

**The Emergence of eBooks:
Just Another Media Industry Joining the Converging Digital World?
- An Explorative Study on User Preferences and Industry Structure Changes -**

Claudia Loebbecke¹
University of Cologne
Germany

1 Introduction

'Will the future of book reading be digital? Is the printed book dead?' Questions like these have been found in various newspapers reporting on the Frankfurt Book Fair 2009. eBooks have existed for more than 20 years; their emergence has been discussed for more than a decade. The Association of American Publishers (AAP 2010a) reports that eBook sales grew 163 percent in the month of May 2010 and 207 percent year-to-date through May. Amazon customers nowadays purchase more Kindle books than hardcover books (Amazon 2010). This is across Amazon's entire US book business and includes sales of hardcover books where there is no Kindle edition. Free Kindle books are excluded. Five authors - Charlaine Harris, Stieg Larsson, Stephenie Meyer, James Patterson, and Nora Roberts - have each sold more than 500,000 Kindle books (Amazon 2010). Nevertheless, eBooks are still far from substituting traditional books.

Recently, people have become more accustomed to reading texts on screen; they are more experienced with eCommerce, and new devices that offer an enhanced reading experience. Yet,

¹ Prof. Dr. Claudia Loebbecke, M.B.A., University of Cologne, Faculty of Business, Economics, and Social Sciences, Department of Media and Technology Management, eMail: claudia.loebbecke<at>uni-koeln.de, URL: www.mtm.uni-koeln.de; Tel. +49 221 4708 5364; Postal Address: Pohligstr. 1, 50969 Cologne, Germany.

in its efforts to increase distribution and generate profits with eBooks, the book industry faces a dilemma well known from its music peers: It tries to popularize eBooks and to develop the eBook market, but, at the same time, it needs to curb large scale unauthorized distribution and usage of eBooks.

The emergence of eBooks and eBook readers is likely to change the book industry structure and pose new opportunities and challenges for eBook publishers and vendors. Hardware manufacturers and Internet Service Providers (ISPs) have already entered the book industry and they may outpace the traditional industry players in the creation of new business models for digital content. Advertisers who could initially place advertisements in eBooks or completely sponsor them (Chang 2009) and search engines may also gain momentum.

The music industry has 'gone digital' almost a decade before their book counterparts; its situation is well known and has been discussed at length. Why should the basic trends in the book industry be different from the music ones? Does just another set of digital products and services suggest cross-industry 'convergence' of business models and revenue sharing structures? Or will varying usage preferences, different traditional industry structures, and specific regulatory backgrounds drive conceptually different developments?

In this paper, we undertake a multi-perspective effort to analyze the eBook industry putting it into perspective to the music industry. We borrow from the economic literature and its coverage of the music industry as the latter reacted to the beginning of peer-to-peer music availability. We build on the management innovation literature when we analyze the case of Amazon launching the Kindle 2 and entering the eBook scene based on an originally proprietary business model. We offer empirical data on user preferences concerning their attitude regarding copy right protected versus non-protected (not necessarily free) eBooks. We conclude with pulling the three pieces

together. Overall, we find that the book industry is not all that different from the music one and that the traditional book players need to be careful not to falter on their inability to transform themselves in response to digitization.

2 Industry Brief

2.1 eBooks, eReaders, and the Book Industry

The term eBook is used ambiguously. It refers either to book content in digital format or to reading devices (Garrod, Weller 2005). The glossary published by the Open eBook Forum (Open eBook Forum 2000, p. 6) captures the term eBook as "[a] literary work in the form of a digital object, consisting of one or more standard unique identifiers, metadata, and a monographic body of content, intended to be published and accessed electronically. [eBook] may also refer to the hardware devices created for the purpose of reading eBooks".

Even the specification of *eBooks as digital content* needs further clarification. Armstrong (2008, p. 12) defines an eBook as "any content that is recognizable 'book-like' - regardless of size, origin or composition, but excluding serial publications, made available electronically for reference or reading on any device (handheld or desk-bound) that includes a screen". Of 37 eBook definitions examined by Vassiliou and Rowley (2008), the majority contains analogies to the printed book such as the 'electronic equivalent of a conventional printed book'. To account for technological developments, Vassiliou and Rowley (2008, p. 363) condense and expand on existing definitions when they propose: "An e-book is a digital object with textual and / or other content, which arises as a result of integrating the familiar concept of a book with features that can be provided in an electronic environment. (...) E-books typically have in-use features such as search and cross reference functions, hypertext links, bookmarks, annotations, highlights,

multimedia objects, and interactive tools". Referring to *eBooks as reading devices* also needs specification. Devices may be dedicated to eBooks like the Amazon Kindle, but also include computer displays, laptops, netbooks, smart-phones, and almost any other electronic display.

In this paper we refer to eBooks as digital content and limit the discussion to so-called trade eBooks. Such trade eBooks are intended for the sale to the general public and have to be distinguished from educational, professional, and scholarly eBooks. The most common genres for trade eBooks are fiction, general interest non-fiction, and children literature. While trade eBooks may not be the first ones to be heavily impacted by digitization, we think that the trade eBook industry is large enough to justify an analysis, not intertwined with issues related to up-to-dateness, opinion diversity, or perhaps ad placements as they are typically at the core of discussion when it comes to digitizing press and reference information.

We also need to agree on what we mean by the book industry. In addition to authors who we include in the book industry, our focus is on intermediaries such as publishers, industry associations, collecting companies, distributors, and new players such as device manufacturers, cloud service providers, advertisers, or search engines - all eventually positioned to connect authors' content to the general public.

2.2 Book Market

The global book market amounts to about US\$ 113 billion, with Europe, the Middle East and Africa accounting for US\$ 50 billion, North America for US\$ 34 billion, Asia Pacific for US\$ 24 billion, and Latin America for US\$ 5 billion. The top ten countries - the United States, Germany, China, Japan, the UK, Italy, Spain, Russia, and South Korea - represent approximately 80% of the global book market (PWC 2008).

Book publishing has remained a moderately concentrated industry. Although confronted with distribution costs of 30% and more of net sales, the top ten global book publishers - Pearson, Reed Elsevier, ThomsonReuters, Wolters Kluwer, Bertelsmann, Hachette Livre, Grupo Planeta, McGraw-Hill Education, De Agostino Editore, and Holtzbrinck - account for almost 40% of the market (Bookseller.com 2010). Publishers usually share their earnings with authors through advances (signing fee) and based on sales royalties. Such sharing arrangements are typically based on contracts with predefined royalty schedules and publisher and author responsibilities including copyright protection, non-compete agreements, and

Many publishers have recently introduced eBooks to complement their portfolio. An industry survey conducted at the Frankfurt Book Fair in 2009 emphasized the increasing importance of eBooks. Almost 40% of respondents considered eBooks to be the most important advancement in the publishing sector since the 1950s. They expected that eBooks sales would surpass traditional book sales by 2018, if some global and local issues could be resolved (Frankfurt Book Fair 2009). Recent data published by the Association of American Publishers' (AAP 2010a) and Amazon (2010) support their vision pointing to the steady growth of eBook sales. In July 2010, Amazon sold more eBooks than hardcover ones.

On a global scale, a standardized eBook format and Digital Rights Management (DRM) are prerequisites for further eBook market growth. A first standardization attempt has been made by the open ePub-format (International Digital Publishing Forum 2007). Also, local and national challenges including varying national copyright laws or pricing regulation cannot be neglected. For example, the Germany clings to eBook Resale Price Maintenance and thus excludes price advantages for eBooks compared to its printed version.

2.3 Main Players

Major constituencies along the book industry value chain are authors, publishers, industry associations, collecting societies, distributors, and consumers. Their respective adoption of eBooks is influenced by the relative advantage gained from the new technology compared to the traditional way of publishing and using books.

Authors are willing to adopt eBooks and the possibilities of self-publishing when they can avoid unwanted free downloading and benefit from increasing revenue shares and audience sizes (Shaver, Shaver 2003). However, successful self-publishing requires that authors already enjoy popularity; their books would not be found otherwise.

Traditional *publishers* receive economic benefits from ePublishing as manufacturing costs decrease due to the digital delivery and elimination of the printing process. They enjoy higher profitability when inventory, back order, or 'out-of-stock' costs are eliminated. Their flexibility increases with the ability to publish niche books and to update versions faster and more easily. However, they can only realize those benefits when the issues of copyright and content control are resolved.

Many traditional *distributors* are likely to resist mass adoption of eBooks when they experience eBooks as a significant threat to their traditional business model. Especially wholesalers may lose their importance in the value chain, as eBooks require neither inventory nor transportation. Retail distributors, on the other hand, may have to introduce eBooks as an additional product in their assortment to avoid being 'overtaken' by 'alternative' book distribution channels.

Consumers can enjoy a recognizable look and feel as reading an eBook has become almost as comfortable as reading a traditional book. They usually appreciate that eBooks are lighter than

a stack of books and have roughly the same dimensions as traditional books. Additionally, consumers like text search capabilities, links to electronic dictionaries, sound and multimedia playback, and adjustable font sizes. However, they not only face the initial purchasing cost for the eReader, consumers may also be hesitant to abandon familiar habits related to books, such as turning pages or putting books into shelves.

In the era of eBooks, *device - or eReader - manufacturers* enter the scene. They are interested in fostering the switch to eBooks as it allows them opening a new market. After the first euphoria ended at the beginning of the 21st century, eReaders caught public attention again when major players such as Sony in 2005 and Amazon in 2007 entered the market with the 'Sony Reader' and the 'Amazon Kindle'. In 2009, almost 40 different devices were available for purchase worldwide (eReaderInfo 2009) suggesting continuous development of eReaders and a steady growth combined with price decreases.

The same interest in participating in the (e)Book industry holds true for other *new players such as advertisers, search engines, or new service providers*, who have not been part of the traditional book industry. It needs to be seen if new players can grow the overall book market or if they will take away revenue and profit from traditional players.

3 Music Being Digital: Setting the Stage for the Book Industry?

The music industry has 'gone digital' more than 20 years ago and has been facing major challenges and significant revenue losses ever since. Since Napster appeared in June 1999, industry players and numerous researchers have typically, and often even exclusively, attributed the losses to unauthorized music distribution and free downloads via the Internet (Becker, Clement 2006; IFPI 2010; Oberholzer-Gee, Strumpf 2007; RIAA 2010; Zentner 2006). However,

the causal relation between peer-to-peer file sharing and decreasing returns in the music industry is not clear (Bourdeau de Fontenay, Bourdeau de Fontenay 2009; Liebowitz 2006; Steinmueller 2008). It is unlikely - or at least not empirically proven - that most individuals who 'illegally' download music would buy CDs in the absence of peer-to-peer (Liebowitz, Watt 2006). Also, it is doubtful whether free downloading, i.e., not paying for music, is the only reason for using peer-to-peer file sharing (Bourdeau de Fontenay, Bourdeau de Fontenay 2009). Finally, other economic effects caused by digitization such as low transaction and distribution costs may be significant, too.

In its efforts to defend its traditional business terrain in spite of the effects of peer-to-peer and digitization, the music industry has concentrated on regulatory and legal actions aiming at government protection primarily in the form of enforced copyrights (Bourdeau de Fontenay, Bourdeau de Fontenay 2009). It has viewed copyrights and the institutions that manage them as endogenous, strategic variables that could be managed.

At least in the United States, the industry's legal strategy has been remarkably successful. However, the economic problems point to the limits of such strategy. Ultimately (in a democracy), when the will of the people and the law diverge too strongly for too long, it is likely the law that changes (Bourdeau de Fontenay et al. 2008). On the one hand, the music industry has to accept that consumers value highly the ability to download music anytime and anywhere (Noam 2008). The disastrous implementation of Digital Rights Management (DRM) forced an industry retreat when it became obvious that consumers did not want DRM-constrained music (Stahl, Maass 2006; Wang et al. 2005). On the other hand, the absence of commercialization turns the works of artists into a commons (Hardin 1968), where the creation of new works is at

risk when artists are not being provided a viable way to amortize their investments (Bourdeau de Fontenay, Bourdeau de Fontenay 2009; Picard 2000).²

Whereas the music industry has rather successfully fought against piracy and peer-to-peer networks, it has procrastinated the establishment of business models that match consumers' expectations. Its legal strategy hampered the industry's effectiveness to develop innovative business models. The highly regulated nature of the industry and the considerable governmental protection has slowed down any adjustment efforts to the digitized world. Only about five years ago, the music industry has begun to develop new approaches (Krishnan et al. 2007).

Firstly, players acknowledged the need to segment its user base (Nagle, Hogan 2006) for developing customized business models. Bhattacharjee et al. (2006) for instance suggest distinguishing low and heavy users. Bounie et al. (2005) differentiate between 'explorers' who sample a lot of music and 'pirates' who do not sample, with greater sampling typically meaning the purchase of fewer bad CDs (Liebowitz 2006). Secondly, also some incumbent players seem to re-evaluate the fight against peer-to-peer-like settings. Players such as Apple, Google, or Facebook show how integrate some form of peer-to-peer - possibly combined with Web 2.0 elements - into one's business strategy (Adegoke 2008). Thirdly, in the light of growing bandwidth and streaming opportunities, the music industry has taken notice of newer ways to bring the artists' work to the general public. Running on advertising or subscription models, services like Pandora or Rhapsody in the United States replace the established downloading approach. They make music available in the cloud and accessible on almost any device including

² The situation can be partially explained by the two-sided market phenomenon (Jullien 2006). Considering the various intermediaries such as labels, the Recording Industry Association of America (RIAA), and distributors, the industry offers mediation services that enable artists to commercialize their music and helps consumers find music. As such the industry's primary value lies in internalizing externalities between artists and consumers. However, de facto only majors largely internalize the externalities between artists and consumers (Gordon 2005).

cell phones via WLAN or 3G networks. Business models known from the B2B software market under the term 'software as a service' have made it into the consumer world and are likely to shift the relative market power of different players in the content industry (here music).

At first glance, it seems that there is little that is music-specific in the way the industry has been responding to digitization and peer-to-peer (Christensen 2000; Tushman, O'Reilly 1996). So, why should the book developments be any different? What could or should the book industry learn from the lessons learnt by their music colleagues?

Admittedly, there are some differences between the situation in music and in trade books: The trade book industry revenue is - still - stable, and there are no significant losses attributed to illegal distribution of content via the Internet (GfK 2010). Digitally available book content is still limited, and creating digital books of printed ones is tedious. Consequently, the threat of pirating printed books has been relatively low. However, file sharing and peer-to-peer are not limited to music. As with all eContent, eBooks can be copied without any loss of quality and be distributed at costs close to zero (Bichler, Loebbecke 2000; Shapiro, Varian 1999).

Like the music industry (used to), the book industry generates most of its revenues from direct content sales, not from subscription or advertising. Illegal and any legal mass-scale low-price 'production' and innovative distribution of content should constitute a significant threat - similar as it has been perceived by the music industry (Smith, Telang 2009). The introduction of DRM, thus, has also become a topic of major concern within the book industry.

Further, as shown by Apple in the music industry, it is not only content delivery per se that needs to be managed. With digitization and the convergence of devices and industry sectors, the amalgamation of content and device that needs to be addressed.

The following section on the case of Amazon launching Kindle 2 investigates exactly those opportunities and challenges. It investigates how a book industry incumbent, online retailer Amazon, early on tackles with eBook phenomenon, how it manages innovation so that the provision of adequate devices and corresponding content develops the eBook market and strengthens Amazon's position in it.

4 Amazon's Kindle: Developing the eBook Industry by Device?

This section offers a short study of Amazon launching Kindle 2 in February 2009. It depicts an online retailer of printed books undertaking first steps to proactively maintaining its advantage in the eBook era and trying to restructure the (e)Book industry by closely connecting an innovative device with access to content. The case is based on data collection from published sources and interviews with four Amazon managers and six other industry players (see also Loebbecke et al. 2010a).

Amazon, incorporated in 1994, is the largest online retailer in the United States with established websites in six other countries. Linking online customer-facing processes such as shopping, buying, paying, and customer service to back-end processes like inventory management and order fulfillment has allowed for sustainable advantage (Applegate 2008). Amazon has steadily expanded its product spectrum, which today spans from tennis rackets to diamond jewelry to a wide range of service offerings such as private marketplaces. Nevertheless, Amazon's original core business - the sale of books and media products - is still a major pillar of its activities.

Beyond complementing its existing product lines with eBooks, in 2004, Amazon initiated a project to develop the Amazon Kindle (or just 'Kindle'), a reading device bundled with software

for PCs.³ As Jeff Bezos, Amazon CEO, suggested: "The vision is that you should be able to get any book - not just any book in print, but any book that's ever been in print - on this device in less than a minute" (Levy 2007; p 2).

To Amazon, Kindle is a radical innovation⁴. It underlines Amazon's thrive to get the pole position in the eBook market. The first version of Kindle was released in the United States in November 2007. The successor, Kindle 2, was introduced in February 2009, and the expanded version, Kindle DX, was brought to market in June 2009 (eReaderInfo 2009). While the Kindle design resembles paperback books, the device allows storing up to 3,500 eBooks. Weighing 10.2 ounces, Kindle has an e-ink display that allows reading even in bright daylight. It has two weeks of battery life and free 3G wireless with no monthly fees or annual contracts. It lets one buy eBooks once and read them everywhere - on one's Kindle, PC, Blackberry, Mac, iPad, iPod, iTouch, iPhone, iPad, and Android-based devices.

Kindle marked a new level of Amazon's continuous expansion philosophy. In August 2000, Amazon had explored already a new business model as a logistics services provider to traditional retailers such as Toys "R" US. At that time it expanded into a new market (traditional retailing) with its established online retail offerings (Applegate 2008). Now, it entered a completely new business area by developing a technical device and introducing a business model built on the direct link between selling a new generation reading device and globally branded eBook content.

3 As Amazon did not have in-house knowledge for conceptualizing and building a mobile device, it hired hardware engineers to develop and design Kindle and founded Lab 126. The manufacturing was outsourced to the Taiwanese firm Foxconn Technology Group, experienced in producing high quality technical devices.

4 Henderson and Clark (1990) suggest four categories of innovation in order to measure the impact that an innovation is likely to have on an existing firm. On the x-axis, they capture the impact of innovations on the linkage of components and competencies – whether they are changed or unchanged; on the y-axis, they cover the impact on core concepts – whether they are reinforced or overturned. The four innovating categories are: (1) incremental innovation, (2) modular innovation, (3) architectural innovation, and (4) radical innovation. While digitization may demand for radical innovations, the literature (Henderson, Clark 1990; Song, Thieme 2009; Sood, Tellis 2005) points out that radical redefinition of existing technologies and the necessary intra-firm adjustments are not always beneficial.

Amazon aimed at exploiting its large customer base, its strong reputation for book selling, and its globally known brand. As these resources have been accumulated over time, short-term imitation by competitors seemed unlikely (Barney 1991).

In contrast to its competitor Sony, which relies on cooperation with experienced book sellers, Amazon forces Kindle 2 users to purchase eBooks exclusively via the Kindle store with its more than 610,000 eBooks. It tries to keep the eBook market - or at least Amazon's slice of the cake as a 'blue ocean' irrelevant (Kim, Maubourgne 2007), that is a nearly uncontested market where competition is essentially.

Amazon's move around Kindle 2 has made Amazon a first mover in the Book value chain. Beyond establishing Kindle, Amazon pursues its first mover strategy by purchasing exclusive publishing rights for new book releases and making them accessible only via the Kindle store (King 2009). For selling eBooks (content), Amazon benefits from its well-established distribution channels, its in-house knowledge concerning storefront and the related processes, and its international scope. However, competitors such as Google or Apple, who are new to the book market, may enjoy a growing market after entering with only a short delay. They may benefit from economies of scale and network effects arising from investments in a generally growing base of customers whose is better understood, better educated, and better informed (Agarwal, Gort 2001; Lieberman, Montgomery 1998).

To encourage early adopters to share their experiences with prospective users, Amazon initiated the 'See a Kindle in your Area' program (Amazon 2010). Via the Amazon website, prospective and current customers have the opportunity to contact each other and arrange a meeting for a private demonstration. This saves Amazon costly presentations and also increases its credibility (Chevalier, Mayzlin 2006).

The initial price for Kindle 2 was set at US\$ 399. Considered expensive, Kindle 2 attracted only less price sensitive early adopters, who possibly triggered the rather critical word-of-mouth 'campaigns'. The small number of early adopters barely allowed Amazon to recoup its initial investments. By abandoning the skimming strategy and counting on economies of scale along the supply chain, Amazon could reduce manufacturing costs and thus lower the sales prices for the device to US\$ 189. On the content side, Amazon also prices aggressively. The US Kindle Store with its more than 630,000 books sells over 510,000 of them at US\$ 9.99 or less, including 75 New York Times bestsellers. Depending on the book, users save up to 75% per book, compared to the paperback. In addition, more than 1.8 million free pre-1923 books without copyright are available on Kindle.

With the introduction of Kindle 2, Amazon introduced a radical innovation (Henderson, Clark 1990). Kindle 2 and the linked provision of content contain new components and embody a new set of knowledge, compared to traditional books and other eReaders. For the first time in the book market, hardware sales are being combined with content delivery - a business model that has been proven to be successful in other major content markets such as music and software (Chen 2009).

However, with new players entering the market, the unique features of Kindle 2 and the sustainability of the business model are at risk. Customers may be hesitant to buy into closed offerings. They may criticize the limited personalization and usability capabilities beyond features such as full text search and immediate newspaper download. Their hesitation may turn the proprietary elements of the business model into an obstacle for quickly achieving a critical mass of users (Markus 1987). Further, the Kindle strategy could worsen Amazon's brand image

and value. By not meeting established retail brand promises and retail customers' expectations, the Kindle strategy may dilute Amazon's overall brand equity (Beverland et al. 2010).

5 Digital Rights Management: A User Perspective

5.1 Background

Although people have become increasingly accustomed to reading texts on a screen and have gained more experience with eCommerce over the last decade, the number of persons with any eBook experience is still low (BITKOM 2010). Only little is known about eBook consumers; regarding their attitudes toward peer-to-peer file-sharing or Digital Rights Management (DRM)⁵ to anchor the issue more broadly, one can only assume that eBook users' preferences resemble music users' ones.

Several consumer concerns arise regarding a DRM implementation in the context of eBooks. These concerns affect consumers' acceptance and value experience (Jarvenpaa, Loebbecke 2009) and the willingness-to-pay for eBooks. Consumers are concerned with the duration of access rights and curtailed usage rights. They expect transparency and want to understand to what extent the usage of the digital content might be restricted and whether these restrictions are in line with the consumer rights granted by copyright law. Further, they want to know where personal data are stored and who gathers information about one's actual consumption of digital content. Consumers seek interoperability, i.e., the possibility of using digital content in multiple ways and on multiple devices. They dislike encryption, the requirement for specific software and hardware,

5 The main purposes of DRM and related Digital Rights Management Systems (DRMS) are the management and the enforcement of rights (Rump 2003) in order to support the emergence of a vital marketplace (Loebbecke 1999; Slowinski 2003). In contrast to copyright law, DRM is capable of providing an ex-ante protection against copyright law violations (Djekic, Loebbecke 2007). Furthermore, identification measures as part of DRM help copyright holders to detect and prosecute copyright law infringements.

and limited playability. Consumers are willing to pay for digital content, even if pirated content was available for free. With a rising degree of DRM protection, the willingness-to-pay for digital music decreases significantly (Buxmann et al. 2008; Felten 2003; Fetscherin 2002; INDICARE 2004).

Whereas the implementation of DRM along the value chain is considered essential for establishing and maintaining a sustainable market place and thus for exploiting eBooks commercially (Slowinski 2003), any user restriction tends to limit the valuation of content from a consumer perspective (Djekic, Loebbecke 2007; Stahl, Maass 2006; Wang et al. 2005).

5.2 Empirical Investigation

To study the acceptance of DRM protected eBooks, we conducted an online survey among actual eBook users (see also Loebbecke et al. 2010b). We based our inquiry on the Technology Acceptance Model (Davis 1989), the literature regarding the importance of trust in eCommerce (Gefen et al. 2003; Jarvenpaa et al. 2000), and eContent related studies regarding the willingness-to-pay (Pavlou, Fygenson 2006). We investigated four hypotheses to assess the consumer attitudes towards downloading and paying for trade eBooks:

- H1: Consumers perceive the characteristics of eBooks as being useful. (Perceived Usefulness)
- H2: Consumers are not satisfied with the current eBook purchasing processes. (Perceived Ease of Use)
- H3: Consumers are concerned with the permanence of eBook purchases and the usage of their private data. (Trust)
- H4: Consumers are not content with the current eBook pricing. (Willingness-to-Pay)

In our attempt to address eBook readers directly, we assumed that the possession of a dedicated eBook reader was strongly correlated with downloading and reading trade eBooks. Carrying out our study in Germany, we identified four German eBook discussion boards (e-reader-forum, Mobile Read, Sony Reader Club, and Xing) and supposed that the members of these online discussion boards represented German eBook users. We developed an online questionnaire and posted it on each board for two weeks in September 2009. In total, 125 persons started the questionnaire and 89 persons completed it.

The following results can best be indicative. They are limited due to the low number of respondents and because the sample may not be fully representative. Members of eBook reader discussion boards are not fully representative for all eBook consumers. For instance, they were aware of DRM issues which were treated in several threads on the discussion boards. Further, members' answers to questions touching upon illegal behavior may reflect a bias towards social desirability.

5.3 Sample, Results and Discussion

The majority of respondents were male (70%). This is in correspondence with the findings of the nation-wide German GfK survey (GfK 2009), which shows that men are especially interested in eBooks. The majority of eBook users were between 30-49 years (63%); 16% were above 50 years. 70% of the respondents were full-time employees, 15% were students. All respondents read eBooks in their leisure time. 47% had used eBooks for more than a year. 32% had used eBooks for about three to six months. 63% had downloaded more than ten eBooks over the last three months. Only 17% had bought more than ten eBooks within the last three months, while 30% indicated that they had not bought a single eBook within this period. 34% used free

platforms as their primary source for eBooks; 39% determined commercial distribution platforms to be their primary source. Most searched for a mixture of free downloads and commercial eBooks platforms. 8% used P2P-networks as the primary source. Among students, P2P-networks accounted for 30%. Libraries' and publishers' websites played only a minor role in obtaining eBooks. Only 3% used friends and family as source.

Perceived Usefulness (H1) -- see Table 1. Respondents perceive eBooks to be useful (PU1-PU4). To 52% it is useful to transfer eBooks to multiple devices (PU5). To 75% it is important to treat an eBook as being comparable to a printed book (PU6). Only 5% are satisfied with eBooks offerings (PU7). The latter puts the positive evaluation of eBook advantages into perspective: Advantages are not exploited if the offer is inadequate.

Table 1: Statement Evaluations - Perceived Usefulness

Statement	Perceived Usefulness - Statements	Mean (Scale 1-5)
PU1	It is useful that I have instant and ubiquitous access to eBooks.	4.53
PU2	It is useful that I can adjust eBooks to my individual reading preferences.	4.57
PU3	It is useful that I can load many eBooks on my reading device.	4.75
PU4	It is useful that there is a broad supply of free eBooks.	4.32
PU5	It is useful to use eBooks on several different devices.	4.06
PU6	It is important to me that I can treat a purchased eBook comparable to a printed book. (lending, selling, give away)	4.09
PU7	The current offer of eBooks in Germany is satisfying.	1.91

Perceived Ease of Use (H2) -- see Table 2. Respondents evaluate the ease of finding and downloading free eBooks (EOU1) slightly higher than the ease of buying and downloading eBooks (EOU2). 73% agree that transferring free eBooks to multiple devices is easy (EOU3). Differences between consumers' evaluation of the interoperability with multiple devices concerning ease of use - especially with regard to the transfer of eBooks to other devices - are

recognizable (EOU4). 52% perceive the online ordering of a book as being easier than the purchase of an eBook (EOU5). However, 21% find purchasing an eBook easier than ordering a book online. Purchasing DRM protected eBooks requires downloading certain software to decrypt and display the downloaded works. Such requirement of additional software is not discerned as being a major barrier to purchase eBooks (EOU6).

Table 2: Statement Evaluations - Perceived Ease of Use

Statement	Perceived Ease of Use - Statements	Mean (Scale 1-5)
EOU1	It is easy to find and download free eBooks.	3.71
EOU2	It is easy to buy and download eBooks.	3.49
EOU3	It is easy to transfer free eBooks to multiple devices.	4.12
EOU4	It is easy to transfer purchased eBooks to multiple devices.	2.74
EOU5	It is easier to buy an eBook than ordering a book online.	2.50
EOU6	It is laborious to download and install additional software in order to use eBooks.	2.88
EOU7	It is easy to find the titles I am interested in.	2.58

Trust - Permanence of eBook Purchases and Usage of Private Data (H3) -- see Table 3.

26% are concerned the future usability of purchased eBooks (TR1). However, the mean of 3.23 shows that - in total - the respondents are rather ambiguous, with 20% strongly disagreeing. The threat of viruses and spyware is not perceived as being relevant (TR2). Control over eBooks (TR3) is assessed neutrally. Overall both, respondents who buy eBooks from online vendors and those who obtain eBooks from free sources, are not particularly worried about the usage of their personal data (TR4). 73% agree that it is important to obtain eBooks from a legitimate and trusted source (TR5).

Table 3. Statement Evaluations - Trust

Statement	Trust - Statements	Mean (Scale 1-5)
TR1	I am worried that I cannot use my bought eBooks in the future	3.23
TR2	I am worried that eBooks contain viruses or spyware	1.84
TR3	I am worried that I do not have full control over my eBooks.	2.91
TR4	I am worried about the usage of my personal data.	2.93
TR5	It is important to download eBooks from legal sources I have trust in.	4.06

Willingness-to-Pay - Pricing (H4) -- see Table 4. 92% of the respondents indicate that they are generally willing to pay for eBooks (WTP1). 95% agree that the compensation of authors is important (WTP2). However, only 6% agree that the current prices are adequate, and almost 50% strongly disagree with that (WTP3). 79% perceive usage restrictions as 'punishment' to lawful customers (WTP4). 32% strongly agree that they do not buy any eBooks with usage restrictions. Of those who had not bought an eBook within the last three months, 81% agreed with the statement (WTP5). 71% could imagine borrowing eBooks as an alternative to buying usage restricted ones (WTP6).

Table 4. Statement Evaluations - Willingness-to-Pay (N=89)

Statement	Willingness-to-Pay - Statements	Mean (Scale 1-5)
WTP1	I am generally up to paying for eBooks.	4.47
WTP2	It is important that authors are compensated for their intellectual work.	4.67
WTP3	The current prices for eBooks are reasonable.	1.82
WTP4	Usage restrictions 'punish' lawful customers.	4.24
WTP5	I do not buy any eBooks with usage restrictions.	3.15
WTP6	Renting eBooks is an attractive alternative to buying usage restricted eBooks.	4.03

Whereas users generally perceive eBooks as useful, the study confirms that there is considerable difference in the evaluation of free (unprotected) and priced (protected) eBooks

(Smith, Telang 2009). Consumers find protected eBooks to be less valuable than unprotected ones for two main reasons: They find interoperability between different devices to be essential; they expect that they can read an eBook on almost every device; therefore they dislike getting locked-in when purchasing a specific eBook reader and the installed DRM. Hence, consumers favor unprotected eBooks even if they do not require them to be for free. They still perceive buying an eBook as being complicated and find eBook prices too high. Overall, uncertainties about the emergence of different systems for DRM protection seem to impede the diffusion.

6 Conclusion and Summary

Digitization and broadband availability have put forward irreversible, much discussed changes to the music industry. Effects on other consumer-oriented content industries such as trade books are unlikely to be very different.

Music and books are identical with regard to the characteristics of economics goods on the level of bits and bytes. On the level of packaged goods such as a piece of music, an album, or a book, economic characteristics of music and books still seem to be identical. Traditionally separate genres start complementing each other, thus enhancing user expectations and experiences. Books include pictures and eBooks may have built-in video clips. Music products are enriched by stage videos or text based information. People have become accustomed to consuming media products on electronic, often mobile, devices. Genre-dedicated devices are becoming rare. Consumer preferences with regard to protected versus unprotected offerings are practically identical.

Whereas file sizes may differ, listening is different from reading, and haptic attitudes may diverge, we think that the differences will become negligible for how industry and players will

develop. Even if players' positions in any industry power game are different, we would not see why - in the medium term - the music industry should be organized differently from the trade book industry. At all levels, differences in eContent products, services, and industries evaporate. Hence, insights and experiences concerning industry structure, business models, and user preferences (for listening, reading, and also watching) should be applicable across industries.

Concentrating on the book industry during its shift to the eBook era, we expect tough fights for each slice of the 'eBook cake' among big traditional players such as Amazon and new entrants like Google, Apple, or Sony. Similar to the situation in music, we expect (1) users unable to differentiate and therefore neglecting whose offer they consume, (2) traditional core (content) competences losing importance, (3) 'profitable' business models emerging around first hardware sales and later 'content as a service' like packages, and (4) advantages for large players who are new to the industry and can exploit economies of scale in the digital world (Loebbecke 2010).

However, the trade book industry does not show many signs that it has learnt its lessons from the music experiences (e.g., AAP 2010b) - neither regarding players' strategies nor building on customer attitudes. Amazon is still an exception of a traditional player to radically innovate elements of its business model in order to meet the opportunities resulting from the technological changes. Players that are new to the industry enter the scene with new business models starting to give the incumbents a hard time. Will expertise in the fields of hardware design, electronic platform management, search, semantic matches, or even ad placements win over established book industry competencies? Or has the traditional book industry learnt its lesson and is the empire ready to strike back when the rubber hits the road?

If there are any cross-industry lessons to be learnt for the eContent world, why should large publishers and traditional book sellers not have learnt from other 'digital content'? But are they

any book lessons to be learnt from the music industry experiences? A straight 'yes' appears to be too simple.

There are two sub-questions. (1) Is the package of technical, economic, and political conditions in music and trade books sufficiently similar so that it makes sense to learn from one another? Yes, we think they are. (2) Has the music industry made a mistake when it pursued its 'legal' strategy for a rather long time? Were there economically promising alternatives for the traditional players and their value creation portfolios? We are not so sure.

For instance, we know that users do not appreciate DRM protection, but we have not seen many successful business models for music incumbents that operate without. Selling concert tickets and t-shirts during concerts seems to be only a partial solution for a very small group of players. What would be the book equivalents?

What does it take to run a successful music platform like iTunes? Does it take music expertise? Probably not. Does it take customer relationships? Probably not either. Huge service incumbents with excellent customer relationships seem to have a hard time to play a major role in any content business. Does it take a device that drives the content market, that drives any content market? The latter is what music seems to be showing. It is barely good news for content incumbents though.

What will the commercial potential be for additional software based goods such as content selection, search, or ad placements? How would providers of such services compete with device manufacturers and platform operators on the one hand, and the authors, publishers, and traditional distributors on the other hand? Are any content 'sales' old-fashioned? Will true broadband lead to streaming, renting, subscription? What product or service, which value creating activities will consumers be willing and having to pay for? Clearly, economic success

requires somebody willing to pay - for whatever emerging business model and for whatever new 'core' competence.

As nobody will stop the dramatic changes coming along with the digitalization and broadband availability, investments in maintaining the current industry power structures are unlikely to lead to sufficient returns or even value creation. We expect that books are just another sort of goods that has gone or will 'go digital' in a rather short period. How will the book publishing industry change? What kind of player will win the game - the content producer (author), the aggregator (publisher), the retailer, the device manufacturer, any new service providers, or the telecommunications infrastructure provider? Under what circumstances will one company or one kind of company dominate the various value chain activities?

We think raising these questions early should create awareness and trigger early measures. We do not claim to know the answers to any of these questions, but we find it very difficult to see why the book industry should be different from the music industry, where digitization and broadband availability has raised many concerns and where the biggest player currently is neither an artist or a producer, nor a label or publisher.

7 References

- AAP - Association of American Publishers (2010a), AAP Monthly Domestic Book Publishing Sales Report July 2010, www.publishers.org, accessed on 08/14/2010.
- AAP - Association of American Publishers (2010b), Digital Issues, www.publishers.org, accessed on 08/14/2010.
- Adegoke, Y. (2008) Myspace Music to Launch in Days: Sources, Reuters Special Coverage, www.reuters.com, accessed on 08/14/2010.
- Agarwal, R., Gort, M. (2001) First-Mover Advantage and the Speed of Competitive Entry, 1887-1986, *Journal of Law and Economics*, 44(1), 161-177.
- Amazon (2010) Amazon.com Now Selling More Kindle Books Than Hardcover Books, phx.corporate-ir.net, accessed on 08/14/2010.

- Amazon (2009) Amazon.com Announces 'Best of 2009' Lists and Launches the Bestsellers Archive, phx.corporate-ir.net, accessed on 01/13/2010.
- Applegate, L. (2008) Amazon.com: The Brink of Bankruptcy, Harvard Business School Case 9-809-014.
- Armstrong, C. (2008) Books in a Virtual World: The Evolution of the E-book and its Lexicon, *Journal of Librarianship and Information Science*, 40(3), 193-206.
- Barney, J. (1991) Firm Resources and Sustained Competitive Advantage, *Journal of Management*, 17(1), 99-120.
- Becker, J., Clement, M. (2006) Dynamics of Illegal Participation in Peer-to-Peer-Networks - Why Do People Illegally Share Media Files?, *Journal of Media Economics*, 19(1), 7-32.
- Beverland, M., Napoli, J., Farrelly, F. (2010) Can All Brands Innovate in the Same Way? A Typology of Brand Position and Innovation Effect, *Journal of Product Innovation Management*, 27(1), 33-48.
- Bhattacharjee, S., Gopal, R., Lertwachara, K., Marsden, J. (2006) Impact of Legal Threats on Online Music Sharing Activity: An Analysis of Music Industry Legal Actions, *Journal of Law and Economics*, 49(1), 91-114.
- Bichler, M., Loebbecke, C. (2000) Pricing Strategies and Technologies for On-line Delivered Content, *Journal of EndUser Computing and Electronic Commerce*, 12(2), 4-10.
- BITKOM - Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2010) Interesse an digitalen Buechern waechst rasant, www.bitkom.org/files/documents/BITKOM-Presseinfo_E-Books_18_03_2010.pdf, accessed on 03/18/2010.
- Bookseller.com (2010) Pearson Stays on Top as World's Largest Book Publisher, www.thebookseller.com, accessed on 10/14/2010.
- Bounie, D., Bourreau, M., Waelbroeck, P. (2005) Pirates or Explorers? Analysis of Music Consumption in French Graduate Schools, Working Paper, Paris: ENST-Paris, www.brousseau.info, accessed on 10/14/2010.
- Bourdeau de Fontenay, A., Bourdeau de Fontenay, E., Pupillo, L. (2008) The Economics of Peer-to-Peer, Noam, E., Pupillo, L. (eds.), *Peer-to-Peer Video: The Economics, Policy, and Culture of Today's New Mass Medium*, Springer, New York, NY, 37-78.
- Bourdeau de Fontenay, A., Bourdeau de Fontenay, E. (2009) You can lead a Horse to the Water but you can't make it drink: the Music Industry and Peer-to-Peer, Lehr, W., Pupillo, L. (eds.), *Internet Policy and Economics*, Springer, New York, NY, 181-217.
- Buxmann, P., Strube, J., Pohl, G. (2008) Der Einfluss von Digital Rights Management auf die Zahlungsbereitschaften fuer Online Musik - Untersuchung auf Conjoint Analyse, *Multikonferenz Wirtschaftsinformatik*, GITO-Verlag, 1043-1058.
- Chang, R. (2009) Amazon Plans for E-Book Advertising, www.businessinsider.com, accessed on 01/07/2010.
- Chen, L. (2009) iPhone or Kindle: Competition of Electronic Book Sales, *Lecture Notes in Business Information Processing*, 36(1), 31-43.
- Chevalier, J., Mayzlin, D. (2006) The Effect of Word of Mouth on Sales: Online Book Reviews, *Journal of Marketing Research*, 43(3), 345-354.
- Christensen, C. (2000) *The Innovator's Dilemma: When New Technologies Cause Great Firm to Fail*, Harvard Business School Press, Boston, MA.

- Davis, F. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly*, 13(3), 319-340.
- Djekic, P., Loebbecke, C. (2007) Preventing Application Software Piracy: An Empirical Investigation of Technical Copy Protections, *Journal of Strategic Information Systems*, 16(2), 173-186.
- eBook Reader Review (2010) 2010 eBook Reader Product Comparisons, ebook-reader-review.toptenreviews.com, accessed on 02/10/2010.
- eReaderInfo (2009) Worldwide eBook Reader List, www.ereaderguide.info, accessed on 12/10/2009.
- Felten, E. (2003) Sceptical View of DRM and Fair Use, *Communications of ACM*, 46(4), 57-59.
- Fetscherin, M. (2002) Present State and Emerging Scenarios of Digital Rights Management, *The International Journal on Media Management*, 4(3), 164-171.
- Frankfurt Book Fair (2009) Emergence of New Business Models, <https://en.book-fair.com>, accessed on 12/20/2009.
- Garrod, P., Weller, J. (2005) Ebooks in UK Public Libraries: Where are we now and the Way ahead: An Issue Paper from the Networked Services Policy Task Group, www.ukoln.ac.uk, accessed on 11/20/2009.
- Gefen, D., Karahanna, E., Straub, D. (2003) Trust and TAM in Online Shopping: An Integrated Model, *MIS Quarterly*, 27(1), 51-90.
- GfK - Gesellschaft fuer Konsumforschung (2010) Deutsche bleiben Buecherwuermer, www.gfk.com, accessed on 03/12/2010.
- GfK - Gesellschaft fuer Konsumforschung (2009) E-Books: Lesen wir in Zukunft nur noch digital? Eine Studie der GfK Panel Services Deutschland, www.gfkps.com, accessed on 12/20/2009.
- Gordon, S. (2005) *The Future of the Music Business: How to Succeed in the New Digital Technologies*, Backbeat Books, Berkeley, CA.
- Hardin, G. (1968) The Tragedy of the Commons, *Science*, 162(3859), 1243-1248.
- Henderson, R., Clark, R. (1990) Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms, *Administrative Science Quarterly*, 35(1), 9-30.
- IFPI - International Federation of the Phonographic Industry (2010) IFPI Digital Music Report 2010 - Key Highlights, www.ifpi.org, accessed on 02/02/2010.
- INDICARE (2004) Digital Rights Management and Consumer Acceptability: A Multi-Disciplinary Discussion of Consumer Concerns and Expectations, www.indicare.org, accessed on 11/17/2009.
- International Digital Publishing Forum (2007) OPS 2.0 Elevated to Official IDPF Standard, www.idpf.org, accessed on 01/07/2010.
- Jarvenpaa, S., Loebbecke, C. (2009) Management Implications of a Consumer Value Perspective on Mobile TV, *Journal of Information Technology*, 24(2), 202-212.
- Jarvenpaa, S., Tractinsky, N., Vitale, M. (2000) Consumer Trust in an Internet Store, *Information Technology and Management*, 1(1-2), 45-71.
- Jullien, B. (2006) Two-Sided Markets and Electronic Intermediaries, Illing, G., Peitz, M. (eds.), *Industrial Organization and the Digital Economy*, MIT Press, Cambridge, MA, 273-300.

- Kim, W., Maubourgne, R. (2007) *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*, Harvard Business School Press, Cambridge, MA.
- King, S. (2009) UR Exclusively on Amazon's Kindle - Now Available, www.stephenking.com, accessed on 12/10/2009.
- Krishnan, R., Smith, M., Tang, Z., Telang, R. (2007) Digital Business Models for Peer-to-Peer Networks: Analysis and Economic Issue, *Review of Network Economics*, 6(2), 194-213.
- Levy, S. (2007) The Future of Reading, www.newsweek.com, accessed on 11/23/2009.
- Lieberman, M., Montgomery, D. (1998) First-Mover (Dis)Advantages: Retrospective and Link with the Resource-Based View, *Strategic Management Journal*, 19(12), 1111-1125.
- Liebowitz, S. (2006) File-Sharing: Creative Destruction or Just Plain Destruction, *Journal of Law and Economics*, 49(1), 1-28.
- Liebowitz, S., Watt, R. (2006) How to Best Ensure Remuneration for Creators in the Market for Music? Copyright and its Alternatives, *Journal of Economic Surveys*, 20(4), 513-545.
- Loebbecke, C. (2010) eBooks: Are there lessons to learn from music?, International Telecommunications Society Europe, Copenhagen, Denmark, September.
- Loebbecke, C. (1999) Electronic Trading in On-line Delivered Content, Hawaii International Conference on System Sciences, IEEE, ieeexplore.ieee.org, accessed on 11/26/2009.
- Loebbecke, C., Soehnel, A., Weniger, S., Weiss, T. (2010a) Innovating for the Mobile End-User Market: Amazon's Kindle 2 Strategy as Emerging Business Model, International Conference on Mobile Business, IEEE, ieeexplore.ieee.org, accessed on 07/15/2010, 51-57.
- Loebbecke, C., Bartscher, P., Weiss, T., Weniger, S. (2010b) Consumers' Attitudes to Digital Rights Management (DRM) in the German Trade eBook Market, International Conference on Mobile Business, IEEE, ieeexplore.ieee.org, accessed on 07/15/2010, 337-344.
- Markus, M.-L. (1987) Toward a Critical Mass Theory of Interactive Media - Universal Access, Interdependence and Diffusion, *Communication Research*, 14(5), 491-511.
- Nagle, T., Hogan, J. (2006) *The Strategy and Tactics of Pricing: A Guide to Growing More Profitably*, Prentice Hall, Saddle Brook, NJ.
- Noam, E. (2008) The Economics of User Generated Content and Peer-to-Peer: The Commons as the Enabler of Commerce, Noam, E., Pupillo, L. (eds.), *Peer-to-Peer Video: The Economics, Policy, and Culture of Today's New Mass Medium*, Springer, New York, NY, 3-13.
- Oberholzer-Gee, F., Strumpf, K. (2007) The Effect of File Sharing on Record Sales: An Empirical Analysis, *Journal of Political Economy*, 115(1), 1-42.
- Open eBook Forum (2000) A Framework for the ePublishing Ecology: Public Comment Draft - Version 0.78, www.idpf.org, accessed on 11/12/2009.
- Pavlou, P., Fygenon, M. (2006) Understanding and Predicting Electronic Commerce Adoption: An Extension of the Theory of Planned Behavior, *Management Information Systems Quarterly*, 30(1), 115-143.
- Picard, R. (2000) Changing Business Models of Online Content Services: Their Implications for Multimedia and Other Content Producers, *Journal of Media Management*, 2(2), 60-68.
- PWC (2008) Consumer and Educational Book Publishing, Global Entertainment and Media Outlook: 2008-2012, www.pwc.com, accessed on 08/13/2010.

- RIAA - Recording Industry Association of America (2010) Piracy: Online and on the Street, www.riaa.com/physicalpiracy.php, accessed on 02/01/2010.
- Rump, N. (2003) Digital Rights Management: Technological Aspects, Becker, E., Buhse, E., Guennewig, D., Rump, N. (eds.), *Digital Rights Management: Technological, Economic, Legal and Political Aspects*, Springer, Heidelberg, Germany, 3-15.
- Shapiro, C., Varian, H. (1999) *Information Rules: A Strategic Guide to the Network Economy*, Harvard Business School Press, Boston, MA.
- Shaver, D., Shaver, M. (2003) Books and Digital Technology: A New Industry Model, *Journal of Media Economics*, 16(2), 71-86.
- Slowinski, H. (2003) What Consumers Want in Digital Rights Management, AAP/ALP White Paper, home.att.net, accessed on 07/22/2009.
- Smith, M., Telang, R. (2009) Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy, *MIS Quarterly*, 33(2), 321-338.
- Song, M., Thieme, J. (2009) The Role of Suppliers in Market Intelligence Gathering for Radical and Incremental Innovation, *Journal of Product Innovation Management*, 26(1), 43-57.
- Sood, A., Tellis, G. (2005) Technological Evolution and Radical Innovation, *Journal of Marketing*, 69(3), 152-168.
- Stahl, F., Maass, W. (2006) Adoption and Diffusion in Electronic Markets: An Empirical Analysis of Attributes Influencing the Adoption of Paid Content, *Electronic Markets*, 16(3), 233-244.
- Steinmueller, W. (2008) Peer-to-Peer Media File Sharing: From Copyright Crisis to Market?, Noam, E., Pupillo, L. (eds.), *Peer-to-Peer Video: The Economics, Policy, and Culture of Today's New Mass Medium*, Springer, New York, NY, 15-42.
- Tushman, M., O'Reilly, C. (1996) The Ambidextrous Organization: Managing Evolutionary and Revolutionary Change, *California Management Review*, 38(4), 8-29.
- Vassiliou, M., Rowley, J. (2008) Progressing the Definition of 'eBook', *Library Hi Tech*, 26(3), 355-368.
- Wang, C., Ye, L., Zhang, Y., Nguyen, D. (2005) Subscription to Fee-Based Online Services: What Makes Consumers Pay for Online Content?, *Journal of Electronic Commerce Research*, 6(4), 304-311.
- Zentner, A. (2006) Measuring the Effect of File Sharing on Music Purchases, *Journal of Law and Economics*, 49(1), 63-90.