A STUDY ON DIGITAL PIRACY OF MOVIES IN WESTERN AUSTRALIA

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ABSTRACT

This study investigates the personal and social factors influencing "illegal" downloading of movies from the Internet. The data analysis of 203 usable responses indicated three antecedents ("habits", "affect" and "facilitating conditions") have significant relationships with "attitude towards illegally downloading movies". Conversely, "moral judgement", "self efficacy" and "social factors" do not have significant influence towards "attitude towards illegally downloading movies". Additionally, internet usage, internet time spent and internet speed do not have significant influence to respondents' attitude towards illegally downloading movies to change the respondents' intention to download movie illegally in the future. Self-control theory, neutralization theory and theory of planned behaviour are used to explain some of the results. Findings derived from this study can provide useful practical implications for marketers, policy makers and internet gatekeeper to have a better understanding of down-loaders' behaviour and developed better anti-piracy measurements to reduce piracy rate in Australia. The major limitation in this study is the use of a convenience sample from a large university. Further research is needed with a random sample of down-loaders.

INTRODUCTION

Movie piracy, the unauthorized use or illegal copying of movies, continues to be a major drain on the global economy especially for the movie-enterprise industry (MPAA, 2005; Walls, 2008). The global film industry has a low rate of return coupled with high volatility (De Vany and Walls 2004; Walls 2008). The revenue lost to piracy can be particularly difficult to absorb because most movie projects are already not profitable (De Vany and Walls 2004; Walls 2008).

The Motion Picture Association of America (MPAA) estimates motion-picture industry losses due to piracy exceed $3 billion annually in potential worldwide revenue (MPAA, 2005; Lewis, 2007). According to the Motion Picture Association of America the cost of piracy was $US6.1 billion to the American movie industry in 2005 (MPAA 2005). However, Siwek (2006) estimates that the total loss to American industries for the same year is actually $US20.5 billion which $US5.5 million represents wages loss to American workers. Without piracy approximately 141,000 jobs would have been created in the US economy (Siwek 2006). Motion Picture piracy in 2005 cost governments at all levels in the USA $US837 million in lost tax revenue (MPAA 2005).

Electronic movie piracy has been increasing recently that worried the movie industry, which internet piracy has been encouraged by the ever-increasing reach of high-speed broadband Internet access (Hunt, 2003; Liebowitz 2008; Das, 2008; Dejean 2009). Before broadband Internet access is available, a pirate needs 20 to 24 hours to download a movie with a 56K modem or dial-up speed. Now the download time is reduced to less than 20 minutes with broadband or DSL speed (Lewis, 2007).

Byers et al. (2003) found that most internet movies that posted on the Internet are insider copies, for example the advance copies used for screening and marketing purposes. Other copies are made from hand-held video camera recording of motion picture film of a theater screen or cinema. Although the quality of the movies may be low, the latest movies are readily available over internet-based file-sharing networks, such as BitTorrent (Kwok, 2004).

This study purely focuses on movie piracy through the Internet which internet users upload the movie files in the Internet so other Internet users can download it for free illegally. This research has two primary objectives. The first objective is to examine the relationship between six antecedent factors (social factors, facilitating conditions, habits, self efficacy, affect and moral judgement) and attitude towards illegally

downloading movies from the Internet. The second objective is to investigate the relationship between internet users' attitude towards illegally downloading movies and the intention to download movies illegally. Additionally, this research also tries to find out how the internet usage, internet time spent and internet speed moderate the relationship between attitude towards illegally downloading movies from the Internet as an independent variable and intention to download movies illegally from the Internet as a dependent variable. The difference behaviour between down-loaders and non-down-loaders also will be investigated.

This paper enhances understanding of internet users' behaviour in internet movie piracy and leads to valuable implication for movie producers, managers, the internet gatekeeper, the academic community, and governmental agencies on how to develop effective measures to deal with movie piracy through Internet. For instances, marketers and policy makers are creating ad campaigns to invoke guilt factor and providing another cheaper alternatives for consumers on the Internet. Additionally, the punishment should be harsher and anti-piracy agencies should be more aggressive in catching all illegal "down-loaders" by tracking their IP address from the Internet provider that they used.

This paper is organized into several sections, beginning with a discussion on relevant literature, and leading to the model and hypotheses development. This is followed by a description of the research methodology and some findings from the data analysis. The discussion of the finding will be provided in the next section. Finally, the implications and limitations of the study are highlighted as the conclusion of this study for further research.

LITERATURE REVIEW

Internet piracy

Internet piracy or digital piracy is the illegal downloading or distribution of unauthorized copies of intellectual property such as movies, television, music, games and software programs via the internet that occur in many forms including via file sharing networks, pirate servers, websites and hacked computers without permission from and compensation to the copyright holder (AFACT 2007; Gopal et al. 2004). The hacking of vulnerable web sites or defeating Digital Rights Management (DRM) tools to steal motion pictures is also referred to as internet piracy (Ponte, 2008, p.338). In this context, the form of digital piracy involves movies. Downloading a movie

without paying for it is morally and ethically no different to walking into a store and stealing a DVD off the shelf (Gopal et al. 2004). These actions violate copyright infringement law (Commonwealth Consolidated Acts 2009) because it is stealing intellectual property right. The term "copyright is defined as a type of legal protection for people who produce things like writing, images, music and films to prevent others from doing certain things (such as copying and making available online) without permission (Australian Copyright Council 2009). At the individual level in the US, there are potentially considerable fines for illegal downloads (MPAA 2005). For example, In Sydney in 2009 the head of a piracy ring was sentenced to imprisonment (www.ifpi.org).

Impact to economic factor

According to some estimates, movie piracy has had a significant effect on the movie industry. The Motion Picture Association (MPA) estimates that its member companies lose approximately US$1.2 billion each year in potential revenue in the Asia-Pacific region alone, and US$6.1 billion globally (MPAA 2005; AFACT 2007). In 2005, LEK Consulting estimated that internet piracy accounted for $92 million lost revenues for the film industry (not including piracy of free-to-air television programs) in Australia and Australian downloaded 11 million illegal copies of films (AFACT 2007). These will threaten the jobs of close to 50,000 Australian employers in film and television industries (AFACT 2007). In Weigel's (2008) article, it shows that 15 percent losses from share of movie pirating from the Internet attributable to college students and the typical pirate is "age 16-24 and male" from MPAA and LEK Consulting research.

Shadowing the actions of the Recording Industry Association of America (RIAA), the MPAA is using courtroom, legislative, and technological strategies to stop global online piracy (Ponte, 2008, p.333). Clearly, pirates are intelligent enough for recognizing the importance of customer satisfaction and the importance of permitting consumers shape their own viewing experience (Ponte, 2008, p.362).

According to Chen et al. (2009), hundreds of thousands more Australians have turned to illegal download sites in the past year to save money on movies, music, software and TV shows during the economic downturn. For example, the most popular movie – Watchmen – was downloaded 17 million times through Torrent site (Cellan-Jones, 2009). Total visits by Australians to BitTorrent websites including Mininova, The

Pirate Bay, isoHunt, TorrentReactor and Torrentz grew from 785,000 in April last year to 1,049,000 in April this year with a year-on-year increase of 33.6 per cent (Chen, Shang, and Lin 2008, 419).

Previous research

There are only a few existing studies which examine the effects of digital piracy (Al-Rafee & Cronan, 2006; Bhattacharjee & Gopal, 2003; Chiou, Huang & Lee, 2005; d'Asous, Colbert & Montpetit, 2005; Gopal et al., 2004; LaRose, Lai, Lange, Love & Wu, 2005; Plowman & Goode, 2009). Among these studies, the focus was placed on music piracy and software piracy but video piracy did not taken into consideration.

The decision to engage in the piracy of music, film and television programmes from the internet can be related to a number of decision making factors including economic, legal, ethical network and consumer behaviour aspects (Coyle et al. 2009, 1031). Goel and Nelson (2009) found that piracy is less attractive to individuals in wealthier nations and the punishments for possessing pirated software are heavier than poorer nations. Lysonsku and Durasula (2008) found that authorities need to invoke guilt factor to change the minds of individuals who did digital piracy. Basically, in order to decrease the amount of illegal down-loaders, the consequences of these unethical practices needs to be harsher. In this context, the antecedents from previous research for music piracy and software piracy can be used to measure movie piracy.

There are few studies have been done in movie piracy. According to Walls (2008), the previous research indicates that social factors have positive relationship with movie piracy but internet usage level has negative relationship with movie piracy. According to Shin et al. (2004), sociological factors have more influence than economic factors. In this empirical study, sociological factors will be investigated in relation to the level of movie piracy. Al-Rafee and Cronnan (2006) found that people who did digital piracy want to save money and did not believe they would get caught. Additionally, the data analysis indicated moral judgement was not significant with attitude towards digital piracy. Banerjee et al. (1998) found that individual and situational (social) characteristics influence the intention to do digital piracy. Limayem et al. (2004) adopted the Trandis (1980) model and investigated various factors including social factors, affect, habit, and facilitating conditions. All of these factors except affect significantly influenced both the intention to pirate and actual digital piracy

behaviour. Thus, this study will use personal factors and social factors to measure the attitude towards downloading movies for free.

Theory Development

Studies based on the perspectives of theory of planned behaviour (TPB), expected utility theory (Peace, 1997) and equity theory (Glass and Wood, 1996) have explained the behaviour that favours piracy. The literature has shown that the attitudes and intentions towards downloading movie for free are highly applicable to the theory of reasoned action (TRA) and TPB (Cronan and Al-Rafee 2008; Peace et al. 2003). This study will use both well-developed theoretical orientation to clarify the pyshological processes underlying intention and behaviours of internet users favouring internet movie piracy (Plowman & Goode 2009). Thus, both theories will be used to underpin this research. Self control theory (Gottfredson & Hirschi 1990) and neutralization theory (Sykes & Matza 1957) will also be used in this study to explain personal factors that affect the individuals to do digital piracy.

Self Control Theory

Originally, Gottfredson and Hirschi's (1990) self control theory suggests that self-control is the principle causal factor for all crimes. Gottfredson and Hirschi (1990) argued that individuals who are subjected to poor or ineffective parenting practices (i.e., no emotional attachment, lack of monitoring, no recognition of deviant behaviour, and the use of corporal punishment) are likely to have low self-control (i.e., the inability to foresee the long-term consequences of a behaviour). Those with low self-control are likely to perform criminal behaviour when an opportunity presents itself (Gottfredson and Hirschi 1990; Higgins et al. 2009). In this context, digital piracy is a criminal behaviour (Zhang et al. 2009; Higgins et al. 2009).

Neutralization Theory

Originally, neutralization theory is developed by Sykes and Matza (1957) to develop "techniques of neutralization" specific to criminal offending even their exploration was limited to juvenile offending (Morris and Higgins 2009; Ingram and Hinduja 2008; Hinduja, 2006). Five techniques are created by Sykes and Matza (1957): denial of responsibility, denial of injury, denial of victim, condemnation of the condemners, and appeal to higher loyalties (Hinduja 2006). Hinduja (2006) also explored metaphor

of the ledger (Klockars 1974; Minor 1980), claim of normalcy, denial of negative intent and claim of relative acceptability (Henry 1990) as other four techniques to explain neutralization theory. The neutralization theory has been used to explain a number of criminal behaviours such as digital piracy in this context (Morris and Higgins 2009; Ingram and Hinduja 2008; Hinduja, 2006; Peace et al. 2003). This finding can be explained by using all techniques in neutralization theory which postulates that individuals are able to neutralize their wrongdoing by justifying their illegal actions as "normal" (Hinduja 2006).

Theory of Reasoned Behaviour

The TRA theory indicates that personal in nature (attitude) and social influences (subjective norms) affect human behaviour which people intend to behave in ways allow them to obtain favourable outcomes and meet the expectation of others (Azjen and Fishbein 1977). According to TRA, a decision to engage in a behaviour (downloading movies illegally from the Internet) is predicted by an individual's intention to perform the behaviour directly. Additionally, an individual's intention to perform the behaviour can be predicted if the individual's attitude and subjective norms are known. Results from other studies have indicated that attitudes have a stronger effect on predicting behavioural intentions than subjective norms (Cronan and Al Rafee 2008; Peace et al. 2003; Beck and Azjen 1991).

Theory of Planned Behaviour

The TPB is an extension of the TRA, introduced by Azjen in 1985 with the additional variable of perceived behavioural control as a predictor for intentions and behaviour to improve the main flaw of the TRA. According to Azjen (1991), behaviour is guided by belief about likely outcomes of behaviour and evaluations of these outcomes (behavioural beliefs), beliefs about normative expectations of others and motivation to comply with these expectations (normative beliefs), and beliefs about the presence of factors that may facilitate or impede performance of behaviour and the perceived power of these factors (control beliefs).

Azjen's Theory of Planned Behaviour (TPB) is a well recognized intention model because it is very useful to understand and explain behaviour in a wide range of topics including digital piracy (Morton and Koufterous 2008; Cronan and Al Rafee 2008; Peace et al. 2003). Both personal and social factors influence intention to illegally

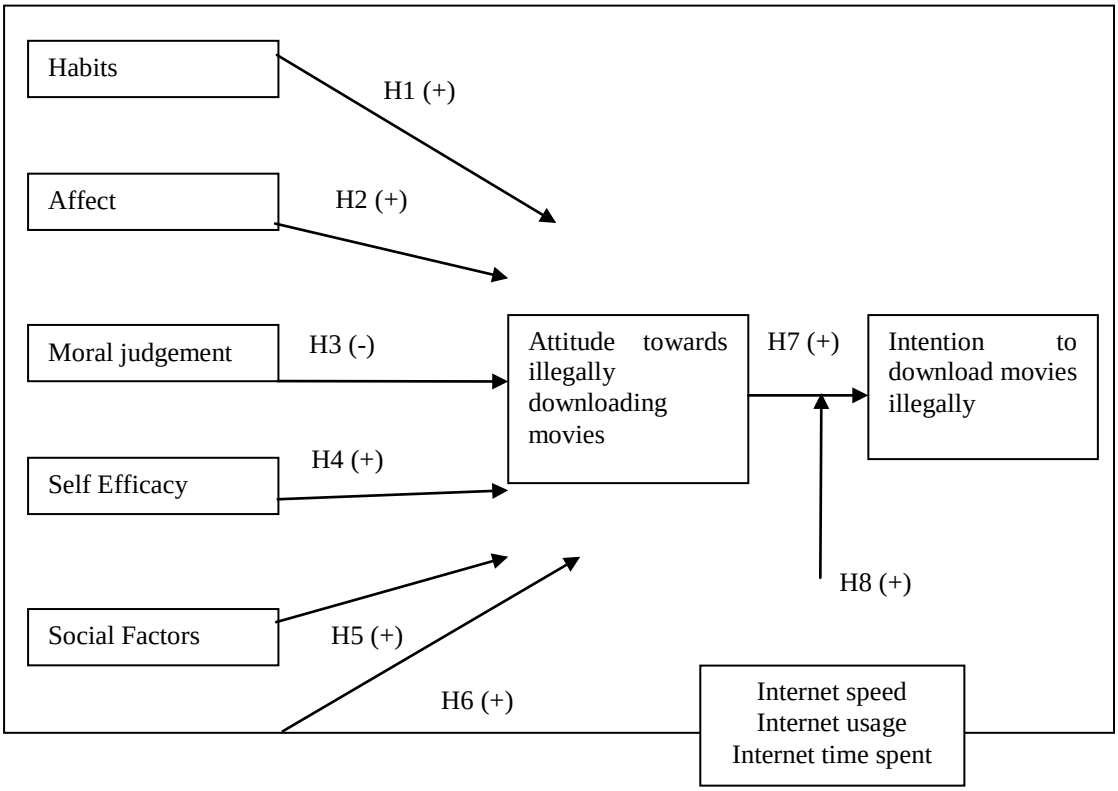
downloading movies as explained by TRA. Peace et al. (2003) have shown that these factors are strongly affected to attitude towards the behaviours. In this context, these factors (habits, affect, facilitating conditions, social factors, moral judgement and self efficacy) are those accrue to attitude towards the behaviour. According to Morton and Koufterous (2008, 491), a recent survey conducted of 216 respondents based on this planned behaviour theory also suggested that attitude towards digital piracy, subjective norms and perceived level of control in individuals were factors that led to the intention to commit online piracy. In order to gain an initial exploratory understanding of the movie downloading phenomenon situation, this paper uses the wide model view of rational choice (Figure 1).

HYPOTHESES DEVELOPMENT

Habits

According to Triandis (1980), habits are situation-behaviour sequences that have become automatic and occur without self-instruction. An individual's behaviour and attitude are affected by habits because habits are function of an individuals' past experience and the ability to accomplish specific tasks (Limayem et al. 2004). In such instances, habits have positive influence to individuals' attitude towards illegally downloading movie. As such, the following hypothesis:

H1: There is positive relationship between habits and attitude towards illegally downloading movies.



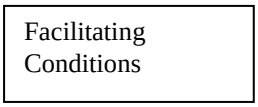


Figure 1: Theoretical framework for intention to download movies illegally from the Internet.

Affect

According to Triandis (1980), affect refers to an individual's feeling of joy, elation, pleasure, depression, dictate, discontentment, or hatred with respect to a particular behaviour. Triandis (1980) argues that literature shows a profound and substantial relationship between affect and attitude that will lead to intention to download movies illegally. The affect factors that used in the questionnaire are positive individual's feeling toward illegally downloading movies such as wise, exciting, amusing and pleasant (Limayem et al. 2004). In such instances, affect has positive influence with the attitude towards illegally downloading movies. As such, the following hypothesis:

H2: There is a positive relationship between individuals' affect and their attitude towards illegally downloading movies.

Moral Judgement

Moral judgement has been used to predict ethical judgement and attitude (Al-Rafee and Cronan 2006).Studies in cognitive moral development have consistently affirmed a direct relationship between higher stage of moral judgement and higher occurrence of downloading movies for free from the Internet (Tan 2002; Wagner and Sander 2001). Blasi (1980) proved that there is a significant relationship between moral thinking and moral behaviour that will affect the individuals' attitude towards illegally downloading movies. Several studies have found that moral judgement have a connection with digital piracy which the intention to do digital piracy will decrease if the moral beliefs are increasing (Higgins and Makin 2004; Higgin and Wilson 2006; Wolfe and Higgins 2009). In this context, attitude towards illegal downloading movies will be lower when the moral judgement is higher. Hence, the following hypothesis is proposed:

H3: Individuals who are high on the moral judgement scale will have a lower attitude towards illegally downloading movies.

Self Efficacy

Self efficacy is the "beliefs in one's capabilities to organize and execute the courses of action required producing given levels of attainment" (Bandura, 1998, p. 624). Self efficacy in this study refers to individuals' judgement of their capability to engage in digital piracy behaviour (downloading movies illegally from the Internet) in various situations especially technological capabilities (Zhang et al. 2009). Additionally, an individual with high level of self efficacy will have small chance to get caught (Krueger and Dickson, 1994). Therefore, individuals who intend to download movies for free from the Internet should perceive themselves capable of doing the tasks aforementioned. As such, the following hypothesis is proposed:

H4: There is a positive relationship between self efficacy and attitude towards illegally downloading movies.

Social Factors

According to Limayem et al. (2004), perceived social pressure refers to individuals' perception affected by most people that influential to them think that the behaviour should be performed or not. Social factors can be defined as those norms, roles and values at the societal level that influences an individual's intention to download movies illegally. In this context, the norms and values that are conveyed through interaction with friends, colleagues, and family members such as comments, suggestions or directives are all examples of social factors (Limayem et al. 2004). In such instances, the influence of social norms on personal behaviour is positively related. As such, the following hypothesis proposed:

H5: Social factors have a positive influence on the attitude towards illegally downloading movie.

Facilitating Conditions

Facilitating conditions can be defined as those factors in an individual's environment that facilitate the act of illegally downloading movies such as absence of penalties for illegal downloading, availability of movies to download for free and the absence of a code of ethics (Triandis 1980; Limayem et al. 2004). Similarly, Cheng et al. (1997)

found that the low risk of being caught and the ease of piracy are among the main factors that facilitate piracy. In this context, facilitating condition will have positive influence for attitude towards illegally downloading movies. Therefore, the following hypothesis:

H6: There is positive relationship between facilitating conditions and attitude towards illegally downloading movies.

Attitude towards illegally downloading movies

According to Cronan and al Rafee (2008), attitude is one of the major components of the TPB as the best predictor of intention to do digital piracy. Similarly, Peace et al. (2003) found that attitude had the strongest effect on intention to do digital piracy based on TPB. Attitude has been shown As such, the following hypothesis:

H7: There is positive relationship between attitude towards illegally downloading movies and intention to download movies illegally.

Moderating variables

Previous studies have shown that internet speed facilitate internet users to download files faster (Lewis 2007) and there is no study about level of internet usage and internet time spent that moderate between attitude towards illegally downloading movies and intention to download movies illegally. It is expected that internet speed, internet usage and internet time spent have moderation between attitude towards illegally downloading movie with intention to download movies illegally. Hence, the following hypothesis:

H8a: Internet usage is a moderation variable between attitude towards illegally downloading movies and intention to download movies illegally.

H8b: Internet time spent is a moderation variable between attitude towards illegally downloading movies and intention to download movies illegally.

H8c: Internet speed is a moderation variable between attitude towards illegally downloading movies and intention to download movies illegally.

METHODOLOGY

Data Collection

The survey instrument was designed and distributed to convenience samples in one large university which nearly every one of the samples is internet users to take part in

the survey. The data collection is conducted over a four week period. The survey took place at various times in the day to achieve a broad cross-section of the population. It was highlighted to the respondents that participation in this study was voluntary and that respondents' anonymity was ensured due to the sensitivity of this study. The respondents were further reassured that their responses would not be traced back to them owing to the sensitivity of some questions in the survey. The demographic details requested were purely for statistical analysis. Respondents were given 3-4 minutes to complete the survey. Two hundred and three surveys were completed and employed in the final analysis.

Survey instrument

All of the scales, with the exception of the first section have been used in previous research. The first section of the survey instrument comprised three filter questions to differentiate internet users and non-internet users also to differentiate down-loaders and non-down-loaders. Additionally, eight items scale were developed to measure internet usage level (Teo 2001). The first four items measured internet usage level (seven-point scale: 1 = Never, to 7 = Very Often). The second four items measured internet time spent (seven-point scale: 1 = Never, to 7 = More than 4 hours). One-item scale was established to measure internet speed.

The second section comprised a 5-item scale to measure habits (Limayem et al. 2004), a 4-item scale to measure self efficacy (Zhang et al. 2009), and a 3-item scale to measure social factors (Limayem et al. 2004).

The third section comprised a 6-item scale to measure affect (Limayem et al. 2004), a 5-item scale to measure facilitating conditions (Limayem et al. 2004), a 4-item scale to measure moral judgement (Tan, 2002), a 4-item scale to measure attitude towards illegally downloading movies (Plowman and Goode 2009) and a 4-item scale to measure the intention to download movies illegally (Limayem et al. 2004).

All items in second and third sections were measured on a 7-point Likert scale, with 1 representing 'strongly disagree' and 7 representing 'strongly agree'. The last section comprised a series of demographic items.

Relevant issues were revised and amended from the feedback of reviewers before the survey instrument was distributed to the actual sample.

FINDINGS AND ANALYSIS

Samples

In total, 233 responses were collected, and 30 responses were discarded due to incompletion. Two hundred and three usable responses were analyzed with SPSS version 16. The sample distribution between non-down-loaders and down-loaders is shown in Table 1. Over fifty percent of respondents were females. The percentage of down-loaders (71.6 %) was higher than non-down-loaders (28.4 %), which showed a high prevalence and acceptance of downloading among university students. Most of the down-loaders were in "age range 18-25" with 88.9 percent. The results from Table 1 also indicates that majority of people with low income are down-loaders (68.1 percent).

Table 1: Sample distribution between non-down-loaders and down-loaders of movies.

Demographic	**Non-down-loaders (n=57; 28.4 %)**	**Down-loaders (n=144; 71.6 %)**
Gender		
Male	20 (35 %)	75 (52 %)
Female	37 (65 %)	69 (48 %)
Age		
18-25	42 (73.9%)	128 (88.9%)
26-35	7 (12.3 %)	15 (10.4 %)
36 and above	8 (13.8 %)	1 (0.7%)
Household income		
0-20000	29 (50.9 %)	98 (68.1 %)
20001-40000	3 (5.3 %)	22 (15.3 %)
40001-60000	9 (15.8 %)	6 (4.2 %)
60001 and above	16 (28 %)	18 (12.4 %)
Education		
Secondary Education	22 (38.6 %)	65 (45.1 %)
Diploma TAFE	11 (19.3 %)	26 (18.1 %)
Bachelor Degree	15 (26.3 %)	45 (31.3 %)
Postgraduate Degree	9 (15.8 %)	8 (5.5 %)

Preliminary checks

The scales were each factor-analysed to ensure uni-dimensionality, followed by a reliability check. These results and the respective sources are shown in Table 2. As reflected, most of the scales exhibit a high degree of reliability with the Cronbach α above 0.80, except for affect (0.768), facilitating condition (0.537), attitude towards illegally downloading movies (0.779), general internet usage frequency (0.664), and daily internet usage frequency (0.672). The scale is adapted in this study is still deemed as acceptable, as it is greater than 0.60 (Nunnaly 1991) except for facilitating

condition (0.537). Facilitating condition factor has 0.537 for Cronbach alpha but it is still acceptable as it is an existing scale from Limayem et al. paper and had low Cronbach alpha score as well.

Table 2: Reliability scores of scales

Scale Measure	Source	No. of items	Cronbach alpha
Habits	Limayem et al. 2004	5	0.913
Self efficacy	Zhang et al. 2009	4	0.905
Social factors	Limayem et al. 2004	3	0.800
Affect	Limayem et al. 2004	6	0.768
Moral judgement	Tan 2002	4	0.821
Facilitating Condition	Limayem et al. 2004	3	0.537
Attitude towards illegally downloading movies	Plowman and Goode 2009	4	0.779
Intention to download movies illegally	Limayem et al. 2004	4	0.922
Internet usage level	Teo 2001	4	0.664
Internet time spent	Teo 2001	4	0.672
All scales measured using 7-point Likert scale.			

Regression Analysis

In order to test the hypotheses (Hypotheses 1-6), multiple regressions were used to analyze the effects of the independent factors on attitude towards illegally downloading movies. Results generated are shown in Table 3.

Table 3: Predictors of attitude towards illegally downloading movies

Independent variables	B-values	Std. error	β	Adjusted R^2	t-value	Sig.
Affect	0.579	0.075	0.524	0.683	7.720	0.000**
Social Factor	-0.006	0.044	-0.007		-0.129	0.898
Facilitating Conditions	0.227	0.054	0.210		4.175	0.000**
Habits	0.138	0.051	0.187		2.706	0.007**
Moral Judgement	-0.062	0.050	-0.062		-1.243	0.215
Self Efficacy	0.022	0.048	0.026		0.466	0.642

Dependent variable: Attitude towards illegally downloading movies
Adjusted R^2=0.683; F=72.706 (significant at P< 0.01)
**significant at P< 0.01

Only three variables, namely affect, facilitating condition and habits, are found to be significant influence “attitude towards illegally downloading movies” (F= 72.706, P< 0.01, Adjusted R^2= 0.683). These predictors are explained by 68.3 percent of the variance in attitude towards illegally downloading movies. The results indicate

"habits" has a positive influence on "attitude towards illegally downloading movies" (β = 0.187, adjusted R^2 = 0.683, Sig. = 0.007). Hence, H1 has been accepted. Further, a positive relationship between "affect" and "attitude towards illegally downloading movies" is also reported (β = 0.524, adjusted R^2 = 0.683, Sig. = 0.000). Therefore, H2 is accepted also. The regression between "moral judgement" and "attitude towards illegally downloading movies" indicate that there is no significant difference (β = -0.062, adjusted R^2 = 0.683, Sig. = 0.215). Therefore, H3 has been rejected. There is no significant relationship between "self efficacy" and "attitude towards illegally downloading movies" (β = 0.026, adjusted R^2 = 0.683, Sig. = 0.642). Hence, H4 has been rejected. The results indicate that there is no significant influence between "social factors" and "attitude towards illegally downloading movies" (β = -0.007, adjusted R^2 = 0.683, Sig. = 0.898). Thus, H5 is also rejected. The analysis indicate that "facilitating conditions" has a positive influence on "attitude towards illegally downloading movies" (β = 0.210, adjusted R^2 = 0.683, Sig. = 0.000). Thus, H6 is accepted.

Table 4: Regression from factors of attitude towards illegally downloading movies onto intention to download movies illegally

Independent variables	**B-values**	**Std. error**	**β**	**Adjusted R^2**	**t-value**	**Sig.**
Attitude towards illegally downloading movies	0.964	0.057	0.767	0.587	16.973	0.000**

Dependent variable: Intention to download movies illegally.
Adjusted R^2=0.587; F=288.099 (significant at P< 0.01).
**significant at P< 0.01

The analysis (based on Table 4) indicates that "attitude towards illegally downloading movies" has a positive influence on "intention to download movies illegally" (β = 0.767, adjusted R^2 = 0.587, Sig. = 0.000). Therefore, H7 is accepted.

Hierarchical Moderated Regression Analysis

Hierarchical moderated regression analysis will be used to analyze three factors (internet usage, internet time spent and internet speed) as moderation variables between "attitude towards illegally downloading movies" as an independent variable and "intention to download movies illegally" as a dependent variable.

Table 5: Hierarchical Moderated Regression Analysis for Internet Usage

Independent Variables	Cumulative R^2	F	*df*	Independent Variable Added	R^2 Increment	F(step)	*df*
Z	0.580	274.42[a]	1,199	Z	0.580	274.42[a]	1,199
Z + X	0.597	146.47[a]	2,198	X	0.017	8.37[a]	1,198
Z + X + ZX	0.597	97.27[a]	3,197	ZX	0.000	0.14	1,197

[a]p < .001
Z = attitude towards illegally downloading movies (independent variable)
X = internet usage (moderation variable)
ZX = independent variable/moderation variable interaction

Moderated regression analysis seeks to determine the change in R^2 that results during a hierarchical test of three regression equations (Caruana et al. 2002; Aiken and West 1991). Based on Table 5 Row 1, the results indicate that independent variables provide a significant R^2 of 0.58. The results shown in Table 5 row 2 and 3 indicate a higher R^2 of 0.597 but the increase in R^2 from 0.58 to 0.597 is statistically not significant ± F = 8.51; p > 0.001. Therefore, there is no significant influence when internet usage (moderation variable) added into attitude towards illegally downloading movies (independent variable) because there is no significant change in R^2. Therefore, H8a is rejected.

Table 6: Hierarchical Moderated Regression Analysis for Internet Time Spent

Independent Variables	Cumulative R^2	F	*df*	Independent Variable Added	R^2 Increment	F(step)	*df*
Z	0.580	274.42[a]	1,199	Z	0.580	274.42[a]	1,199
Z + X	0.585	139.45[a]	2,198	X	0.017	2.47	1,198
Z + X + ZX	0.585	92.50[a]	3,197	ZX	0.000	0.004	1,197

[a]p < .001
Z = attitude towards illegally downloading movies (independent variable)
X = internet time spent (moderation variable)
ZX = independent variable/moderation variable interaction

Based on Table 6 Row 1, the results indicate that independent variables provide a significant R^2 of 0.58. The results shown in Table 6 row 2 and 3 indicate a higher R^2 of 0.585 but the increase in R^2 from 0.58 to 0.585 is statistically not significant ± F = 2.474; p > 0.001. There is no significant influence when internet time spent (moderation variable) added into attitude towards illegally downloading movies

(independent variable) because there is no significant change in R^2. Therefore, H8b is rejected.

Table 7: Hierarchical Moderated Regression Analysis for Internet Speed

Independent Variables	**Cumulative R^2**	**F**	***df***	**Independent Variable Added**	**R^2 Increment**	**F(step)**	***df***
Z	0.580	274.42[a]	1,199	Z	0.580	274.42[a]	1,199
Z + X	0.585	139.51[a]	2,198	X	0.017	2.51	1,198
Z + X + ZX	0.586	92.99[a]	3,197	ZX	0.000	0.57	1,197

[a]p < .001
Z = attitude towards illegally downloading movies (independent variable)
X = internet speed (moderation variable)
ZX = independent variable/moderation variable interaction

Based on Table 7 Row 1, the results indicate that independent variables provide a significant R^2 of 0.58. The results shown in Table 7 row 2 and 3 indicate a higher R^2 of 0.585 or 0.586 but the increase in R^2 from 0.58 to 0.586 is statistically not significant ± F = 3.08; p > 0.001. There is no significant influence when internet speed (moderation variable) added into attitude towards illegally downloading movies (independent variable) because there is no significant change in R^2. Therefore, H8c is rejected.

DISCUSSION

The findings of this study reveal that only three antecedents (habits, affect and facilitating conditions) have significant influence in "attitude towards illegally downloading movies". Conversely, "moral judgement", "self efficacy" and "social factors" have not significant influence with "attitude towards illegally downloading movies". Clearly, "moral judgement", "self efficacy" and "social factors" do not have any affect to respondents' attitude to download movies illegally.

Habits

Firstly, "habits" as a personal factor has positive influence on "attitude towards illegally downloading movies". It is clear that down-loaders are addicted to download movies illegally and have downloaded high numbers of movies. According to self control theory, down-loaders have low self-control towards illegally downloading movies because it is easy to perform and no one is being harmed. That's why it becomes a bad habit for down-loaders to download movies illegally from the Internet. Additionally, down-loaders are given the opportunity to download movies illegally

from the Internet by the authorities including government. Authorities need to invoke guilt factor to change the minds of individuals who did digital piracy as suggested by Lysonsku and Durasula (2008) so the down-loaders will change their bad habits.

Affect

'Affect" as a personal factor has a positive relationship with "attitude towards illegally downloading movies". It is shown that down-loaders feel downloading movies illegally is valuable, exciting, and wise. Additionally, the results also indicate that downloading movies illegally is not "wrongdoing" and it is an ethical conduct in down-loaders' perspectives. These findings once again validating the concept of the neutralization theory, especially the claim of normalcy technique (treated an illegal activity as a normal activity). Authorities should create awareness campaigns to alert public about the risks of being caught and it is morally wrong to download movies illegally.

Facilitating Conditions

"Facilitating conditions" as a social factor positively influences "attitude towards illegally downloading movies". Clearly, "facilitating conditions" play an important role with "attitude towards illegally downloading movies". It is shown that down-loaders need to know how to access website which they can download movies illegally and know some skilled people who can help them to download the movies illegally. Inappropriate anti-piracy measures for illegally downloading movies in Australia is also one of the "facilitating conditions" factors that encourage individuals to download movies illegally. There is a very small chance to get caught for downloading movies illegally and there is no awareness about the code of ethics or penalties for downloading movies illegally. It is clear that down-loaders can not download movies illegally without "facilitating conditions" support. With TPB as theoretical foundation, facilitating conditions are integrated in perceived behaviour control concept which down-loaders need to get support from the environment so the act of illegally downloading movies can be performed.

Moral Judgement

Firstly, "moral judgement" as a personal factor has no significant influence with "attitude towards illegally downloading movies". This finding is different from

previous research (Blasi 1980; Higgins and Makin 2004; Higgin and Wilson 2006; Wolfe and Higgins 2009) except Al-Rafee and Cronan (2006) which moral judgement has significant negative influence with attitude towards digital piracy. This result indicates that respondents' ethical concern with the act of illegally downloading movies do not affect their "attitude towards illegally downloading movies". Down-loaders found that the act of illegally downloading movies in the society is a common practice because of inappropriate anti-piracy measure in Australia. Down-loaders do not feel guilty because they benefit the society to have a chance to enjoy entertainments contents and their deeds do not murder or harm anyone.

Self efficacy

"Self efficacy" as a personal factor has no significant influence with attitude towards illegally downloading movies. It has shown that individuals who have capabilities to engage in the act of illegally downloading movies have no affect to their "attitude towards illegally downloading movies". This finding indicates that down-loaders do not need to have high level of self efficacy to conduct illegally downloading movies. With the support from "facilitating conditions" results, it shows that respondents know people who have high level of self efficacy to help them to download movies illegally. Additionally, it is also easy for respondents without high level of self efficacy to access the websites that have free movies to download by using search engine on the Internet (i.e. Google or Yahoo). Justification statements from above can explain the insignificant relationship between "self efficacy" and "attitude towards illegally downloading movies". There is no requirement for down-loaders to have high level self-efficacy to download movies illegally. "Down-loaders" behaviour towards illegally downloading movies depends on how they control their own behaviour based on self-control theory.

Social Factors

"Social factors" as a social factor has no significant influence with attitude towards illegally downloading movies. It has shown family, colleagues and friends who are likely to influence the act of illegally downloading movies have no affect at all with "attitude towards illegally downloading movies". This finding indicates that families, colleagues and friends are not the groups of people who can influence down-loaders to do the act of illegally downloading movies. This finding will be discussed with

neutralization theory as the theoretical foundation. Down-loaders already found out that the act of illegally downloading movies is a common practice in the society and the environment support this illegal act. Additionally, individuals who do the act of illegally downloading movies are already having low self-control based on self-control theory.

Attitude towards illegally downloading movies

Another finding of this study indicates "attitude towards illegally downloading movies" has significant influence with "intention to download movies illegally". With the TPB as a theoretical foundation, the linkage between attitude and intentions has been reconfirmed again, reflecting many studies had been done previously (Morton and Koufterous 2008; Cronan and Al Rafee 2008; Peace et al. 2003). In support of previous findings (Cronan and Al Rafee 2008; Peace et al. 2003), individuals with favorable attitude towards illegally downloading movies will also have stronger intention to download movies illegally. Furthermore, the individuals who illegally downloading movies from the Internet do not hold negative intentions towards the copyright owners.

From all these findings, the characteristics of "down-loaders" who are likely to download movies illegally have the habits and affection to download movies illegally with "facilitating conditions" support from the environment.

Conceptual Implication

This study is expanding current digital piracy literature and developing a more robust measure by measuring the relationship between six antecedents (habits, affect, facilitating conditions, social factors, moral judgement and self efficacy) and attitude towards illegally downloading movies based on Theory of Planned Behaviour (TPB). Additionally, it also specifically measures the relationship between attitude towards illegally downloading movies and intention to download movies illegally based on TPB.

Practical implications

Managers, marketers and policy makers must collaborate to combat the movie piracy. Since the issue about downloading movie illegally is hard to handle and the piracy rate is always increasing, movie industry should use this concern to sell their movies

through internet with reasonable price as another cheaper alternative. For instances, consumers can download movies from legal websites with cheaper price or through mobile phone (i.e. iPhone or Blackberry) in smaller size screen with cheaper price as well. Additionally, managers, marketers and policy makers need to improve their technology securities to prevent hackers to download movies without paying (Ponte 2008) by creating new system where the consumers will receive serial number or key code to access and download the movies that they already paid.

The above findings provide further insight for movie industry to strategize their piracy measurement in Australia and in the worldwide to prevent internet users to download movies illegally from the Internet and download the movies from the legal websites which requires them to pay for the movies.

Moderation variables

Another finding has indicated that the internet usage, internet time spent and internet speed do not moderate the relationship between the "attitude towards illegally downloading movies and the "intention to download movies illegally". It shows that the respondents do not concern about internet speed, internet time spent and internet usage to have intention to download movies illegally. The reasons to explain these findings are the size of movie files and time length to download movie files. One movie file usually have small or medium size around 700 megabyte (CD size) or below. It also does not take a lot of time to download the movie files even with Dial-Up speed (maximum time is 24 hours) (Lewis 2007). From this result, movie industry should not blame the broadband internet provider to support the downloading movies illegally as it depends on the personal factors (habit and affect) and social factor (facilitating conditions) to influence individuals to download movies illegally.

CONCLUSION

Internet piracy has created big loss for movie industry cause severe global economical problem that cannot be solved overnight (MPAA 2005; AFACT 2007). Australian Federal Against Copyright Theft (AFACT) has created anti-piracy campaigns but it is still not effectively stop internet users to download free movies from the Internet (AFACT 2007). AFACT and other anti piracy organizations in other countries should work together to curb this problem.

In summary, this study presents the following conclusion: It is evident that individuals attitude towards illegally downloading movies from the Internet has significant influence in affecting intention to download movies illegally from the internet. “Habits”, “affect” and “facilitating conditions” also play an important role in affecting the individuals’ attitude towards downloading movies for free from the Internet. Conversely, “moral judgement”, “self efficacy” and “social factors” have not significant influence with “attitude towards illegally downloading movies”. Additionally, there are significant difference behaviour between down-loaders and non-down-loaders.

Although this study shows that the attitude towards illegally downloading movies from the Internet play a role in affecting the intention to download movies illegally, they might differ in downloading other product categories such as pirated games, music and software.

Some implications for marketers, the internet gatekeeper, and policy marketers on how to develop effective measures to deal with movie piracy through Internet need to be considered from this study. For instances, marketers and policy makers are creating ad campaigns to invoke guilt factor and providing another cheaper alternatives for consumers on the Internet. Additionally, the punishment should be harsher and anti-piracy agencies should be more aggressive in catching all illegal “down-loaders” by tracking their IP address from the Internet provider that they used.

Limitation of the study

There are a number of limitations that can be improved in the future research. First, the scope of this study is limited to convenient samples that involve students’ participation from a large university which are found to be the majority of illegal down-loaders. The data does not represent Western Australia population. Additionally, quantitative approaches are very commonly used and the understanding derived may still be limited. For instances, there are possibilities that the respondents are under reporting on their actual downloading behaviour due to the sensitivity of the topic. Each respondent also has difference perspectives about the definition of downloading. Further research is needed with a random sample of consumers and clarify downloading definition.

The study only focuses on personal factors and social factors that influence attitude towards illegally downloading movies from the Internet and intention to download

movies illegally from the Internet. The study can explore more in technology and economic factors to understand consumer behaviour with digital piracy.

This study is engage only in Western Australia. However, generalizing to other states in Australia (i.e. Queensland, South Australia, New South Wales or Victoria) is needed because the results that obtained in Western Australia can not be used to generalize other states.

Further exploration using qualitative approaches also needed to investigate the difference between down-loaders' behaviour and non-downloaders behaviour that may provide deeper insights.

Future Research Direction

The study should contain economic factors (price) and compare the downloading behaviour (online) with purchasing original DVD or CDs (offline). Additionally, the quality of downloaded movies and the sources of the downloaded movies also need to be researched to provide more useful information for movie industry. Technology factors (i.e. internet speed, computer features and software features) also needed to be researched to understand how down-loaders conduct their illegal downloading behaviour.

The study should explore more about the difference behaviour between downloaders and non-downloaders to get more understanding individuals behaviour towards illegally downloading movies from the Internet.

The study should expand into cross country or cross cultural studies as every country has difference cultural background and different technology development.

Further research for ethical concern in the society and self control for individuals about downloading behaviours are needed to get deeper insight of these issues. Additionally, further research about piracy also needs to explore more in the comparison among music, video and software digital piracy to find out the similarities and the difference in individuals' behaviour toward different types of digital piracy.

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Appendix

Habits – Five items were used to measure the extent to which the act of illegally downloading movies became automatic for the respondent. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed.

Habit 1. Downloading movies for free from the Internet is a habit for me.

Habit 2. I am addicted to downloading movies for free from the Internet.

Habit 3. I always like to download movies for free from the Internet.

Habit 4. I don't even think twice before downloading movies for free from the Internet.

Habit 5. The number of movies I have downloaded for free from the Internet is high.

Affect – Six items were used to measure respondents' feeling regarding the act of illegally download movies. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed to obtain the extent to which the respondents felt that movie piracy is wrong, exciting, unethical, amusing, wise and valuable.

Affect 1. It is wrong to download movies for free from the Internet. (reversed score)

Affect 2. It is exciting to download movies for free from the Internet.

Affect 3. It is unethical to download movies for free from the Internet. (reversed score)

Affect 4. It is amusing to download movies for free from the Internet.

Affect 5. It is wise to download movies for free from the Internet.

Affect 6. It is valuable to download movies for free from the Internet.

Moral Judgement – Four items were used to measure respondents' ethical concern with the act of illegally downloading movies. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed. Questions for moral judgement 1 and 2 are measuring cognitive judgement. Questions for moral judgement 3 and 4 are measuring moral reasoning.

Moral judgement 1. The act of downloading movies for free from the Internet rather than buying the original one is wrong.

Moral judgement 2. It is morally wrong to download movies for free from the Internet.

Moral judgement 3. One should always consider the moral implications before downloading movies for free from the Internet.

Moral judgement 4. There are moral reasons against downloading movies for free from the Internet.

Self Efficacy – Four items were used to measure the respondents' capabilities to engage in the act of illegally downloading movies. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed.

Self efficacy 1. It is easy to access movies that can be downloaded for free from the Internet.

Self efficacy 2. It is easy to install the software to download movies for free from the Internet.

Self efficacy 3. It is easy to use the software to download movies for free from the Internet.

Self efficacy 4. It is easy to download movies for free from the Internet.

Social Factors – Three items were used to measure how three specific groups of people (family, colleagues and friends) who are likely to influence the act of illegally downloading movies. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed.

Social factor 1. My family encourages me to download movies for free from the Internet.

Social factor 2. My colleagues encourage me to download movies for free from the Internet.

Social factor 3. My friends encourage me to download movies for free from the Internet.

Facilitating Conditions – Five items were used to measure how objective environmental factors that make an act of illegally downloading movies easier to do (Triandis, 1980) according to the respondents. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed.

Facilitating condition 1. There are inappropriate anti-piracy measures for downloading movies for free in Australia.

Facilitating condition 2. There is insufficient copyright protection for movies in Australia.

Facilitating condition 3. There is a lack of awareness campaign on illegal downloading of movies in Australia.
Facilitating condition 4. I know people who can help me to download movies for free from the Internet.
Facilitating condition 5. I know how to access movies that can be downloaded for free from the Internet.

Attitude towards illegally downloading movies – Four items were used to measure the respondents' attitude towards illegally downloading movies. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed.
Attitude 1. Downloading movies for free from the Internet is a wise idea.
Attitude 2. Downloading movies for free from the Internet would be pleasant.
Attitude 3. Downloading movies for free from the Internet is a good idea.
Attitude 4. I don't like the idea of downloading movies for free from the Internet. (reversed score)

Intention to download movies illegally – Four items were used to measure the respondents' intention to illegally download movies. A Likert scale with 7 levels (1=Strongly disagree to 7=Strongly Agree) was employed.
Intention 1. I intend to download movies for free from the Internet in the future.
Intention 2. All things considered, it is ***likely*** that I will download movies for free from the Internet in the future.
Intention 3. All things considered, I ***expect*** to download movies for free from the Internet in the future.
Intention 4. I will download movies for free from the Internet in the future.

Internet usage – Four items were used to measure the respondents' level of internet usage. A Likert scale with 7 levels (1=Never to 7=Very often) was employed.
Internet usage 1. On the average, how often do you use the Internet for <u>messaging</u> (*e.g. e-mailing, discussion group, chat line, etc.*) activity?
Internet usage 2. On the average, how often do you use the Internet for <u>browsing</u> (*surfing the Internet*) activity?
Internet usage 3. On the average, how often do you use the Internet for <u>downloading</u> (*copying files from the Internet such as images, shareware, etc.*) activity?

Internet usage 4. On the average, how often do you use the Internet for purchasing (*ordering products through the Internet*) activity?

Internet time spent - Internet usage – Four items were used to measure the respondents' internet time spent. A Likert scale with 7 levels (1=Never, 2=Less than ½ hour, 3= ½ - 1hour, 4=1-2 hours, 5=2-3 hours, 6=3-4hours and 7=More than 4 hours) was employed.

Internet time spent 1. On the average per day, how much time do you spend on the Internet for messaging (*e.g. e-mailing, discussion group, chat line, etc.*) activity?

Internet time spent 2. On the average per day, how much time do you spend on the Internet for browsing (*surfing the Internet*) activity?

Internet time spent 3. On the average per day, how much time do you spend on the Internet for downloading (*copying files from the Internet such as images, shareware, etc.*) activity?

Internet time spent 4. On the average per day, how much time do you spend on the Internet for purchasing (*ordering products through the Internet*) activity?

Internet speed – There are four options (1= Dial-up, 2=ADSL 1, 3=ADSL 2+ and 4=Other) to measure the internet speed that the respondents had.

Internet speed 1. What is your Internet speed?