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# Understanding determinants of illegal e-book downloading behaviour in the UK and Germany

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## Abstract

With the success of e-books in the last decade, e-book piracy has become increasingly prevalent. This is a significant threat to the publishing industry, publishers and authors alike. Despite efforts to inhibit illegal downloading of e-book files, unauthorized download platforms have not lost much popularity. One of the underlying problems is a limited understanding of the determinants that drive consumers in their choice between legal and illegal download options. This article identifies and critically evaluates the key product attributes in the decision-making process of consumers downloading e-books from legal and illegal sources. By providing consumer insights, the publishing industry and e-book sellers can be guided to meet consumer demand better and design marketing plans to attract consumers towards legal download sources and discourage e-book piracy. The consumer choice between legal and illegal e-book download platforms is analysed using the multi-attribute theory for consumer decision making. 23 attributes were tested using an online questionnaire and analysed by logistic regression. Three attributes were found to be significant in determining the choice of download platforms: A low perception of the importance of copyright compliance, dissatisfaction with the security of download platforms and dissatisfaction with e-book prices in online stores.

**Keywords:** E-books; illegal download; consumer behaviour; Multi-attribute Theory; Germany; UK.

## Introduction

In a tough economic climate where worldwide sales of printed books are under pressure, sales of e-books are sky-rocketing (Market Line, 2012). Although there is no established monitoring of industry-wide downloads which makes accurate statistics elusive (European Commission, 2005; Vasileiou et al., 2008), the following figure shall provide a general sense of broader trends in the e-book market: Amazon.com, USA's largest download platform for e-books in terms

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of sales and variety, reported to now sell more digital books than printed copies. According to information released by the company 180 e-books were sold for every 100 printed books in early 2010 (Boersenblatt, 2011a; Miller and Bosman, 2011; Edgecliff-Johnson and Hill, 2011). E-books did not outsell their printed counterparts outside of Amazon until 2010, but this figure certainly was a strong indicator of a trend (Miller and Bosman, 2011). Nevertheless, it is a dynamic sector with observable variations around the world. Recent surveys show that ebook sales continued to fall as younger generations drive appetite for print in 2015 and 2016 in the UK. A Nielsen survey found that ebook sales declined by 4% in 2016 in the UK (Cain, 2017). There was a significant fall reported in the first half of 2018 in the US too (Kozlowski, 2018). While Amazon and Kindle reported sizeable growth across the world, Association of American Publishers reported about 3.8 percent decline in 2018 (AAP, 2018). As can be seen from the table 1 below, the appetite for ebooks are not small despite these reported falls. Nevertheless, one should also note that overall book sales fell about 7 percent in the same period.

**Table 1.** Book sales in the US, 2017-2018, 1<sup>st</sup> Quarters (in USD)

	Jan. – April 2018	Jan. – April 2017	Percent share 2018	Percent Change
Hardback	\$769.6	\$688.5	35%	+11.8%
Paperback & Mass Market	\$789.8	\$759.1	36%	+1.4%
<b>eBooks</b>	<b>\$358.7</b>	<b>\$373.0</b>	<b>16%</b>	<b>-3.8%</b>
Downloaded Audio	\$137.0	\$100.6	6%	+36.1%
Physical Audio	\$12.5	\$14.1	1%	-11.4%
Board Books	\$36.9	\$39.0	2%	-5.5%
Other	\$95.9	\$76.4	4%	+25.5%
<b>Total</b>	<b>\$2,200.4</b>	<b>\$2,050.7</b>	<b>100%</b>	<b>-7%</b>

Source: AAP (2018).

PWC (2011) pointed out that trends and developments in the US e-book market were having similar patterns in Europe and e-books were finally breaking through on both sides of the Atlantic. In this light, reports from the German e-book market predicted a yearly sales growth rate about 70% (PWC, 2011) in the following years at the expense of a small decline in printed book sales (Wischenbart and Kaldonek, 2012). The e-book market in the UK was constituting 50% of the total European market with a 38% sales growth reported in 2011 whilst printed book sales fell by 3% in the same period (Futuresource, 2011; Publishers Association, 2011).



However, these successes of e-books over printed books were driven by consumers being open to new technologies as the internet become more pervasive in all areas in life (Loebbecke, 2010). However, Williams et al. (2010) argued that "The digital world is not the same as the physical world. It is changing basic assumptions about the idea of ownership, sharing, and copying content" (p. 283) whilst the popular blog "Good E Reader" stated that: "Entire generations of users grow up getting their music, movies, and books for free and feel no moral qualms about what they do" (Kozlowski, 2012). This ethical divide can be a reason for the challenges of unauthorised downloading behaviour.

The book industry has faced an inherent dilemma: on the one hand putting efforts to increase sales of e-books and on the other hand this fuels the demand for illegal or unauthorised distribution channels. This is familiar dilemma from the music industry. Digital piracy brought dramatic change to the music industry with record labels being forced to give up their traditional business models (Graham et al., 2004) and the question rises whether the patterns are the same for e-books. Loebbecke (2010) suggests the following answer:

*"Music and books are identical with regard to the characteristics of economic goods on the level of bits and bytes. Hence, insights and experiences concerning industry structure, business models and user preferences should be applicable across industries" (pp. 21-22).*

The main focus of this study was to identify and explore the factors that make unauthorized download sources of e-books appealing for consumers and this would enable the e-book publishing industry adjust their portfolios in order to meet consumer demand better and attract consumers to legal download sources instead. Understanding how and why consumers choose from the available options is likely to help the publishing industry to become more proactive instead of maintaining the defensive stance and, thus, regain competitive advantage over illegal download platforms.

### **Drivers of digital piracy of music and books**

In fact the moment ebooks sales and therefore demand reached substantial levels, unauthorised channels emerge and become viable. Piracy surely poses an increasingly significant threat to the e-book sector like it did to the digital music sector (Wischenbart and Kaldonek, 2012; GfK, 2011; GfK et al., 2012; PWC, 2011; Wiggin, 2011).

This unauthorized sharing of e-book files mainly takes place via direct download links where files are stored on a server by pirates and downloaded by consumers. Doing so, consumers hardly face legal

consequences as they do not provide any pirated content during the download process themselves, as is the case with peer-to-peer networks generally used for sharing larger music and video files (Bonik and Schaale, 2011; Magnúsdóttir and Sirkeci, 2010; Boersenblatt, 2011).

The "Digital Entertainment Study 2011" discloses that some 36% of UK e-book readers admitted to regularly downloading pirated copies of e-books (Wiggin, 2011). UK government's *Online Copyright Infringement Tracker* survey revealed that about 15% of consumers have accessed content illegally in 2017 and 68% of them were aged under 35 (IPO, 2017). Same survey reported that one of the key reasons cited by illegal downloaders were "if legal services were cheaper" which was cited by 21% of respondents in 2017 and 24% in 2016. Despite efforts to inhibit illegal downloading, this activity is likely to grow as a quarter of unauthorised downloaders of e-books intend to do so to a larger extent in the next 12 months. Reports on the scale of e-book piracy vary between 13% and 65% of all downloads being illegal (Hargreaves, 2011). Statistics of the German Booksellers' and Publishers' Association show that 60% of German e-books are being downloaded illegally (GVU, 2011) and 3.7 million of the total 14.3 million consumer who downloaded media content from the internet admit to have downloaded pirated content. However, Bonik and Schaale (2011) and Wischenbart and Kaldonek (2012) recommend being critical in referring to industry-sponsored statistics as data and methodologies are often imprecise. According to them it is not possible to provide absolute figures on any kind of illegal downloads due to the fragmented nature of the piracy scene, technical restrictions and the fact that unauthorized sources do not publish traffic statistics. As an alternative methodology in assessing e-book piracy, the authors monitored Google search-queries of consumers and found that illegal downloads had a prominent and growing presence. Among the ten most popular combinations that included the word "e-book" in Google searches, four were in combination with the terms "rapidshare", "free", "torrent" and "no cost" (Bonik and Schaale, 2011, p. 5).

According to several studies drivers of illegal downloading behaviour are:

**Digital Rights Management (DRM)** is the main method deployed by publishers to prevent e-book piracy and the main reason for consumers to engage in e-book piracy.

**Prices of E-Books** are too high in the eyes of consumers, driving them to seek cheaper or free alternatives.



**Limited legal availability** of titles in electronic form drive consumers to digitalize paper books themselves and make them available through unauthorized platforms.

**Usability of unauthorized sources** is often reported to be higher than that of paid download platforms.

**Fixed book pricing rules and varying tax rates** prevent competitive pricing between publishers, increasing the popularity of illegal sources.

**Small size of E-Book files** adds momentum to piracy as books can be downloaded very quickly.

**Lack of respect of copyrights** seems to be prevalent among consumers who provide and download pirated e-book files.

(Sources: Bonik and Schaale (2011), Loebbecke et al. (2010), PWC (2011), Ramge (2011), Zimmerman (2010).)

Understandably, there are alternative interpretations and understanding of the illegal download behaviour. For example, according to Kozlowski (2012) the main stimulants for consumers to engage in e-book piracy are:

*"The first reason is the type of person that grows up pirating content and has absolutely no moral qualms about doing so. The second is people who have a lack of a stable income or fixed income and still wants to satiate their literary thirst. Third, in the eBook realms people tend to pirate books they cannot get locally due to geographical restrictions or the lack of an official copy." (p. 12).*

Zimmerman (2010: 71) underlines another character of illegal users and states:

*"Hacker and cracker usually do what they do, because they can, and may not have a profit motive in copying music, films and e-books. It is a challenge to the hacker to be able to steal from the big business".*

This particular behaviour can also be a reflection of political statement as the founder of an illegal download platform deliberately stated that each unauthorized download is a vote against a system that charges too much (Young, 2008, p. 1).

Consumers of ebooks usually have a few categorical options to download from: online stores, free and authorized sources, libraries and unauthorized sources. Some studies indicated that consumer choices are well balanced between these alternative routes.

Loebbecke (2010) found out that 39% of consumers in Germany use commercial distribution platforms as their primary e-book download source but the vast majority searches for a mixture of free downloads and commercial platforms. Unauthorized sources were selected by 8% of respondents but the number rises to 30% when looking at the sub-group of students only. On the same note, the "JISC E-Book Survey" revealed that e-book downloading behaviour among UK students and academic staff was different to that of full-time employed persons. The results indicate that consumer characteristics such as age and occupation determine downloading behaviour (JISC, 2009).

### **Consumer behaviour perspective**

Schiffman and Kanuk (2008) stated that "Marketing activities should be designed to: impart a more favourable, perhaps more relevant product image to the target consumer. This may also require a change in product features or attributes to more or better features." (p. 489).

Then the question is whether unauthorized e-book download platforms are better able to serve consumer needs than authorized platforms? An analysis of the product attributes that make one or the other superior appear to be a starting point to unpack this question. Currently, there is a gap in the knowledge about consumer needs when it comes to e-book platforms and these dynamically vary over time (Rowlands et al., 2007; JISC, 2009; IPO, 2017).

Also analogies with the music industry seems a way forward to improve our understanding of ebook piracy. As Loebbecke et al. (2010) stated nearly a decade ago the developments in other industries such as music or film indicate the importance of understanding consumer needs and warrants for more research: "Only little is known about e-book consumers; to anchor the issues more broadly, one can only assume that e-book users' preferences resemble music users ones." (p. 15). "The book industry does not show many signs that it has learnt its lessons from the music experience, neither regarding strategies or building on customer attitudes" (Loebbecke, 2010, p. 22). A PWC report also underlined the consequences of not understanding consumer behaviour in this sector: "If legitimate vendors fail to meet consumer demand, either in terms of content choices or reasonable prices, their potential customers may turn to file-sharing websites for pirated books" (PWC 2011, p. 3).

Consumers seek to make the best choice among alternative possibilities, seek to reduce effort in making this choice, minimalizing



negative emotions and maximizing the ability to justify their decision, thus, decision-making is a constructive process (Mowen and Minor, 2006). Thus, consumers of ebooks make decisions to download a book from a certain platform and doing so she or he consciously or unconsciously, goes through a certain process. Although many researchers agree that there is not a universal theory for every consumer decision process, one thing is clear that consumer behaviour is influenced by the individual characteristics of each consumer (Häubli and Trifts, 2000; Payne et al., 1982).

Many conceptual frameworks in consumer behaviour are widely used to illustrate complex decision-making processes and to make them intuitively pleasing (Foxall, 1990). Nevertheless, there is also strong criticism as Dubois (2000), for instance, objects that: "No model, however sophisticated, will ever account for all the facets of purchase and consumption behavior because decisions made by consumers are too diversified to be explained by a single scheme" (p. 303).

Some other studies underlined the risks of generalizing a decision process as it fails to embrace the diversity of product categories and purchase situations (Burns and Gentry, 1990) while others criticised that the decision-process models are often too restrictive and fail to correctly reflect the real-life situation of a consumer with its many individual situations (Lye et al., 2005; Loudon and Della Bitta, 1993; Erasmus et al., 2001).

Consumers also frequently engage in non-conscious behavior that might not be well modeled through a rational information processing approach (Erasmus et al., 2001; Bozinoff, 1982). Other academics emphasize the limited theoretical background against which the first consumer decision models have been developed (Du Plessis and Rousseau, 1991). In the early days of consumer research, academics tended to apply decision models from other disciplines such as psychology, sociology, anthropology and economics. Therefore, Hoyer (1984) is of the opinion that applying these early models, developed to understand different processes, on today's consumer reality will always remain problematic. Erasmus et al. (2001) conclude that it remains difficult to determine whether major decision frameworks actually can provide an accurate presentation of consumer behavior at all.

Bearing these criticisms in mind, we have decided to select, among various consumer decision models, *the Multi-attribute Theory* as appropriate for this study. This assumption was based on the work of Magnúsdóttir and Sirkeci (2010) who determined the role of product attributes in music piracy by means of the *Multi-attribute Theory*.

Following the early notes about "learning from music industry", using the same model would serve well to our purposes here.

The Multi-attribute Theory assumes that several product attributes and their relative importance constitute the evaluation criteria consumers apply to the choice alternatives in their evoked set (Bettman et al., 1998; Bonik and Schaale, 2011; Schiffman and Kanuk, 2009). Doing so, consumers rank each examined product attribute according to their overall importance (also referred to as utility or salience). The highest scoring alternative is expected to bring them closest to the desired state and will be purchased (Arnould et al., 2005; Haugvedth et al., 2008; Kardes et al., 2008). Bettman et al. (1998) point out that, in order to construct this ranking, consumers must have command of computation skills since each option is supposed to have a value which is subjective; and assumed that consumer will make a calculated choice based on such evaluation of utility and value (p. 187).

Therefore, ebook readers would be seeing each download alternative as a bundle of attributes coinciding with different levels of ability to satisfy their ebook (download) needs if we can apply the theory in our case. The product attributes can be described as a range of features of products and services sought after by consumers when they search for a solution to a particular problem and these are, in the context of consumer decision-making "particular dimensions or attributes that are used in judging the choice alternatives" (Engel et al., 1995, p.208) whilst it is moderated by the number of "criteria consumers use during alternative evaluation" and "relative importance of each criterion?" (Lindquist and Sirgy, 2009, p. 64).

Thus the number of criteria used is crucial. The more important a purchase is for a consumer, the greater the number of evaluative criteria used and consumers typically use six or less evaluative criteria in making up their minds (Engel et al., 1968). Boyd and Walker (1990, p. 119) suggests over 20 attributes in four categories for general product evaluations.

Our question is how many would suit to the ebook consumers' decision making process. According to Weniger and Loebbecke (2010) seven variables can explain drivers of e-book reading behavior whereas PWC (2011) came up with 22 product attributes determining consumer choice of e-book reading devices. Typical attributes are for example, availability, ease of storage (Chu, 2003), difficulty in reading, annotating, and browsing (Rowlands et al., 2007).

In reference to the Multi-attribute Theory, relative importance of product attributes in the decision process (salience) is important



(Cruickshank et al., 2007) and it varies from consumer to consumer and from product to product (Tillis and Wernerfelt, 1987; Alpert, 1971; Lindquist and Sirgy, 2009, p. 66).

### **Data and Methods**

In this study we have focused on the two leading European e-book markets: Germany and the United Kingdom. Germany was the world's second largest book market after the US and the UK was leading Europe in e-book adoption (PWC, 2011). For example, nearly 50% of all European e-book sales in the first half of 2011 were in the UK (Futuresource, 2011, Boersenblatt, 2011). Thus, we made the questionnaire available in English and German while others were filtered out.

The online survey was carried out in the second half of 2012 and ended by April 2013. To reach a sample reflective of differences in target populations in both countries, we have subscribed and contributed to forums with posts and comments featuring a link to the questionnaire. These were published to several online discussion forums and blogs dealing with e-books and followed up with several updates throughout the fieldwork period. We have also used posts on social media platforms facebook and linkedin. Respondents were also further encouraged to pass on the questionnaire link to their acquaintances. Blumberg et al., (2005) considered this online snowball technique as a very useful approach to reach a population.

In an effort to maximise exposure of the questionnaire to the potential target group, three additional marketing vehicles have been deployed: search engine advertising and online search optimization and within the Google.com environment as well as an email campaign to a university with dominantly international student body based in London.

First of all, we have to clarify and note few limitations of this study. Understanding the challenges and limitations of online surveys, we shall caution the readers that these surveys are relativey easy and cost effective but lacks personal interaction and control (Couper, 2000, p. 464). It is also likely that respondents may easily be bored and inaccurate and/or unuseable responses are possible (Blumberg et al., 2005). Second limitation arises from the small sample size: only 130 respondents including 87 e-book downloaders; and 14 illegal downloaders. Thus, this study is a reflection of reality but not necessarily a full representation. Despite including a large full-time student segment, our sample was more diverse than most previous research that focused on student samples only (see JISC, 2010).

A third issue arising from the sensitivity of the question investigated is so-called “cognitive dissonance” which implies a potential limitation on generalizability. It suggests that when consumers are uncomfortable with unethical or critical decisions, they tend to hesitate in answering and when answered likely to allocate greater salience to positive product attributes and smaller salience to negative attributes (Solomon, 2009; Schiffman and Kanuk, 2007). Hence, our findings must be interpreted with caution (Wischenbart and Kaldonek, 2012).

**Table 2.** Tested Attributes of e-books

Category	Product Attributes	Source
Appeal & Functions	Design of website / navigation	JISC, 2010
	Search function (for titles, authors, genres, ISBN, etc.)	JISC, 2010
	Connectivity to social media	Johnson, 2010
	Cloud / Online storage	PWC, 2011, Vasek, 2011
Product Offering	Variety of titles and genres	Loebbecke et al., 2010; GfK, 2011b; Giebenhain and Mundt, 2007; Zimmerman, 2010
	Quality of files	PWC, 2011; Chao and Lu, 2011
	Choice of digital formats	Bonik and Schaale, 2011; Boersenblatt, 2011
Files	Compatibility	Loebbecke, 2010
	Ability to download single chapters	Kucklick, 2010; Edgecliff-Johnson and Hill, 2011
	Download speed	Zimmerman, 2010
Service	Book reviews & Bestseller lists	GfK et al., 2011
	Personal recommendations	Thomas and Housden, 2011
	Speed of publication	Chu, 2003
Security & Legal	Protection of personal information	Loebbecke, 2010
	Security of website	Miyazaki and Fernandez, 2005
	Compliance with copyrights	Williams et al., 2010
Price	Price of e-books	Chen et al., 2008; PWC, 2011
	Free sample / preview	BML and Bowker, 2011
	Monthly subscription / Flatrate	PWC, 2011; Boersenblatt, 2012
Help & Support	Video demos / tutorials	PWC, 2011
	Personal assistance	
	Help instructions / FAQ's	

We have designed the questionnaire integrating two steps in modules; first of which to measure salience of attributes and the second to measure satisfaction level. The following attributes were



drawn as relevant from earlier research and fine tuned after the pilot study.

Our dependent variable was preferred or mostly used downloading channel. We have also controlled the genre of e-books as it may have moderated the behaviour indicated by research for example, fiction books accounted for 80% of all paid e-book downloads in Germany (GfK, 2011; GfK et al., 2011).

Following the patterns in earlier studies, individual consumer characteristics such as age, gender, income, education and occupation were included in our models (see Magnúsdóttir and Sirkeci, 2010; Giebenhain and Mundt, 2007; Heting, 2003; Williams et al., 2010). This is supported by the industry statistics too (See GfK et al., 2011; IPO, 2017). Nationality was also included in the models (see Wischenbart and Kaldonek, 2012).

### **Analysis and findings**

In our sample, nearly half of respondents were educated at college level or higher. Income levels were equally distributed into four groups, namely those earning €10,000 or less per annum, a quarter between €10,000-24,999, another between €25,000-39,000, and finally with above €39,000. German respondents had slightly higher income than the British.

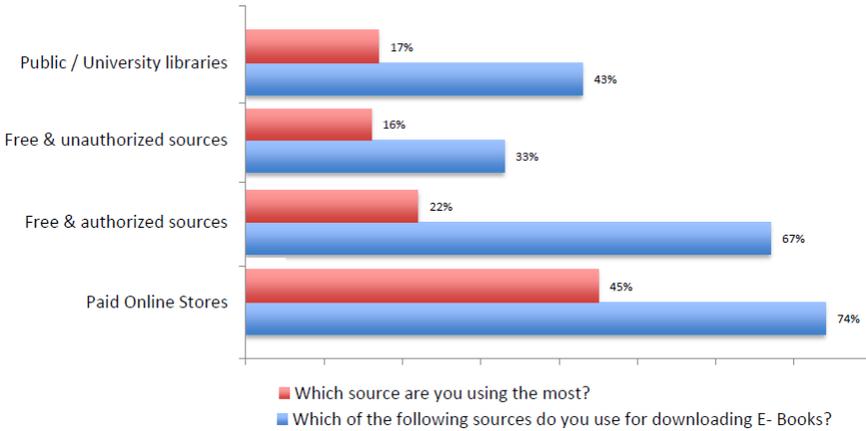
Appropriate to the general trends (i.e. majority illegal downloaders are aged 35 or younger), our sample was dominated by those aged 20-34. Our respondents almost equally distributed between those resident in Germany and the UK. More than half of our respondents were in full time employment (52%) and 8% unemployed.

Overall one third of our respondents reported to have used illegal downloading channels (33%) while 16% of them indicated that unauthorised means to download was the most frequently used (Figure 1).

In our regression models, we have collapsed Public and library sources, free-authorized sources and paid online stores as authorised and free and unauthorised as illegal channels.

We have found significant correlation between illegal downloading and certain book genres. Several e-book genres were significantly moderating the illegal download behaviour. 53% of the readers of Computer & Technology genre was using illegal sources while only 10% admitted paying for these books. This can be seen as in line with what PWC (2011) research showed: those who engage in illegal downloading tend to be technically more literate.

**Figure 1.** Download platform categorised used.



However, Social Sciences books were the second most illegally downloaded titles. Nearly twice as many respondents were downloading these books from illegal sources than from legal sources. These were followed by Business & Administration titles. Research Methods literature was also in this cluster with only 14% of e-books on methods were downloaded from legal sources whilst 32% were downloaded from illegal sources.

These findings offer further support to what JISC (2009) found: E-book piracy poses a significant threat to the educational books market. Text books are frequently downloaded illegally and students are likely to download pirate copies of these texts which are usually expensive.

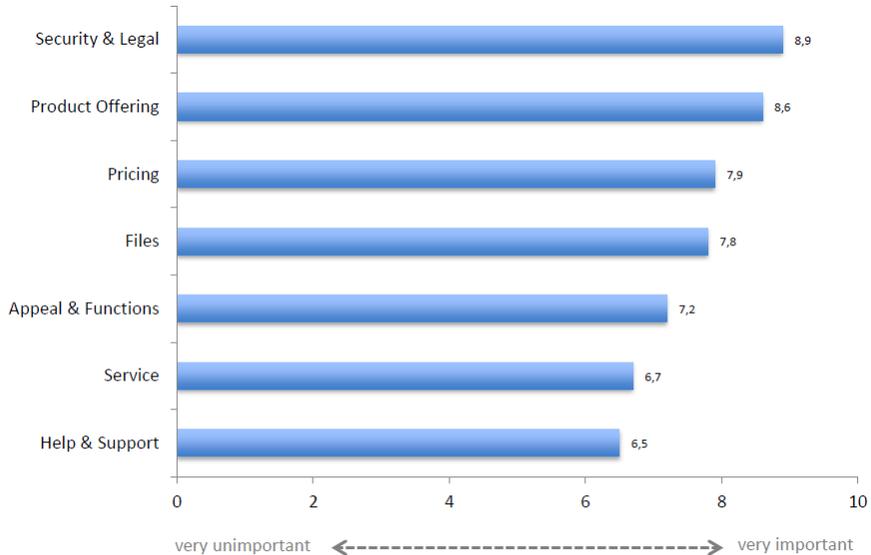
The other two genres with heavy illegal downloading traffic were: "Romance & Love, Short Stories" and "Travel & Outdoor" books. These are all popular mass-market titles with the latter being the only genre that was exclusively downloaded illegally. Among others, one reason for this pattern could be the fact that these travel-guides are mainly used only once and disposed after holidays. This may make readers less willing to spend on these when it can be downloaded for free from unauthorised channels.

Figure 2 summarises the most important product attributes playing a role in consumers' decision to choose legal or illegal platforms to download e-books. Security and legal assurances are the most important closely followed by variety and quality of the product offering. Price of e-books, quality of files and overall appeal along with service and support are also other importance attributes. These can be interpreted as likely reasons to convince customers to turn to legal channels and enjoy these benefits. However, to be sure of such



relationship, we have to examine the attributes and their impacts further. Despite research indicate that legal stores can differentiate themselves by offering better help and customer service (PWC, 2011), this result shows that these two are at the bottom of the scale, though still considered important.

**Figure 2:** Average ratings of importance of top 7 attributes in determining illegal or legal download source choice



When we turn to the satisfaction scores, it was clear that legal platforms have a slightly higher (6.6 out of 10) customer satisfaction than illegal channels (6.3 out of 10). This can be explained by legal channels attributes of security of website, protection of personal information, compliance with copyrights, and quality of files.

Interestingly, illegal downloaders were more satisfied with many (6 out of 23) attributes including price, free sample, monthly subscription, compatibility of files, ability to download multiple times, and video demos while also being equally good on 5 more (Figure 3). The blue bars indicate overall importance attributed to each product attribute. Clearly illegal sources are preferred for different reasons than legal sources.

Next, we have looked into the categories' relative importance and significance of differences if any. These categories were presented in table 2 above and can be seen on the side of the figure 3. Our analysis showed that there was no statistically significant difference

between legal and illegal sources in terms of product appeal and functions.

**Figure 3:** Relative customer satisfaction with attributes of legal and illegal channels.



File related attributes such as compatibility and multiple download ability was found significantly relevant attribute category favouring illegal download sources over legal ones ( $\chi^2[4] = 13.59, N = 84, \text{Cramer's } V = .40, p = .01$ ). Our results also shows that people who are concerned about copyright compliance and laws are unlikely to download illegally. Obviously this is not a common concern among illegal downloaders.

Surprisingly, price was not the most important criterion for consumers who use e-book download platforms and other factors play a more significant role. There were still differences between the two groups. Chen et al. (2008) and PWC (2011) recommended an alignment of prices for printed books and e-books in order to discourage illegal downloading. However, if it is not a decisive factor, does it really worth the effort?

Finally, we have examined the relationship between download channel choice and attributes. We have employed a logistic regression model for this purpose. The result of the regression can be summarised as shown in Table 3.

$$\text{Logit illegal} = 9.114 - 1.764 \text{ LComp.} - 4.258 \text{ SSecure} + 1.166 \text{ SPrice} + 1.92 \text{ SFlat.}$$

**Table 3:** Step 5 of logistic regression employing backward selection from an initial eight predictors.

(LComp) Importance compliance with copyrights	-1.764	0.975	3.27	1	0.071	0.171	0.025	1.159
(SSecure)Satisfaction security of website	-4.258	2.27	3.519	1	0.061	0.014	0	1.21
(SPrice)Satisfaction price	1.166	0.619	3.547	1	0.06	3.21	0.954	10.808
(SFlat)Satisfaction monthly subscription / flatrate	1.792	1.086	2.723	1	0.099	6.001	0.714	50.407
Constant	9.114	6.218	2.148	1	0.143	9080		

The odds ratios we calculated for the importance of compliance with copyrights and the satisfaction with security were below 1. Consequently, with a one-step increase in the rated importance of compliance of copyrights, the odds of being in the illegal downloader group was 83% less likely (1 -0.17). Similarly, with a one-step increase in the satisfaction with security, the odds of being in the illegal downloader group was 99% less likely (1 - 0.014).

Satisfaction with price and satisfaction with the monthly subscription / flatrate were found to have positive odds ratios. In other words, one-point increase in price satisfaction was associated with a 3.2 fold increase of the odds of being in the illegal downloader group. Satisfaction with the monthly flatrate was associated with a 6-fold increase in the odds of being in the illegal downloader group. Given the fact that monthly subscription models or flatrates are not typically associated with illegal downloading platforms (except gaining faster downloads for a monthly fee), the latter result has to be considered in relation to the respondents' dissatisfaction with prices on legal platforms.

We can summarise our key findings about determinants of preferring illegal downloading platforms over legal ones as follows:

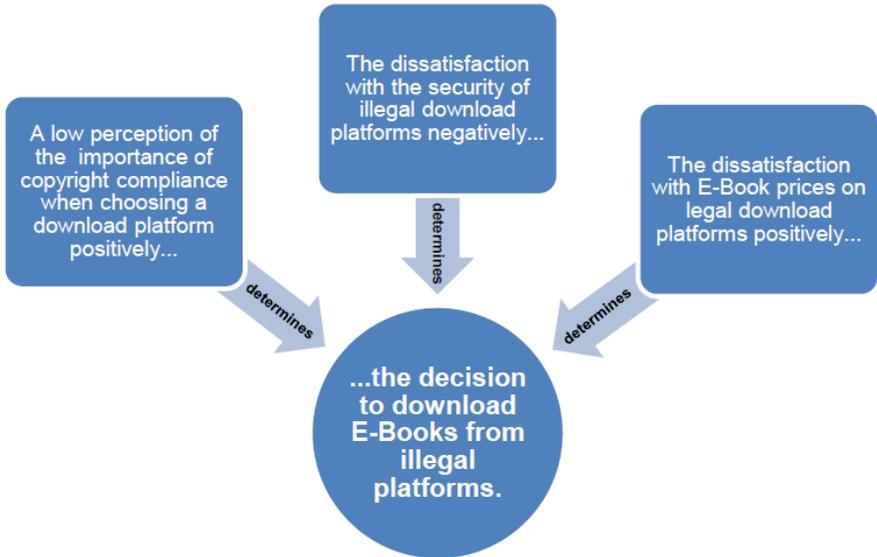
A. When people consider the importance of copyright compliance as a low priority issue, they tend to go for unauthorised channels to download their e-books. Kozlowski (2012) and Williams et al. (2010) had pointed this as one of the main stimulants for e-book piracy. Our study also confirms that a lower perception of the importance of copyright compliance has a direct effect on the consumer choice between legal and illegal e-book download platforms.

Respondents mostly preferring illegal download channels had a neutral or slightly negative attitude towards copyright compliance. Unsurprisingly, respondents who mainly paid for e-book downloads regarded compliance with copyrights as an important attribute. The differences between groups for this attribute was substantial and statistically significant.

B. Low satisfaction with website security was rated as the most important factor in a set of 23 attributes by both groups, legally (mean = 9.00) and illegally (mean = 9.63) downloading respondents. With regards to satisfaction of security, a large difference was examined between legal and illegal platforms with the legal group being considerably more satisfied (mean = 8.35) than the illegal group (mean = 5.54). These findings show that possibly risk-averse e-book downloaders are more likely to be attracted to legal download channels. Thus, the higher respondents are satisfied with the security of a download source, the less likely they are to download illegally.

C. Dissatisfaction with e-book prices on legal download platforms (in combination with a high attraction to flatrate fees lure users to unauthorised channels. However, in contrast to the views of many authors (e.g. Chen et al., 2008; Edgecliff-Johnson and Hill, 2011; PWC, 2011) the price of e-books was not ranked the most important factor for the respondents of our study. However, satisfaction with prices varied significantly between both groups with the illegal group being more satisfied with price (mean = 8.14) than the legal group (mean = 6.21). We have also found that the respondents who are unsatisfied with prices of e-books were 3.2 times more likely to download an e-book illegally than paying for it. So even though consumers do not regard the price of E-Books as important in first instance, this factor does determine their choice between legal and illegal channels and must be taken into account.



**Figure 4:** Key determinants of illegal e-book downloading behaviour

## Conclusion

Even though this research is not representative for the entire population, it reflects that consumers who mostly download illegally and those who pay for e-books are likely to differ in their overall perceived utility of the measured attributes.

However, additional and more comprehensive studies with larger samples and in different geographies are necessary to confirm and advance these findings. National differences in copyright legislation, varying tax rates on e-books and fixed book pricing arrangements also need to be taken account of in further studies.

Schiffman and Kanuk's consumer decision process model, the multi-attribute theory and basic principles of marketing, there is a clear message emerging from our study that preventing or reducing the use of illegal download platforms requires understanding what consumers really want and delivering these benefits better than illegal download platforms. As noted by earlier studies on illegal music downloading as well as reports on e-book downloading, legal measures can only be successful to a limited extent unless the markets serve fully to consumer needs. There are signs indicating a move in the right direction. For example, there is a trend that consumers of digital content are increasingly more likely to pay for the content as is the

case for the e-book consumers in the UK (in 2017, 46% of them paid for all e-books they downloaded while 85% of e-books consumed online were paid for. See IPO, 2017).

Current state of illegal downloading in general and e-book piracy in particular warrants that publishers, download stores, libraries and other authorized e-book distributors must make a note of consumer concerns, needs, wants and desires. Given the size of illegal download segment, there is a long road ahead in four lanes: a) make digital content downloading via legal platforms more convenient and faster than illegal ones; b) awareness and education to ensure culture change towards legal platforms; c) price reduction and service improvement to entice consumer interest; and d) awareness about and sanctioning of legislation.

On a lesser extent, consumers need to be made aware of the security risks associated with illegal downloading. This also requires tightening up the security gaps in legal platforms.

We do hope that findings presented and discussed in this article are of value to both consumers, distributors and publishers. Recommendations cited here may seem not rocket science but we are cautious that such a globally widespread practice requires equally transnational measures and transnational collaboration among providers and regulators of the publishing industry.

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