

The impact of eBooks on the book sector in the Netherlands

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ABSTRACT

The digitalization of the music and video industry has had large influences on the corresponding sectors. With the growing numbers of eBooks, eReaders and tablets sold, the book sector is becoming digitalized too.

This research paper describes the impact of eBooks on the book sector in the Netherlands, given the limited size of the Dutch language area. The research is based on a literature study and interviews with three key stakeholders of the book sector.

The conclusion is that the digitalization of the book sector will have large influences on the sector. The author, online bookseller and customer will profit by the digitalization. The publisher, bookstore and library will encounter decreasing incomes if they don't find additional sources of incomes. For the wholesaler the income won't change. Nowadays eBooks are protected by Digital Rights Management (DRM). The role of DRM will be minimal in the future, because it does not prevent illegal distribution and is not user-friendly. A low eBook price is the best solution to limit illegal distribution. Although the popularity of eBooks is growing fast, the eBook won't directly extinguish the demand for printed books. There will still be a demand for printed books in the next few years.

Keywords

eBooks, Dutch Book Sector, Impact, DRM

1. INTRODUCTION

Following the music and video industry also the book sector has started to become more digitalized. The market research of Growth from Knowledge (GfK) [9] described the growing popularity of tablets, eReaders and eBooks. Tablets are getting better, more user-friendly and cheaper. In the first nine months of 2011 nearly 89.000 e-readers and 450.000 tablets were sold in the Benelux. This has led to an increase of the number of eBooks sold. In the first three quarters of 2011 558.027 eBooks were sold in the Netherlands, against 32.9 million printed books [9]. An eBook is more than an electronic version of a book, which you can read on a computer, tablet, eReader or smartphone. An eBook can have extra functionalities as for example music, videos or hyperlinks [16]. In the Netherlands an eBook doesn't have a fixed price, in contrast with a printed book, which has a fixed price determined by the publisher and demanded by the Dutch government. (The fixed price is part of

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a Dutch law). At the moment the Dutch government find price regulation for eBooks undesirable. This however may change in the future [15].

In 2011 1.3% of all books sold in the Netherlands were eBooks. Currently however only 6% of all Dutch titles are available as eBook. This results in about 8.500 Dutch titles [9].

To prevent piracy, eBooks are protected by Digital Rights Management (DRM). DRM is a security measure (and technique) to prevent unlimited copying [2]. Piracy is the copying and distributing of digital content without compensating the copyright-holder(s).

The digitalization of music and videos has had large influences on the corresponding sectors. The thesis of Lakhani [18] describes these influences. Instead of buying a CD in the music store customers buy their music online as a complete digital product (only bits and bytes). Online distribution has its benefits and drawbacks. One of the benefits is the easy access to a huge potential market; with the internet millions of potential customers can be reached. The risks of piracy increases also. Both the music and video industry face this risk problem. The DRM of both music and video is still not strong enough to prevent piracy. Although the sales of digital music and video products have grown, the total music and video sales have decreased, because of piracy. To increase sales, new business models emerge in the music industry [14]. An example is the streaming service Spotify. Spotify offers a service to customers to listen to millions of songs via their computer or smartphone in an easy way. These customers are willing to pay 5 to 10 euro a month for this service, rather than illegally downloading the songs for free [30].

The question is whether the digitalization of the book sector will have the same consequences as the digitalization of the music and video market. Different players in the Dutch book market have started to experiment with new business models. For example: Dutch public libraries are lending out eBooks via bibliotheek.nl [8].

1.1 Problem Statement

The digitalization of music and video products has had large influences on the music and video industry. Given the fact the sales of eBooks increased a lot last year, it becomes clear that the book sector in the Netherlands has started to become more and more digitalized too [9]. Just as in the music and video industry the digitalization of the book industry will probably have large consequences [18]. What are the opportunities (and threats) of eBooks for authors or customers? How important will online booksellers, as for example Bol.com, become in the book sector? Is DRM the solution to prevent piracy in the future?

The actual book sector consists of different stakeholders, as for example authors, publishers and customers. Each stakeholder is responsible for a part of the book supply chain. A supply chain

is the set of organizations and people involved in creating and/or moving a product or service from supplier to customer. For these stakeholders it is interesting to know what consequences eBooks will have on them, their contribution to the book supply chain and their benefits from it. Some will profit from the digitalization of the book sector and others won't.

This research paper predicts what the impact of eBooks is on the Dutch book market.

1.2 Research Questions

To answer the problem pointed out in the previous paragraph, the following question need to be answered:

- What is the impact of eBooks on the book sector in the Netherlands, given the limited size of the Dutch language area?

To answer this question, the following sub questions need to be answered first:

1. Which stakeholders are involved in the Dutch book sector?
2. What value do these stakeholders add to the book supply chain of printed books?
3. What is a possible future scenario of the supply chain of eBooks?
4. What is the role of DRM in the future of the Dutch book sector?

2. METHOD OF RESEARCH

2.1 Type of research

To answer the research questions, a qualitative desk research, in combination with interviews with stakeholders, has been performed. The results of a quantitative research can be generalized to a group or population, the results of a qualitative research often cannot. However when there is not much empirical research data available a qualitative research is more appropriate and useful. In case of this research there is not much empirical research data available about the future of the Dutch book sector, therefore the above mentioned research method is chosen.

2.2 Method of research

A literature study is performed to answer the four sub questions. The main type of literature used, is marketing literature. This literature helps to describe the different players in the book sector, what they (in general terms) contribute to the supply chain of books, what their role will be in the future and what the role of DRM will be. To get a more complete idea of the role of the different stakeholders and the role of DRM in the future, semi-structured interviews with three stakeholders of the book sector are performed. The semi-structured interviews are based on a list of questions and topics prepared in advance. This list is used as a guide during the interviews, but deviations are allowed when appropriate. Semi-structured interviews allow the interviewer to be prepared as well as to be flexible during the interviews [24]. The interviewed stakeholders are asked what their vision is about the future of the Dutch book sector.

Based on the answer of sub question one and two a process model of the actual publishing supply chain is constructed. The visualization of the supply chain gives a clear image of the set of organizations and people involved in creating and/or moving a **book** from author to customer. This helps, together with the results of the interviews and the literature study to construct a

possible scenario of the Dutch book sector in the future, as well as to create a new process model of the possible future publishing supply chain(s) (to answer sub question three). This visualization gives a clear image of the set of organizations and people involved in creating and/or moving an **eBook** from author to customer. Also the effect of DRM future is analyzed (to answer sub question four).

Based on the results of sub question three and four an overview is created. This overview visualizes the differences between the current and future supply chain, taken into account the future role of DRM. It shows the impact of eBooks on the different stakeholders and their role in the supply chain. This predicts the impact of eBooks on the Dutch book market, given the limited size of the Dutch language area and answers the main question.

3. THE DUTCH BOOK SECTOR

3.1 Stakeholders

The actual Dutch book sector consists of different stakeholders. This chapter focuses on stakeholders active in the Dutch supply chain of printed books and the activities connected with printed books. The activities related to eBooks are discussed in the next chapter.

Appelman and Van den Broek [1] describe the stakeholders who are active in the Dutch book sector, e.g. authors, publishers and customers. Figure 1 shows the main stakeholders. Not every detail is included in the diagram to keep it clear. For example the situation where some publishers deliver books directly to the customers or to booksellers is not included in the diagram. These situations happen only occasionally and are therefore not included.

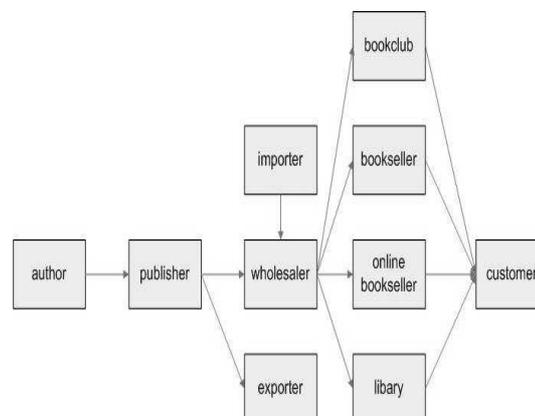


Figure 1. Stakeholders

This research focuses on the main chain activities that take place between writing and reading a **new** book. This chain starts with a Dutch author and ends with a Dutch customer. In between you find in this chain the publisher, wholesaler, library and the (online) bookseller. The importer imports books written by foreign authors from the rest of the world and the exporter exports books written by Dutch authors to the rest of the world. Since the importer and exporter are not part of this main chain, they are excluded from the research. The book club is a subscription-based organization for selling and purchasing books. The book club is not discussed in more details, since the activities are similar to the bookseller. Libraries however are much more different from a bookseller and are discussed here too. To limit the scope the handling of second hand books is not included in this research.

3.1.1 Author

The author is the originator of a written work. There are two different kinds of authors: professional authors and non-professional authors (hobbyists). Professional authors (try to) make a living out of writing stories and novels. Hobbyists write in their free time and mostly only for the joy of writing and not as a way of living, for this reason the non-professional authors are not discussed in more details.

3.1.2 Publisher

A publisher is engaged in publishing books, newspapers, magazines, etc. Centraal Bureau voor Statistiek (CBS) [3] stated there were more than 3000 publishers active in the Netherlands in 2008. About 43% of them publish books. In the thesis written by Schrijvers [26] the function of a Publisher are described. The publisher's main activity is printing and spreading books, but that is not all a publisher does. The publisher checks if the manuscript written by the author has potential. If it has potential the publisher will help the author with editing to get the best out of it. When the editing is finished, the publisher will start printing and promoting the book. The publisher sells the printed books to a wholesaler.

3.1.3 Wholesaler

A wholesaler is an organization which distributes books between the publishers, libraries and booksellers. Appelman and Van den Broek [1] state that 'Centraal Boekhuis' is with a market share of 70% the biggest and most important wholesaler of the Netherlands. The 'Centraal Boekhuis' provides storage, transport and provision of information about books for booksellers, libraries and publishers [6].

3.1.4 Bookseller

A bookseller is engaged in selling books to customers. Krooman [17] states that besides selling books booksellers help the customers to select the right book by selecting a top ten and giving them advice. There are two different groups of booksellers; the traditional bookseller (the bookstore) and the online bookseller. The traditional bookseller sells books in a physical store often located in the city centre. A well known traditional book chains is "De Slegte" [7]. The online bookseller sells (printed) books via the internet. Bol.com is a well known online bookseller [5]. These days you also see a combination of these two groups; a physical store which also sells books online.

3.1.5 Library

A library is an organized collection of books and other sources of information. There are different kinds of libraries; public and private. Nearly every library in the Netherlands is a public library, for this reason only the public library is discussed in more details. Huysmand and HilleBrink [11] describe the function and activities of a public library. A public library provides access to books for the public who choose not to or cannot afford to purchase a collection books themselves. CBS [23] stated there were 166 public libraries located in the Netherlands in 2010. The main service is lending books to the public for a fixed number of weeks and for a price far below the new price of all the books lent. The library also helps with finding the right book, provides quiet study and work areas as well as internet access and often organizes lectures and courses.

3.1.6 Customer

The last stakeholder in the book sector is the customer. The customer is the recipient of the book. The customer is therefore probably the most important stakeholder in the sector. A book can never be a success when nobody buys it (or lends it).

3.2 Fixed book price

The previous paragraph described who the different stakeholders in the Dutch book sector are and what their contribution is. This paragraph describes how the profit of a book sale is distributed among the different stakeholders.

Since the beginning of the twentieth century the price of a printed book is fixed in the Netherlands [32]. The fixed price is part of a law created by the government. The law lists a number of rules agreed on by the different stakeholders in the Dutch book sector. The price of a new book is determined by the publisher. Booksellers cannot change this price.

Appelman and Van den Broek [1] studied the distribution of the profit of a sold book. The average price for a printed book was 12.25 euro in 2000. The author receives roughly 10% of the book price. The publisher receives about 38.5%, from which 50% of this amount is spend on the costs for printing. The costs for the distribution via the Central Boekhuis are 6% of the book price. The book seller receives around 39.5% and the last 6% of the book prices is paid to the taxes.

Also the price for lending out books is fixed by law. This is described by Jawad and Van Mil [13]. Based on an exception in the law for copyright libraries have the right to lend out books for an agreed fee. This fee is fixed. Libraries are often subsidized by local governments.

3.3 Publishing supply chain

The previous paragraphs described who the different stakeholders in the Dutch book sector are, what their contribution is and how the profit of a printed book is divided. Based on this information two process models of the actual publishing supply chain of (Dutch) books are composed.

The first process model (shown in figure 2) shows the activities that take place between writing and **selling** a new book to a customer. This chain starts with the author and ends with the bookseller. The customer is not included in the chain, because the customer adds no value to the publishing process. The percentages shown in the overview represent the distribution of the profit of a sold book (excl. 6% BTW) [1].

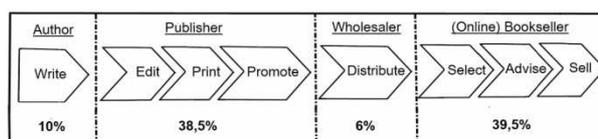


Figure 2. Publishing supply chain – Selling a book

The second process model (shown in figure 3) shows the activities that take place between writing and **lending** a book to a customer. This chain starts with the author and ends with the library. The customer is also not included in this chain.

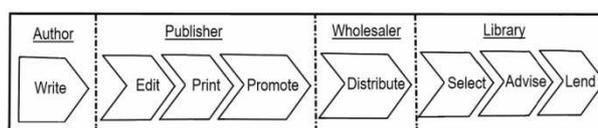


Figure 3. Publishing supply chain – Lending out a book

4. FUTURE SCENARIO OF THE DUTCH BOOK SECTOR

4.1 Stakeholders

In 2010 the sales of eBooks grew by 300% in comparison with 2009 [22]. When the popularity of e-book keeps growing this way, it will take over a large part of the Dutch book sector. This

will have consequences for the different stakeholders in the Dutch book sector. The previous chapter described which stakeholders are active in the Dutch book sector for printed books and what value they add to the Book process. Chapter four describes a possible scenario of the future of the Dutch book sector. In this scenario the expected consequences of the growing market for eBooks are given for each of the different stakeholders. These expectations are mainly based on the interviews, but also supported (where possible) with expectations expressed in the literature. (The possibility that people spend less time in reading books in the future is not included in this research, because of its uncertainty). For each stakeholder the expected scenario is made visible.

4.1.1 Author

The main activity of an author is expected not to change. The authors will still be the originator of a written work. At the moment only the latest titles of an author are available in the book stores. (Only very well selling books are reprinted regularly). The eBooks give authors and publishers the opportunity to make their titles available (for the customers) for eternity once their titles have become digital. Old titles can get (at low costs) a new life as eBook.

The eBook is expected to provide new opportunities to (especially bestsellers) authors for better earnings. Authors can directly offer their books as eBooks to customers on their own website or on a collective selling point, so the author bypasses both the publisher and bookstore. Today not only publishers offer edit services to authors for correcting typing errors and designing a lay-out and cover, also others do. When these costs are covered, as well as the cost for building and maintaining a good website, the authors will receive all the rest of the profit themselves. In comparison with the 10% of the sales price of a printed book the author normally receives, the earnings from the sales of eBooks on his own website will be larger, when customers know to find him [1].

Also for less successful authors the eBook can provide new opportunities. In the current book sector it is difficult for less successful authors to find enough buyers for their printed books in the three to four month period their new books are offered and promoted for sale in the regular book stores. The internet is an ideal place to offer their books to the public for a much longer period and that increases the chances their book is found and appreciated.

The future offers new opportunities for authors. The drawback of eBooks however is an increasing competition between the different authors, since it is easier for each of them to publish their new and old books. All eBooks titles will stay available for eternity. The promotion of the author's book will become even more important in the future to distinguish one author from the others and one book from all the others.

4.1.2 Publisher

In comparison with other countries it took longer for the eBooks to become popular in the Netherlands [12]. The article written by Vermij [31] states many publishers didn't publish any digital content to delay to growing popularity of eBooks. Publishers thought they could prevent the digitization of the book sector by not publishing any digital content. In the meantime it turns out that the digitalization is a movement (autonomous development), which is a lot bigger than the Dutch book sector and cannot be stopped.

In the absence of the physical (print) form of an eBook, the demand for the main service provided by the publisher, namely printing of books will decline with the introduction of eBooks. Schrijvers [26] describes the reactions of the publishers to the

eBook. In the publishers' opinion the growing popularity of eBooks is not a direct threat for their reason of existence. A publisher fulfills after all more services than only printing and spreading books. The publisher also selects potential manuscripts, supports the author with editing his manuscript and helps the author with presenting and promoting his book.

These services (other than printing services) may indeed still give the publishers a reason of existence in the future, but the declining demand for the publishers' print services will lead to a decrease in profit for these organizations. The interviewed author even predicts the author may not need the publisher anymore to promote his book nor to edit his book. Nowadays there are other ways to get attention. Authors can attract the attention of the public through their own website or online platforms, as for example Youtube or Facebook. Also for editing an author can hire a freelance-editor instead of a publisher.

4.1.3 Wholesaler

The Centraal Boekhuis is the largest and most important wholesaler of books in the Netherlands [1]. The article written by Romey [25] describes the establishment of a digital version of the Centraal Boekhuis under the name eBookhuis. The eBookhuis provides the distribution of eBooks between publishers, booksellers and libraries. Via eBookhuis publishers can make their complete eBook assortment available to the customer via one (web)address. Publishers don't have to invest in an own data systems, since eBookhuis has already the infrastructure for it. eBookhuis is ideal for booksellers and libraries to get easy access to the biggest collection of eBooks.

4.1.4 Bookseller

There are two different groups of booksellers; the bookstore (the traditional bookseller with a physical store) and the online bookseller. First the expected consequences for the bookstore are described and then the expected consequences for the online bookseller.

The demand for the main service of the bookstore, namely selling printed books, will decline. The absence of a physical form of an eBook will lead to increased competition between the bookstore and online booksellers. The internet is an ideal place to sell eBooks. A traditional bookstore will have more chances to survive by distinguishing itself from its online competitors by specializing. Wijndelts [33] states the traditional booksellers should be more active in creating a relation with its customers, for example by creating reading groups or organizing lectures and workshops.

Two of the three interviewed stakeholders expect print-on-demand to be a new service for the traditional bookstores. This service gives the customer the opportunity to print an eBook. In the future there will always be people who prefer a printed book over an eBook. Print-on-demand can also offer the customer the possibility to print a personalized book. For example the customers can choose a different cover or size.

Krooman [17] researched the reactions of the traditional bookstores to the eBook. The bookstores don't see the growing popularity of the eBook as a direct threat to their reason of existence and they expect to play a part in Dutch book sector in the future too. The bookstore's opinion is that they offer more services than just selling books. A bookstore offers also personal advising and book selecting services differently than online booksellers do. These services will in their opinion even in the future have added value. Although these services may add value, the increasing competition for their main service (selling books) will lead to a decrease in profit.

The online booksellers are expected to get a strong position on the market, because customers will more often buy their books online. The internet is after all an ideal place to sell digital content. The growing popularity of eBooks led also to the introduction of new players in the sector. A good example is Boenda.nl. Boenda.nl is an organization who only sells eBooks [4].

For the eBook to become a real success the number of titles available as eBooks should substantial increase (to tempt all customers to say goodbye to printed books). The interviewed stakeholders expect this to happen in the next few years. A successful online bookseller can (and should) distinguish himself by offering a good search engine, user-friendly interface and/or unique collection.

4.1.5 Library

The library has, just like the traditional booksellers, to cope with an increased competition. Huysmans and Hillebrink [11] observed a decrease in the use of the services of libraries. Via the internet and new media people have fast and easy access to a large collection of information. The growing popularity of eBook will lead to a further decrease in the use of library services. Because of the absence of a physical form of an eBook no physical locations are needed anymore. Therefore it becomes easier (cheaper) for other parties to 'lend out' eBooks too by selling a license which allows the customer to get access to the eBook for a certain period of time.

The research of Nederhoff [20] describes the reactions of libraries to the eBook. A couple of the fifteen libraries she interviewed are already lending out eBooks. In the libraries' opinion the eBook is not a direct threat to their part in the Dutch book sector. They don't expect many new competitors who also 'lend out' eBooks. In their opinion is 'lending out' eBooks a low profitable service and therefore often subsidized by local governments. Besides lending out books, libraries also offer advising and selecting services. Also most libraries offer quiet work areas for studying and working as well as internet access. They also often organize lectures and courses. They expect that there will still be a demand for these services in the future too. These services may add value, but the increasing competition for their main (lending) service will lead to a decrease in profit for the libraries.

4.1.6 Customer

A research of Stichting Marktonderzoek Boekenvak and GfK [28] shows the eBooks matched almost all the readers' expectations. The attractiveness of the eBook is first of all a practical one [29]. The eBooks are ideal for traveling. Hundreds of eBooks can be stored on just a single device. An eBook can be a lot more than an electronic version of a printed book. An eBook also offers many new opportunities, as for example the possibility to add sound, movies and dynamic content. The reader could for example also choose whether the story has a happy ending or not.

Nieuwenhuis [21] states the price of an eBook is currently around the 80% of the price of the printed version of the book. The interviewed stakeholders expect that the price of an eBook will drop in the future, especially when authors directly sell to customers.

The above mentioned benefits for customers will lead to a growing popularity of eBooks in comparison with printed books.

The growing popularity has however also a drawback. In the current bookstore you have the top ten bestsellers and only a few hundred other books to choose from. In the digital book market the number of titles will be gigantic. It will be difficult

for customers to find the right book. It is therefore really important that the (online and traditional) booksellers help the customer selecting the right book by offering for example a good search engine or a review system.

4.2 Publishing supply chain

The previous paragraph described a possible scenario for each of the different stakeholders in the Dutch book sector. Based on this information possible future publishing supply chains of (Dutch) eBooks are composed. In comparison with the publishing supply chain of printed books the activities of the players that take part in the process between writing and selling an eBook are less fixed. There are multiple chains possible, which can coexist at the same time. The customer is not included in any of these chains, because the customer adds no value to the publishing process. These chains are visualized in three process models. See figure 4, 5 and 6.

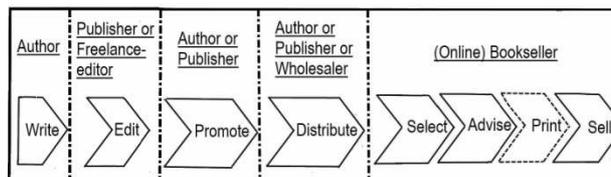


Figure 4. Future publishing supply chain – Selling a book

The first two process models (shown in figure 4 and 5) show the activities that take place between writing a new eBook and selling a new eBook to a customer.

The first model (shown in figure 4) represents multiple chains in one figure. The second model (figure 5) represents just a simple chain with fewer players. All the represented chains of figure 4 start with the author and ends with the bookseller. The different activities can be done by various players: the promoting activity can be performed by the publisher or/and by the author himself, the editing activity can be performed by a publisher or a freelance-editor and the distributing activity can be performed by the author, publisher and/or wholesaler. The printing activity provided by the publisher has become obsolete, because of the absence of a physical form of an eBook. Instead the bookseller can offer a print service. Customers can choose to print an eBook when they prefer a printed book instead of an eBook.

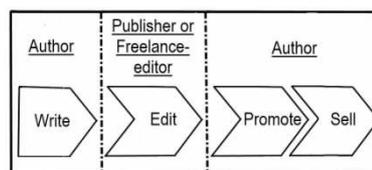


Figure 5. Future publishing supply chain – Selling a book

The second chain (shown in figure 5) differs a lot from the chain(s) shown in figure 4 therefore it is presented separately. This chain starts with the author and ends with the author. As described in the previous paragraph eBooks provides the author with the opportunity to sell his books directly to customers. The edit activity can in future be performed by a publisher or a freelance-editor.

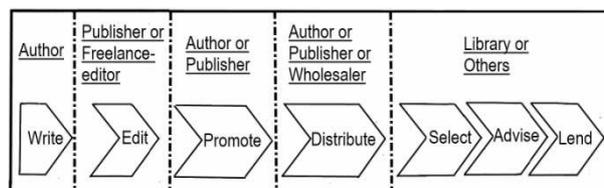


Figure 6. Future publishing supply chain – Lending out a book

The third process model (shown in figure 6) shows the activities that take place between writing and **lending** an eBook to a customer. This figure represents multiple chains too: the promotion, the edit and the distribution activity can be performed by multiple players. As described in the previous paragraph libraries have to cope with more competition in the future. Due to this also the selecting, advising and lending activities of the library can be performed by others as well. This (multiple) chain starts with the author and ends with the library or other lending organizations who lends books too.

4.3 Digital Right Management

The Dutch book sector has had to cope with piracy since the introduction of eBooks [21]. Piracy is the copying and distributing of digital content without compensating the copyright-holder(s). As mentioned in the introduction, piracy has had great consequences for the music and video industry. Both the music and video industry have tried to prevent piracy by protecting their digital content with Digital Right Management (DRM). Arkenbout et al. [2] defines DRM as a security measure (and technique) to prevent unlimited copying. The DRM was in both industries not strong enough to prevent piracy [14]. Huibers et al. [10] describes the use of DRM in the Dutch book industry. At the moment most eBooks are protected by DRM. The Dutch publishers have chosen for a standard eBook DRM: Adobe EPUB. This paragraph describes what the positive and negative effects of DRM are and what the prospect is of the use of DRM in the future in the Dutch book sector.

As just mentioned the only advantage of using DRM is to prevent eBooks illegally be copied or spread. This prevents copyright-holders to lose sales. However there still hasn't been developed any DRM that could not be decoded as stated by Lewis [19]. Once a DRM is decoded the eBooks can illegally be copied and spread. Basically a decoded DRM is useless, because the only advantage a DRM has, is no longer applicable.

Besides that there is no DRM that cannot be decoded, the use of a DRM has a couple of disadvantages. De Jager [12] described these disadvantages. The customer experiences the use of a DRM often as unpleasant. At the moment there are several DRMs used to protect eBooks. Three well-known DRM are: Adobe's Portable Document Format (PDF), Mobipocket format for Amazon and ePub format. A large disadvantage of the use of the different DRMs is that eReaders and tablets do not support every DRM. For example if you buy an eBook with the Mobipocket format and your eReader only support the ePub format, this eBook would be useless for you. A DRM prevents you for coping the eBook. This makes it impossible for you to read your eBook on multiple devices. This often leads to frustrations by customers who want to read their book on both their smartphone and eReader or who upgraded their eReader and want to transfer their books from their old eReader to the new one.

The interviewed stakeholders expect that DRM is not the solution to prevent piracy and will hardly be used to protect eBooks in the future. The chance a DRM will be developed, which cannot not be decoded is nihil. Besides, the use of a DRM also leads to many frustrations by customers. There are three alternative solutions to limit piracy.

The first alternative is 'Social DRM', although technically the name 'Social DRM' is incorrect. 'Social DRM' is based on social control and not a technique to prevent the content to be copied or spread [27]. This "technique" processes the name of the buyer in the eBook. This can be done subtle, on one of the last pages or more striking on the front-page. People who bought the eBook legally, won't easily post an eBook with their own name in it on an illegally file sharing website, because then

it is a lot easier for authorities to trace the source of the illegal copies.

The second alternative is 'Watermarking' [27]. Every eBook has a unique code. This code can be used to trace back where and when the eBook was sold.

The question is how effective 'Social DRM' and 'Watermarking' are to prevent piracy. 'Social DRM' and 'Watermarking' may limit piracy of books, but never prevent it. Someone may think twice before sharing his eBook with someone else. However once someone has posted the eBook on an illegal file sharing website, everyone can still illegally download the eBook even when the source is arrested. Also a malicious could delete the code or personal name from the book or use a fictive name, so he or she never can be traced.

The third alternative is to lower the price of eBooks. This is, according to the interviewed stakeholders, the best solution to limit piracy. People are more prepared to pay for an eBook when the price is not too high, because then it will be less worthwhile to spend a lot of time and effort to search for a free illegal alternative. The price of an eBook is nowadays around 80% of a printed book [12]. With a much lower price of around 5 euro, legal purchases will be stimulated, resulting in an increase of the sales.

5. DIFFERENCES CURRENT AND FUTURE DUTCH BOOK SECTOR

The last two chapters described the current Dutch book sector and the future of Dutch book sector. Chapter five describes the effects of the digitization of the Dutch book sector. These effects are based on the differences between the current and future supply chain and takes into account the future role of DRM. For each stakeholder the effects are visualized in an overview.

The table 1 shows the effects of the digitization of the Dutch book sector for each stakeholder. A "+" means the stakeholder will have some profit from the digitization. A "++" means the stakeholder will profit a lot. A "+/-" means the incomes of the stakeholder will be equal. A "-" means the stakeholder will encounter decreasing incomes. A "--" means the stakeholder will encounter large decreasing incomes. For each stakeholder the effects are clarified below.

Table 1. Effects of digitization of Dutch book sector

Stakeholder	Effects
Author	+
Publisher	--
Wholesaler	+/-
Bookstore	--
Online bookseller	+
Library	-
Customer	++

5.1.1 Author

Authors' main and only activity used to be writing. Due to the failing role of DRM, the prices of eBooks have to drop to limit piracy. This will result in a lower income for authors, unless authors manage to profit more than 10 % from each book sold. In the future the author has the possibility to do this by extending his activities with promotion, distribution and sales. Also old titles can get (at low costs) a new life as eBook. This creates new opportunities for authors to increase their incomes. For this reason the author will have some advantage of the

digitization of the book sector even if the prices of the eBooks drop substantially.

5.1.2 Publisher

Publisher's main activity used to be printing. Because of the absence of the physical form of an eBook the demand for these activities will decrease in the future. Also the promote activity and the edit activity can be done by others as well. The publisher will therefore encounter a large decrease of income because of the digitization of the book sector.

5.1.3 Wholesaler

Wholesaler's main and only activity is distribution. With the absence of the physical form of an eBook there is no need for physical distribution of books. The wholesaler however can still offer a central place for publishers (and/or authors) to store their collection of eBooks. For booksellers and libraries such central place offers the ideal place to get easy access to a large collection of eBooks. The wholesaler's distribution activity will, (although in a different form) therefore continue to exist and his incomes will not change very much because of the digitalization of the book sector.

5.1.4 Bookstore

This stakeholder is split into two groups the bookstore (= traditional bookseller) and the online bookseller. The growing popularity of eBooks will lead to a weaker position on the book market of the bookstore. The online booksellers will benefit of the digitization, because the internet is the ideal platform to sell eBooks. Although the print-on-demand activity may help to differentiate, it will still be difficult for the bookstores to compete with these online booksellers. For that reason the bookstores will encounter decreasing incomes because of the digitization and the online bookstores will have increasing incomes.

5.1.5 Library

The libraries' activities will not change in the future. The main activity will still be lending out books, but the absence of the physical form of an eBook will lead to increased competition. For that reason the libraries will not benefit of the digitization and encounter a possible decrease in income.

5.1.6 Customer

Although the customer doesn't take part in the publishing supply chain, the customer will benefit from the digitization. This conclusion is based on the expected benefits (like extra functionalities, lower prices and larger collections) of eBooks for the customer in comparison with printed books and the decreasing role of DRM in the future.

6. CONCLUSION

In the beginning of this paper a couple of research questions were formulated to predict the impact of the problem pointed out in the Problem Statement. A literature study and three interviews with key stakeholders were performed to find the answers.

The first sub question focuses on the stakeholders involved in the Dutch book sector. The research led to the conclusion that there are ten different stakeholders active in the Dutch book sector: author, publisher, importer, exporter, wholesaler, book club, bookseller, online bookseller, library and customer. The importer and exporter however are excluded from the rest of the research, because the research only focuses on the stakeholders that take part in the chain starting with a Dutch author and ends with a Dutch customer. The book club is excluded as well, since their main task is similar to the bookseller.

The second question focuses on the value the identified stakeholders add to the publishing supply chain of printed

books. The author is the originator of a written work. The publisher supports the author with editing his work. After the work is finished the publisher will promote, print and spread the work of the author. The wholesaler will distribute the work between the publishers, libraries and booksellers. The booksellers are engaged in selecting, advising and selling books to customers. The library provides access to books for a public who choose not to purchase a collection of books themselves.

The third question focuses on a possible scenario of the future the supply chain of eBooks. The digitalization of the book sector will have large influences. The author has new possibilities to increase his profits for each book written. The publisher has to cope with a declining demand for their services and therefore will see a decrease in incomes. The wholesaler position and benefits will not change. The storage and distribution activities will only change from physical to digital, but continues to exist. The bookstores will have to face increased competition, what will lead to declining profits. The internet is the ideal place to trade eBooks. The online bookstores will have a stronger position in the market and for that reason will see an increased demand for their services. The library will have to cope with an increased competition as well. The customer will benefit of the advantages of an eBook. An eBook is cheaper, lighter and can offer more content than a printed book.

The fourth question focuses on the role of Digital Right Management in the future of the Dutch book sector. Since the introduction of eBooks the book sector has had to cope with piracy. To prevent piracy eBooks are protect with a DRM. The conclusion is however that DRM do not and will not prevent piracy. Alternatives are a "Social DRM", "Watermarking" and a lower price for eBooks. A lower book price is expected to be the best solution to limit piracy (Social DRM is based on social control, which makes it technically is not a DRM.)

After answering all the sub questions, the main question can be answered. The main question focuses on the impact of eBooks on the book sector in the Netherlands, given the limited size of the Dutch language area. The conclusion is the digitalization of the book sector will have large influences. Some stakeholders profit by the growing popularity of eBooks and others won't. The author, online bookseller and customer will profit by the digitalization. The publisher, bookstore and library will encounter decreasing incomes if they don't find additional sources of incomes. The incomes of the wholesaler will not change. The role of DRM will be minimal in the future, because it doesn't solve the problem. A low price is the best solution to limit piracy.

Although the popularity of eBooks will grow fast, the eBook won't directly extinguish the demand for printed books. There will still be a demand for printed books in the next few years, but this shouldn't be the reason for stakeholder to ignore the eBook. The digitalization is a development, which is much larger than the Dutch book sector and cannot be stopped.

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