hazard cost, and ego cost (Roselius, 1971), only prosecution cost and financial costs are likely to occur in the case of textbook piracy. Ang et al. (2001) found that the cost of buying counterfeited goods may include apprehension by authorities and prosecution. Similar to Chiou et al. (2005), the present study focused on the effects of prosecution cost due to textbook piracy.

Jaisingh (2009) found that if the perceived cost of using pirated software was low, such as in countries like Vietnam, where the actions taken to prevent piracy are low, this could lead to an increase in piracy. Tan’s (2002) study found that the higher the perceived cost faced by students, the lower their intentions to purchase pirated software. In Kim’s (2007) sample of internet purchasers in the USA, convenience cost, financial cost, functional cost, and physical cost all have a negative influence on internet purchasing decisions. Furthermore, financial cost, performance cost, physical cost, and social cost lower the intention to purchase prior to purchasing (Jacoby and Kaplan, 1972; MacCrimmon et al., 1986). Similarly, if students perceive the cost of being prosecuted for textbook piracy to be high, then they are less likely to engage in such activity. Therefore, our first hypothesis is proposed as follows:

**H1: There is a negative relationship between cost and textbook piracy intention.**

Benefit of book piracy: Stigler’s (1961) cost-benefit theory proposes that a rational individual will perform a certain activity only if the marginal benefits of doing so outweigh the marginal costs. Based on either the expectancy theory or the cost/benefit theory, the financial benefit derived from pirating a textbook is the primary motivation for students. Students have grown up conditioned by the immediate access and instant gratification provided by the likes of television and computer games (Stigler, 1961). The average cost of a textbook ranges from NTD 1,500 (USD 45.7) to NTD 800 (USD 24.4). However, the maximum acceptable textbook price for students is NTD 500 (USD 15.26) (Lee, 2007). By pirating a textbook, students not only get immediate access to the book, but they also save money. The benefit derived from pirating a textbook is considered an active benefit because this action is initiated by the students themselves (Vitell and Muncy, 1992). Therefore, the second hypothesis is proposed as follows:

**H2: There is a positive relationship between benefit and textbook piracy intention.**

2.3.2 Social influence – Textbook piracy intention

The social influence factor determines how a decision is influenced by social pressure (Fukukawa, 2002). Social influence includes information susceptibility and normative susceptibility (Ang et al., 2001; Bearden et al., 1989). Information susceptibility is concerned with making a purchase decision based on the opinion of expert peers, while normative susceptibility is concerned with making a purchasing decision based on impressing others.
Peer influence: Peer influence means how an individual’s belief can be influenced by individuals that are close to him/her, such as friends, family, or classmates (Fukukawa, 2002). Abdullah (1992) stated that “the Eastern tradition emphasizes a man’s role as a member of a family with a special emphasis on building smooth interpersonal relationships” (Cherry, 2006, p.118). Normative pressure can affect the ethical judgment and behavior of a Taiwanese sample (Cherry, 2006). Ferrell and Gresham (1985) found that people learn values, attitudes, and norms from members of social groups, and that this affects individual decisions. Moreover, Hunt, and Vitell (1986) found that the opinion stakeholders hold regarding the importance of something will influence their ethical judgment through a teleological (or consequentialist) evaluation that is the sum of the good and the bad of an issue.

As to students, they are likely to be directly influenced by the academic and social behavior of other group members (Felmlee and Eder, 1983; Park and Lessig, 1977).

In the case of textbook piracy, classmates and other friends influence students. According to the social learning theory (Bandura, 1977) people learn by interacting among each other. For example, if most of their classmates do not pirate textbooks, a student will be less likely to pirate textbook him/herself, because s/he wants to be part of the group. When students are influenced by their peers, they will care what they purchase (Szymanski and Henard, 2001) and they will also care what their peers think about their purchases. Therefore the third hypothesis is proposed as follows:

\( H_3: \) There is a negative relationship between peer influence and textbook piracy intention.

Societal influence: Societal influence determines how an individual’s beliefs are influenced by the surrounding society. The beliefs of a society are the ethical standards that the majority of people in that society follow (Fukukawa, 2002). Zimmerman and Kraus (1971) noted that a society will influence the interactions between individuals. Moreover, a consumer’s purchasing behavior depends on the society s/he lives in (Swinyard et al., 1990; Eining and Christensen, 1991; Skinner and Fream, 1997). A society can influence an individual’s decision-making of EQB. Such influence can take the form of consensus, approval, or pressure to perform a specific behavior. This idea appears to be broader than the one of “subjective norms” (Miniard and Cohen, 1981; Fukukawa, 2002).

In the case of textbook piracy, the intention of a student depends on the view of his/her society regarding such an action. If the society does not agree with textbook piracy, then the student is less likely to engage in pirating textbooks. Therefore the fourth hypothesis is proposed as follows:

\( H_4: \) There is a negative relationship between societal influence and textbook piracy intention.

2.3.3 Perceived behavior control – Textbook piracy intention

Perceived behavior control refers to the perceived ease or difficulty of performing a behavior and the personal sense of control over performing it (Ajzen, 1988). In terms of EQB, Ferrell and Gresham (1985) found that people would engage in opportunistic behavior when there was no “situational contraction” to prevent them from engaging in such a behavior. Opportunity and avoidance of trouble are two factors affecting perceived behavior control on EQB (Fukukawa, 2002). Situational constraints such as an opportunity, or the lack thereof, may result in behaviors that are inconsistent with an individual’s intentions and ethical judgment (Hunt and Vitell, 1986).

When individuals do not have the opportunity to perform a specific behavior, they are less likely to have an intention towards that behavior (Kalafatis et al., 1999). Therefore, the higher
the perceived control those students have, the more likely they will pirate textbooks. Therefore, this study proposes a fifth hypothesis as follows:

**H5:** There is a positive relationship between opportunity and textbook piracy intention.

### 2.4 Anticipated guilt – Textbook piracy intention

The Hunt-Vitell model (1986, 1993) is the most widely accepted theory that provides a framework for understanding a consumer’s ethical decision making process. The deontological/teleological paradigm proposed by Hunt-Vitell (1986, 1993) is parallel to Forsyth’s (1980, 1992) two-dimensional ethical ideology concept (i.e. idealism and relativism). Idealism refers to the degree to which an individual believes that the right decision can be made, and infers that idealistic individuals adhere to moral absolutes when making an ethical judgment. Relativism refers to the rejection of universal rules in making ethical judgments and focuses on the social consequences of behavior.

Following the suggestions made previously about the potential positive impact of guilt in consumer ethics (e.g. Baumeister, et al., 1994; Marks and Mayo, 1991; Steenhaut and Van Kenhove, 2005; Strutton et al., 1994; Tangney and Dearing, 2002) and in line with recent theoretical and empirical research supporting anticipated emotions as predictors of intentions to act (e.g. Parker et al., 1995; Richard et al., 1996; Zeelenberg and Beattie, 1997), we hypothesize that a student's intention to textbook piracy is negatively influenced by anticipated guilt. That is, when confronted with an ethically questionable situation, a student will anticipate any possible post-decisional guilt feelings and take them into account when making a decision. The more guilt a student anticipates, the more likely that student will choose not to pirate the textbook. This brings us to our sixth hypothesis which states that:

**H6:** There is a negative relationship between anticipated guilt and textbook piracy intention.

Following the Hunt-Vitell model (1986, 1993), many empirical researches used Forsyth's (1980,1992) ethical ideology to explore the ethical judgments (or beliefs) of consumers (i.e. the extent to which one believes that a certain alternative is ethical or not) within a given country or culture, or across several countries (e.g. Al-Khatib et al., 2004; Al-Khatib et al., 2005; Erffmeyer et al., 1999; Rawwas et al., 1995; Singhapakdi et al., 1999; Swaidan et al., 2003). These studies concluded that consumers who are more idealistic tend to believe that ethically questionable situations are more wrong (e.g. these consumers have high ethical beliefs), whereas relativistic consumers are more likely to perceive these situations as less wrong (e.g. they have low ethical beliefs). The present study aimed to incorporate the notion of anticipated guilt within the generally acknowledged ethical decision-making framework. Following the study by Steenhaut and Van Kenhove (2006), the present study treated anticipated guilt as a mediator between consumers' attitude (cost and benefit) and social norms (social influence and peer influence). In other words, anticipated guilt represents the mechanism through which ethical beliefs influence a person’s intentions, rather than predicting a significant proportion of the variance in behavioral intentions over and above that person’s ethical beliefs. This brings us to the following four hypotheses:

**H7:** Anticipated guilt mediates the effect between cost of textbook piracy and textbook piracy intention.

**H8:** Anticipated guilt mediates the effect between the benefit of textbook piracy and textbook piracy intention.

**H9:** Anticipated guilt mediates the effect between peer influence and textbook piracy intention.
$H_{10}$: Anticipated guilt mediates the effect between societal influence and textbook piracy intention.

3. Conceptual Framework

Based mainly on the framework that underlies the Theory of Planned Behavior and the Hunt-Vitell (1986) model, this study investigated the effect of cost, benefit, peer influence, societal influence and opportunity on a student’s textbook piracy intention, while incorporating anticipated guilt as a mediator as shown in Figure 1.

![Conceptual Framework](image)

Figure 1. Conceptual Framework.

4. Methodology

4.1 The Study

The present study used indirect questioning in the design of the survey questionnaire in order to reduce a social desirability response bias. Fisher and Tellis (1998) suggest that respondents will give a more honest answer when they are asked indirectly rather than directly. In addition, indirect questioning and anonymity must be assured because otherwise it might influence self reported data. Therefore, this study used the indirect questioning approach to collect data so that students would be more open and honest in answering sensitive questions about pirating textbooks. In other words, the sensitive word “you” in the questionnaire was replaced by “one” or “a person”. For example, instead of saying “you could be prosecuted for textbook pirating”, a person would say “one could be prosecuted for textbook pirating”. Please see the attached questionnaire (Appendix 1) for additional examples.

4.2 Pretest

The purpose of the pretest was to validate the questions on cost, benefit, peer influence, societal influence, anticipated guilt, and textbook piracy intention. Only university students
were asked to participate, because they are likely to purchase foreign textbooks for their required courses. A total of fifty questionnaires were collected. The results of the exploratory factor analysis were confirmed with the theoretical construct and were used in the formal questionnaire to collect data.

4.3 Procedure

Students have an increased opportunity to pirate entire textbooks by photocopying them. (Liu and Liu, 2004). The participants in this study were 423 students recruited from a subject pool at two large universities in Taiwan. Of those, 62 responded to the questionnaire items in an irregular manner, which means that these respondents did not fill out the questionnaire completely or filled out the survey with all the same answers or other irregularities, and were thus excluded from the analysis. The final, usable sample consisted of 361 students (an 85% return rate). The participants did not know the purpose of the study, and each student received an extra course credit as an incentive to participate. This approach is consistent with the argument from researchers that if the student sample comprises the same interest, they are an appropriate sample (Gordon et al., 1987). Each student was asked to fill out a questionnaire that consisted of eight parts. The first seven parts contained 38 close-ended questions about cost, benefit, peer influence, societal influence, anticipated guilt, and textbook piracy intention. The final part pertained to personal information. The questionnaire was administered in Chinese. To ensure that the meanings of all items in the Chinese version of the questionnaire were the same as in the English version, the questionnaire was double translated as suggested by Brislin (1980).

4.4 Participants

The sample characteristics are shown in Table 1. The median age of the participants was 22.5 years. Approximately 63% of the participants were female. More than 99% of the participants were undergraduate students. About 53% of the participants had a family income of less than NTD 30,000 (USD 915) per month. More than 74% of the participants admitted to having copied textbooks, and more than 56% claimed that they never had purchased a pirated textbook.

4.5 Measurement of the Variables

The scales on cost and benefit were based on Tan’s (2002) instrument while peer influence, societal influence, opportunity, and textbook piracy intention were measured with Fukukawa’s (2002) instrument. The scale of anticipated guilt was measured using the Roseman et al. (1994) instrument. All items in the scales were measured using a five point Likert-type scale ranging from strongly agree (1 point) to strongly disagree (5 points).
Table 1. Demographics.

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>132</td>
<td>36.57</td>
</tr>
<tr>
<td>Female</td>
<td>229</td>
<td>63.43</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 ~ 19</td>
<td>4</td>
<td>1.11</td>
</tr>
<tr>
<td>20 ~ 21</td>
<td>46</td>
<td>12.74</td>
</tr>
<tr>
<td>22 ~ 23</td>
<td>171</td>
<td>47.37</td>
</tr>
<tr>
<td>24~ 25</td>
<td>119</td>
<td>32.96</td>
</tr>
<tr>
<td>26~27</td>
<td>16</td>
<td>4.43</td>
</tr>
<tr>
<td>28 above</td>
<td>5</td>
<td>1.39</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate students</td>
<td>357</td>
<td>98.89</td>
</tr>
<tr>
<td>Graduate students</td>
<td>4</td>
<td>1.11</td>
</tr>
<tr>
<td>Family income (NTD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>below 30,000</td>
<td>190</td>
<td>52.63</td>
</tr>
<tr>
<td>30,000~50,000</td>
<td>87</td>
<td>24.10</td>
</tr>
<tr>
<td>50,001~70,000</td>
<td>41</td>
<td>11.36</td>
</tr>
<tr>
<td>70,001~90,000</td>
<td>16</td>
<td>4.43</td>
</tr>
<tr>
<td>above 90,000</td>
<td>1</td>
<td>7.48</td>
</tr>
<tr>
<td>Have you ever copied a textbook</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>268</td>
<td>74.24</td>
</tr>
<tr>
<td>NO</td>
<td>93</td>
<td>25.76</td>
</tr>
<tr>
<td>Have you ever purchased a pirated textbook</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>158</td>
<td>43.77</td>
</tr>
<tr>
<td>NO</td>
<td>203</td>
<td>56.23</td>
</tr>
<tr>
<td>Sample Size</td>
<td>361</td>
<td></td>
</tr>
</tbody>
</table>

4.6 Scale Reliability

Reliabilities for the measures are reported in Table 2. The internal consistency (Cronbach’s α) of all factors is at least 0.73, as recommended by Nunnally (1978) and was deemed acceptable.
Table 2. Reliability.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>.81</td>
</tr>
<tr>
<td>Benefit</td>
<td>.83</td>
</tr>
<tr>
<td>Peer influence</td>
<td>.73</td>
</tr>
<tr>
<td>Societal influence</td>
<td>.84</td>
</tr>
<tr>
<td>Opportunity</td>
<td>.73</td>
</tr>
<tr>
<td>Anticipated guilt</td>
<td>.84</td>
</tr>
<tr>
<td>Textbook piracy</td>
<td>.77</td>
</tr>
</tbody>
</table>

5. Testing of the Hypotheses

To examine the multicollinearity among independent variables, the variance inflation factor (VIF) and eigenvalue were analyzed. The analysis shows that VIF ranges from 1.05 to 1.67 while the eigenvalue ranges from 0.05 to 0.17, which indicates that there is no multicollinearity problem (Hair et al., 1995). As shown in Table 3, the only statistical significant coefficient is the negative relationship between cost and benefit.

Regressions were run separately to test the hypotheses proposed in the study. As suggested by Baron and Kenny (1986), testing for a mediation effect is best done in the case of a strong relation between the predictor and the criterion variable. In addition, three conditions must be met to establish mediation. First, the independent variable must affect the mediator (\( Y_{\text{anticipated guilt}} = \beta_0 + \beta_1 X_{\text{cost}} + E \)). Second, the independent variable must be shown to affect the dependent variable (\( Y_{\text{textbook piracy intention}} = \beta_0 + \beta_1 X_{\text{cost}} + E \)). Finally, the mediator must affect the dependent variable after the predictor is statistically controlled (\( Y_{\text{textbook piracy intention}} = \beta_0 + \beta_1 X_{\text{cost}} + \beta_2 X_{\text{anticipated guilt}} + E \)). If the above three requirements are met, then the effect of the independent variable on the dependent variable in the third equation must be less than in the second (Baron and Kenny, 1986). Table 4 shows a strong relationship between the variables, indicating that the study is suitable to test for mediation effects.
Table 3. Correlation coefficients for relations among five independent variables.

<table>
<thead>
<tr>
<th></th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>-0.21**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>0.06</td>
<td>-0.09</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>0.18</td>
<td>-0.25</td>
<td>0.37</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>F5</td>
<td>0.04</td>
<td>-0.14</td>
<td>0.11</td>
<td>0.26</td>
<td>1.00</td>
</tr>
</tbody>
</table>

** p < 0.05
*** p < 0.001

F1 = Cost, F2 = Benefit, F3 = Peer Influence, F4 = Societal Influence, F5 = Opportunity

PS

Table 4. Testing the hypotheses.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>R</th>
<th>Value</th>
<th>t-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Cost → Textbook piracy intention</td>
<td>-</td>
<td>β = -.51***</td>
<td>-4.37</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2: Benefit → Textbook piracy intention</td>
<td>+</td>
<td>β = .84***</td>
<td>4.61</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3: Peer influence → Textbook piracy intention</td>
<td>-</td>
<td>β = -.47***</td>
<td>-3.66</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4: Societal influence → Textbook piracy intention</td>
<td>-</td>
<td>β = -.41**</td>
<td>-2.23</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5: Opportunity → Textbook piracy intention</td>
<td>+</td>
<td>β = .37**</td>
<td>2.18</td>
<td>Accepted</td>
</tr>
<tr>
<td>H6: Anticipated guilt → Textbook piracy intention</td>
<td>-</td>
<td>β = -.22***</td>
<td>-2.73</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

** p < 0.01
*** p < 0.001

R - Relationship

Subsequent analysis of three regression equations reveals the conditions required for mediation (Baron and Kenny, 1986), as shown in Table 5. In addition, the effect of cost on textbook piracy intention is less in the third equation than in the second equation (Baron and Kenny, 1986). Thus, H7 is supported.
Table 5. Mediation test for H7.

<table>
<thead>
<tr>
<th>Regression equation</th>
<th>Independent variables</th>
<th>Selected variables</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cost</td>
<td>Anticipated guilt</td>
<td>0.13***</td>
</tr>
<tr>
<td>2</td>
<td>Cost</td>
<td>Textbook piracy intention</td>
<td>-0.51***</td>
</tr>
<tr>
<td>3</td>
<td>Anticipated guilt + Cost</td>
<td>Textbook piracy intention</td>
<td>-0.52**</td>
</tr>
</tbody>
</table>

**Significant level at 0.01  ***Significant level at 0.001

Similarly, all conditions for mediation were met for H8. For example, the subsequent analysis of three regression equations revealed that the conditions for mediation were present in Table 6. In addition, there was a reduction in the relationship between benefit and textbook piracy intention. In other words, this analysis concluded that anticipated guilt does mediate the relationship between benefit and textbook piracy intention. Thus, H8 is supported.

Table 6. Mediation test for H8.

<table>
<thead>
<tr>
<th>Regression equation</th>
<th>Independent variables</th>
<th>Selected variables</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Benefit</td>
<td>Anticipated guilt</td>
<td>0.14**</td>
</tr>
<tr>
<td>2</td>
<td>Benefit</td>
<td>Textbook piracy intention</td>
<td>0.84***</td>
</tr>
<tr>
<td>3</td>
<td>Anticipated guilt + Benefit</td>
<td>Textbook piracy intention</td>
<td>-0.45**</td>
</tr>
</tbody>
</table>

**Significant level at 0.01  ***Significant level at 0.001

However, Table 7 shows that not all conditions for mediation were met for hypothesis 9. For example, the first condition for mediation was not present: (1) Peer influence was not significantly related to anticipated guilt ($\beta = 0.07, p < 0.48$), (2) peer influence was significantly related to textbook piracy intention ($\beta = -0.47, p < 0.001$), (3) anticipated guilt was significantly related to textbook piracy intention ($\beta = -0.22, p < 0.001$), and (4) there was a reduction in the relationship between peer influence and textbook piracy intention. Thus, this analysis does not support hypothesis 9 that anticipated guilt mediates the relationship between peer influence and textbook piracy intention.

Table 7. Mediation test for H9.

<table>
<thead>
<tr>
<th>Regression equation</th>
<th>Independent variables</th>
<th>Selected variables</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Peer influence</td>
<td>Anticipated guilt</td>
<td>0.07</td>
</tr>
<tr>
<td>2</td>
<td>Peer influence</td>
<td>Textbook piracy intention</td>
<td>-0.47***</td>
</tr>
<tr>
<td>3</td>
<td>Anticipated guilt + Peer influence</td>
<td>Textbook piracy intention</td>
<td>-0.41***</td>
</tr>
</tbody>
</table>

***Significant level at 0.001
Table 8. Mediation test for H10.

<table>
<thead>
<tr>
<th>Regression equation</th>
<th>Independent variables</th>
<th>Selected variables</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Societal influence</td>
<td>Anticipated guilt</td>
<td>0.26***</td>
</tr>
<tr>
<td>2</td>
<td>Societal influence</td>
<td>Textbook piracy intention</td>
<td>-0.41**</td>
</tr>
<tr>
<td>3</td>
<td>Anticipated guilt + Societal influence</td>
<td>Textbook piracy intention</td>
<td>-0.38**  -0.36**</td>
</tr>
</tbody>
</table>

**Significant level at 0.01 ***Significant level at 0.001

Finally, a similar mediation test was run for H10. Analysis of three regression equations revealed that all three conditions were met. For example, the subsequent analysis of three regression equations showed that the conditions for mediation were present in Table 8. In addition, there is a reduction in the relationship between societal influence and textbook piracy intention. Thus, this analysis concludes that anticipated guilt does mediate the relationship between societal influence and textbook piracy intention. However, the magnitude of the direct path barely drops when the mediator is entered. Thus, H10 is marginally supported.

Even though we did not hypothesize the relationship between intention and behavior, we ran a correlation analysis. As shown in Table 9, we found that piracy intention is positively related to either of the two purchase behaviors. This result further confirmed that the previous findings that intention is a good index of behavior. The evidence for the prediction of behavior from intentions can be found in the applications of TPB in several behavioral contexts (e.g. Ajzen and Driver, 1992; Bansal and Taylor, 1999, 2002).

Table 9. Correlation coefficients for the relationship among three factors.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Textbook Piracy Intention</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Have you ever copied a textbook?</td>
<td>0.41***</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Have you ever purchased a pirated textbook?</td>
<td>0.43***</td>
<td>0.38**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

** $p < 0.05$, *** $p < 0.001$

6. Discussion

As shown in Figure 1, this study tested not only the mediation effect of anticipated guilt but also the direct effect of “opportunities” and “anticipated guilt” on textbook piracy intention. The findings supported that if students can find a place where they could safely pirate a textbook or have someone make a copy for them, they were more likely to do so. In addition, when confronted with an ethically questionable situation, students would anticipate any possible post-decisional guilt feelings and take them into account when making their
decision. The more guilt a student anticipated, the more likely that the decision would be not to pirate the textbook.

In terms of mediation effect, three out of four hypotheses were supported. The empirical results supported that anticipated guilt mediates the effect between “cost” and “textbook piracy intention”, and the effect between “benefit” and “textbook piracy intention.” However, the mediation effect of anticipated guilt between “social influence” and “textbook piracy intention” was only marginal. In other words, students’ textbook piracy intention driven by the financial benefit of making unlawful copies was attenuated by the anticipated guilt. Students’ textbook piracy intention deterred by the cost of making unlawful copies was accentuated by the anticipated guilt.

The only non-supported mediation effect for anticipated guilt was between peer influence and textbook piracy intention. Past research has demonstrated that individuals who are highly group identified are more likely to show an ingroup bias (Doosje and Branscombe, 2003; Rantilla, 2000). Such a bias may lead students to make excuses for their bad behavior, thereby inhibiting their feelings of anticipated guilt for textbook piracy. Therefore, a possible self-defense mechanism could explain why the effect of peer influence on textbook piracy intention was not mediated through anticipated guilt.

6.1 Managerial Implications

The findings of this study may provide some suggestions for government officials, publishers, schools, and instructors. Anti-piracy strategies must enhance a student’s perception about the cost of book piracy, and at the same time it must educate university students on how to deal with peer pressure.

In terms of costs, government and publishers need to publicize the severity of the consequences of textbook piracy. Based on instrumental conditioning, a learned behavior becomes extinct when the expected positive outcome is no longer received (Solomon, 2004). In the same vein, reducing the benefits received from pirating may reduce or even remove the pirating behavior entirely. A special inducement should be offered to those students who purchase their books legally. For example, law abiding students could be offered on-line access to supplementary class material. Students need to be educated how to withstand the pressure from their peers to pirate textbooks and learn to conform to proper social norms. In addition, intellectual copyright laws need to be enforced more effectively, especially on a university campus, and the opportunity for students to pirate textbooks should be discouraged through education and penalties if necessary. In addition, if not already done so, each school should establish proper channels for sales of used textbooks on their campus. Since anticipated guilt was found to be a mediator between cost, benefit, social pressure and book piracy intention, a special effort is required to instill a sense of guilt into students when they are pirating textbooks. With a stronger sense of anticipated guilt toward book piracy, even when there is a great incentive (such as high benefit or low cost) to pirate textbooks, students will be unlikely to engage in book piracy behavior.

6.2 Research Limitations and Future Suggestions

The major limitations of this research involve issues of both measurement and sampling. In terms of measurement, even though indirect questioning was used in the design of the survey questionnaire, social desirability bias may still have compromised the validity of this study. Thus, future research should consider measuring social desirability and treat it as a covariance. Another factor which was not included in the present research design but might have a significant influence is the price of the textbook. In the study of receiving too much
change at the checkout, Steenhaut and Van Kenhove (2005) found that the guilt feeling is higher for those consumers who did not report having received a large excess of change than those consumers who failed to report receiving a small excess of change. In a software piracy study, Tang and Farn (2005) found that the effect of a positive social norm on piracy behavior is more effective when the price of the software is low than when the price of the software is high.

In terms of sampling limitation, the sample in this study was drawn from university students in Taiwan who represent a “typical” book pirating population. Nevertheless, college students recruited exclusively from Taiwan limit the generalizability of this research to other Asian countries such as Korea and China. The extent to which ethical beliefs differ across nationalities might provide beneficial insights into the determinants of these ethical beliefs, and could be a valuable topic for future study.

References


Appendix 1

Measure

Cost
- One could be prosecuted for textbook pirating.
- One could be imprisoned for textbook pirating.
- One could be subject to a heavy fine for textbook pirating.
- One could be sued for textbook pirating.

Benefit
- Textbook pirating can save a lot of money.
- Textbook pirating can save waiting time.
- If bookstores or online bookstores do not sell the textbook One wants, One will turn to pirate that textbook.
- If the bookstores or online bookstores sell the needed textbook, but at a high price, one will still pirate that textbook in order to save money.

Peer Influence
- Most of a person’s relatives, friends and classmates are against pirating textbooks.
- Most of a person’s relatives, friends and classmates believe that pirating textbooks is immoral.
- Most of a person’s relatives, friends and classmates will look down at him if he is not able to purchase textbooks.
- Most of a person’s relatives, friends and classmates will treat him with respect if he does not purchase pirated textbooks.
- Most of a person’s relatives, friends and classmates will look down at him if he pirates textbooks.
- Most of a person’s relatives, friends and classmates are against pirating textbooks.

Societal Influence
- The general public is against pirating textbooks.
- The general public believes that pirating textbooks is immoral.
- The general public will look down at someone because he is not able to purchase textbooks.
- The general public will not treat a person with respect because he does not purchase his textbooks.
- The general public will look down on a person because he pirates textbooks.
Opportunity
- On campus there are some places where one can pirate textbooks.
- Off campus there are some places where one can pirate textbooks.
- The school prohibits students from using pirated textbooks.
- Photocopiers on campus will not pirate textbooks for students.

Anticipated Guilt
- Textbook pirating makes one feel uptight.
- Textbook pirating makes one feel remorseful.
- Textbook pirating is wrong.
- One shouldn’t pirate textbook for any reason.
- One feels like undoing what s/he has done with the textbook.
- One will be punished with high fine for pirating textbooks.
- One should apologize for pirating textbooks.
- One should avoid meeting people’s gaze when pirating a textbook.
- One should make up for what one has done wrong by pirating textbooks.
- For the first time, one will be forgiven for pirating a textbook by publisher(s).

Textbook Piracy Intention
- If needed in class, people will choose pirating that textbook.
- People will pirate a textbook for economic reasons.
- If one is financially comfortable, then one will purchase the textbook.
- Generally speaking, people will pirate textbooks.
- Generally speaking, people will not pirate textbooks.