TECHNOLOGICAL AND ETHICAL ANTECEDENTS OF E-BOOK PIRACY AND PRICE ACCEPTANCE. EVIDENCE FROM THE SPANISH CASE [*]

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Abstract

Purpose – The purpose of this paper is to analyse the driving factors of e-books' illegal downloading and price acceptance from a theoretical perspective that embraces ethical and technological aspects. The diffusion of e-readers and tablets has led to a spate of pirated copies of books.

Design/methodology/approach – The proposed model holds that normative and value consciousness, as well as the self-efficacy, the usefulness and the use of the new technology, are determinants of the trend towards free downloads and the maximum acceptable price for e-books. Data are collected from a sample of 227 users of e-book reader devices.

Findings – The results provide evidence that individuals are inclined towards piracy when they use and control the technology, whereas value consciousness mitigates illegal downloading and is basic to the individuals' acceptance of a higher price.

Implications – Bearing in mind that the spread of electronic devices has led to an increase in downloads, raising awareness of the norms among individuals is essential if piracy is to be curtailed. In addition, actions aimed at endowing electronic books with value would encourage consumers to pay a higher price for them.

Originality/value – Few attempts have been made to apply ethics theories and the technology acceptance model to the context of e-books' piracy, and even less effort has been devoted to analyse consumers' price acceptance in the e-book industry.

Keywords: Piracy, Price acceptance, e-books, Technology acceptance

[*] The authors gratefully acknowledge the financial support for this study by the Consejería de Educación de la Junta de Castilla y León (Spain), ref. VA181A11-1.

This is the accepted version of the manuscript:

Camarero Carmen Antón Carmen Rodríguez Javier (2014), "Technological and ethical antecedents of ebook piracy and price acceptance", The Electronic Library, Vol. 32 Iss 4 pp. 542 – 566. https://doi.org/10.1108/EL-11-2012-0149

1. INTRODUCTION

Although somewhat later than in other industries such as the cinema, music or videogames sectors, and somewhat more slowly than expected by some experts, digital formats have also broken into the world of the book (Kumbhar, 2012; Vasileiou et al., 2009). E-books and e-reader devices (e-readers and tablets) herald a major shift with regard to how people traditionally read. E-books seek to provide easy formats for text, which can also be readily accessed through the Internet, thereby substantially increasing the choice of reading matter available as well as the opportunities to download. For their part, e-readers and tablets are striving to offer a readability which is similar to that afforded by paper, through an intuitive interface, great independence, and a wide range of reading matter available on a small light device.

Although at different moments and with differing objectives and strategies in mind (many publishers in fact showing initial reluctance), the major international publishers have adopted the e-book as a new channel of revenue, the increased sales in some cases proving amazing. The Association of American Publishers (AAP) reported that net revenue from e-book sales more than doubled in 2011 compared to 2010, the e-book format now ranking number one for the first time in the adult fiction segment. One industry leader, Amazon, has shown a similar trend. Amazon's e-book sales have surpassed their printed book sales while its Kindle has become the best-selling e-reader. The e-book reader population is growing, with the latest Pew Internet survey indicating that in 2012 the number of those who read e-books had increased from 16% of all Americans aged 16 and over to 23%, while the number of those who read printed books fell five points to 67% (Rainie and Duggan, 2012). In addition to the USA, Australia, India, and the UK are the leading countries in the adoption of e-books according to Bowker's (2012) Global e-book Monitor.

However, this is not the case in Spain. According to the Association of Spanish Publishers (Federación de Gremios de Editores de España, FGEE), although there was a substantial increase in 2012, still only 11.7% of people aged 14 or over read e-books, a figure which in 2011 stood at a mere 6.8% (FGEE, 2013). Furthermore, according to a report presented at the International Digital Content Fair (Marketing Directo, 2011), for each e-book sold in 2011, 1.5 e-reader devices had been bought. Moreover, only 32% of e-book users admit to paying for at least some of the e-books they download, with the vast majority getting them for free (FGEE, 2013). In this context, although Spanish publishing companies recognize the opportunities that e-books offer for the industry, they fear piracy-related problems, a threat which other digital industries have had to deal with and one which in Spain has proved particularly virulent. This may to some extent explain why, according to the Spanish Watchdog for Reading and Books (Observatorio de la Lectura y el Libro, 2012), Spanish publishers have been more reluctant and slower than companies in other countries, especially Anglo-American publishers, to introduce e-books into their catalogue. Prior to 2010, few publishers produced e-books and less than 5% of new releases were available in the digital version. Only in the last couple of years has e-book production really taken off in Spain. In 2011, over 14% of Spanish publishing companies published e-books, and in 2012, e-books accounted for 22% of new book releases. The total number of books digitized is now growing at a rate of over 200% (Observatorio de la Lectura y el Libro, 2012). However, sales figures have failed to match increased production and availability. According to the Association of Spanish Publishers (FGEE, 2011), e-book revenue remains extremely low (72.6 million euros, 2.6% of total income) and as yet is failing to repay the investment made to adapt to the digital business or to offset the declining sales in paper books.

E-readers and tablets seem to have made the digital format more appealing and boosted demand, yet they have also led to a spate of pirate copies of books. Hard data on book piracy is scarce, but many analysts see evidence of an alarming increase in piracy, due in part to the advent of the e-book reader (Castro et al., 2009; Zimerman, 2011). As Sudler (2013) point out, the arrival of digital media and the development of the World Wide Web, together with increased network bandwidth, has facilitated access to pirated content that truly rivals the originals and has spread such access across international borders. Digital Rights Management (DRM) systems have proved ineffective in preventing piracy and have even had side effects since such systems frequently pose hurdles to legitimate buyers (through either more difficult or more limited use of legal content) (Sudler, 2013; Zimerman, 2011). 28% of e-reader owners use unregulated torrent services and, despite websites such as Megaupload having been shut down, book piracy supply continues to grow with no end seemingly in sight (Attributor, 2012). As mentioned, Spain is by no means an exception, but indeed quite the contrary. According to data published by the Watchdog for Piracy and Digital Consumer Habits (IDC Research Iberia, 2011), during the first half of 2011, pirated digital content in Spain came to over 5,200 million euros, of which 793 million corresponded to books. 35.1% of e-books downloaded in Spain are pirated. Spanish publishers estimate the financial losses caused by piracy to be in the region of 350 million euros (El País, 2013). According to a recent report by GfK (2013), these financial losses for the publishing industry are not as high, since only 12% of people pirate books and much of the pirated content would not be bought even if free access were not possible. GfK estimates that book industry losses amount to some 45 million euros, a much less dramatic figure than for the music (580 million euros), movie (327), or videogame (270) sector. It is therefore not surprising that the International Intellectual Property Alliance (IIPA) in its *2013 Special 301 Report* has recommended that, after

having been removed in 2012, Spain should be put back on the *Watch List* of countries for which there are copyright protection and enforcement concerns. At the same time, some people are also blaming the high price of e-books for the rise in piracy, and in the case of Spain the huge increase in the VAT levied on e-books has only made matters worse (GfK, 2013). In sum, there is a danger that what has happened in the music and film industry may occur again with industries involved in digital contents, in this case publishing, a sector which might suffer at the hands of new information and communication technologies without being able to capitalize on the opportunities that digitization provides.

Together with the practical reasons, there are also academic concerns that lead us to consider the need to explore in greater depth the issue of piracy and illegal downloads in the Spanish book industry. Scholars have debated about the consequences of digital file-sharing in the context of music or software. Some authors have alerted about the negative effects of file sharing and unpaid music downloading: decline in record sales (Liebowitz, 2006), reduction of the probability of buying music by 30 percent (Zentner, 2006), or decrease in music purchases and expenditure (Rob and Waldfogel, 2006). Bhattacharjee et al. (2006) analyze the reaction of individuals to the industry legal actions and find that, even if individuals perceive the risk and reduce the number of files shared, they continue using P2P networks. However, other works have focused on the positive consequences of digital contents for the consumers and the industries. For instance, Brynjolfsson et al. (2003) have highlighted the benefits of electronic markets for customers (product variety, lower prices, and more efficient retailing channel), and Gopal et al. (2005) conclude that sampling music is an incentive for consumers to purchase music online as the costs of evaluation and acquisition decrease. This is in line with Sudler's (2013) conclusion that anti-piracy technologies do not work and that companies must find effective solutions

which merge technology and innovative business models in an effort to encourage consumers toward legitimate consumption.

Despite research in different digital industries, to date, literature has paid little attention to e-books, and has mainly focused on the role of e-books in education (e.g. Abdulah and Gibb, 2008; Shiratuddin, 2005; Landoni et al, 2001) or on the advantages of innovation (Calvert, 2004; Chen, 2003). Vasileiou et al. (2009) analyze the e-book market, identifying participants and vendor strategies (i.e., supply of available e-books, formats, customer segments, pricing models, etc.). Only recently have studies begun to emerge analyzing demand and positing the determinants behind the spread of such devices (Lai and Chang, 2011), with certain authors, such as Kumbhar (2012), highlighting the need for more research into e-book use. Moreover, in contrast to the proliferation of studies exploring the problem of digital piracy in general (Taylor, 2012; Taylor et al., 2009), or focusing on other digital content industries such as music (Easly, 2005; Shang et al., 2008), movies (Chih-Chien, 2005; Waterman et al., 2007), software (Gupta et al., 2004, Hsu and Shiue, 2008), or videogames (Bach et al., 2010), as yet there remain few studies addressing the problem of e-book piracy (Van Hoorebeek, 2004).

Given such a setting, the present work seeks to explore the driving factors behind illegal downloads of books and the price accepted by consumers from the standpoint of current e-reader and tablet users in Spain. To achieve this, we adopt a theoretical approach which embraces the deontological ethical perspective of the general theory of marketing ethics (Hunt and Vitell, 1986) and the Technological Acceptance Model-TAM (Davis et al., 1989). Specifically, we posit consumer ethical values (normative consciousness and value consciousness), technological aspects (self-efficacy, usefulness of e-books, and the degree of use of e-book reader devices), and an individual's traits as a reader (novelty and

variety seeking) as determinants of the trend towards free downloads and the maximum acceptable price for e-books.

The first contribution of this work is that it studies a digital product, e-books, which have remained previously unexplored in digital piracy literature. Although e-book piracy is a recent phenomenon, there are thousands of feeder pages that link to pirated content. Feeder sites are websites that do not host infringing files, but rather provide links that enable downloads from cyberlocker sites. As regards e-books, according to a recent report by Attributor (2011), the top cyberlockers host less than 50% of all pirated content and there are over one million pages link to pirated e-books. Book piracy may be included in media piracy, although it does evidence certain differences to music, movie, videogame, or software piracy. First, contrary to other digital files, the book's file size is small, thus making downloading fast and easy (Zimerman, 2011). A large number of books can be downloaded in just a few minutes and stored, for instance, in a flash drive. Second, there is a variety of file formats (Vasileiou et al., 2009). Some of the common e-book formats available on the market are MobiPocket, PDF (Portable Document File), AZW (Amazon Kindle e-book format file) or ePUB (electronic publications), each of which has its own particular features. Linked to these formats, there may be DRM protection systems aimed at limiting the number of devices on which an e-book may be reproduced. Although some companies such as Amazon use their own proprietary format, there is a trend in the market towards open and standardized formats such as PDF or ePUB, which are compatible with every kind of reader device. This progressive standardization and the ineffectiveness of DRM systems may account for the spectacular growth in pirated content. Third, whereas the quality of the copies is almost identical in videogames or software, several book copies come from scanned books and are poor quality. Although there is also plenty of poor quality movies or music, taking into account that individuals devote more time to

reading than listening to music or watching a movie, reading a bad-quality copy may entail a negative consumer experience.

A further relevant contribution our study makes is that it does not explain consumer intention, but actual consumer behavior. Moreover, we introduce price acceptance as an antecedent of illegal downloading. Findings allow us to evaluate which factors may jeopardize the book industry and what kind of action should be taken to avoid the risks of file sharing using P2P and the invasion of intellectual property rights. Our study is therefore in line with Vasileiou et al.'s (2009) call for the need for effective research on e-book adoption and the nature of e-book consumer use and the consequences for aspects such as pricing strategy, distribution channels, or copyright and licensing regulation.

2. LITERATURE REVIEW

Digital piracy is defined as the illegal or unauthorized copying/downloading of copyrighted content (Castro et al., 2009; Cronan and Al-Rafee, 2008). This is based on peer-to-peer architectures, where users connect directly to others to share and download files (Shang et al., 2008). The ethical concerns about digital piracy emerge since such behavior represents an invasion of intellectual property rights.

The scale of this type of unethical behavior in digital content industries is surprising. Gupta et al. (2004) state that digital piracy is a phenomenon that not only includes consumer behavior but also entails financial and legal considerations. From the consumer standpoint, users of illegal contents often resort to a number of different arguments (Gupta et al., 2004; Bhal and Leekha, 2008; Shang et al., 2008; Wang et al., 2009) such as industry profits (opportunities for new artists, increasing the awareness and penetration of software), consumers' rights (possibility of sampling, convenience, access to culture),

or justice (no real competition to regulate prices, distribution of revenue within the industry).

In legal terms, piracy is an infringement of intellectual property rights. Certain authors (Kopp and Suter, 1998) have shown an interest in the type of infringement (uploading, downloading, and other violations) and the parties involved in piracy, whilst others have questioned the role of intellectual property rights. The argument supporting intellectual property rights establishes that they reward the creators and that without such incentives few would engage in creative activities and that society as a whole would suffer the negative consequences, piracy thus being unethical (Bhal and Leekha, 2008). Yung (2009) examines this argument and concludes that it is merely a hegemonic imposition of Western conceptions, and that intellectual property rights should be relative and conditional on the values attached to creative works specific to time and place. Easley (2005) also questions whether piracy is unethical or merely illegal. There are ethical questions related to the behavior of those who share digital files, namely, the acceptance of downloading as civil disobedience in protest at the excessive scope of copyright protection, or disproportionate company profits, based on the notion of culture as a public good.

A further element of digital piracy is the financial aspect. Price is one of the main motives driving consumer demand for illicit or free goods. Gupta et al. (2004) indicate that consumers respond to businesses in terms of perception of equity between marketers and themselves. High prices contribute to the perception of being ripped-off and increase piracy behavior (Zimerman, 2011).

From a theoretical point of view, digital piracy has been explained from different approaches. Several researchers have analyzed digital piracy on the basis of behavioral theories such as the theory of reasoned action - TRA- (Fishbein and Ajzen, 1975) and the

theory of planned behavior - TPB - (Ajzen, 1991). TRA based models posit that the intention to pirate depends on the attitude towards piracy and subjective norms (Al-Rafee and Cronan, 2006; Aleassa 2011). TPB based models attempting to explain digital piracy (Cronan and Al-Rafee, 2008, Wang et al., 2009; Yoon, 2011) as well as textbook piracy in the offline context (Su et al., 2011) maintain that the deterrence of legislation, individual attitude, subjective norms and perceived behavioral control determine the intention to pirate.

Another group of works explains digital piracy based on ethical theories (Chen et al., 2008, Yoon, 2011). According to these theories, consumers' beliefs and attitudes concerning an ethical dilemma predict their intentions toward specific actions. The main theoretical framework is the general theory of marketing ethics (Hunt and Vitell, 1986). According to this model, ethical judgments are determined by both deontological and teleological evaluations on the issues with ethical content. Deontological evaluations have to do with duty and moral obligations (fairness, justice, equity, reciprocity), whereas teleological evaluations consider the perceived benefits of the action (egoism and utilitarianism). On the basis of this model, Yoon (2011) finds that moral obligation and perceived benefit are the factors which most impact the intention to engage in digital piracy. Shang et al. (2008) show that the consumer rights argument and reciprocity norm are the major causes for sharing music files.

In order to explain piracy behavior, researchers have adopted macro and micro-levels of analysis. At a macro-level, digital piracy has been studied as a problem related to the economic, cultural and institutional characteristics of a country. From an economic point of view, several studies have proved that the higher the per capita national income of a country the lower the level of piracy (Husted, 2000; Moores, 2008; Goel and Nelson, 2009; Yang et al., 2009). As regards cultural aspects, Hofstede's national culture

dimensions (Hofstede, 2001) have been used to suggest that the individualism and masculinity of a country influence software piracy levels (Husted, 2000; Moores, 2008). As for the institutional aspects analyzed, it has been shown that a country's corruption levels have a positive effect on piracy rates (Robertson et al., 2008) whereas political freedom has a negative effect (Goel and Nelson, 2009). At a micro-level analysis, several works examine the consumer's profile in an effort to account for digital piracy. In the case of the music industry, for instance, Wang et al. (2009) and Chiou et al. (2005) indicate that idolizing a particular artist has a positive impact on the intention to purchase rather than download illegally. Self-control, public self-consciousness, strength of religious conviction (Aleassa et al., 2011), and Machiavellianism (Sinha and Mandel, 2008) have also been proposed as antecedents of pirate behavior.

3. CONCEPTUAL FRAMEWORK

In the light of the literature review, the arguments to explain piracy antecedents and consequences involve ethical, legal, and financial issues. In addition to these factors, in our study we introduce the impact of technology on piracy as well as the effect of individuals' behavior as readers. Since the study focuses on a particular country, we have not included legal norms (identical for all individuals). We therefore propose a micro-level of analysis and a plural approach that embraces technological, ethical, financial, and behavioral factors to explain piracy behavior in digital books. Indeed, we consider the use of e-book readers (related to self-efficacy and the usefulness of e-books) as a technological factor, value and normative consciousness as ethical factors, novelty and variety seeking as consumer behavior factors, and price acceptance as a financial antecedent of e-book piracy.

This has led us to merge diverse theoretical approaches: the Technological Acceptance Model (Davis et al., 1989), the self-efficacy theory (Bandura, 1997), and the deontological ethical perspective of the general theory of marketing ethics (Hunt and Vitell, 1986).

Vasileiou et al. (2009) recommend that any research into the adoption and use of e-books must explicitly consider existing innovation adoption models and, specifically, technology adoption models. In this sense, the technological acceptance model (TAM) and the self-efficacy theory (Bandura, 1997) offer a suitable framework to explain the effect of technology (e-readers and e-books) on e-book piracy. Technological acceptance model (TAM) assumes that perceived ease of use and usefulness of a new technology have a major impact on an individual's attitude towards such a technology and are thus related to the intention to use it and, in turn, to actual use (Davis et al., 1989). In addition, perceived usefulness depends on perceived ease of use and is directly linked to the intention to use the new technology. Moreover, according to the self-efficacy theory (Bandura, 1997), self-efficacy judgments determine how much effort people will spend on a task and how long they will persevere with it. Although in the original proposal of Davis et al. (1989), attitude is a variable that mediates between technology perception and purchase intent, in subsequent works both perceived usefulness and perceived ease of use were found to have a direct influence on behavior, eliminating the need for the attitude construct (Venkatesch and Davis, 1996). In line with these ideas, in the present work, we propose that piracy is conditioned by the use of e-book readers as well as by both the perceived ease of use and perceived usefulness of the digital technology (Davis et al., 1989; Liao et al., 2009).

Ethical factors are explained on the basis of the general theory of marketing ethics (Hunt and Vitell, 1986) which posits that individuals' behavior is determined by teleological

and deontological judgments or evaluations. The teleological process is based on the intended outcomes, aims, or goals of a certain action (selfishness, perceived benefits, and consequences). On the other hand, the deontological process of evaluation is related to the role of duty and moral norms in behaviors. Deontological norms range from general beliefs (honesty, fairness, justice, stealing, cheating) to issue-specific beliefs. In the current work we focus on the deontological perspective of ethics to propose two antecedents of illegal downloading: value consciousness and normative consciousness.

The financial aspect of piracy is introduced in our model as price acceptance. Price acceptance sums up the consumer's perception of business equity (Gupta et al., 2004), high prices being perceived as unfair, unacceptable, and a potential reason for increased piracy behavior.

Finally, we take into account consumer behavior factors, that is, the individuals' characteristics as readers.

The following sections explore the relation between accepted price and downloads, the effect of technological factors, the impact of ethical considerations, and the effect of individuals' characteristics as readers.

4. HYPOTHESES

4.1. E-book downloading and price acceptance

As explained before, the increasing popularity of tablets and e-readers has provided opportunities for digital e-book piracy. Although the scale of downloads and the financial losses caused remain some way off from other digital contents, figures are rising alarmingly. We have shown before the figures in the Spanish case, but the problem is also relevant in other countries. The findings of the 2011 Digital Entertainment Survey by the firm Wiggin for the UK market show that amongst people who own/access a tablet or e-book reader, 36% admit that they have illegally downloaded unauthorized copies of e-books. In the case of the US market, Attributor (2010) claimed that unauthorized copies of digitized books had already cost American publishers $2.8 billion dollars in lost sales, and that there had been a 54% increase in pirated e-book demand since August 2009 and a 20% increase in demand for pirated downloads since the iPad became widely available in mid-May 2010. Technical and scientific publications are losing over one million US dollars per title each year (Sudler, 2013).

As has occurred in other digital content industries, there seems to be certain agreement that the relatively high market price is mainly to blame for piracy (Easley, 2005; Shina et al., 2010). The higher the perceived price of legal content, the greater the desire and intention to engage in digital piracy and, according to Taylor (2012), the greater the frequency of illegal downloading. In fact, pricing is still a challenge for the e-book industry (Herther, 2012). Consumers are aware that the cost of producing an e-book is much lower than the cost of producing a paper book (there is only the digital file), and that the marginal cost of distributing an electronic copy is close to zero. Therefore, consumers expect a reasonable price (Easley, 2005). Whilst some estimate that e-books

should cost between 30% and 50% less than the same document in a printed paper version, which is the percentage saved in printing and distribution, e-books currently cost 20 to 30% less than the price of a conventional paper book. Sudler (2013) contends that many consumers are willing to accept some level of advertising provided they can gain either free or at least cheaper access to a convenient and well-managed service which provides them with legal digital content, rather than wasting time searching for pirated content of dubious quality. Faced with such a situation, individuals who are less willing to pay high prices for electronic books will be more likely to engage in illegal downloading. Therefore,

Hypothesis H1. The lower the accepted e-book price, the higher illegal downloading.

4.2. Technological Factors: Self-efficacy and The Technology Acceptance Model.

The technology acceptance model was designed to explain the use and intended use of new technologies. Numerous works have applied the TAM to explain the use of new technologies such as the Internet (Liaw 2002), the adoption of e-services (Liao *et al*., 2009), online shopping (Klopping and McKinney 2006), and other forms of information technology (Bhattacherjee and Hikmet, 2007). According to this model the use of a new technology is related to the perceived ease of use and the perceived usefulness of the technology.

Ease of use is defined as the degree to which a person believes that using a technology would be free from effort (Davis et al., 1989). Since we are in a context of use (and not intention to use), we feel that perceived ease of use in the case of e-books would correspond to the extent to which the individual perceives that accessing e-books would prove easy and straightforward. As a result, in the TAM, ease of use may be replaced by perceived self-efficacy. Indeed certain works point to the strong correlation between the

two variables (Kulviwat et al., 2005). Self-efficacy is defined as the belief that one is capable of performing specific tasks (Bandura, 1997). Self-efficacy with e-books refers to the degree to which individuals perceive that they are capable of accessing e-books, downloading, or installing them, i.e., that e-books are easy to use. On the one hand, according to the TAM, perceived ease of use determines the perceived usefulness of a technology (Davis et al., 1989). On the other hand, and according to the self-efficacy theory (Bandura, 1997), self-efficacy judgments determine how much effort people will spend on a task and how long they will persevere with it. People with strong self-efficacy beliefs exert greater efforts to master a challenge (Hill and Beatty, 2011).

Moreover, the theory of planned behavior (Ajzen, 1991) states that individuals' behavior intention is affected by the opportunities and resources available to them. When individuals perceive they have the appropriate ability and resources, they will feel able to exhibit a specific behavior, in this case book piracy (Su et al., 2011). This means that individuals who feel more able to access books and download them will not only use the reader device more but will also display a greater tendency towards piracy.

Hypothesis H2. Perceived self-efficacy in the use of e-books positively affects the perceived usefulness of e-books (H2a), the use of e-book reader devices (H2b), and illegal downloading (H2c).

Perceived usefulness is defined as the degree to which people believe that using the technology would enhance their performance. TAM proposes that perceived usefulness is directly linked to the intention to use the new technology (Davis et al., 1989). In the case of e-books, usefulness is related to large storage capacity, lightness, and screen quality (Gibson and Gibb, 2011) and perceived usefulness will entail a greater use of reader devices. Likewise, the fact that individuals perceive that the technology is useful

will lead them to consume more e-books, whether through legal or illegal downloading. In the music industry, Chen and Yen (2011) explain that illegal downloading of digital files provides individuals with transaction and collection utility. The individuals can perceive the financial advantage of collecting large numbers of files without regard for their financial resources. Therefore,

Hypothesis H3. Perceived usefulness of e-books positively affects the use of e-book reader devices (H3a) and illegal downloading (H3b).

Additionally, we can relate the effective use of e-book reader devices to illegal downloads. This argument is based on the current situation of the book industry. E-book reader devices have proved to be a disruptive innovation (a term coined by Christensen, 1997) for the book industry (Rainie and Duggan, 2012), and one that threatens the traditional business model (Easley, 2005). Having the device available and using it creates an opportunity for illegal downloading. Goel and Nelson (2009) have evidenced that access to technologies (Internet, PCs, etc.) and use thereof has boosted the demand for (legal and illegal) software. Individuals who are willing to use the reader device frequently (for much of their reading) will perceive that engaging in illegal downloading is profitable because they not only save on the cost of buying e-books but also get payback on the initial cost of the device. This is reflected by the fact that publishing companies have found that increased sales of e-readers far outstrip sales of e-books. Therefore,

Hypothesis H4. The greater the use of e-book reader devices, the greater the illegal downloading.

4.3. Ethical Factors: Value Consciousness and Normative Consciousness

According to the deontological perspective of the general theory of marketing ethics (Hunt and Vitell, 1986), individuals' behavior is determined by moral and social norms. Moral and social norms are rules that people actually follow or feel they ought to follow. These norms provide patterns for human behavior, that is, they engender obligations. Elster (2009) distinguishes social norms from moral norms. Whereas social norms are sustained by the sanctions that others apply to norm violators, moral norms are internalized, such that punishment is manifested by emotions such as guilt or remorse. Moral norms require introspection rather than external observation. Contrary to social (and legal) obligation, which stems from the authorities or punishment, a moral obligation is based on individuals' willingness and their understanding of norms. Moral norms are related to ethical obligations. However, even creating legal obligations does not necessarily imply any ethical obligations. An ethical obligation relates to an individual's perception, understanding, and awareness of moral and legal obligations.

The effect of ethical issues on piracy has been addressed by several authors (Chiou et al., 2005; Yoon, 2011, Shang et al., 2008). In the context of e-book piracy, we follow the proposal of Hsu and Shiue (2008) for software piracy, and put forward two deontological antecedents of illegal downloading: value consciousness and normative consciousness.

Value consciousness refers to the individual's perception that products and services are valuable and that it is worth paying for them. Individuals who feel a moral or personal obligation will be willing to perform (or not perform) a particular behavior (Cronan and Al-Rafee, 2008; Yoon, 2011). In our case, e-books may be seen by individuals as a valuable good, not in financial terms but in cultural terms. This consciousness makes individuals feel morally obliged to buy them, as opposed to the possibility of downloading them illegally. Moreover, value consciousness makes individuals willing to pay more for e-books. In this sense, Su et al. (2011) find that, when confronted with ethically

questionable behavior, the anticipated feeling of guilt reduces the intention to behave in such a manner. Likewise, Gupta et al. (2004) indicate that consumers who are more sensitive to manufacturer loss due to piracy will likely have less favorable attitudes towards engaging in illegal downloads.

Further, this value which is assigned to the book is directly linked to perceived usefulness. Perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given (Zeithaml, 1988). Bearing in mind that value represents a cost/benefit trade-off, the greater the perceived usefulness the greater the perceived value (Ko et al., 2009). In our case, the greater the benefit or usefulness and the advantages which individuals perceive in e-books compared to conventional books, the greater their perception of value and their intention to pay more. In contrast, as long as the perceived costs of accessing and using illegal material remain low and the benefits high, the intention to pay for legal content will be lower (Su et al., 2011). Therefore,

Hypothesis H5. Value consciousness negatively affects illegal downloading (H5a) and positively affects price acceptance (H5b).

Hypothesis H6. Perceived usefulness positively affects value consciousness.

Normative consciousness concerns the degree to which individuals feel influenced by legal or social norms (Hsu and Shiue, 2008). Social norms can generate moral obligations when individuals internalize them, that is, they understand and accept social norms. The theory of planned behavior (Ajzen, 1985; Cronan and Al-Rafee, 2008; Yoon, 2011) states that individuals act in accordance with the importance they attach to others' expectations. Transgressing social norms can cause embarrassment to individuals (Sinha and Mandel, 2008; Su et al., 2011) and prevent them from behaving illegally or unacceptably. Chiou et al. (2005) indicate that the level of social agreement concerning the goodness or evil

of an act affects attitudes towards piracy. Further, Aleassa et al. (2011) hold that individuals who exhibit high public self-consciousness base their behavioral responses on others' expectations. Taylor (2012) suggests that marketing campaigns which contain moral appeals may attenuate the intention to engage in digital piracy. Therefore, we can expect individuals who are more influenced by legal or social norms to be more reluctant to engage in illegal downloads and to be willing to pay a higher price for e-books.

Hypothesis H7. Normative consciousness negatively affects illegal downloading (H7a) and positively affects price acceptance (H7b).

4.4. Readers' Characteristics: Variety and Novelty Seeking

Finally, we posit that readers' personal traits may also shape their attitude towards piracy and towards the price of e-books. Individuals seeking the latest releases or best-sellers are more likely to resort to illegal downloading, since it is precisely these kinds of books which are accessible on P2P platforms. By contrast, those who seek variety in the books they read will find fewer options on illegal download platforms (as we have explained at the beginning, e-books are published only by 34.6% of Spanish publishers) and will not find neither benefits nor interest in illegal downloading. In addition, whereas illegal downloading is more practical when individuals are certain which product they wish to download (such as recent best-sellers), the same cannot be said when readers are considering a wide range of alternatives and need to weigh up a number of different books and conduct a thorough search.

As regards price acceptance, both individuals who are seeking variety in books as well as those who are attracted by the latest releases will be more willing to pay a higher price for e-books. Hsu and Shiue (2008) find that individuals who search for different kinds of new software or the latest versions are willing to pay for them. Therefore,

Hypothesis H8. Novelty seeking positively affects illegal downloading (H8a) and price acceptance (H8b).

Hypothesis H9. Variety seeking negatively affects illegal downloading (H9a) and positively affects price acceptance (H9b).

The proposed hypotheses are summarized in Figure 1.

Insert here Figure 1

5. METHOD

5.1. Data collection and sample

The population chosen as the basis for the sample was Spain. As we have stated at the beginning, piracy poses a huge problem for the Spanish digital contents market and, recently, for the book industry. In Spain it is sold 0.7 e-books every one e-reader, whereas in the rest of Europe the ratio is 5 e-books every e-reader (Foro Internacional de Contenidos Digitales, 2011).

According to the Watchdog for Piracy and Digital Consumer Habits (IDC Research Iberia, 2011), the number of people who have e-reader devices in Spain is estimated to stand at around 400,000, with iPad sales reaching over 200,000 in 2011. These figures reflect the difficulty in selecting individuals from a relatively small and disperse group in the overall population of Spain. In such cases, one efficient and convenient way to access the desired population group (owners of e-reader or tablets) is to seek them in the places they visit. In the current case, subjects who read e-books are likely to be visitors of web sites specialized in e-books and additional related information. An online survey was thus developed to collect data and was delivered through online social networks and forums. We introduced the questionnaire in several social network groups and pages related to reading, bookshops, and e-books, as well as forums related to new technologies. We thus

sought to obtain answers from a range of consumer profiles. Although this procedure for selecting the sample does not ensure representativeness, it was considered a convenient way to access e-reader or tablet users and owners.

The questionnaire was composed in several phases. Firstly, a preliminary version was designed, taking into account previous studies as well as the results from a focus group amongst e-book readers. The questionnaire was then pre-tested with a convenience sample before the final version was drawn up. In order to control answers, respondents had to copy a password to answer the questionnaire. Respondents were asked to indicate which Spanish region they belonged to so as to ensure they were really Spanish readers.

We explained that the aim of our research was to explore consumer use of e-books and that the questionnaire could be answered by both users and non-users of e-readers and tablets. For the current research, we only focused on responses from users of e-readers and tablets. After an initial filter process, where some questionnaires were eliminated due to incompleteness or wrong answers, the final sample comprised 227 users (144 with e-readers and 83 with iPads or similar).

As explained, we are unable to gauge the representativeness of the sample of e-reader or tablet users, although the percentage of e-reader and tablet owners is very similar to the figures in the FGEE (2013) report on reading and book purchasing habits in Spain Furthermore, we can compare our data with the survey conducted by Nielsen for the US market for the final quarter of 2010 (see Table 1).

Insert here Table 1

5.2. Measurement of variables

In order to measure perceived usefulness, we considered a two-item scale based on the original scale proposed by Davis et al. (1989). The self-efficacy scale was inspired by the

scale proposed by Lim and Dubinsky (2005) and was adapted to e-readers. This two-item scale reflects individuals' confidence in their ability to download and install e-books in the e-book reader device. In order to measure ethical factors (normative consciousness and value consciousness), we adapted the scales proposed by Hsu and Shiue (2008) for software piracy. Novelty and variety seeking were measured with an item which indicates the individual's preference when reading: reading the latest book releases and reading a wide range of books, respectively. All these constructs were measured using five-point Likert scales.

The actual use of the e-book reader device was measured as the percentage of books the individual reads on the device of all the books he/she reads (1: 0-20%, 2: 21-40%; 3: 41-60%; 4: 61-80%; 5: 81-100%). The greater the percentage, the greater the number of paper books replaced by the digital device. Illegal downloading was measured as the frequency with which individuals download e-books free through P2P (ranging from hardly ever to very often). Finally, price acceptance, that is, the maximum amount the individual would be willing to pay for e-books, was measured using a five-point scale (1: I am not willing to pay for them; 2: no more than 25% of the price of the paper version of the book; 3: between 26% and 50% of the price of the paper version of the book; 4: between 51% and 75% of the price of the paper version of the book; and 5: between 76% and 100% of the price of the paper version of the book). The scales used to measure the proposed constructs as well as the original scales which inspired them are summarized in Table 2.

6. ANALYSIS AND RESULTS

To test the proposed model empirically, we used a structural equation modelling (SEM). The main characteristic of SEM is that it allows relations among multiple independent

and dependent variables to be estimated, as well as enabling models which include unobservable constructs to be represented and estimated (Hair et al., 1999). Two approaches can be identified within SEM techniques; Covariance-based SEM (CBSEM), and Partial Least Squares (PLS). CBSEM estimation requires a set of assumptions to be fulfilled, including multivariate normality of data or a moderate to large minimum sample size. In PLS, measurement and structural model parameters are estimated via an iterative procedure which combines simple and multiple regressions by traditional Ordinary Least Squares (OLS), avoiding any distributional assumption of the observed variables. Thus, we feel the best approach to be a model based on partial least squares (PLS) estimation, since it is more flexible with regard to the measurement instruments used and does not require the variables to be normally distributed (Falk and Miller, 1992). Moreover, this approach is suitable for estimating models with small-size samples. Specifically, we used SmartPLS (Ringle et al., 2005) software.

PLS estimation comprises both the estimation of the measurement and the structural models. The measurement model, that is, the factor loadings of the measurement items, provides diagnostic information about scale reliability and validity. In this case, all factorial loadings are significant and above 0.8. Moreover, reliability values (Cronbach's alpha, composite reliability, and average variance extracted) are above those usually recommended. As regards discriminant validity, the average variance extracted of each variable exceeds the value of its squared correlation with the other variables, justifying the discriminant validity of the scales (Anderson and Gerbing, 1988). Table 2 sums up the measures of all the variables, the descriptive statistics, the factorial loadings, and the reliability values. In Table 3, we show the correlation matrix.

Insert here Table 2

Insert here Table 3

The structural model refers to the path coefficients indicating the relationships among the set of variables. In order to verify the hypotheses proposed in the model, path coefficients need to be analyzed applying three kinds of criteria; sign, size, and significance, the latter being estimated from a re-sampling procedure known as *bootstrapping* which generates a series of sub-samples from the original sample. In this study, 500 sub-samples were randomly generated. Thus, we had 500 estimations of all the parameters, enabling their significance to be determined from the empirical distribution of the parameters estimated around the mean, which is compared to a Student value (Hair *et al.*, 1999).

In the structural model, we included the type of e-book reader device (E-reader=0 and Tablet=1) as a control variable. Table 4 shows the standardized coefficients of the estimated structural model and their level of significance. We also obtained the R^2 value of the dependent variables: e-book perceived usefulness (R^2=43.4%), value consciousness (R^2=5.6%), e-book reader device use (R^2=37.6%), price acceptance (R^2=20.7%) and illegal downloading (R^2=39.2%). The total effects on illegal downloading are shown in Table 5, complementing the information obtained from the direct effect shown in Table 4.

Insert here Table 4

Insert here Table 5

As posited in hypothesis H1, results show that there is a negative correlation between price acceptance and illegal downloads. The less e-reader owners are willing to pay for e-books, the greater their tendency to download illegally.

As regards technological factors, the easier it is for individuals to access electronic books (download and install) the greater the usefulness they perceive them to have (H2a). However, the direct effect on the use of e-reader devices and illegal downloads does not prove significant. We therefore reject H2b and H2c. By contrast, perceived usefulness of

e-books does have a positive impact on the use of e-book readers and tablets (H3a) and on illegal downloads (H3b). Moreover, the greater the use of e-book readers and tablets for reading, the greater the tendency towards piracy (H4). Thanks to the indirect effects, we thus see that the total effect of self-efficacy on illegal downloading is significant. Individuals who feel able to gain easy access to electronic books perceive the usefulness of the technology, leading them to use electronic devices more and to make more illegal downloads.

With regard to ethical factors, individuals' consciousness of the value of electronic books and possible legal or social norms is negatively related to download frequency (we accept H5a and H7a). A consciousness and appreciation of the value of electronic books impacts an acceptance of a higher price for them (H5b). However, we failed to find any empirical support for the effect of consciousness on norms concerning the maximum acceptable price for electronic books, leading us to reject H7b. As expected, value consciousness of books is shaped by perceived usefulness (H6). Therefore, perceived usefulness will have a negative impact on downloads through value consciousness which suppresses the positive effect of perceived usefulness on illegal downloading. Nevertheless, when looking at the total effects, we see that, despite this suppressing effect, the overall effect of perceived usefulness on downloading is positive.

As regards individuals' characteristics as readers, we see that those who are keen on the latest releases make more illegal downloads (H8a), whereas those who read a wider variety of books make fewer (H9a). In addition, findings indicate that these characteristics do not impact the maximum acceptable price for electronic books, leading us to reject H8b and H9b.

Finally, as the various statistics concerning the use of tablets and e-readers indicate, individuals who own e-readers read a higher percentage of books using these devices than

those who own tablets. It is also curious to note that individuals who own tablets are willing to pay more for electronic books than those who own e-readers. Finally, we see that the kind of device owned does not influence the tendency to engage in illegal downloading.

7. DISCUSSION

The spread of electronic book reading devices has created enormous concern and no little fear amongst publishing companies who, faced with the threat of a repeat of what has happened in the music and film industry, have as yet to decide what business model and approach to adopt. Choosing the right strategy no doubt involves gaining an insight into the mindset of readers. This is why the present study sets out to explore determinants of illegal downloading of electronic books and willingness to pay a higher or lower price for them.

As regards illegal downloading, we have seen that there are three kinds determining factors: technological, ethical, and those related to consumers. Firstly, we see that consumer familiarity and use of technology encourage illegal downloading. The fact that individuals feel able to access electronic books easily and to install them, means that they perceive greater utility and advantages in e-books than they do in conventional paper books. This positive evaluation of the benefits of e-books is what leads to a more intense use of electronic devices as a reading tool and, ultimately, to a greater tendency towards illegal downloading. These findings confirm one of the fears of the digital contents industry, namely the inverse relation between the growth of the electronic device industry and the digital contents industry, i.e., the fact that owning an electronic reading device encourages more illegal downloading. Secondly, ethical and moral factors, an awareness of norms, and assigning a value to electronic books, mitigate the tendency towards piracy.

When subjects respect the recommendations made by government and industry or the opinions expressed by friends and relatives against piracy they tend to limit the number of illegal downloads. In this vein, we highlight that the value consciousness of books (in turn determined by their perceived usefulness) is the main factor impacting behavior vis-à-vis downloading, and emerges as more relevant than respect for social norms. In a similar vein, Shang et al. (2008) find that the belief in the norm of anti-piracy has a low impact on the deontological evaluation of music piracy. Thirdly, we see that individuals who look for best-sellers and the latest releases to read are more prone to indulge in piracy, in contrast to those who tend to opt for a wider variety of reading matter.

With regard to the price which individuals are willing to pay for electronic books, we found that the less people are prepared to pay, the greater the tendency towards piracy. However, as regards the determinant variables, only consciousness of the value of e-books has an impact on price acceptance. Neither susceptibility to social norms nor a preference for the latest releases nor variety of reading influence the price that individuals are prepared to pay. This finding contrasts with the results obtained by Hsu and Shiue (2008) for the case of software. In that particular setting, the search for the latest releases does increase the intention to pay for digital contents. This finding is not really surprising, since paying for the latest software entails investing in a product which will last for a long time, as opposed to a best-seller which tends to be a product which is consumed quickly and immediately.

Another interesting finding is that owners of tablets are willing to pay more for electronic books than owners of e-readers. This may be related to the fact that the most widespread tablet, Apple's iPad, allows convenient access to the iTunes virtual bookshop. Owners of this particular device are likely to be more used to purchasing digital contents in the virtual store and are therefore willing to pay more for electronic books.

By way of the **implications for business management** to emerge from the study, one point is that the spread of electronic devices, as certain figures already seem to be indicating, has led to an increase in downloads. Faced with this fact, the question is knowing what business model to adopt and what pricing policy to implement.

As regards publishing, the dilemma facing publishing houses is whether or not to publish digital books (Zimerman, 2011). The fact that those seeking the latest releases tend more towards piracy leads us to posit a restriction on the digital editions of these books, at least while they are launched and are selling well. Although this will not prevent piracy, at least it will not encourage it further. Unlike other digital contents markets (music, movies, software) in which products are already sold in digital formats that may induce copies and indeed high quality copies, in the case of electronic books publishing houses can decide when to adapt to technologies so as to avoid falling victim to piracy. The fact that publishing companies supply the market with digital copies would only boost interest in piracy due to the possibility of obtaining a high quality copy. As with paperbacks, it might prove advisable to bring out the digital edition after a few months or once the book is no longer amongst the best sellers. By contrast, those seeking variety in the books they acquire do not resort to illegal copies. In this case, digital editions of books covering a wide range of topics, specialized editions, or targeting specific market segments would make sense.

In addition, awareness of the norms and the value of books is essential if piracy is to be curtailed. Although raising awareness amongst individuals is by no means an easy task, governments and publishing houses should engage in joint action to stamp out piracy. Certain authors (Yoon, 2011) propose enforcing copyright laws and increasing individuals' awareness of the potential severity of the problem and certainty of being

punished. Nevertheless, in line with Sudler (2013), we feel that it would be better to try to alert people to the value or interest in buying electronic books. In this vein, Sinha and Madel (2008) also posit the dilemma of the carrot versus the stick: punishment or incentives and cooperative agreements. One possibility is to create purchasing scenarios that inspire enthusiasm amongst consumers coupled with a true appreciation for the product they are acquiring. For instance, setting up subscription based platforms where purchasing books is easy and entertaining and where the client can enjoy additional services such as guidance, rewards, free applications, and so on, might prove to be an alternative. Examples in the music market such as iTunes or Spotify reflect the viability of various business models and different pricing policies.

As regards price, we again see that if individuals are to pay for a book they must also appreciate its value. Following on from what we mentioned above, action aimed at endowing electronic books with value (through quality, design or added services), would encourage consumers to pay a higher price for them. The fact that owners of tablets such as the iPad are willing to pay more reflects consumer preference for online shopping sites that offer a fast and simple purchase service, product and service range, and an enjoyable overall shopping experience. Nevertheless, we should take into account that iPad owners may have more disposable income than e-reader owners, since they own a more expensive device.

Pricing policy management is a key issue and one which has a tremendous impact on consumer behavior. As certain authors have pointed out (Easley, 2005), in spite of piracy, there is evidence of a willingness to pay for digital contents, via legal download services. It is therefore advisable for publishing companies to make people realize that what they pay for a book is an ethical price, related to the added services received, but that they are not made to pay further taxes and rights which may only spark mistrust, rejection or

negative consumer attitudes. One example of pricing policy that stirs protest (through piracy) is the case of digital rights management (DRM), which strives to make it difficult to reproduce and distribute copies of legally purchased digital products (Sinha et al., 2010). There are also those who blame intellectual property rights (Yung, 2009), whereas publishers maintain that copyright ensures that authors, writers and researchers get rewarded for their talent and expertise, and that the publishers who support them see a return on their investment (The Guardian, 2011). A further example is that publishers are blamed for setting the prices for their books rather than allowing retailers to do so. Certain publishers are even being investigated after being accused of fixing or rigging the prices of e-books.

To conclude this work, we wish to point out certain issues concerning **limitations and further research**. The study is based on a sample of Spanish consumers, a market where the introduction of electronic readers has been slow, due to initial public rejection. This has also been coupled with the fact that publishing companies have shown themselves highly reluctant to publish digital texts. Although we are immersed in a global market, we feel that our choice of sample restricts the extrapolation of the findings to other contexts in which the electronic book has penetrated more deeply. In addition, although we have addressed technological and ethical factors, we have failed to take account of how penalizing piracy and other ethical and legal considerations may influence consumers. The use of self-reported perceptual data is a further cause for concern. Although Taylor (2012) finds there is a high degree of correspondence between self-reported data on the frequency of illegal downloading and observed objective data, he also finds that self-reported data may lead to actual illegal downloading behavior being underestimated. Finally, the measurement of certain constructs may be improved. For

instance, we measure self-efficacy as the ability to access and install e-books, yet it might also involve other aspects which we have not taken into account (e.g., ease of downloading, ease of reading).

As for future lines of research, we feel it would prove useful to explore in greater depth the behavior of individuals who engage in illegal downloading: How much of what is downloaded is actually read? Are books which have already been downloaded also read? It would be interesting to find out the underlying motives for engaging in digital piracy and thus answer such questions as to what extent people download out of pure greed, or a desire to access something which is supposedly free, even if they have no intention of reading what they download. Since some statistics (FGEE, 2013) indicate that those who read e-books read more books, we also wish to investigate rigorously whether illegal downloading really means that far fewer books are bought. It would no doubt prove interesting to explore whether individuals download books which they would not otherwise purchase, or how the desire to collect books might impact the acquisition thereof in electronic format.

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Figure 1. Proposed model

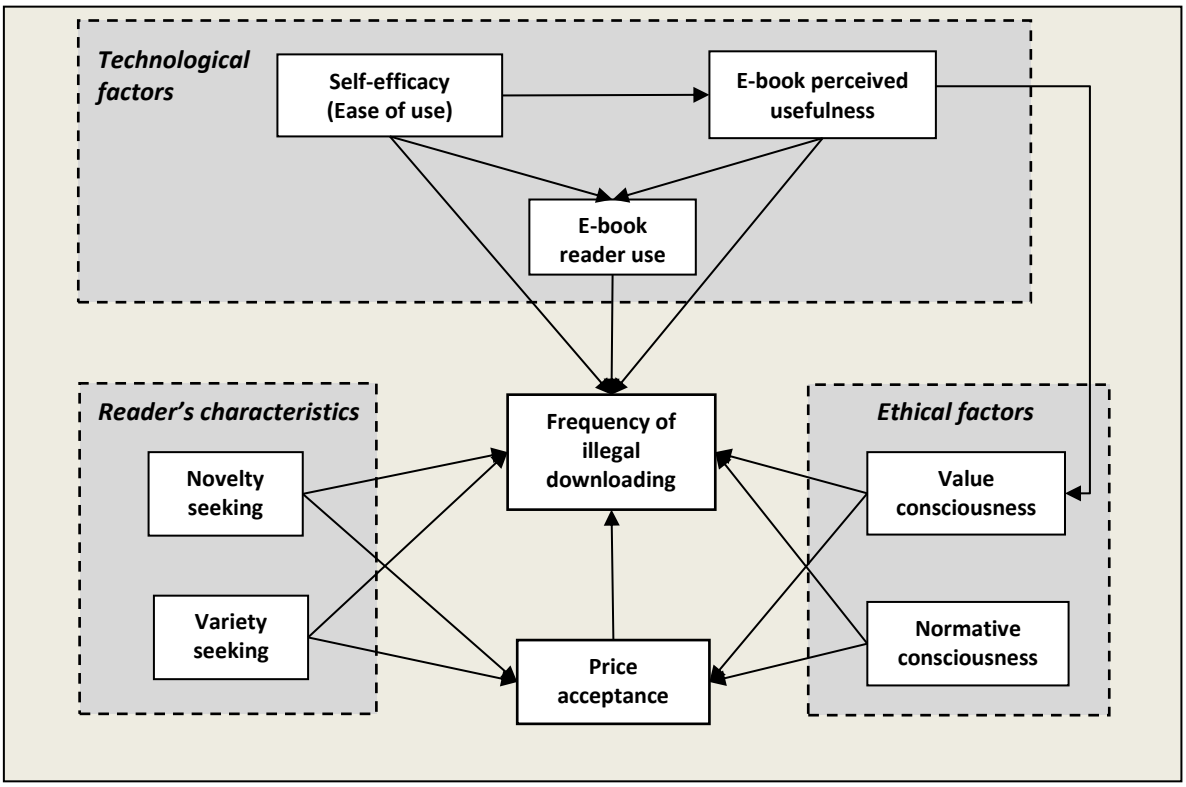

Table 1. Comparison of e-reader's and tablet's users

	E-READERS		TABLETS			E-READERS		TABLETS	
Age*	**USA**	**Sample**	**USA**	**Sample**	**Gender**	**USA**	**Sample**	**USA**	**Sample**
13-17	10%	0.7%	13%	1.4%	**Men**	46%	49.3%	61%	64.8%
18-24	15%	12.6%	23%	26.4%	**Women**	54%	50.7%	39%	35.2%
25-34	21%	25.2%	26%	18.1%					
35-44	15%	38.5%	15%	27.8%					
45-54	15%	16.3%	13%	22.2%					
≥ 55	25%	6.7%	10%	4.2%					

(*) The age bands considered in the study conducted by Nielsen do not correspond exactly to those we considered in the sample used in our study: ≤18; 19-25; 26-35; 36-45; 46-55, > 55.

Table 2. Summary of measurement scales, descriptive statistics, and loadings

Original scales	Measurement scales	Mean	S.D.	Loading
Self-efficacy (Lim and Dubinsky, 2005)	***Self-efficacy (e-book ease of use)*** *(α=0.89; ρ=0.95; AVE=0.90)*			
	How confident are you about your ability to...			
Feeling of comfort purchasing an item that I want on the Internet	Access electronic books	4.44	0.85	0.935
Ease of purchasing an item that I want on the Internet on my own	Install electronic books in your e-book reader device	4.49	0.84	0.957
Ability to purchase an item that I want on the Internet without help				
Perceived usefulness (Davis et al., 1989)	***E-book perceived usefulness*** *(α=0.72; ρ=0.88; AVE=0.79)*			
I would find X useful	Having books in electronic format is useful	4.57	0.69	0.881
Using X would improve my performance	I think that electronic books offer advantages over conventional books	3.97	1.02	0.893
Using X would increase my productivity				
Using X would enhance my effectiveness				
	E-books reader use			
	Of all the books you read, what percentage do you read on the e-reader/tablet	3.36	1.54	1.000
Normative consciousness (Hsu and Shiue, 2008)	***Normative consciousness*** *(α=0.96; ρ=0.97; AVE=0.89)*			
If government promulgates the importance of using authorized software, I will choose authorized software	If the government alerts people to the importance of downloading books legally, I won't make any illegal downloads	2.14	1.35	0.937
If software companies disseminate information of the importance of using authorized software, I will choose authorized software	If distribution companies alert people to the importance of not downloading books legally, I won't make any illegal downloads	2.04	1.28	0.968
If my family and friends prefer using authorized software, I will choose authorized software as well	If my family and friends urge me to download books legally, I won't download illegally	2.15	1.34	0.954
If I can be accredited by others from using authorized software, I will choose authorized software	If other people will think badly of me because I download books illegally, I will stop doing so	2.06	1.27	0.914
Value consciousness (Hsu and Shiue, 2008)	***Value consciousness*** *(α=0.92; ρ=0.95; AVE=0.86)*			
I intend to purchase authorized software as long as the cost is within my budget	I try to buy books in electronic format	2.89	1.36	0.911
I believe authorized software is worth to buy	I think that it is worth buying books in electronic format	3.04	1.26	0.934
I feel delighted to purchase newly issued authorized software	I find it pleasant to buy books in electronic format	2.74	1.24	0.942
	Novelty seeking			
	I like to read the latest book releases	4.04	1.13	1.000
	Variety seeking			
	I like reading a wide range of books	3.47	1.27	1.000
	Illegal downloading			
	How often do you download e-books free through P2P (illegal downloading)	3.62	1.51	1.000
	Price acceptance			
	What is the maximum amount you would be willing to pay for e-books	2.55	1.20	1.000

α= Cronbach's Alpha; ρ= Composite Reliability; AVE=Average Variance Extracted

Table 3. Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Illegal downloading	1.000								
2. Price acceptance	-0.338	1.000							
3. Self-efficacy	0.197	0.017	1.000						
4. Perceived utility	0.259	0.081	0.659	1.000					
5. E-book reader use	0.306	-0.111	0.410	0.516	1.000				
6. Normative consciousness	-0.361	0.210	-0.210	-0.288	-0.355	1.000			
7. Value consciousness	-0.382	0.412	0.120	0.233	0.100	0.299	1.000		
8. Novelty seeking	0.149	-0.076	-0.030	0.016	0.002	0.268	0.048	1.000	
9. Variety	0.027	-0.065	0.156	0.176	0.165	0.102	0.075	0.532	1.000

Table 4. Estimation of the proposed hypotheses

Hypothesis	Relationship			ß-estimate	t-statistic
H1 (-)	Price acceptance	→	Illegal downloading	-0.152*	2.242
H2a (+)	Self-efficacy	→	Perceived usefulness	0.658***	14.548
H2b (+)	Self- efficacy	→	E-book reader use	0.084	0.988
H2c (+)	Self- efficacy	→	Illegal downloading	0.022	0.343
H3a (+)	Perceived usefulness	→	E-book reader use	0.363***	5.015
H3b (+)	Perceived usefulness	→	Illegal downloading	0.232**	2.979
H4 (+)	E-book reader use	→	Illegal downloading	0.165*	2.056
H5a (-)	Value consciousness	→	Illegal downloading	-0.348***	4.542
H5b (+)	Value consciousness	→	Price acceptance	0.380***	5.870
H6 (+)	Perceived usefulness	→	Value consciousness	0.237***	2.979
H7a (-)	Normative consciousness	→	Illegal downloading	-0.152*	1.944
H7b (+)	Normative consciousness	→	Price acceptance	0.094	1.400
H8a (+)	Novelty seeking	→	Illegal downloading	0.277***	4.078
H9b (+)	Novelty seeking	→	Price acceptance	-0.107	1.474
H9a (-)	Variety seeking	→	Illegal downloading	-0.161*	2.276
H9b (+)	Variety seeking	→	Price acceptance	-0.012	0.148
Control *E-reader=0 Tablet=1*	Type of device	→	E-book reader use	-0.329***	6.221
	Type of device	→	Illegal downloading	-0.004	0.068
	Type of device	→	Price acceptance	0.115*	1.773

(*) $p < 0.05$ (**) $p < 0.01$ (***) $p < 0.001$ (one-tailed test)

Table 5. Total effects on illegal downloading

Price acceptance	*Self-efficacy*	*Perceived usefulness*	*E-book reader use*	*Normative consciousness*	*Value consciousness*	*Novelty seeking*	*Variety seeking*
-0.152*	0.165*	0.196*	0.165*	-0.167*	-0.406***	0.294***	-0.159*