Digitalization in the newspaper industry

A business model for the e-newspaper from a customer perspective

Master thesis: MSc in Business administration

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11-02-2014

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Abstract

The emergence of the Internet era has put pressure on the established business model of the newspaper industry, which has been stable and profitable for hundreds of years. The previous ten years show a steady decline in newspaper subscriptions, and an increase in e-newspaper subscriptions. The e-newspaper will in time replace the traditional newspaper, but today a successful business model is lacking, which leads to declining income from advertisement and difficulty to remain profitable. A debate in literature is mostly absent. Just a few articles have been published in bigger journals in recent years. This paper tries to fill this gap, by presenting a general business model for e-newspapers created from a customer perspective. Therefore it is needed to define the e-newspaper and the value it adds to the customer. The research consists of a literature review and qualitative research. The literature review is based on the five-stage grounded-theory method for reviewing the literature by Wolfswinkel and colleagues (2013). The qualitative research is based on 29 interviews, allowing quantitative analysis to support or question the results and present graphical presentations of the findings.

An e-newspaper is a newspaper in digital formats, which can be searched comprehensively, quickly and reliably. E-newspapers have the form of a webpage or mobile application and can be accessed with personal computers and mobile devices like a tablet, phone or e-reader. Newspapers are read to search information, get updated news, for leisure reasons, and as a habit. The interviews show that newspapers are also read to socialize and be educated. On top of what a printed newspaper offers, the e-newspaper allows for live news coverage, although correctness is valued more. E-newspapers offer ways to share and communicate about news, and interact directly with the customer. The choice between the traditional newspaper and e-newspaper is mostly determined by the perceived ease of use. This leads to older readers preferring the traditional newspapers and younger readers the most likely customer segment at this time. Looking at comparable entertainment industries, it seems likely that the future will show a central newspaper seller, collecting news from newspapers and bringing it to the customer (bundled or singular), like ITunes with music. Where nowadays most newspaper producers ask a fee for their news, news will most likely be delivered for free on the future, since customers do not associate paying for news with higher quality. The (increasing) advertisement revenues can be enough for survival. This is illustrated by the exemplary success of NU.nl, which delivers news for free. This subject still requires a lot of research with bigger samples and perhaps case studies to learn more and understand better.

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1. The end of the printed newspaper

The Internet has marked a shift in the production of news, making it difficult for newspaper producers to remain profitable and retain readers. For hundreds of years the newspaper industry has built its business on offering news and articles to readers and exposure to advertisers. The producers of newspapers have had control over the production, distribution and relationships with customers. But the recent years are marked by a smaller number of subscribers and lower income from advertising (Ihlström & Kalling, 2007). This can be seen in the Netherlands, where the previous ten years show a constant reduction in the number of subscribers, indicating that the printed newspaper is nearing its final chapter.

Lately the upcoming of the Internet has affected the distribution of goods and services. This has consequences for the newspaper industry, creating a revolution in journalism (Guo & Sun, 2004). New information systems accelerate the process of news reaching the reader, the distribution costs and the chance to connect with readers in a more direct way, where readers might even play a role in the journalistic offer (Flavián & Gurrea, 2009). These developments have paved the way for a new kind of newspaper: the electronic newspaper or e-newspaper. This digital newspaper differs from the traditional newspaper in the possibility of providing more news than possible in an physical newspaper. The medium and techniques of reading also differ, where the traditional newspaper is browsed by turning pages, and the e-newspaper can be read by clicking links and scrolling. Above all, e-newspapers have the possibility to deliver directly, where traditional newspapers are lagging in time. It has proved difficult for newspaper producers to transform their business model from traditional printed newspapers into digital channels and the newspaper industry fails to do it successfully (Ihlström, 2005; Ihlström & Kalling, 2007).

1.1 Current (successful) initiatives

The situation in the newspaper industry is comparable to other entertainment industries, like the music or video industry. The music industry has shifted from paying for single songs and CD’s, to downloading illegally in MP3 format. Since the necessity of a new business model became bigger, new concepts like ITunes and Spotify turn out to be very successful in creating revenue from legal downloading. In Norwegia this lead to a reduction of illegal downloading from 1.2 billion songs in 2008, to 210 million songs in 2012, without a repressive policy of the government (Aftenposten, 2013). In the video industry, similar

concepts are now starting to become popular. A big example is Netflix, which streams content per pay and suggests videos based on previous watching behavior (NRC, 2013).

New digital central sellers are now also appearing in the newspaper industry, where the lack of a successful business model still exists. In the Netherlands the service Blendle is founded to solve the problem at hand. The idea is offering single articles of different newspapers and journals to the customer, who pays per read, like a digital newsstand. This idea differs from newspapers trying to sell their news on their own platform. This is done because of the believe that customers do not want to buy an newspaper or journal for a large amount, when finding only one particular article of interest. In the case of Blendle, newspapers have to collaborate, in order to generate profits, comparable to ITunes being an overarching platform for music sellers. Just like ITunes, Blendle wants to earn 30% of each sold item. Competing initiatives are eLinea, which allows access to contents for a fixed amount like Spotify does with music, and Yournalist, which selects relevant articles for readers from thousands of newspapers and journals (Volkskrant, 2013; NRC, 2013). On the other hand there is NU.nl, a free news website since 2000 that covers a broad spectrum of subjects and delivers direct and up-to-date news coverage. 65% of the readers accessed NU.nl via mobile apps, whereas 35% of the readers accesses NU.nl via Internet. NU.nl receives a billion page views per month, highlighting their current success.

These upcoming interesting and innovative ideas have not been addressed or studied properly in literature when it comes to the newspaper industry. The scientific debate is mostly lacking, or failing to assess the current developments, which is needed in order to come up with a working business model for the newspaper industry. This paper tries to add to scientific literature and creating a business model framework that fits the current trends and technologies.

1.2 Research question

If a technology is not commercialized in some way through a business model, it will not yield value (Chesbrough, 2010). If e-newspapers are not able to be perceived as valuable by the customers, it will not be successful. In addressing this challenge, this research tries to find what customers expect and need in an e-newspaper. The research question in this paper is:
"What should be the business model of the e-newspaper, looking from a customer perspective?"

To answer this research question, it is needed to define the concept of an e-newspaper, since not a clear definition exists in literature. Besides defining an e-newspaper, it is important to understand the value of an e-newspaper. Therefore the sub questions are:

- *What is a proper e-newspaper definition*?
- *What value does an e-newspaper bring and what effort does it require*?

This research adds practical value by introducing aspects and options for a new business model of the e-newspaper. Besides it adds to existing literature by looking at the e-newspaper business model, by looking at current developments and the opinions and feelings of customers.

This research proceeds with the research design (section 2), explaining shortly the means of research. Then in section 3 and section 4 the knowledge and theories found through literature review will be described. These sections are about e-newspapers (section 3) and business models (section 4). Section 5 explains the research methods of this research. The results per will be presented in section 6. This section will mainly use quotes and summaries from the interviews, but also present the findings of the quantitative analysis. In section 7 the theories and results found will be analyzed towards a new business model for the e-newspaper. Section 8 will conclude this research with a summary of the research and tries to answer the research questions. Finally, section 9 provides an overview of the limitations of this research and possible focal points for future research. Section 10 lists the literature used in this research in alphabetical order.

2. Research design

The design of this research is described here. First the steps in this research will be explained. Note that although the steps seem linear, in practice this is not always the case. Finally the literature review will be described.

2.1 Steps in research

- *Literature review*: The basis of this research consists of literature reviews on the theories of (e-)newspapers and business models (section 3 and section 4). These theories will shape this master thesis and serve as a framework for the interviews, as well as the analyses that will follow after the interviews. The literature review will be based on the theories of Wolfswinkel (2013), which provide a framework for doing a thorough literature review and this will be explained in paragraph 2.2.
- *Hypotheses*: "*A hypothesis is a specified testable expectation about empirical reality that follows from a more general proposition*" (Babbie, 2012, p. 70). Babbie (2012) also states that hypotheses are derived from theories and propositions, and that research is designed to test these hypotheses. A hypothesis must be defined in a clear and unambiguous manner, and makes a prediction about the relationship between two variables. The hypothesis should predict a certain direction in the relationship between two variables like "*Age positively influences Income, with older people earning more than younger people*". Finally, a null hypothesis is required, which predicts that there is no (statistically significant) relationship (Babbie, 2012). To test hypotheses, all variables involved must be explained. During the literature review, hypotheses are stated based on the theories and propositions found.
- *Operationalization*: Once the variables have been defined, the ways to measure them have to be specified. This literally means specifying the exact procedures undertaken to measure the variable (Babbie, 2012). Therefore, for this research the definitions of operations will be explained, by which observations are going to be categorized (paragraph 5.3).
- *Interviews*: In order to test the hypotheses and find an answer to the research question, newspaper customers will be interviewed. The questions of the interview are derived from the PRIMA/USE-IT model described by Landeweerd (2013) (paragraph 5.1), with added questions based on the UTAUT model by Venkatesh (2003) (paragraph 5.2) and findings from the literature review.

- *Results*: The performed interviews need to be studied and findings have to be presented, which is done in section 6. The hypotheses will be checked using the qualitative open questions. These inform about the beliefs and feelings interviewees have towards the two types of newspapers. The multiple-choice questions are used for SPSS analyses, since they allow for this kind of testing of hypotheses, to see if the relationships exist in the expected direction and are of a significant level.
- *Discussion*: The results need to be analyzed looking at the research question, its sub questions and the stated hypotheses (section 7). This means that the theories found in the following sections will be used as a framework to answer the research questions based on the findings in the results section. The implications, importance and relevance of this research are also being described in this part.
- *Conclusion*: The research is briefly being summarized and the main findings are recapped in a clear overview (section 8). Then the limitations of this research are discussed and recommendations for future research are given (section 9).

2.2 Literature review

The scientific knowledge on (e-)newspapers and business models is gathered using books, articles, and statistic websites. An online search engine for scientific articles called "*Scopus*" is used to create an extensive collection of scientific books and articles. When certain information is unavailable in Scopus, like statistics or history descriptions, or full text versions are inaccessible from Scopus, sources like Google Scholar are used. When searching in Scopus using keywords: "*e-newspaper*" OR "*digital newspaper*" OR "*electronic newspaper*" returns 248 results, with 161 results from the previous 10 years. Only 6 of the articles published in the last 10 years have over 15 citations. When searching in Scopus using keywords: "*business models*" returns 11.211 results, with 9.814 results from the previous 10 years. 11 Articles published in the last 10 years have over 400 citations.

In order to perform an in-depth and structured literature review, the five-stage grounded theory method for doing literature reviews of Wolfswinkel (2013) is used. Wolfswinkel and colleagues (2013) present the five-stage grounded-theory method for reviewing the literature in an area, which can be used in an iterative fashion. This research method consists of the five stages Define, Search, Select, Analyze, and Present. The used criteria for this research are the number of citations and the year of publication. The number of citations indicates quality,

utility and impact (Seglen, 1997). From articles found, forward and backwards citation is used to get a complete and detailed picture of the subject.

Concerning the knowledge and theories on e-newspapers, no hard selection criteria are used for searching with Scopus regarding the number of citations, because the already small number of articles found. But an article with a larger number of citations and/or a more recent article if preferred over an article with a small number of citations and/or a relatively old article.

Looking at the theories of business models, selection criteria are used: papers must be published in the previous 15 years. When searching in Scopus: articles older than 10 years should have at least 20 citations, articles between 5 and 10 years should have at least 15 citations, and articles from the last 5 years should have at least 5 citations. Wen searching in Google Scholar: articles older than 10 years should have at least 200 citations, articles between 5 and 10 years should have at least 150 citations, and articles from the last 5 years should have at least 50 citations. The reason for these criteria is that the older an article, the higher the chance of it being outdated. To compensate for this effect, the number of citations is used.

Table 1 below lists the topics found in literature and the main articles or books that encompasses these topics. There are two main subjects in this literature review: the e-newspaper and business models. The first four rows concern articles about the e-newspaper and its aspects, where rows 5 to 11 contain articles about business models. Row 12 is a combination of both, mentioning articles that are about business models for e-newspapers.

A = Åkesson (2009)
B = Åkesson and Ihlström (2008)
C = Al-Debei and Avison (2010)
D = Brousseau and Penard (2007)
E = Chesbrough (2010)
F = Chesbrough and Rosenbloom (2002)
G = Deacon (2007)
H = Flavian and Gurrea (2009)
I = Ihlström and colleagues (2008)
J = Ihlström and Kalling (2007)
K = Johnson and colleagues (2008)
L = Morris and colleagues (2005)
M = Mullainhathan and Shleifer (2005)
N = Osterwalder and colleagues (2005)
O = Osterwalder and Pigneur (2002)
P = Osterwalder and Pigneur (2004)
Q = Osterwalder and Pigneur (2010)
R = Shapira and colleagues (2009)
S = Zott and colleagues (2011)

Table 1 – Topics found in literature review by author(s)

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	**E-newspaper definition**							X			X								X	
2	**Newspaper history**	X																		
3	**Reader motivations**								X					X						
4	**Newspaper characteristics**	X	X																	
5	**Business model definition**			X		X							X		X					X
6	**Functions of a business model**						X									X	X			
7	**Value proposition**					X						X	X				X	X		
8	**Customer relationship**					X							X				X	X		
9	**Infrastructure management**											X	X				X	X		
10	**Financial aspects**					X						X	X				X	X		
11	**E-business model**			X	X															X
12	**E-newspaper business model**									X	X									

3. E-newspaper

This section encompasses the theories of newspapers and e-newspapers. First the e-newspaper will be defined (paragraph 3.1). Then the history and current developments of the newspaper will be described with a focus on the Netherlands (paragraph 3.2, paragraph 3.3, and paragraph 3.4). After this, the costs and revenues of newspapers will be discussed (paragraph 3.5). The reasons for customers to read a newspaper will be explained (paragraph 3.5). Implications for journalism will be described in paragraph 3.6, after which the motivations for reading newspapers are given (paragraph 3.7). The main differences between age groups will be described, after which the section ends comparing the e-newspaper to the traditional newspaper (paragraph 3.8 and paragraph 3.9).

3.1 Defining e-newspaper

Ihlström et al. (2004) state that the concept of e-newspaper is a wide and not defined term. Ihlström and Kalling (2007) limit an e-newspaper to a newspaper service published on an e-paper device (like an e-reader), with the possibility to offer an experience to read news in a high quality at any time of the day. The properties of this e-newspaper are close to print on paper. This is something else than an e-newspaper offered online or PDF, because according to them, this is a digital replica of the printed edition (Ihlström & Kalling, 2007).

David Deacon (2007) uses a different definition. He states that an e-newspaper is a newspaper in digital formats, so it can be searched comprehensively, quickly and reliably. In many cases this can even happen remotely by subscribers (Deacon, 2007). Shapira and colleagues (2009) state that an e-newspaper can have many forms and can be accessed with computers and mobile devices like a phone or e-reader.

Considering the growth of technologies used to access the Internet as shown in table 2 (paragraph 3.6), portable devices like laptops and mobile phones, but also tablets make great means for reading e-newspapers. For instance NU.nl is read mostly through mobile applications (via mobile phones or tablets), instead of using the Internet. Unfortunately the definitions mentioned above are already quite old and somewhat outdated. Since so many (potential) customers nowadays have and use portable access to internet and applications, enormous potential lies in this field and therefore need to be incorporated in this researches' definition of the e-newspaper. This research combines and renews the definitions by Shapira and colleagues (2009) and Deacon (2007):

"*An e-newspaper is a newspaper in digital formats, so it can be searched comprehensively, quickly and reliably. An e-newspaper has the form of a webpage or mobile application and can be accessed with personal computers and mobile devices like a tablet, (smart)phone or e-reader*".

3.2 History of the printed newspaper

Somewhere in the mid 1400's the German Johannes Gutenburg invented the movable printing press. This allowed newspaper producers to start mass-producing and distributing printed news. The newspaper industry is grant and starting in the 17th century newspapers have been printed on paper the way newspapers are known today. Opregte Haarlemsche Courant, from Haarlem in the Netherlands, is the oldest newspaper worldwide which is still publishing. They started in 1656, whereas the first successful newspaper in the United States was the Boston News-Letter, in 1704 (Åkesson, 2009). In 1844, Samuel F.B. Morse invented the telegraph, after successfully experimenting with an electronic telegraph in 1837. This innovation offered new possibilities for gathering and spreading news. This in turn also lead to newspapers becoming the most important source of information for people and businesses in the industrialized world (Åkesson, 2009; Frewer et al, 1996). When radio and television appeared in the first half of the 20th century, these became a new source of information, an alternative to newspapers. This enforced newspaper producers to make their products more attractive to customers. The Swedish evening newspaper Aftonbladet started to publish on the Internet in 1994, challenging the traditional business model. This lead to possibilities like online newspapers, PDF-newspapers, and mail news services.

3.3 Newspapers nowadays

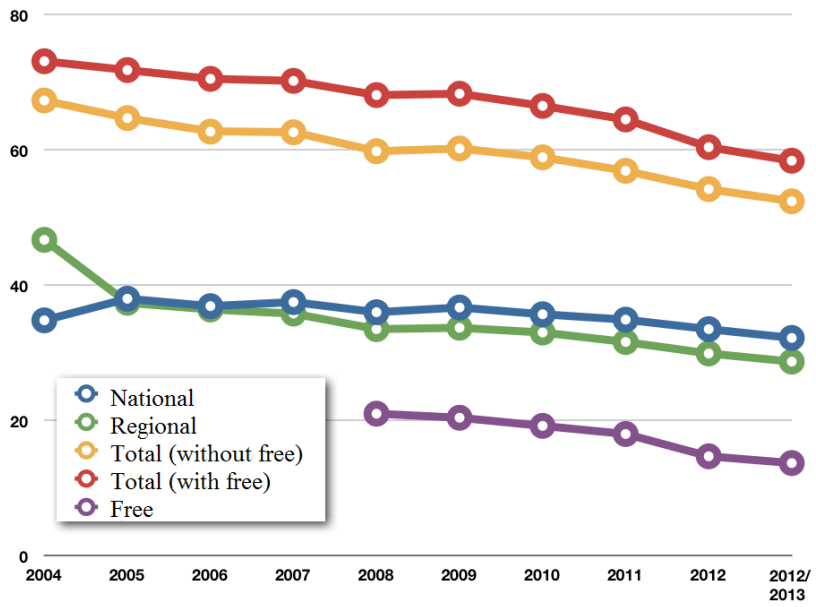
Today, most newspapers have an online version. Besides the opportunities that portable access to online content presents, it challenges the core business of newspaper producers. Change seems to be very difficult to achieve, and not much is done to expand the markets, target new customer segments, or provide new products and services in a response to the changing media landscape. As media economist Robert G. Picard argues: "To create lasting value, the business fundamentals of who they are, what they are, and how they serve readers and advertisers need to be examined by newspapers" (Picard, 2006, p.11). This will require innovation capability and entrepreneurship infrequently found in newspapers in recent years (Picard, 2006). The print model has become a strait jacket holding back innovative efforts in digital media. However, newspaper industry has been more innovative when it comes to

technology for production such as publishing systems, content management systems, and advertisement systems.

3.4 Newspapers in the Netherlands

In the Netherlands the amount of newspaper subscriptions have dropped since 2004 until 2013 as can be seen in figure 1. The total percentage of Dutch people reading newspapers in 2004 (either free, regional or national) has dropped over 10%, with especially the precious five years showing a downward slope. Even newspapers (like Metro and Spits) published for free are read less. Following the trend since 2009, one can estimate the end of printed newspapers as a common news source within a decade or two.

Figure 1 – Newspaper readers in the Netherlands from 2004 to 2013 in % of population

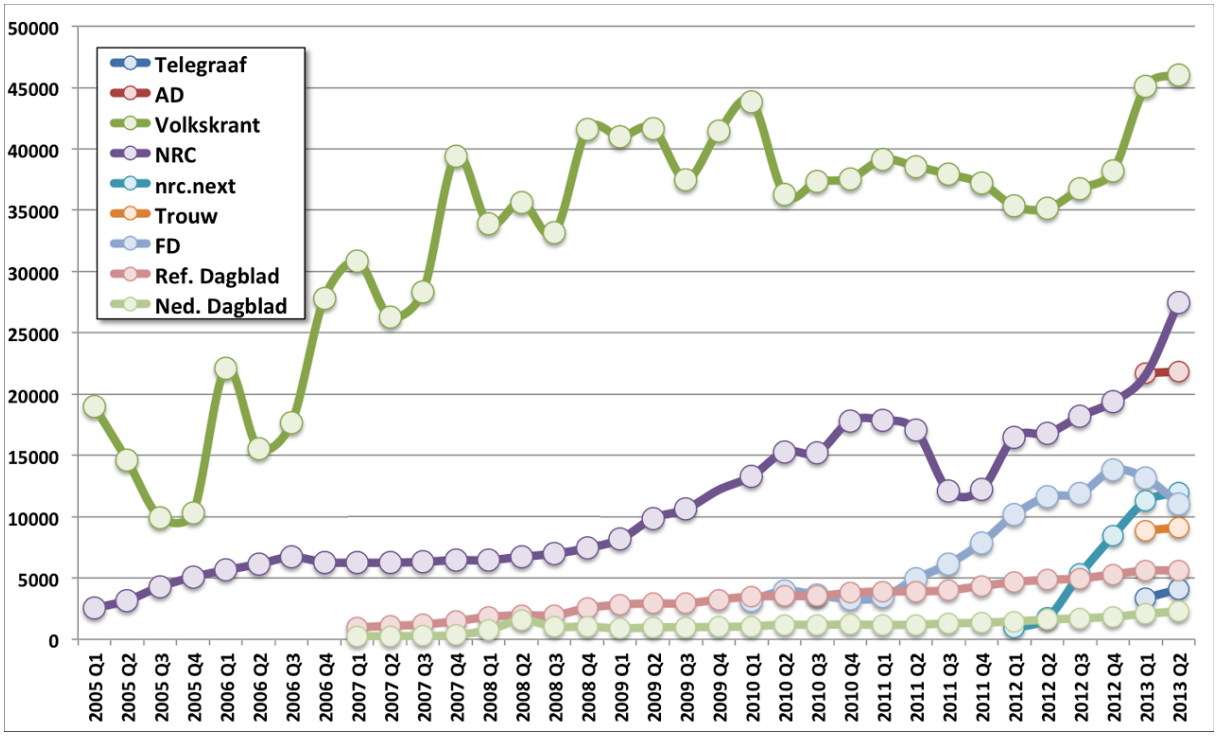


Source: Krantenstatistiek (2013)

Although newspaper producers are still struggling to come up with a suitable business model, in the Netherlands the subscriptions for e-newspapers have increased since 2005 (see figure 2). Krantenstatistiek (2013) shows that for nine major newspaper producers in the Netherlands, the number of subscriptions have increased. Notable is the recent rise in subscriptions for NRC, which is promising. The general growth has continued until at least the final quarter of 2013. Volkskrant has the largest number of subscribers to their e-newspaper with over 45.000 subscribers. Only for Financieel Dagblad the number of subscribers have dropped in 2013, all the other newspapers report increasing numbers.

Krantenstatistiek (2013) also shows that around 1% of the newspapers is sold across the borders, which makes the geographical scope of all newspaper mostly national.

Figure 2 - Subscriptions to e-newspapers per newspaper producer in the Netherlands

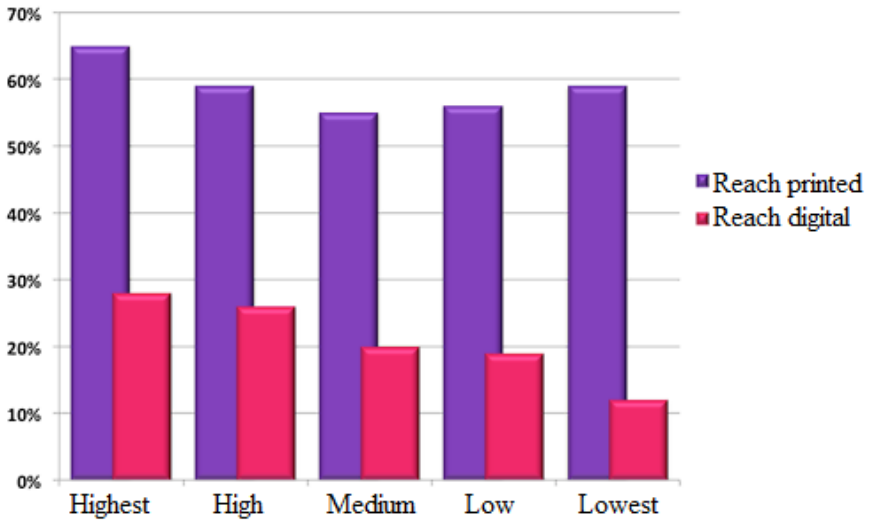


Source: Krantenstatistiek (2013)

Looking at another news providing medium in the Netherlands news, Nu.nl receives a billion page views per month. 68% of this number of page views comes from either a tablet or a mobile phone (Nu.nl, 2013). In 2012 it was stated that over 5 million unique visitors visit Nu.nl per month (Marketingfacts.nl, 2013). Looking at the billion page views this means that each unique visitor would view the site about 200 times a month.

De Telegraaf, having the highest number of online visitors from the traditional newspapers, reported that in 2013 3,7 million unique visitors per month visited their website, and 331 million page views (TMG, 2013). Paid traditional newspapers have a better reach than paid e-newspapers do, but looking at the direction both newspapers are going, it is mere a question of when, then if the e-newspaper will ever surpass the traditional newspaper. Figure 3 shows the reach of the two types of newspaper per wealth group. It can be seen that the digital newspaper is consumed relatively more by the wealthier groups.

Figure 3 – Reach of newspaper type per wealth group in % of group



Source: Krantenstatistiek (2013)

3.5 Costs and income for printed newspapers and e-newspapers

The newspaper industry has always been very profitable compared to other industries over time, until recently (Åkesson, 2009; Picard, 2006). According to Alexander and colleagues (2004), the newspaper industry always relied on two revenue streams: circulation and advertising. In 2000, 81% of the income came through advertising. The most important costs for traditional newspapers are printing, mechanical, administration, distribution, and editorial (see table 2).

Table 2 - Average percentage of operating budgets for the traditional newspaper industry

Average percentage of operating budgets		
Revenues	Advertising	65-80%
	Circulation	20-35%
Expenses	Newsprint	15-30%
	Mechanical	13-15%
	Administration	8-12%
	Distribution	9-10%
	Editorial	7-10%
	Advertising	5-6%
	Building and land	1-3%
	Promotion	1-2%

Source: Alexander and colleagues (2004)

Newspapers can gain from going digital, according to Thurman and Myllylahti (2009), who performed a case study in Finland. On the other hand they found that online traffic did not rise due to dropping the printed newspaper. The income from advertisement online is much lower than for printed newspapers (Kaye & Quinn, 2010). Above all the losses on advertising and subscription revenue can be even higher making a switch to online newspapers useless (Thurman & Myllylahti, 2009; Peters, 2011). It can be said on the other hand, that this has more to do with the lacking of a successful business model, and inexperience in this particular field, than anything else.

In 2009 it has been noted that for the New York Times, printing the newspaper on a yearly basis would cost twice as much as it would cost to present every subscriber an e-reader (Businessinsider, 2009). One can imagine that the absence of paper with e-newspapers reduces costs, or that delivery through digital channels reduces delivery costs made for delivering printed newspapers. Given the fact that newspapers already do rely on advertisement income, this should not be a big change when moving to e-newspapers. It is clear from table 2 that the most important costs can be avoided when moving to e-newspapers.

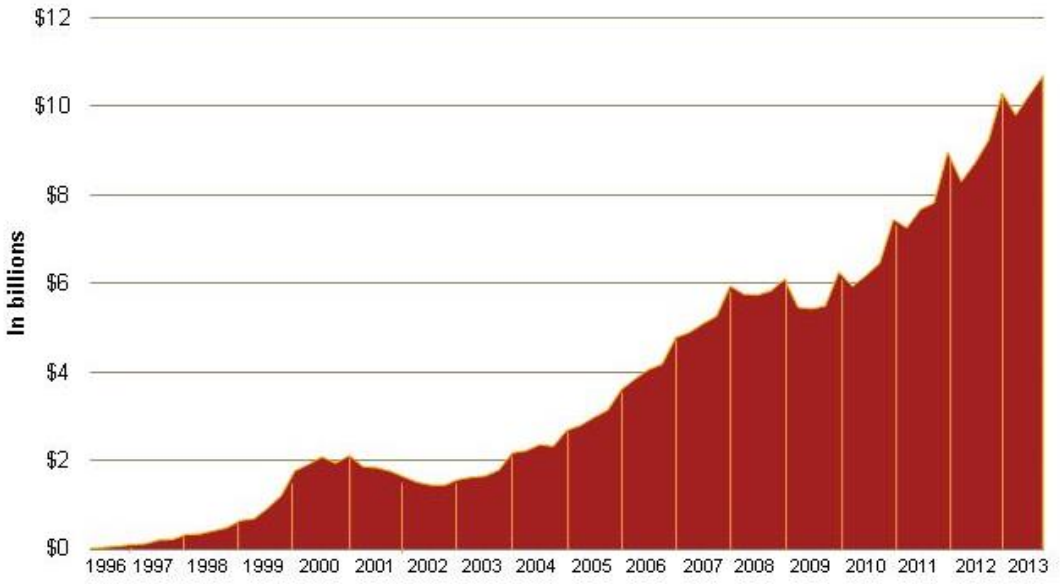
3.5.1 Subscriptions or free content

The subscription model for online contents has been tested unsuccessfully in the 1990's, and since then most content is available for free online (Chyi, 2005; Mings & White, 2000). This seems to be one of the biggest struggles to get by, in order to create a successful business model, since the income from advertisements have always been one of the most important forms of income for newspaper producers. It is stated by economists that a switch from offering free news to a model which requires paying will not work due to substitution, except if all newspaper producers increase their price (Chyi, 2005). According to a number of authors customers value the paid and free newspaper similarly, which makes the customer prefer the free content (Ariely & Shampan'er, 2004; Chyi, 2005; Pauwels & Weiss, 2008).

Receiving to revenue due to free content is not necessarily a problem, as NU.nl shows. NU.nl delivers its contents for free, and is able to survive mainly on advertisement income. Thus an e-newspaper producer does not need to get revenue from subscriptions, although this has been perceived to be the case in literature. It seems likely that a solution lies in finding more effective ways to yield income from advertisements and such. This thought is credible due to

the previous 10 years in the US where a large growth in online advertisement income is achieved (see figure 4). In the Netherlands, online advertisement is the fastest growing market, where in 2013 the revenues grew with 20% to 6 million euros (NOS, 2013).

Figure 4 – US quarterly revenue growth for online advertisement in billions of dollars



Source: IAB/PWC (2013)

3.5.2 Bundling or single articles

It has been suggested by Kaye and Quinn (2010) that a central newspaper bundler combines a certain topic from different newspapers, so that it shows all articles regarding a subject (for instance sports or politics), since this bundling should increase the willingness to pay (Shapiro & Varian, 1999). Others state that unbundling would be more logical, considering the lack of a cost saving with bundling in the case of online content (Daripa & Kapur, 2001). It is found that offering a similar way of bundling news online and offline leads to cannibalization, which is averted when the news is offered in different ways (Stahl et al, 2004). They also found that the income of bundled articles is higher than the income of single articles.

3.5.3 Current initiatives in the entertainment industry

Today it can be seen that with Blendle, eLinear and comparable initiatives in the music and video industry, companies still tend to believe that the customer is willing to pay. With ITunes, or Blendle, single items are sold to the customer. To maintain the selling platform, newspaper producers, or music producers, need to work together. The success of ITunes shows that it is not per se necessary to bundle items in order to sell them. It has to be noted though, that Apple had the convenience of locking customers using their Ipod, by charging

them relatively little for the music sold on ITunes (Johnson et al, 2008). Newspaper producers do not have this possibility.

Netflix was founded as an online video rental shop and now is very successful in streaming movies and shows for a certain price. In contrary to the newspaper industry, they generate few income from advertisement, because the video is delivered without commercials. This automatically raises the question whether a business model with commercials, but free video could compete with the Netflix business model. Other sellers, like eLinear and Spotify, too offer the possibility of accessing multiple items for a fixed price. This is more like bundling, which is said to be more effective. Spotify for example focused on the younger audience to penetrate the market. For Spotify, the most important activity is to maintain their platform. All in all, a trend can be seen where the idea as mentioned by Kaye and Quinn (2010) is leading, with a central seller offering items of many different producers to a customer, instead of producers selling their own items. All in all it seems that most initiatives still avoid delivering content for free.

3.6 Changes in journalism

A change in journalism is the usage of hypertexts and multimedia, instead of linear texts which still seems to be preferred. Hypertexts and multimedia allow for a more detailed coverage of news items, and offer the reader the possibility to access more background information with the click of a mouse button. These options are not well used by newspaper producers (Steensen, 2011). The access of readers also allows for reader participation or citizen journalism, which could make the role of a formal journalist less valuable. This type of journalism can happen either by allowing readers to publish news stories, or to allow readers to publish opinions in the form of blogs, or comment bars. The costs of these additions are relatively high, given the need for editing and moderating the news to fit the newspaper, prevent duplications, avoid misspellings or bad language, and selecting newsworthy articles (Thurman, 2008). Interactivity and reader participation is used more in the case of breaking news events (Steensen, 2011).

3.7 Why newspapers are read

Newspapers are read for four reasons: (1) *to search for specific information*, (2) *to get updated news*, (3) *for leisure reasons*, and (4) *as a habit* (Flavian & Gurrea, 2009). Flavian and Gurrea (2009) also state that both channels can survive alongside one another, avoiding cannibalistic effects, and that the newspaper industry should recognize the difference of the

digital channel by paying more attention to its peculiarities. More authors have mentioned other (similar) reasons for reading news: *to search for specific information*, *to know what is going on in the environment*, *entertainment*, *socialization*, and *to pass time* (Chung & Yoo, 2006; Lin et al., 2003). The question is, if with the current developments, where people get access to Internet and mobile applications everywhere, these motivations have become any different.

Based on the theories of Ronald Coase (1974) and others, Mullainhathan and Shleifer (2005) state that one explanation for the demand for news, either for reading, watching or listening, is the need to get information. The quality of information in news is the accuracy of it. When the accuracy of news is higher, customers value the source of information more. This accuracy rises due to pressure from readers, watchers or listeners, as well as other market forces like competition (Mullainhathan & Shleifer, 2005). On the other hand, based on non-economic authors a different view is presented. These authors state that private media do not solely sell news (and television programs, in the case of television media), but advertising space as well. This is done by providing not only information, but also by providing a lot of entertainment. Readers value that sources provide not only information, but also explanations, interpretations, persuasions and entertainment. This leads news providers to not only deliver correct and objective information, but prefer to tell stories that cohere and have a point of view (Mullainhathan & Shleifer, 2005).

In their own research Mullainhathan and Shleifer (2005) show that competition is not per se important in the accuracy of information. Instead, customer heterogeneity is important, since the customer segments influence the information in news media. If a news medium has a homogeneous customer base, news providers more or less write what their customers want to read in order to sell the news. This means that a reader that accesses all the news sources will get an unbiased perspective on information. Thus when a news provider serves a heterogeneous customer base, the information is expected to be most accurate (Mullainhathan & Shleifer, 2005).

Reasons for reading the e-newspaper instead of the traditional newspaper and vice versa are found by Lin and colleagues (2011), Papies and Clement (2008), and Zhu and He (2002). These reasons are derived from the book *Diffusion of innovations* by Everett Rogers, which was first written in 1962. The choice for one newspaper type over the other is made based on:

- *Relative advantage*: To what extent the e-newspaper is perceived to be better than the traditional newspaper, either in monetary terms or in convenience.
- *Compatibility*: To what extent the e-newspaper is perceived to be compatible with the current needs, facilities and experience of the user, compared to the traditional newspaper.
- *Complexity*: To what extent the e-newspaper is perceived as easier to use than the traditional newspaper.
- *Observability*: To what extent the results of choosing the e-newspaper are visible to the user and others.
- *Trialablity*: To what extent the e-newspaper can be experimented with.

3.8 Difference between age groups

Customers of media have become selective and active participants in the production and generation of media content. Young customers are more and more moving to online media, thereby creating an environment where substantial audience segments have everyday experiences with reading and using online news services (De Waal & Schoenbach, 2010). Skogerbø and Winsvold (2011) stated that "*print and online audiences read different types of content and were divided according to age, social background, gender and political activity, too*". Bennet (2012) wrote about a difference between the younger and older generation: "*The digital generation gap refers to the proposed gap between children and adults […] due to young people's natural ability to adapt to new technologies more successfully than older generations.*".

The difference between age group when looking at the use of Internet are getting smaller, according to research in the Netherlands and in the US. In the Netherlands, 97% of its citizens have access to the Internet in 2013, compared to 83% in 2005. Especially the access to internet via notebooks and mobile phones has increased dramatically (see table 3).

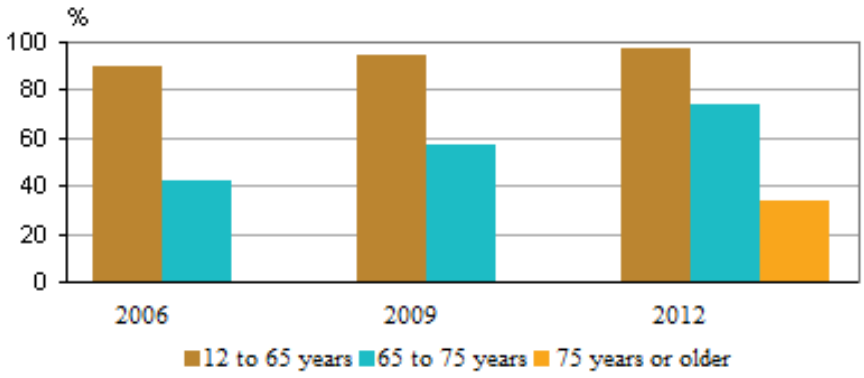
Table 3 – Usage of technologies to access the Internet

	2005	2013
Access to internet	83 %	97 %
Personal computer	82 %	95 %
PC / desktop	78 %	71 %
Notebook	22 %	79 %
Mobile phone	11 %	72 %
Other	4 %	44 %

Source: CBS (2013)

In the Netherlands, older generations are starting to access the Internet more and more, in recent years. Although younger generations still access the Internet more, the differences are getting smaller (see figure 5). This is shown in media like Facebook, where younger audience now move away from this medium, due to the increased presence of older users, particularly their parents (NU.nl, 2013).

Figure 5 - Access to internet per age group



Source: CBS (2013)

This indicates that in time older newspaper readers may move towards online media as well. The large rise in older newspaper readers underline the trend of moving towards e-newspapers in general across all generations. But still it can be expected that currently the younger generation is moving towards e-newspapers sooner than the older generation.

3.9 Differences between traditional newspaper and e-newspaper

The e-newspaper differs from the traditional newspaper in the form it is delivered in. The e-newspaper exists in digital form, where the traditional newspaper exists in physical form. This allows for the e-newspaper to deliver its contents almost 'live', where the traditional newspaper often is lagging a day. Another difference is that the e-newspaper is accessible

almost everywhere, even when on holiday, as long as there is the user has access to the internet, where the traditional newspaper only can be read when it is brought along. The e-newspaper can be altered to the wishes of the user, where the traditional newspaper is standardized. In the same vein, the e-newspaper allows for delivering single articles to the customer, where the traditional newspaper needs to be bundled.

Åkesson and Ihlström (2008) found pros and cons of today's newspapers, comparing traditional newspapers with e-newspapers over two channels (mobile and online), as can be seen in table 4. Nowadays, most of the cons for online and mobile news seem to be absent. Income through online news has increased tremendously, as can be seen by looking at the online subscriptions. Smartphones allow for accessing news apps, as well as news websites, and are nowadays often just as fast as personal computers, when it comes to accessing news. With the rise of the tablet and smartphone, the screen size also has improved. Most newspapers now have a fine and clear overview because of this.

Table 4 - Pros and cons of three newspaper channels

Channels	Pros	Cons
Print	No power consumption needed Shareable Durable Portable Dispensable Scannable Good overview Long term and loyal customer relations	Old news Waste of paper No interactivity Geographically limited Expensive production and distribution
Online	Up to date Always on Interactive Searchable Archiving No space limitations No geographical borders for distribution	Uncertain business model (digital content is regarded as free) Not mobile Poor overview Difficult to know who the reader is Lost control over distribution
Mobile	Anytime, anywhere Push and pull Immediacy Personalization High penetration	Expensive Small screen Very poor overview Slow (most people still have slow phones) Many diverse devices Lack of standards Bad revenue share Unsatisfying business model Lost control over distribution

Source: Åkesson and Ihlström (2008, pp. 138)

Nowadays, the mobile and online news newspaper channels are characterized by some of the pros mentioned for printed newspapers in the table above. News articles are easily sharable, by copying a hyperlink and sending it to friends, family, or colleagues by instant messages, or networking websites. Using mobile phones or tablets makes the newspaper just as portable as

printed newspapers are, and the possibilities of deeper customer relationships allow for customer loyalty. On the other hand, the mentioned cons of printed news still exist, where the business model of this medium seems to become more uncertain. Therefore the figure above seems to be outdated, and a 2014-figure would provide a more positive outlook for the e-newspaper.

4. Business model

This section describes the concept of the business model. First the importance of a business model will be stated (paragraph 4.1). Then the business model will be described and each part will be discussed (paragraph 4.2 to paragraph 4.7). The Innovation/Value proposition part, and the Customer relationship part end with guiding questions presented by Osterwalder and Pigneur (2010) which will be used later in this research to apply to the e-newspaper. To be able to use the interviews of potential customers of the e-newspaper better, the Value proposition canvas by Osterwalder and colleagues (2012) is described in paragraph 4.8. Also the e-business model will be reviewed in this section (paragraph 4.9), which will be applied to the e-newspaper too (paragraph 4.10).

4.1 Importance of a business model

Chesbrough and Rosenbloom (2002) wrote that both established firms as startups use a specific business model to take their technology to market. This is necessary because a business model provides powerful ways to understand, analyze, communicate and manage strategic-oriented choices among business and technology stakeholders (Al-Debei & Avison, 2010). In some cases the current business model used by a company does not fit the circumstances of the innovation, which creates the necessity of finding the right business model, in order to capture value from that technology. If this does not happen properly, these technologies or innovations will yield less value to the firm than they might have otherwise (Chesbrough & Rosenbloom, 2002). Chesbrough (2010) wrote that in order to remain competitive, companies need to be able to experiment with different business models. They also must be willing to discover in order to model uncertainties and update financial projections. Although experiments may fail, the company will benefit in the long run due to the gaining of new knowledge and experience (Chesbrough, 2010).

4.2 Defining business model

Morris and colleagues (2005) wrote that there is confusion in terminology, where besides business model, terms as strategy, business concept, revenue model, and economic model are often used interchangeably. Also the business model has been referred to in many ways, like design, pattern, plan, method, assumption, and statement (Morris et al, 2005). Nevertheless, since 1995 the number of articles about business models in both academic as non-academic journals has increased to around 200 articles per year and 1,000 articles per year in academic and non-academic journals respectively (Zott et al, 2011).

The business model relates to some managerial concepts. It encompasses the most important parts of a business plan, but it deals with some start-up and operational issues that transcend the model. It is not a strategy itself, but it does include a number of strategy elements (Morris et al, 2005). Al-Debei and Avison (2010), Chesbrough (2010), Morris and colleagues (2005), Osterwalder and colleagues (2005), and Rosenbloom (2002) use similar concepts to encompass a business model (see the following paragraphs).

Osterwalder and colleagues (2005, pp. 17–18) define business models as:
"*A conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value relationship capital, to generate profitable and sustainable revenue streams*".

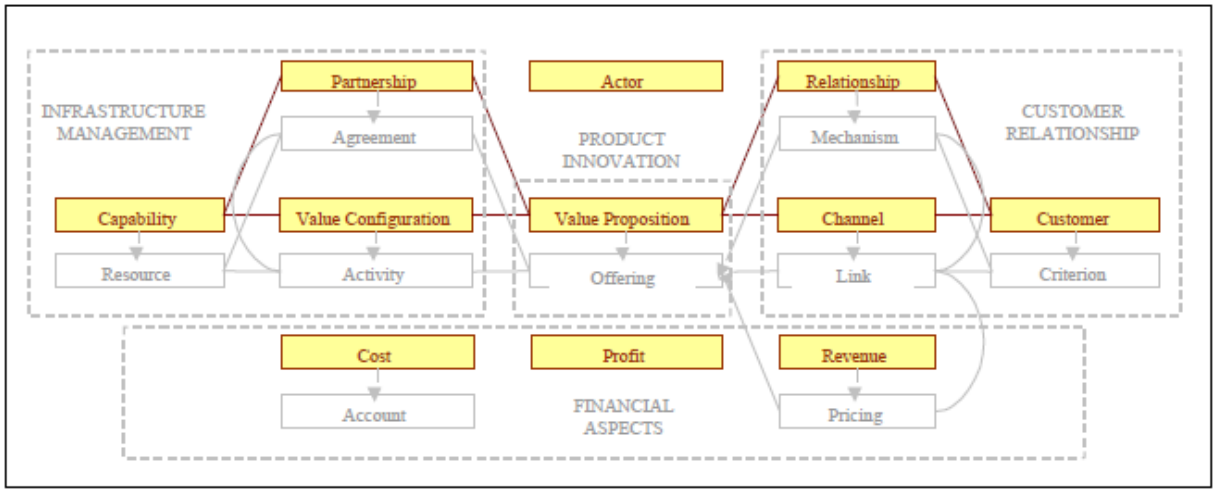
4.3 Functions of a business model

The functions of a business model are to (Chesbrough & Rosenbloom, 2002):

- Articulate the "value proposition": the value that is created for the user by the product that is offered, based on the technology;
- Identify a "market segment": the group(s) of users by which the technology is supposed to be useful and for what purpose, while specifying the revenue generation mechanism(s) for the firm;
- Define the structure of the "value chain": what is needed to create and distribute the offering, and to determine the complementary assets that are needed to support the company's position in the chain;
- Estimate the "cost structure" and "profit potential": given the value proposition and value chain structure, which costs and revenues can be expected by producing the offering;
- Describe the position of the company within the "value network": suppliers and customers are linked, including identification of potential companies to collaborate with and competitors;
- Formulate the "competitive strategy": by which innovating the company will gain and hold competitive advantage over its rivals.

As can be seen, a business model encompasses technical inputs and economic outputs. These functions can then be translated into four parts: Infrastructure management, Product innovation, Customer relationship, and Financial aspects (Osterwalder & Pigneur, 2002; Osterwalder & Pigneur, 2004). In Figure 6 the business model according to Osterwalder (2004) can be seen.

Figure 6 – Ontology of a business model



Source: Osterwalder and Pigneur (2004, pp. 69)

The following paragraphs will explain these blocks in more detail.

4.4 Product Innovation/Value proposition

The first place to start building a business model is at the value proposition. According to Morris and colleagues (2005) there will not be a business that has not defined its value proposition. They state that the creation of value provides a justification for the business entity. Johnson and colleagues (2008) call it 'Customer value proposition', stating that a successful company is a company that knows how to create value for its customers. It has been defined in a likewise way by Osterwalder (2004), who defines value proposition as the way that items of value (like products and services but also complementary value-adding services) are offered and packaged in order to fulfill the needs of customers. Simply put, it states the value created for users by an offering based on technology (Chesbrough, 2010).

Johnson and colleagues (2008) state that a value proposition is a way to help customers to get an important job done. 'Job', in this case, is defined by them as a fundamental problem in a given situation that needs a solution. A company needs to start understanding the job, and then the offering can be designed. This offering needs to be designed with the job in mind. To make sure value proposition is generated most precise, it is necessary to keep in mind four

barriers to customers getting a job done: wealth issues, access, skills or time (Johnson et al, 2008).

Osterwalder (2004) states that an e-business can reach many customers with ease, and provide them with very rich information which can be in the form of multimedia data, personalized information and/or customized products. This requires innovation, due to the fact that successful products are rapidly copied due to the globalization of competition. This innovation goes beyond the bundles of products and services, but also covers the way a company differentiates itself from its competitors. Osterwalder (2004) characterizes an offering by a description, reasoning, value life cycle, value level, and price level.

Osterwalder and Pigneur (2010) have introduced the "*Business model canvas*", a framework usable to create a business model. This canvas can be seen in Appendix A: Business model canvas. Here only the most important questions that belong to the Innovation/Value proposition part will be stated:

- What value do we deliver to the customer?
- Which one of our customer's problems are we helping to solve?
- Which customer needs are we satisfying?
- What bundles of products and services are we offering to each Customer Segment?

4.5 Customer relationship

Customer relationship concerns multiple aspects. It entails the customer segments, the customer relationships, and the channels used. It starts with the nature and scope of the market in which a company competes. In order to state this, a company needs to know to whom it will sell and where in the value chain the company will operate (Morris et al, 2005). Chesbrough (2010) states that customer relationship states to whom the offering is useful, how the company goes to the market and reaches its customers, and how the company will interact with their customers. The types of customers, their geographic dispersion, and their requirements of interaction influence the way a company is configured, the resources it needs, and the offerings it sells. Not succeeding in defining the market properly by a company is a key factor associated with venture failure (Morris et al, 2005). Osterwalder (2004) states that the customer relationship block covers all customer related aspects. In this part, it is necessary that a company choses its target customers, the channels with it will use to get in touch with

their customers and the kind of relationships it would like to establish with its customers. It described how and to whom it delivers the value proposition (Osterwalder, 2004).

Chesbrough (2010) states that ICT has had a very strong influence on the customer relationships between companies and customers, and the way that these are organized. Due to the usage of databases in managing customer related information, the customer relationships could transform. The Internet especially increases the number of possibilities for companies to interact with customers. This has to do with the falling costs and improving performance of ICT, which contributes to gathering and diffusion of customer- and product-related information respectively. The usage of data warehouses, data mining and business intelligence are examples of technologies that enabled companies to increase their insight in the buying behavior of their customers, and to improve their customer relationships (Chesbrough, 2010). According to Osterwalder (2004) ICT-based channels, and particularly the Internet, have the possibility of complementing existing channels, instead of cannibalizing them. But is should be kept in mind that selling through multiple channels at the same time can very well cause conflict if they compete to reach the same customers. This increases the need to conceptually approach channels (Osterwalder, 2004).

Osterwalder and Pigneur (2010) stated the following questions for the customer relationship part of a business model:

- For whom are we creating value?
- Who are our most important customers?
- Through which Channels do our Customer Segments want to be reached? How are we reaching them now?
- How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?
- What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
- Which ones have we established? How costly are they?
- How are they integrated with the rest of our business model?

4.6 Infrastructure management

Infrastructure management as well as customer relationship is about more than one aspect. It entails the business model's capabilities and resources, partnerships, and channels between

them. According to Morris and colleagues (2005) a core competency is an internal capability or skill set that a company possesses better than others. Key resources can be either people, technology, products, facilities, equipment, channels, and brand which is necessary for a company to bring the value proposition to the targeted customer (Johnson et al, 2008). Key processes are alike, these are operational and managerial processes that allow companies to deliver the value to the customer, and enable them to successfully repeat and increase this delivery in scale (this can vary from training to rules and norms). According to Osterwalder (2004) the infrastructure management defines how the company will create its value and how the company will maintain its customer relationships. For this, it is needed to describe the necessary abilities to provide the value proposition. This encompasses in-house capabilities and resources of a company, as well as the capabilities and resources acquired through the firm's partner network (Osterwalder, 2004).

Osterwalder and Pigneur (2010) stated the following questions for the infrastructure management part of a business model:

- What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?
- What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?
- Who are our Key Partners?
- Who are our key suppliers?
- Which Key Resources are we acquiring from partners?
- Which Key Activities do partners perform?

4.7 Financial aspects

Morris and colleagues (2005) state that financial aspects are a core element of a companies' business model, which provides consistent logic for earning profits. Johnson (2008) state that it is the blueprint defining the way the company will create value for itself, which providing value for its customers. It consists of a revenue model, a cost structure, a margin model, and resource velocity. They state that it is better to start with the price for the value proposition and work backwards from there. Chesbrough (2010) defines financial aspects as the cost structure and profit potential. Osterwalder (2004) states that financial aspects describe the way the revenue flows and the pricing mechanisms of a firm, which is in other words the way that

the company makes money through the earlier mentioned three blocks (value proposition, customer relationship, and infrastructure management).

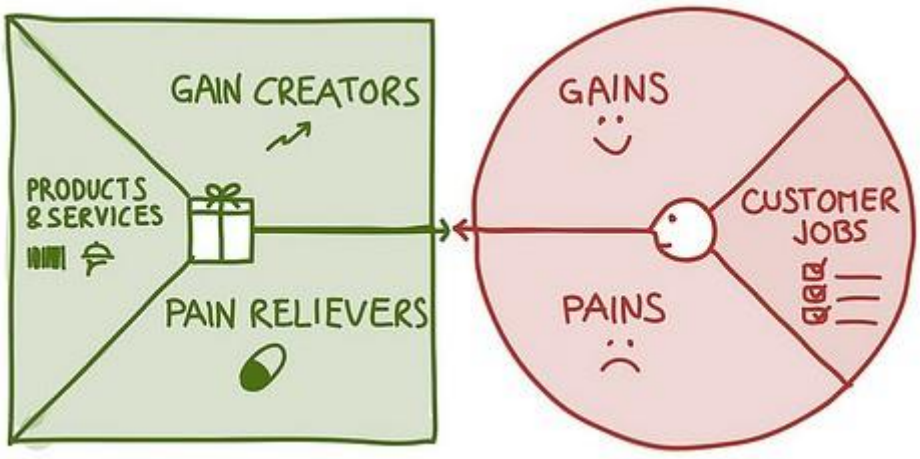
Osterwalder and Pigneur (2010) stated the following questions for the financial aspects part of a business model:

- What are the most important costs inherent in our business model?
- Which Key Resources are most expensive?
- Which Key Activities are most expensive?
- For what value are our customers really willing to pay?
- For what do they currently pay?
- How are they currently paying?
- How would they prefer to pay?
- How much does each Revenue Stream contribute to overall revenues?

4.8 Value proposition canvas

Osterwalder, Pigneur and Smith (2012) introduced the Value proposition canvas, as an addition to the Business model canvas as described in the previous paragraphs. The Value proposition canvas focusses on the customer and the value provided to it, and can be seen in figure 7. Mainly it helps to identify the jobs that the customer is trying to get done on functional level, social level, emotional level, and which needs are being satisfied. The value offered to get the job done comes with pains and gains. Pains are negative emotions, undesired costs, risks, and undesired situations the customer might experience when getting the job done. Gains are benefits that the customer expects, or which he or she can desire, or would be surprised by. On the other side you have the offer consisting of products and services, for which you need to know exactly what value is delivered (what jobs are done), how pains are avoided and gains are created for the customer.

Figure 7 - Business model canvas

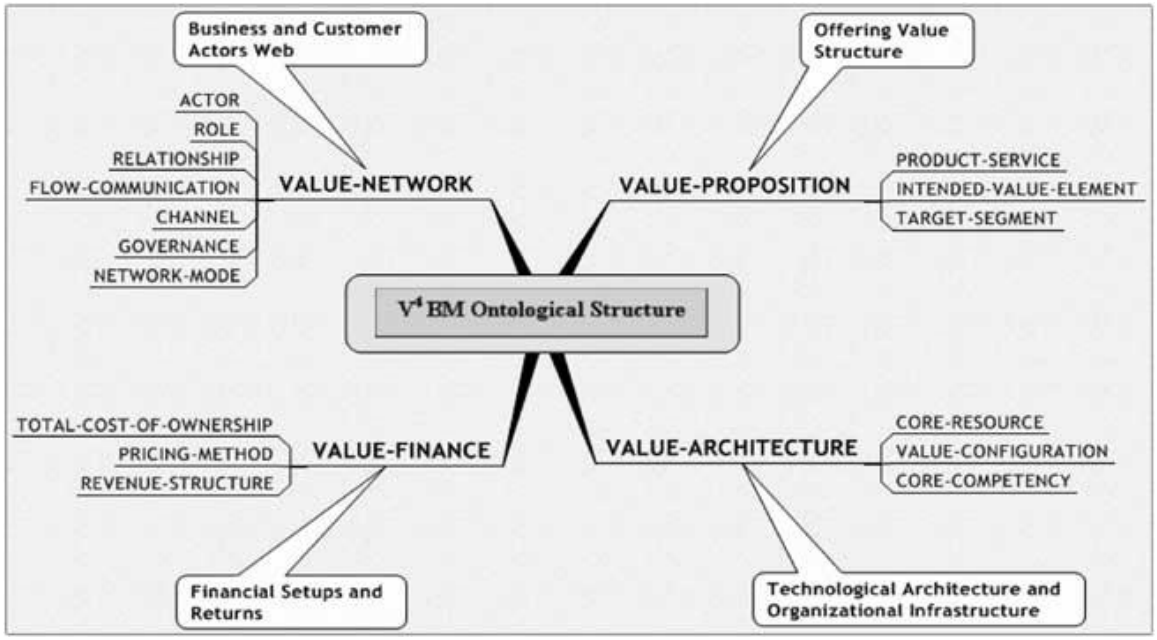


Source: Osterwalder and colleagues (2012)

4.9 E-business models

The latest trend in business model literature is a growing emphasis on business models for e-businesses or "e-business models" (Zott et al, 2011). It means that a business model is created for companies that do business electronically. It involves e-commerce, e-markets, and Internet-based business and is about companies that conduct commercial transactions with their customers and partners over the Internet. But it excludes companies that merely use websites in order to display information for their products and/or services (Zott et al, 2011). Based on IS-related literature Al-Debei and Avison (2010) provide a complete ontological structure (V^4) of the business model concept where value proposition, value network, value architecture and value finance are the main dimensions (see Figure 8), which are similar to Osterwalders' four parts. They also state that "It can be depicted as an intermediate layer between business strategy and ICT-enabled business processes in order to fulfill the missing link created by the complexity of the digitalized environment (Al-Debei & Avison, 2010, pp. 374)". This shows the necessity for e-businesses to have a well worked out business model.

Figure 8 - The V4 ontological structure of Business Models



Source: Al-Debei and Avison (2010, pp. 368)

Brousseau and Penard (2007) propose an analytical framework to compare various business models for producing information goods and digital services. They do this based on three dimensions: the economics of matching, the economics of assembling, and the economics of knowledge management. They state that a digital business model combines the three roles played by a platform. A pure market intermediary (like a market place), a pure assembler (like a telephone company), a pure knowledge manager (like an online encyclopedia), or a combination of the three. This leads to different trade-offs (Brousseau & Penard, 2007):

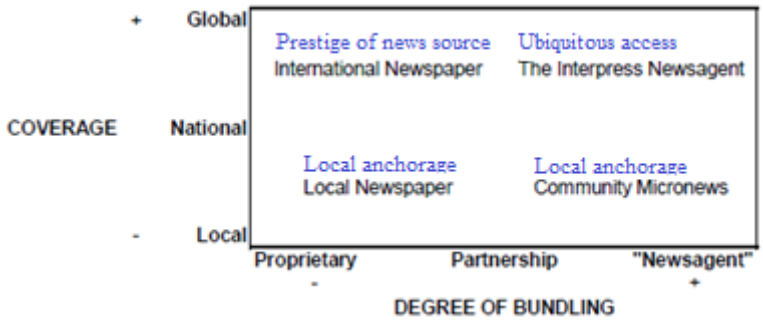
- The degree of standardizing (intermediary)
- The degree of competition (intermediary)
- The width of set of functionalities/modules (assembler)
- Free information and pollution, or a higher quality and a fee (assembler)
- The degree of organizing the exchange of information (knowledge manager)
- The degree of accessibility of the information (knowledge manager)

4.10 E-newspaper business models

While few literature has been written about e-newspapers, Ihlström and Kalling (2007) have created a business model framework for the introduction of the e-newspaper. They created four typical business models in their framework: *International newspaper*, the *Interpress newsagent*, *Community micronews* and *Local newspaper* (see figure 9). These are based on coverage and degree of bundling. The coverage means whether or not the newspaper producer

chooses to cover regional, national or global news and the degree of bundling means that whether or not the newspaper producer produces its own news, or works together with other newspaper producers, or obtains all its news from other sources. This has been based on a small number of interviews they performed with key-figures within newspaper producers. Ihlström and colleagues (2008) used these four typical business models, to find out potential customer segments, by doing an online survey with 3,626 respondents. They found three aspects of customer preferences: *Ubiquitous access* (access everywhere), *Prestige of news source* (credibility and image of media provider), and *Local anchorage* (priority is local news and advertising). These can be incorporated in the before mentioned typical business models as can be seen in figure 9. This model presents us insights in the main directions newspapers can go, and some preferences that customers might have.

Figure 9 - Typical business models for e-newspapers



Unfortunately, the model seems to have become obsolete, given the changes in the previous five years. The implications for one's business model are unclear, since the model only gives a vague idea of the sort of reader a newspaper may have. Also, looking at recent trends with bundlers that sell articles of many different newspapers and journals, this business model framework gives little information on how to build a business model for these initiatives. But also the content seems outdated. For instance, the model implies that one of the four types of news readers want to have access everywhere (ubiquitous access), whereas one can imagine that since 2008, given the rise of technologies with internet access, almost all customers want access everywhere. Their definition of an e-newspaper is limited to those papers read on e-readers, and disregards online newspapers for PC's, tablets or mobile phones, which have become more popular and used since 2008. Therefore, it cannot be generalized to the entire e-newspaper population. This means that for the entire e-newspaper field a business model framework is still lacking.

5. Research methods

The main research question that has to be answered is: *"What should be the business model of the e-newspaper, looking from a customer perspective?"*

In order to answer the research question interviews are done with newspaper readers in the Netherlands. The answers from the interviews give insights in the potential and requirements of e-newspapers from a customer perspective. This is done by looking at the relationships (if any) between customer specific aspects and their newspaper preference. These will give an idea of what the interviewees like, dislike, need and do not need in e-newspapers. This aligns with section 4 about business models, where the customer is put central, and the offered value needs to be aligned with its jobs, relieving its pains and supporting its gains (see among others paragraph 4.8).

The interviews have been done based on the PRIMA/USE IT model by Landeweerd (2013). Therefore the PRIMA/USE IT model will be described in paragraph 5.1. Among more theories, this theory is based on the TAM model by Davis (1989) and UTAUT model by Venkatesh (2003) which will be explained in paragraph 5.2. At last the steps of analyzing the results will be stated (paragraph 5.3).

5.1 Interviews

The interviews are created based on the research method called PRIMA or USE IT as described by Landeweerd (2013). This model includes knowledge on the TAM-model and the UTAUT-model (see paragraph 5.2), the Information System Success Model of Delone and McLean (2003) and the innovation diffusion model of Rogers (1983). The model can be separated into an innovation part and a domain part. The innovation part exists of process and product, which are used to determine the success of an innovation. The domain part exists of a user domain and an information technology domain. These domains cover factors concerning end-user adoption measurements, as well as quality of implanted system measures. In general, five areas of analysis make up the PRIMA model: Process, Relevance, Information needs, Means and people, and Attitude. This model for interviewing is very suitable for the study of adoption of e-commerce services according to Landeweerd (2013).

The interview consists of an open questions part and a multiple-choice questions part. The open questions provide a more detailed insight in the customer perspective on e-newspapers

and e-newspapers compared to traditional newspapers. The multiple-choice questions provide the possibility to test statements and give a more objective overview of the customer perspective. The interviews are done multiple interviewers, all using the same instructions and interview model. The interviewers were ordered to create a sample as representative as possible.

40 Interviews have been held in total, consisting of open questions as well as multiple-choice questions. In total 29 of the 40 interviews held are found to be useful. This is based on whether the multiple choice questions have been answered in a way that allows for analyzing, and whether or not the interviews provide enough information. The average age of the interviewees is 40 years old of which 67,9% is male and 32,1% is female. The youngest case is a 16 year old woman and the oldest case is a 78 year old man. There is 1 case for which the age is unknown.

5.2 UTAUT model

To analyze the probability that people will use a (new) technology, Davis and colleagues (1989) developed the Technology Acceptance model (TAM) based on the variables 'perceived usefulness' and 'perceived ease of use'. In this model, (potential) users prefer an useful technology over an easy to use technology (Davis et al, 1989). Based on TAM Venkatesh and colleagues (2003) developed the Unified Theory of Acceptance and Use of Technology (UTAUT). This model starts with three variables that directly influence the intention to use, which are:

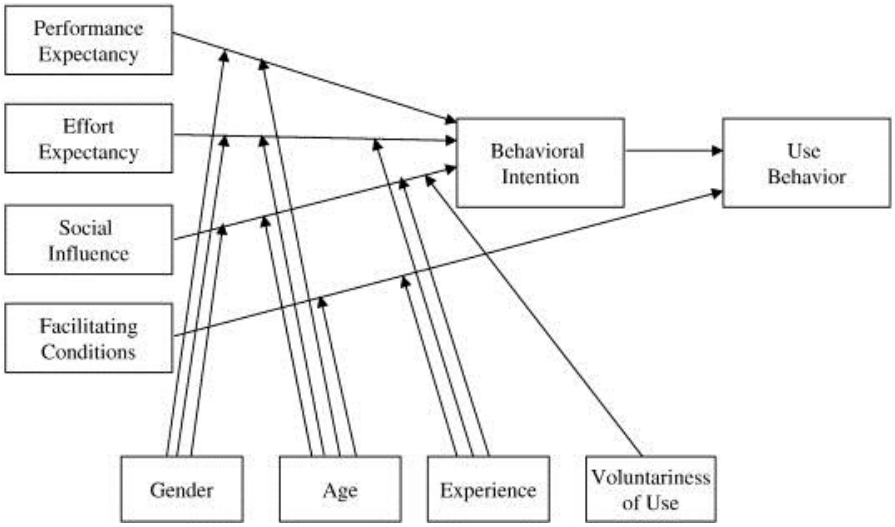
- *Performance expectancy*: To what extent the reader believes the technology will do what it is supposed to do.
- *Effort expectancy*: To what extent the reader believes the technology is easy to use.
- *Social influence*: To what extent the reader believes that people in their life that they find important think the reader should use the technology.

UTAUT also states two determinants that are associated with the intention to use, which are:

- *Facilitating conditions*: To what extent usage of the technology is facilitated.
- *Behavioral intentions*: The attitude of the user towards the new technology.

The connection between these five variables and the intention to use is in some degree influenced by *gender*, *age*, *experience* and *voluntariness of use*, as can be seen in Figure 10.

Figure 10 - The UTAUT model



Source: Venkatesh and colleagues (2003, pp. 447)

Based on the UTAUT model it can be expected that Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions have an influence on the type of newspaper that a customer is likely to read.

5.3 Analysis

The data collected for this research is gathered in a qualitative research with some quantitative questions. Interviews have been performed by students of the University of Twente course *E-business*. 29 Interviewees have completed the interviews which allow for performing analysis via SPSS, which is too low to perform proper quantitative analysis. This research will use the interviews for qualitative analyzing, and uses the quantitative questions in order to support or question the findings.

5.3.1 Hypotheses and questions

Based on the theory section and previous paragraphs, numerous hypotheses can be formulated. For example, based on the UTAUT model, it can be expected that the mentioned variables all to some extent influence the preference for either the traditional newspaper, or e-newspaper. Age is expected to negatively influence the preference for the e-newspaper, and positively influence preference for a printed newspaper. Social influence and performance expectancy are expected to positively influence the preference for any type of newspaper. The required effort is expected to influence the newspaper preference negatively. Looking further than just the UTAUT model, it can also be expected that the customer which prefers either type of newspaper perceives this value proposition to deliver fewer pains and more gains.

Furthermore it will be important to find out whether or not the jobs (or motivations to read) of the respondent influence the choice of newspaper type, whether the interviewee is willing to pay, whether the interviewee associated paying with higher quality, and how the product should be delivered (bundled or single, from one newspaper or from a "central newsstand").

5.3.2 Variables

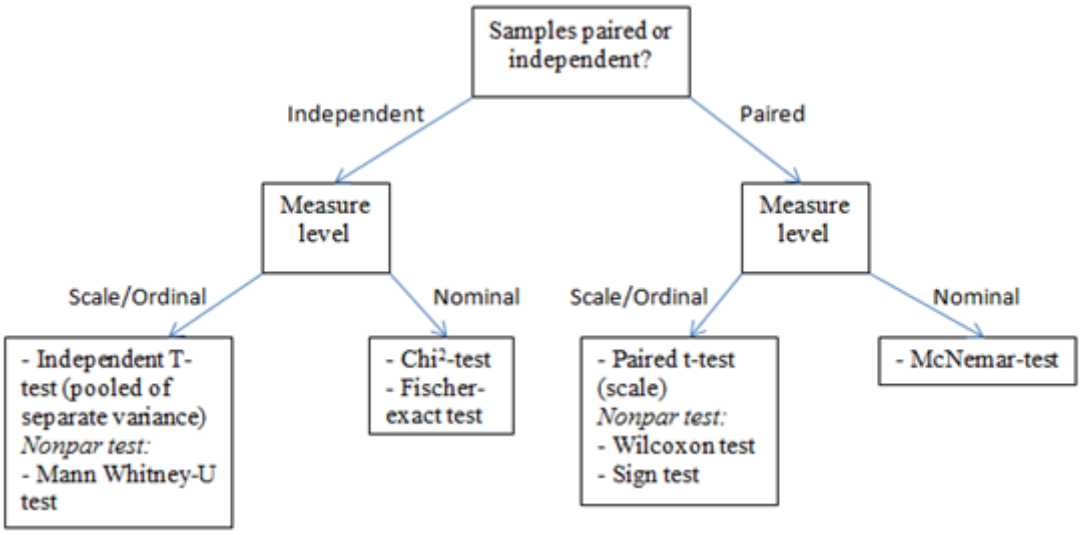
Variables used in the analysis are derived from the theories stated in the previous sections, as well as paragraphs. The UTAUT model presents us clear variables that allow for measuring the interaction with newspaper preference. Therefore these variables, and the variable "newspaper preference" will be used in the analysis. When performing quantitative analysis the variables need to be transformed to dichotomous level for performing analysis (for instance *Age* is split by cut point = median into a group called "*Older*", and a group called "*Younger*"). The main variables used in this research are:

- *Age*: The age of the user. Interviewees have been categorized either as "*Younger*" or "*Older*" with a cut point at the median (46 years old) of the sample.
- *Newspaper preference*: The likelihood of the user choosing and preferring either type of newspaper. This is studied by finding the most likely type of newspaper the interviewee will read, and the preference he or she has for either type of newspaper on a Likert 5-point scale.
- *Perceived ease of use*: The easiness of the e-newspaper, according to the user. This is measured by asking the interviewee if he or she perceives the e-newspaper as easier or less easy than a traditional newspaper, using a Likert 5-point scale.
- *Perceived performance*: The quality of the e-newspaper, according to the user. This is measured by asking the interviewee if he or she perceives the e-newspaper as more or less likely than a traditional newspaper, to achieve the goals of the interviewee when reading news, using a Likert 5-point scale.
- *Facilities*: The facilities of the user to access the e-newspaper using internet. This is measured by asking the interviewee which technologies he or she uses to access the internet (none, desktop, notebook, tablet, phone). This has been categorized in a group that uses 0 or 1 technologies, and a group that uses 2 or more technologies.
- *Social influence*: The influence of the social environment of the user on its preference for either type of newspaper. This is measured by asking the interviewee which type of newspaper their social contacts would prefer him or her to use.

5.3.3 Quantitative analysis

A hypothesis is accepted when the p value is smaller than $\alpha = 0{,}05$. This means that the chance that the result found is found by coincidence should be smaller than 5% in order to be accepted. A hypothesis is categorized as 'doubtful' when the p value is between 0,05 and 0,20 (a chance of 1 in 5 that the results are based on coincidence). If a p value above 0,20 is found, the relationship is said not to exist, and thus the null hypothesis will be accepted. In SPSS, the differences between two groups are analysis based on the decision tree in Figure 11.

Figure 11 - Decision tree for SPSS testing



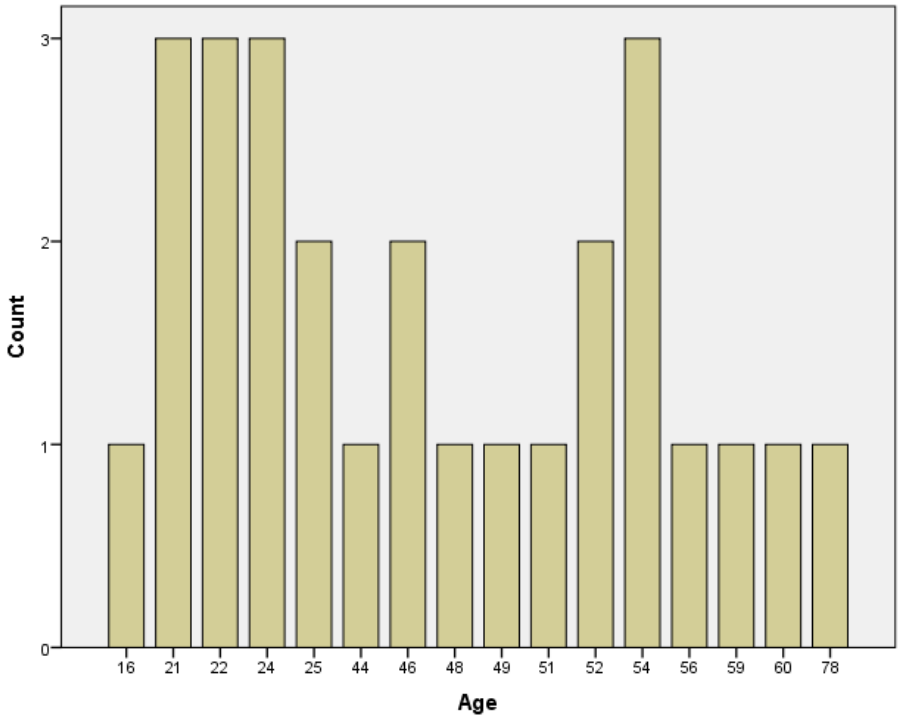
6. Results

This section starts with an overview of the results of the interviews about (e-)newspapers based on the PRIMA USE-IT module. Each paragraph will start with an overview of the most important statements made by interviewees regarding the subject. Then the results of the SPSS analysis will be given, to present a most in-depth overview. For a full description of all the quantitative results of this research, see Appendix B: Quantitative analysis. Here all figures and tables of this research are presented, but note that the sample is too small for doing proper research that way.

6.1 Characteristics of interviewees

68% of the interviewees is male and 32% of the interviewees if female. The average age of the sample is 39,36 years. The distribution of ages can be seen in figure 12. It can be seen that all ages between 16 and 78 are incorporated, although there are relatively more young interviewees, as well as 50-55 year olds, which most likely are fellow-students/friends and parents/family of the interviewers.

Figure 12 - Distribution of ages of interviewees



6.2 Why newspapers are read

It becomes clear from the interviews that besides the gathering of information and being informed about news, reading a newspaper is also a habit for most people to fill their leisure

time. This is illustrated by an interviewee stating "*I am just very used to the whole routine of getting the paper from the post-box after walking our dog*". Another interviewee also noted the habit-aspect of reading a newspaper, and said: *"I think I would miss the physical use of the paper news, stuff wet shoes etc. Another thing I would miss is at the weekend, together with my wife, reading the weekend edition from cover to cover and relax while reading*". These motivations align with the theories found in literature. Other mentioned motivations are the finding of interesting topics to discuss with colleagues, friends or family and to be entertained. Of course these can be incorporated under leisure reasons, but the social aspect of sharing news is very notable in the interviews. Almost all respondents state that others share news items with them, and they share news items with others.

Besides these habits, interviewees also state how they like holding a printed newspaper, turning the pages and cutting out interesting news articles in the case of traditional newspapers. The interviewees also stated to have different wishes regarding the content of newspapers, where some just like to read sport sections, others only regional news, and a third one might prefer all the news except for politics.

6.3 Differences between age groups

The likelihood of an interviewee choosing a type of newspaper is evenly distributed among the three possible outcomes *Traditional newspaper*, *No difference*, *Digital newspaper*. This means that among the sample, no clear preference for either type is found. The interviews show that the older interviewees tend to lean more towards the traditional newspaper, whereas the younger interviewees tend to lean more towards the e-newspaper (see figure 13 and 14). The traditional newspaper is most likely read by 77,8% of the older interviewees and 22,2% of the younger interviewees. The e-newspaper is most likely read by 20% of the older interviewees and 80% of the younger interviewees. When you look at the differences within an age group, it becomes clear that for the younger interviewees, 16,7% is more likely to read a traditional newspaper, 16,7% has no preference, and 66,7% is more likely to read a e-newspaper. For the older interviewees, 50% is more likely to read a traditional newspaper, 35,7% has no preference, and 14,3% of the older interviewees is more likely to read a e-newspaper. When performing a Chi-squared test and Fisher-exact test to find out if the means for younger and older interviewees differ significantly, a p value of 0,023 is found, which is less than $\alpha = 0,05$.

Figure 13 – Age group - Newspaper

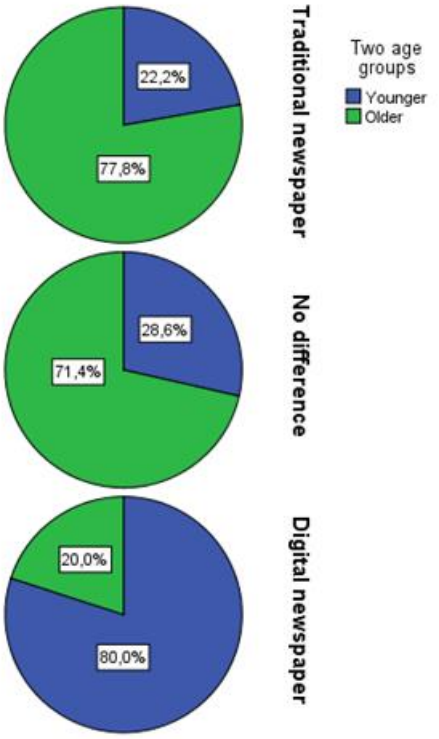
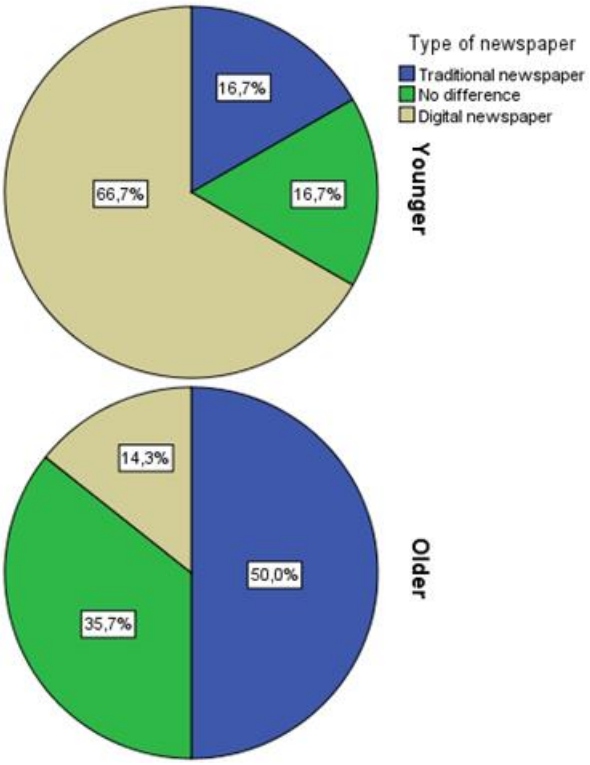


Figure 14 - Newspaper - Age group



6.4 Gains and pains of the traditional newspaper

For a number interviewees, the preference for a printed newspaper has to do with the layout and headers, that are more appealing in the case of the traditional newspaper. One interviewee said that with "*traditional newspaper, usually there is a lot of news and significant headlines in one big page. I can just have a glance of the headlines and then read the news I'm interested in*" Another interviewee stated similarly that with *"the traditional newspaper I like the fact that I sometimes read news, which I would not have pick out to read myself in the first place. Just because the title or something looks interesting, I read it. I would also like to get that in an e-newspaper*". This statement also shows that the decision or preference is not fixed, but might change. On the other hand, some older interviewees recognize the advantages of the e-newspaper over the traditional newspaper, but still prefer the traditional newspaper: "*No doubt, that the e-papers get you more specific and interactive information on the topic you are interested in. So it may get me faster information than the traditional newspaper. But […] if it is that important, that I have to know about it right away, I will turn on the TV*".

On the other hand interviewees dislike the lag in time experienced with the traditional newspaper, which is always the day after it happened. Also the traditional newspaper lacks

the multi-media possibilities that e-newspapers have, although this is not a feeling shared by most of the older interviewees.

6.5 Gains and pains of the e-newspaper

When it comes to the characteristics of the e-newspaper clear differences are found. Interviewees really appreciate the speed of news, accessibility and customization that the e-newspaper offers, but on the other hand interviewees dislike slow internet connections, small or unreadable screens, difficult layouts, and the fact that they cannot lay the newspaper in front of them on the table. For example, one interviewee said he found it "*quite exhausting looking at a screen for a long time*". This is addressed by many others, where one interviewee said to find *"scrolling down a webpage annoying. Reading news from a screen is also not as nice as reading from paper. My smartphone's screen is too small too*". Another interviewee stated he really disliked the "*loading times, especially on my phone. These are very annoying, especially when compared to a traditional newspaper*". Many interviewees too state that it could become easier in time, as does this interviewee when talking about reading the e-newspaper: "*I think it would take more effort, especially in the beginning. I not used to reading things on a screen, so that would be a change for me. But after a while, there might not be a big difference in reading a traditional or an e-newspaper*". Another interviewee acknowledged the difficulty of learning new devices, and stated that this influenced the preference for the type of newspaper, saying: "*so far I still prefer traditional newspaper more but I think I will prefer e-newspaper more in the coming future when I get used to the ICT devices*". These problems are experienced mostly by older interviewees, whereas younger interviewees are much more positive. Big and significant differences are found between the two age groups through a Mann Whitney-U test ($p = 0{,}004$; $\alpha = 0{,}05$).

One interviewee stated that e-newspapers would help him to reach his goals better, but that he dislikes the screen, because of the difficulties of reading, which becomes even impossible in sunlight. The first statement really is about the performance of the e-newspaper, whereas the second statement is about the perceived ease of use which is less in the case of the e-newspaper, than in the case of the traditional newspaper. The effort required to master the technology seems to bother more interviewees more than the increased performance brings, where one said that "*if it is a really big change in relation to the traditional newspaper and it brings many advantages, I willing to spend time on it. But if it is not that big of a change in*

relation to the traditional [newspaper], I will just keep reading the traditional paper and will not spend any time or energy on the e-newspaper".

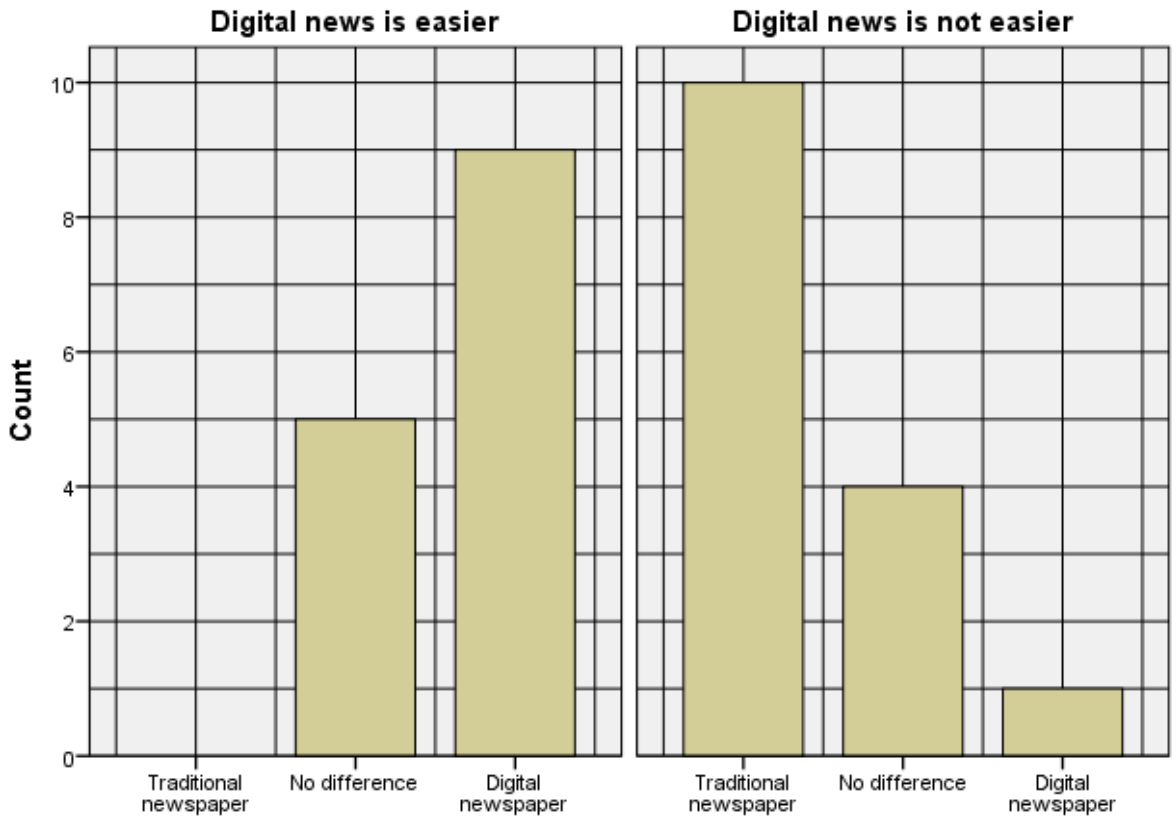
On the other hand, another interviewee stated that *"with a traditional newspaper, you read the news of the day before. With the e-newspapers, this might change because they can update it, when something happened. I think the correctness stays the same".* A second interviewee acknowledged the advantage of e-newspapers, saying that "*you can get sudden information immediately and you do not have to wait until the next day to read about it in the paper. Also you can research further*". On the other hand an interviewee said that she valued the quality of the news itself more and that *"it is OK if this means the news will be slightly less timely, because without depth, the news is not really useful*". This shows that the extent to which the newspaper is up to date does not necessarily make the difference between a customer choosing either newspaper.

One interviewee stated that e-newspapers could provide more background information about certain news items through the use of a broader variety of media, although not always applicable: "*I am not even interested in videos and vocal information, because that would probably disturb my family, while we are eating. But it is useful, if I am doing more research on topics, which interest me, to have […] options like videos*". It has also been stated that the e-newspaper allows for sharing easily on social media channels like Facebook.

6.6 Other factors influencing newspaper preference

The expected performance of the newspaper and the preference for either newspaper show a relationship, which is not found significant. When the interviewee perceives the e-newspaper to better allow for goal reaching, the interviewee is more likely to read the e-newspaper than the traditional newspaper (9 over 3), whereas the interviewee that does not perceive the e-newspaper to be more effective is more likely to read the traditional newspaper over the e-newspaper (5 over 1). When looking at the perceived ease of use and the preference for either newspaper, clear differences are visible (see figure 15). The left part shows interviewees that perceive the e-newspaper as easier, who in turn are more likely to prefer this newspaper. The right part shows interviewees that do not perceive the e-newspaper as easier, who in turn are more likely to prefer the traditional newspaper. To test this relationship a Chi-squared test and Fisher-exact test are used since both variables are of a nominal level. The relationship is tested twice with two different independent variables, and both are found significant for $\alpha = 0{,}05$.

Figure 15 - Perceived ease of use - Likelihood of reading type of newspaper



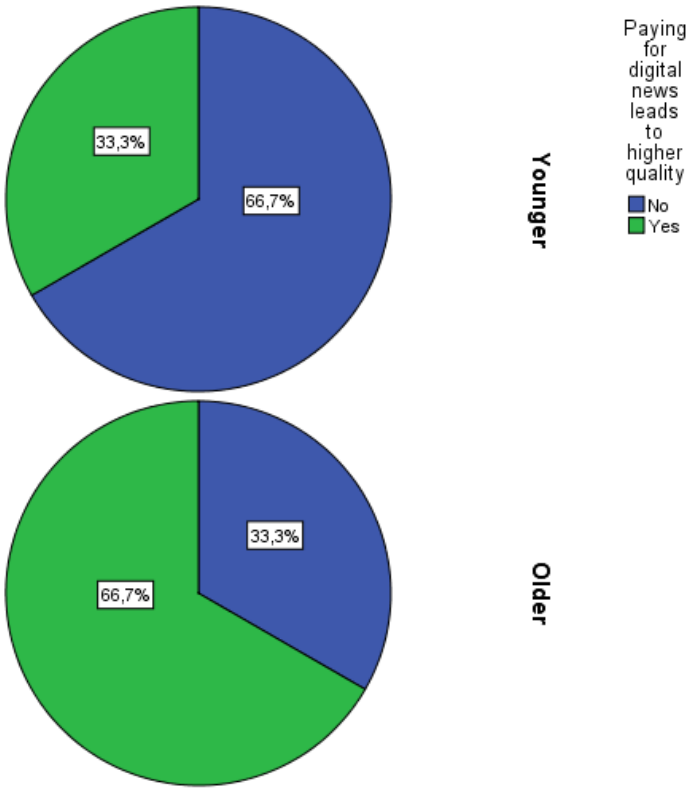
Looking at the age of the interviewees and the facilities used to access the internet, the younger generation seems to use different facilities than the older generation. When it comes to news, younger interviewees state to mostly use a phone to access the internet, whereas older interviewees more often state to use a personal computer or laptop. It seems that there is no relationship between the number of facilities used and the likelihood of choosing or preferring either type of newspaper.

The interviewees are not really clear about whether or not their social contacts have a real opinion about their newspaper channels. Most of them think their social contacts have a preference themselves, but it is not shown that they feel they have to follow that preference. Not very surprisingly, it seems to be the case that older interviewees have more contacts with similar preferences, apart from their children, where younger interviewees seem to have more contacts with similar preferences, apart from their parents. This relationship is found to be significant with a p value of 0,045 and $\alpha = 0,05$ performing a Chi-squared test and Fischer-exact test.

6.7 Paying for newspaper quality

The interviewees are really divided when it comes to paying for digital news in order to increase the quality. Some interviewees seem convinced that this relationship exists, some interviewees are less confident and some interviewees think that is does not exist. When looking at the beliefs of the interviewees whether or not paying for a e-newspaper would lead to a higher quality (allowing the interviewee to reach its goals better), 50% of the interviewees beliefs it does and 50% of the interviews beliefs it does not. When looking at the distribution among age groups, it becomes clear that these differ per age group (see figure 16). Note that when the interviewee states he or she does not believe that paying leads to higher quality that this does not necessarily mean that he or she believes the opposite. Of the younger interviewees, 66,7% does not believe that paying for the digital news would lead to higher quality, whereas 33,3% thinks it does. Of the older interviewees, 33,3% does not believe that paying for digital news would lead to higher quality, where 67,7% belies it does. However, this relationship is not significant.

Figure 16 – Age groups – Paying for quality



7. Discussion

This section will summarize and analyze the findings in the previous section and the findings in the theory sections (paragraph 7.1). The findings will be compared when possible. Then the implications for business models will be discussed (paragraph 7.2). This will be concluded with a general overview of a business model for the e-newspaper industry.

7.1 Analysis of results

The interviews showed that the four motivations of Flavian and Gurrea (2009) to read a newspaper are all present for today's newspaper readers. Although not all readers said to be motivated to read a newspaper to search specific information, get updated news, for leisure reasons, and as a habit, all motivations have been mentioned more than once. Specific reasons for reading the news found in the interviews are studying, staying up to date in a certain topic, sharing news, and being able to talk with friends, family or colleagues about a topic. These have a more educational, or social vibe to it, which are not directly clear from broad terms like "get updated news", and "leisure reasons". The respondents said to value correctness and some prefer better information over faster information. No difference is found in this sample between an overall preference for either newspaper type. Both types of newspaper are preferred as much as the other.

Looking at the UTAUT model and newspaper preference, which formed the basis for the hypotheses used in this research, it becomes clear that perceived ease of use is the most important variable. Age too seems to be correlated with the preference for either type of newspaper, but this seems to be due to the perceived ease of use of the e-newspaper according to older interviewees. Regarding the performance, differences are not so clear, both have some gains and pains, but these seem less influencing than the effort one needs to invest in getting familiar with the e-newspaper.

Important gains of the traditional newspaper have to do with familiarity with this medium, combined with a nostalgic feeling like reading with the family, turning the papers and cutting out news articles of interest. Other gains found are the reading of news one would not choose to read him- or herself and an easy layout. Notably these gains are mostly felt by older interviewees, and are expected pains for the e-newspaper, as stated before. To appreciate the e-newspaper in a similar fashion, interviewees need to get to know this medium as much as they do traditional newspapers. It has been stated multiple times that some readers rather not

put in the effort of getting there, as long as the traditional newspaper is an alternative. It seems likely that as long as the older generations start to get much more familiar with the Internet and all its aspects (as stated in paragraph 3.8), these pros will diminish more and more.

The e-newspaper has many more pains to overcome, but most have to do with the quality of and familiarity with the facilities, instead of the actual e-newspaper. Screen sizes, Internet speeds, and difficulties with ICT systems are mentioned often, but do not address the actual content or form of the e-newspaper. This too is mentioned multiple times to be worse than the printed newspaper, as some stated to dislike the layout, video or audio content, since it is either not practical, or not needed. On the other hand, when it comes to the contents of the e-newspaper, much more gains are mentioned. The e-news would allow for more in-depth studying, customizable news delivery, the possibility to share the news on social media channels and live updates. Given the trends worldwide and in the Netherlands, it seems likely that the e-newspaper will overcome its remaining (ICT-related) struggles and outperform the traditional newspaper within a decade or two.

7.2 Implications for the business model

Looking at the success of current initiatives like ITunes, Netflix and Spotify, it seems likely that news articles in time will be sold mainly through a central seller, like Blendle, Elinear, Yournalist or similar in the Netherlands. The business models of these kind of central sellers are different than those of the individual newspapers, comparable to the business model of Itunes being different than the business model of EMI. Since this research focusses on E-newspaper producers, this will be the focus in this section too.

7.2.1 Value proposition

According to Osterwalder (2012) the first thing to look at when considering the value proposition is the job of the customer. The motivations to read a newspaper, or jobs of the customer to get done by reading the newspaper, have different aspects. Some readers are reading to study and stay up to date in a certain topics, where others want entertainment, talk to social contacts about subjects, stay informed in general, or share news on social media channels. In every case, a big advantage of the e-newspaper is the possibility to share the articles via various of channels (social media, instant messaging, etc.). When reading news for professional reasons it can still be very important to be able to share these articles on forums, or professional social media like LinkedIn. In all cases it is very important to put emphasis on the social aspects of e-news, and make it easy for readers to share articles.

The e-newspaper has some important options concerning the value proposition. There is the possibility of entertainment, which is higher due to the use of multimedia and (hyper)links to other sources. These allow for linking for more in-depth information regarding a topic, similar articles in the past, or other value adding sources if a reader desires so. The social aspects are not limited to sharing, one can think of blogging, even letting readers publish articles themselves, or post comments under news articles. This way, a reader can become part of a community. More specifically the e-newspaper allows for customization and interactivity, which are not used too often today. Mobile applications, or websites can let the user determine which articles he or she would like to read, and which they do not. It has to be kept in mind that readers said to value the reading of articles that they would not choose themselves, so this option is not so clear. Social channels like Twitter and Facebook allow for direct communication between newspaper staff and the reader, and can provide useful, depending on the customer type.

Readers state to value correctness and quality of news over the speed of the news delivery, which is a big advantage for the e-newspaper. It is not uncommon or unlikely for an e-newspaper to publish an article too fast, without checking the facts correctly, which has to be rectified later. This could very well lead to credibility loss and needs to be avoided. It is very important for e-newspapers to put emphasis on this aspect of their news production, and make sure that a high level of correctness and accuracy is maintained in order to remain competitive.

7.2.2 Customer relationship

From the results, as well as the figures and trends mentioned in section 3, it becomes clear that the younger audience is more likely to consume the e-newspaper. The younger generation is more used to ICT and is active on Internet much more than the older generations, although this difference will become smaller very quickly. To achieve a bigger market share, it seems logical to focus more on the younger audience first, which appreciates the added value of the e-newspaper with its social aspects, hyperlinking and multi-media aspects. The older generations are lagging in this respect, but seem to adopt these innovations later in time, as is illustrated by the Facebook-case, where the older generations are now becoming more and more present. It is likely that with e-newspapers too, older audiences will find their way after the younger audience does.

As described by Ihlström and Kalling (2007) and Ihlström and colleagues (2008) in paragraph 4.10, customers differ on the type of news they would like to read. The interviews presented main differences. For one there is the difference between the need for global news, or local news. An e-newspaper producers may very well find a niche in delivering news for a certain region of the country. Furthermore, some interviewees stated to read newspapers in order to stay informed in a certain topic for instance to study, others like general information without in-depth analyses and such to stay up to date, and be able to talk about these topics in their social life. It seems likely to focus on one of the types of readers, because they would prefer different content. The reader who seeks general information will not read an e-newspaper that is very specific and scientific around one topic, but might prefer a news source like NU.nl. On the other hand, some readers prefer specific news sources like Het Financieel Dagblad (which concerns economy and the business world). Of course the way of delivering and producing news needs to be aligned with the contents of the news. A specific newspaper requires specific journalists who give their professional opinions about certain matters, where a general newspaper might focus on collecting the latest news from news sources worldwide.

When it comes to raising awareness about the existence of a newspaper, or maintaining after sales contact with the customer, both the traditional newspaper and e-newspaper can use the same channels. The advantage of the e-newspaper, as stated above, is that the customer is already present on the platform which allows for direct communication, instead of the traditional newspaper. This way the customer can be assisted directly, or communicate with journalists or other readers. With marketing too, online advertisement allows for direct linking to the e-newspaper, which makes it much easier for the customer to pay the website, or application, a visit. But even in the physical world usage of QR-codes allow for direct delivery, as long as the customer has a smartphone or tablet. This in turn increases the trialability of the product, as first mentioned by Rogers (1962). The choice for marketing depends on the customer segment that is targeted. For example, a more professional newspaper might consider social media channels like LinkedIn, whereas a more general channel like NU.nl might consider social media channels like Facebook for their marketing.

7.2.3 Infrastructure management

When it comes to the delivery of the newspaper, the differences occur. In contrast to the traditional newspaper, the e-newspaper allows for direct distribution. The traditional

newspaper requires a party to deliver the physical product to the doorstep of the reader, where the e-newspaper is directly shown on the screen. Both newspapers can be distributed via different channels. For the traditional newspaper this can be the choice between using a paperboy and a newsstand. For the e-newspaper this can be the choice between a website, a mobile app, and/or a tablet app. Where mostly older interviewees complained about difficulties with smaller screens in the case of reading news on mobile phones, it may be better to reach these customers by apps and websites on bigger computer screens. Some interviewees stated to value the traditional channels, since it contributes to the habit of reading the newspaper. On the other hand, interviewees stated to value the speed in news updates of the e-newspaper, which addresses another need.

Besides these differences, it is also possible for the e-newspaper to deliver the articles to the customer via a central seller, as discussed in paragraph 3.4. Given the success of initiatives in other entertainment industries with central sellers, partnering with a central seller is likely to be the smarter choice. Like with Blendle this means that newspaper producers have to work together to some extent, which means that more partnering is required. The success of such a seller can benefit the newspaper.

Whether a central seller or an autonomous e-newspaper, the e-newspaper needs to partner with a mobile application seller, like the Istore. This way the application to access the newspaper can be downloaded, and looking at the success of the NU.nl application, its importance is clear. It is necessary to acquire the right server capacity, and knowledge about programming, web designing and the like, as problems here can damage the newspapers' image. Tasks related to these subjects are not the core business of an e-newspaper producer, so it might be better to outsource these tasks, rather than to acquire the knowledge in-house. It is also important to make sure the website and application is safe from viruses, malware and hacking, which can also be outsourced.

7.2.4 Financial aspects

As stated in paragraph 3.5, the most important costs of the traditional newspaper are in printing and distribution of the newspaper. The e-newspaper eliminates these costs for a large part. Delivering the news, and maintaining the website and servers still have costs, but these are far less. That is why some authors noted the possibility of lowering costs when moving to the e-newspaper.

The biggest choice an e-newspaper producer must make is whether the news will be provided for free, or whether it will be provided on the basis of subscription. The latter automatically raises a problem in the social aspect of the newspaper, since sharing news with non-subscribers would be impossible. NU.nl seems to be very capable of delivering news for free, and still remain competitive, based on its advertisement income. Looking at the opinions of the interviewees, who do not necessarily associate paying for news with better news, they might very well choose the free news provider.

As long as advertisement income keeps increasing as it does as shown in paragraph 3.5, delivering news for free will become much more attractive, since the income can then be higher than the costs.

7.2.5 Business model of the e-newspaper

Based on the analysis of the results, a business model canvas (Osterwalder & Pigneur, 2010) of the e-newspaper is created. This business model canvas is displayed below in table 5. Aspects and options of the e-newspaper are given which are general and depend on the specific requirements of the e-newspaper. This way it is possible to get a clear idea of what the business model of an e-newspaper means.

A big global newspaper targets a heterogeneous customer, delivers general news about all kinds of topics, uses much more employees, journalist, bloggers as well as employees to search other sources, and requires much more server space, than a local newspaper. The latter would target a more homogeneous customer, delivers (local) news for a limited amount of topics, needs fewer employees, and requires little server space. In a similar vein differences occur between the business model of a newspaper targeting the customer that wants to be entertained and a newspaper targeting the customer that wants to be educated.

Table 5 – Business model for e-newspaper industry

Part of Business model	Aspects and options
Value proposition	- News/Information (delivered in timely fashion) - Analyses/Opinions - Social sharing and communication - Multimedia, hyperlinks and hypertexts - Customization
Customer relationship	- Mobile application - Website - QR codes - Automated services - Younger audience - Entertaining/Educative - General/Specialized - Global/Local (niche)
Infrastructure management	- Create content (journalists, bloggers, news searchers) - Maintain social platform - Edit content to fit image of newspaper - Assistance for customers - Maintain servers, website and applications (can be outsourced) - Online security (can be outsourced) - Partnership with application seller - Partnership with central newspaper seller
Financial aspects	- Decreased costs for distribution and printing compared to traditional newspaper - Costs for creating and editing content - Costs for advertising - Costs for maintaining website, security and application - Costs for customer interaction - Income from advertising - Income from central newspaper seller - Income from subscriptions

8. Conclusions

No successful business model for the e-newspaper exists yet. Newspaper producers are experiencing decreasing numbers of subscriptions and reducing revenues. On the other hand, e-newspapers are gaining viewers and subscribers, providing new possibilities for newspaper producers. Other entertainment industries facing similar difficulties are overcoming their struggles using new and innovative business models, like ITunes, Netflix, and Spotify. These central sellers prove effective in selling their items, although downloading offers the customer the chance to avoid these channels. In the newspaper industry similar initiatives are starting to emerge and seem likely to provide a piece of the puzzle.

This research combined an extensive literature research on the e-newspaper and the concept of the business model with 29 interviews among potential readers of the e-newspaper. This has been done to provide an overview of the most important considerations for e-newspaper producers, in order to build a successful business model and add to the existing literature from a customer perspective.

An e-newspaper is defined as "*a newspaper service published accessible either via a web page or a mobile app, with the possibility to offer an experience to read news in a high quality at any time of the day, either for free or through a subscription*". Important characteristics of the e-newspaper that differ from a traditional newspaper are:

- The e-newspaper exists in digital form
- The e-newspaper is accessible via Internet and accessible potentially everywhere
- The e-newspaper allows for live and direct news reporting
- The e-newspaper allows for usage of multimedia, hyperlinks and hypertexts
- The e-newspaper allows for social sharing and communication between and with readers
- The e-newspaper allows for customization and personalization
- The e-newspaper allows for debundling and selling by a central newspaper seller

A business model is found to be: "*A conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value*

relationship capital, to generate profitable and sustainable revenue streams". Although literature has developed in multiple directions, a business model consisting of an Innovation/Value proposition part, a Customer relationship part, an Infrastructure management part, and a Financial aspects part is found to be most commonly used and practical.

The reasons for customers of newspapers to read a newspaper and thus the e-newspaper are found to be: (1) *to search for specific information*, (2) *to get updated news*, (3) *for leisure reasons*, and (4) *as a habit*. These reasons are found in literature, and these have been confirmed in the interviews. Besides these reasons, customers say they like to be educated, to be informed thoroughly, and to be able to socialize using news and newspapers.

The interviewees showed that the perceived ease of use is the most important predictor in newspaper usage and preference. The perceived ease of use is also influenced for a great deal by the age of the user. The perceived ease of use of the e-newspaper for older customers is lower, than for younger customers.

An important part of the value proposition of the e-newspaper is the timeliness of the news. It is capable of delivering up-to-date news. E-news articles can be shared with the click of button, and e-newspapers allow for social platforms where readers can discuss and ask questions. The e-newspaper can also make use of multimedia, hyperlinks and hypertexts. As well e-newspapers can be customized and personalized. The interviews showed that it is important to look at the aspects of newspapers that go beyond the quality of news, but to look more carefully at the motivations and habits of readers. Readers may have nostalgic reasons for reading a newspaper, which should not be ignored.

People read news to find different sorts of information and can be segmented accordingly. In literature differences have been found on customers who prefer either more local, national or global news. Linked to these segments are customers who value either that the newspaper producer produces their own news, or serves as a newsagent. Differences between age generations have been found in the interviews, where younger readers are more likely to prefer an e-newspaper than older readers, who are more likely to prefer the traditional newspaper. Other differences can be between customers that prefer general and specific news, or customers that want to be entertained or educated.

The way of delivering the news to the customer to is important, where the size of the screen of the device influences the perceiving of easiness by the customer and might make a big difference. This also influences the perceived ease of use, which seems to be lower for smaller screens. An e-newspaper on a personal computer or tablet can thus be preferred over an e-newspaper on a mobile phone. Customers can be contacted directly, and they can also contact the e-newspaper easily using digital and social media channels.

The e-newspaper producer can either sell or deliver its news by itself, or can partner with for instance a central news seller like ITunes which sells music. Different than for the traditional newspaper is that the e-newspaper producer needs to pay attention to maintaining the website, its online security, and mobile application. The ways of editing news can also differ, especially when offering readers the possibility to create content.

The costs of printing and distributing news will decrease when moving from a traditional newspaper to an e-newspaper. Unfortunately the revenues from advertising are much lower in the case of the e-newspaper, but given the trends of the last ten years, this will become better in time. This brings e-newspaper the opportunity to offer news content for free, like NU.nl does, instead of subscriptions. Using a central newspaper seller can also be a way of generating income.

Below the main difference between the business models of the e-newspaper and traditional newspaper found in this research are listed in table 6.

Table 6 - Main differences between business models of e-newspaper and traditional newspaper

	E-newspaper	Traditional newspaper
Value proposition	- Live delivery - Customization - Debundling - Social platform and online sharing	- (One day) late delivery - Standardized - Bundled - Cutting out news articles for sharing
Customer relationship	- Younger audiences - Website or application - Automated services	- Older audiences - Paper
Infrastructure management	- Maintaining social platform - Maintaining website, servers and application - Maintain online security - Direct contact with readers	- Printing newspaper - Distributing newspaper
Financial aspects	- No printing costs - Little distribution costs - Costs for running website and application - Lower income from advertising - Income from central newspaper seller	- High printing costs - High distribution costs - Higher income from advertising - Income from newsstand

Producers of traditional newspapers should move to producing the e-newspaper, since the end of the traditional newspaper is in sight, and it will be replaced by the e-newspaper. It seems very likely that news will by then be brought to the customer through a central newspaper seller. The profit can be higher for e-newspapers by eliminating printing and distribution costs, as long as the revenues from advertisements keep increasing the way they are doing.

9. Future research

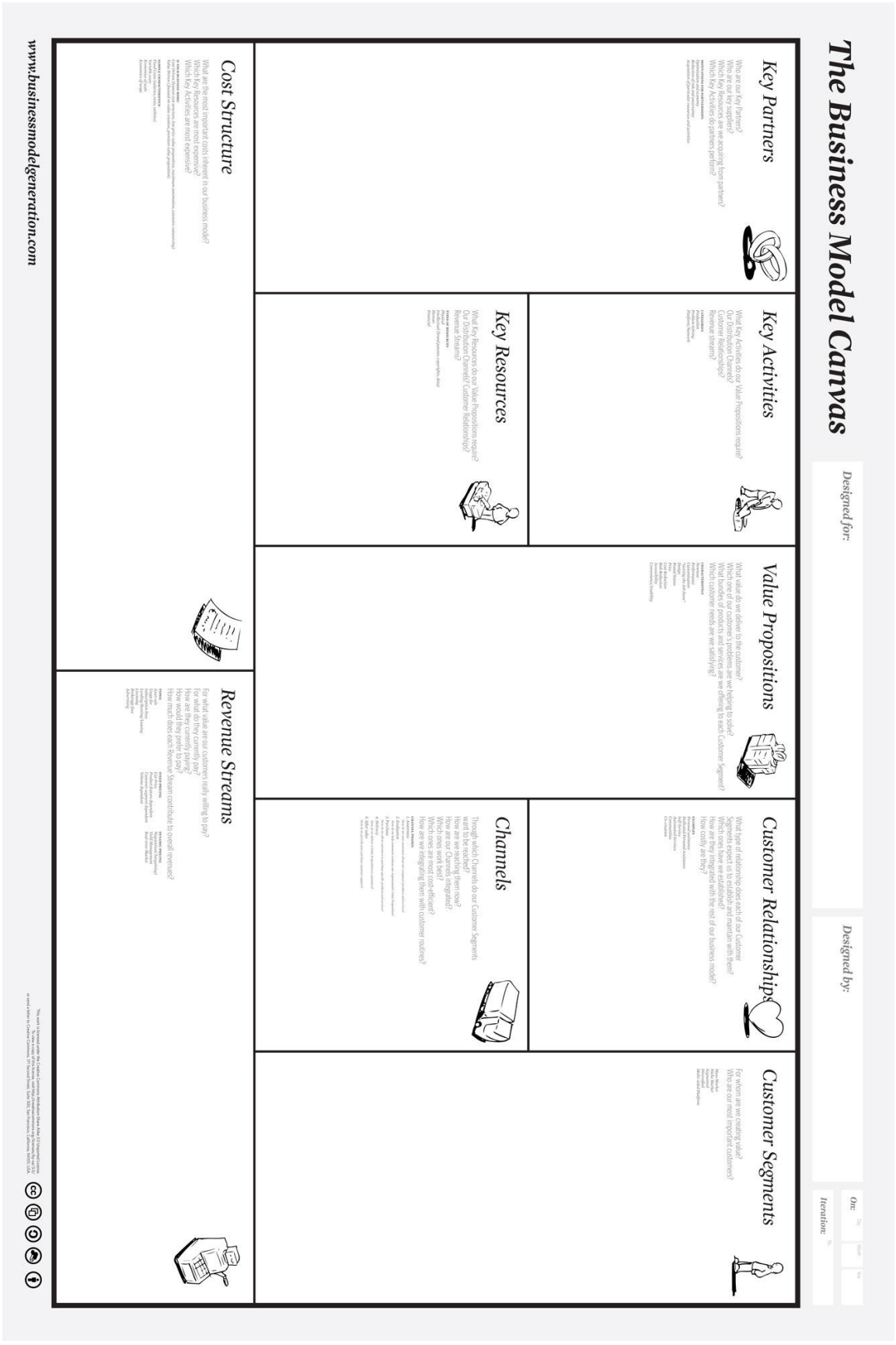
This research tried to add to current literature by looking at the business model of e-newspapers from a customer perspective. It is of practical value through the considerations presented for e-newspaper producers and tries to spur the debate regarding the direction e-newspapers should be going. Although this research has presented insights and analyzed the e-newspaper based on important and useful theories, this research has some limitations.

Little literature has been found about the e-newspaper and its business model in proper journals. This means that the scientific basis of this research, consisting of theories and findings in recent or older articles have to be looked at critically. The lack of literature also leads to the usage of relatively old and outdated articles, which present little useful or groundbreaking insight to build this research upon.

Although this research has been mainly qualitative, quantitative analysis are performed for supporting or questioning findings from interviews. The sample size was too limited, which leads to less credible results and a lower external validity. Performing analysis like a Chi-square test requires table cells to be filled with few than 5 cases for a maximum of 20%, which has not always been the case in this research. This means that not all the conditions have been met for doing a good analysis Another limitation of this research is a small number of indicators per hypothesis. Sometimes only one indicator was used, where a larger number leads to higher content validity and this makes it more difficult to tell whether or not the conclusions drawn are true. Future research should look at these limitations and perform similar studies with much bigger sample sizes and indicators.

It is also important to think about the focus of this research, which was on the customer perspective. Although this leads to important insights, the theory of business models shows that there is more to encompass like suppliers, finances and core competencies of the e-newspaper producer itself. These have been addressed through a thorough but limited literature research, and could have been studied by a case study, qualitative study, or quantitative study for example. To address this better, future research should look at all parts of the business model evenly in order to provide a complete picture.

Appendix A: Business model canvas

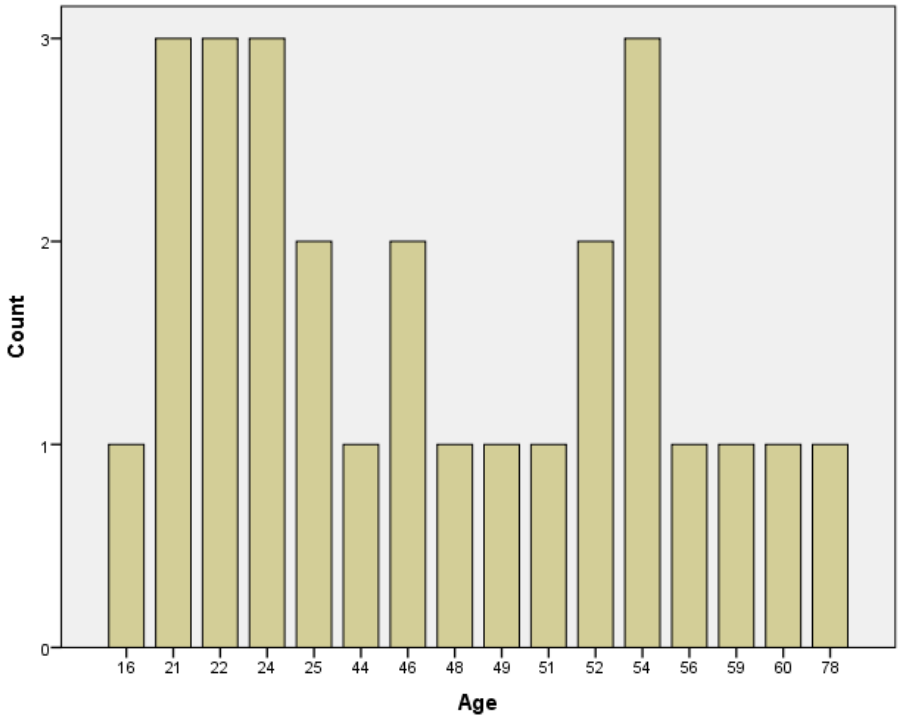


Source: Businessmodelgeneration (2014) and Osterwalder and Pigneur (2010)

Appendix B: Quantitative analysis

68% of the interviewees is male and 32% of the interviewees if female. The average age of the sample is 39,36 years. The distribution of ages can be seen in figure 17. It can be seen that all ages between 16 and 78 are incorporated, although there are relatively more young interviewees, as well as 50-55 year olds.

Figure 17 - Distribution of ages of interviewees



The likelihood of an interviewee choosing a type of newspaper is evenly distributed among the three possible outcomes *Traditional newspaper*, *No difference*, *Digital newspaper* as can be seen in table 7. This leads to insignificant differences ($p = 0{,}069$, $\alpha = 0{,}05$) between the means of this variable, based on a Chi-squared test. This means that it cannot be said, based on this sample, that one type of newspaper is more likely to be chosen over the other, so it is accepted that there is no difference between the likelihood of a type of newspaper being chosen (see table 8).

Table 7 - Likelihood of reading type of newspaper

P5_What_newspaper

	Observed N	Expected N	Residual
Traditional newspaper	10	9,7	,3
No difference	9	9,7	-,7
Digital newspaper	10	9,7	,3
Total	29		

Table 8 – Chi-squared test

Test Statistics

	What newspaper
Chi-Square	,069
df	2
Asymp. Sig.	,966

Using the created variable *Two age groups* it is possible to see clear differences in the type of newspapers the interviewees are more likely to read (see figure 18 and 19). The traditional newspaper is most likely read by 77,8% of the older interviewees and 22,2% of the younger interviewees. The e-newspaper is most likely read by 20% of the older interviewees and 80% of the younger interviewees. When you look at the differences within an age group, it becomes clear that for the younger interviewees, 16,7% is more likely to read a traditional newspaper, 16,7% has no preference, and 66,7% is more likely to read a e-newspaper. For the older interviewees, 50% is more likely to read a traditional newspaper, 35,7% has no preference, and 14,3% of the older interviewees is more likely to read a e-newspaper.

Figure 18 – Age group - Newspaper

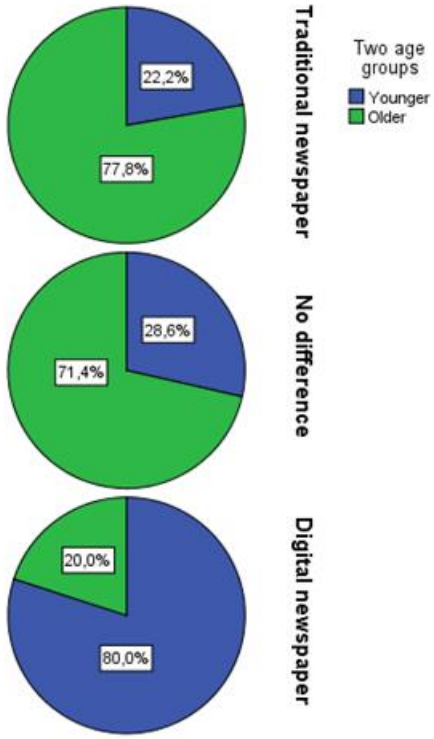
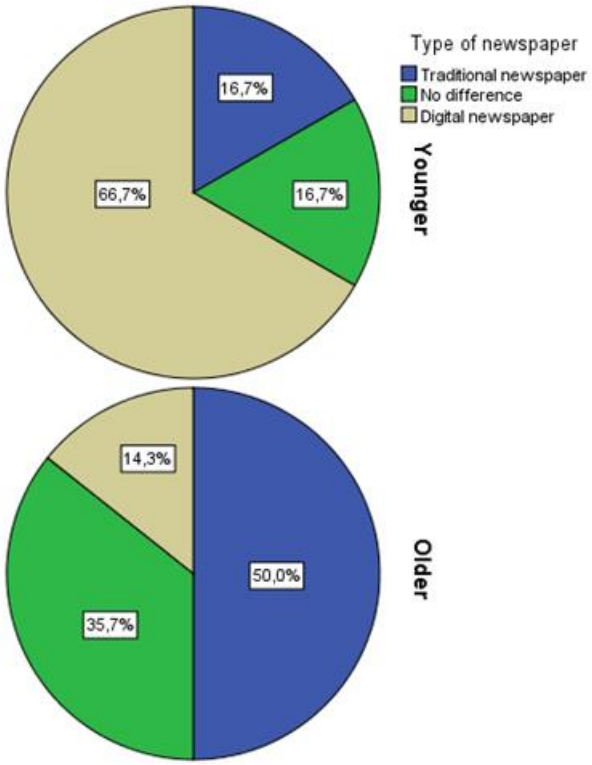


Figure 19 - Newspaper - Age group



When performing a Chi-squared test and Fisher-exact test to find out if the means for younger and older interviewees differ significantly, a p value of 0,023 is found, which is less than $\alpha = 0,05$ (see table 9). This means that younger interviewees are significantly more likely to choose a e-newspaper to read, whereas older interviewees are significantly more likely to choose a traditional newspaper to read.

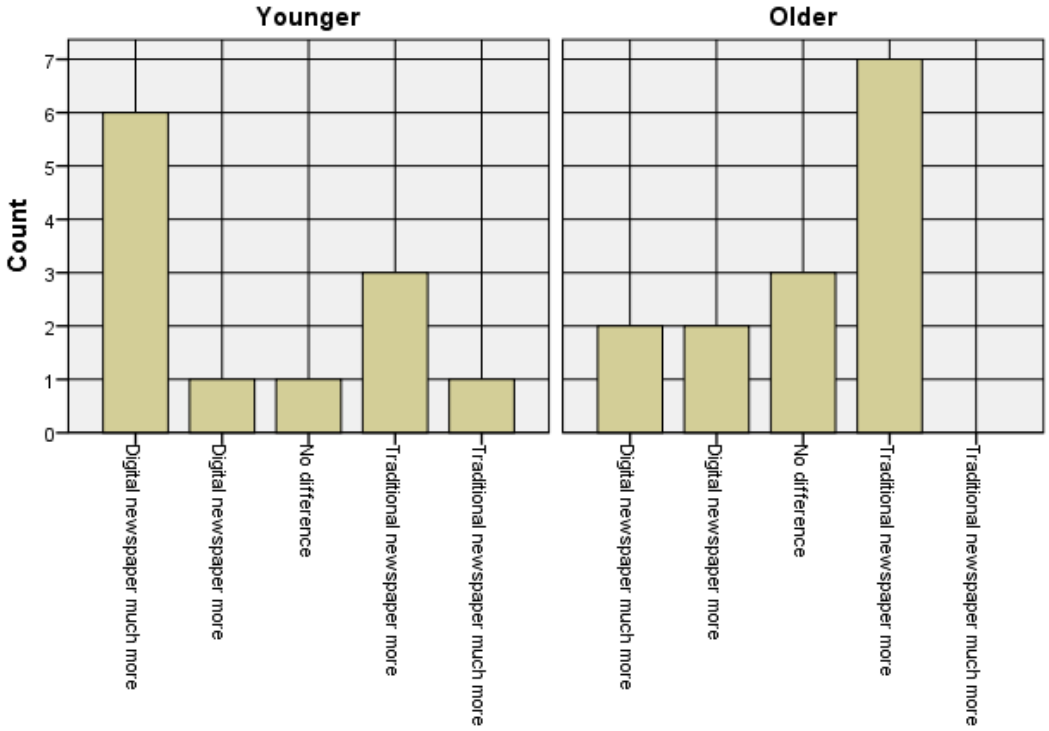
Table 9 - Age groups - Likelihood of reading newspaper

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	7,554	2	,023	,023
Fisher's Exact Test	7,218			,023
N of Valid Cases	26			

When comparing the age groups for the preferences for a type of newspaper (see figure 20), differences are not clear. For younger interviewees, more interviewees prefer the e-newspaper either much more or more (7 cases), compared to the number of interviewees that prefer the traditional newspaper much more or more (4 cases). For older interviewees, less interviewees prefer the e-newspaper either much more or more (4 cases), compared to the number of interviewees that prefer the traditional newspaper more (7 cases).

Figure 20 - Age groups - Preference for type of newspaper



When performing a Mann-Whitney U test to find out if the preferences per age group differ significantly, a p value of 0,231 is found, which is more than $\alpha = 0,05$ (see table 10). This means that is cannot be said that younger interviewees are more likely to prefer any type of newspaper relatively more than older interviewees based on this sample. Either a bigger

sample with similar results, or more clear differences in this sample could provide a significant result.

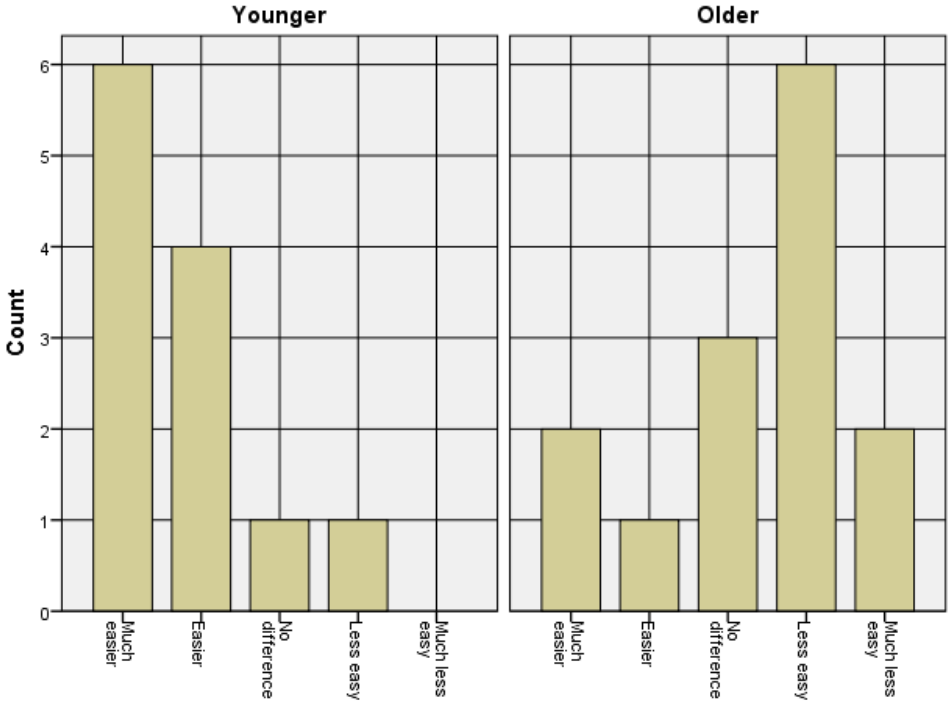
Table 10 - Age groups - Preference for type of newspaper

Test Statistics[a]

Mann-Whitney U	60,000
Z	-1,294
Asymp. Sig. (2-tailed)	,196
Exact Sig. [2*(1-tailed Sig.)]	,231

The difference between the age groups and the belief that a e- newspaper is easier or less easy to use can be seen in figure 21. This picture clearly shows that younger interviewees perceive the e-newspaper as easier to use (10 over 1), whereas the older interviewees perceive the e-newspaper as less easy to use (8 over 3).

Figure 21 - Age - Perceived ease of use



To test the relationship between age on the perceived ease of use of the e-newspaper, a Mann Whitney-U test is used (see table 11). Looking at the significance, a p value of 0,004 is found, which is less than $\alpha = 0{,}05$. This means that it is accepted that the younger age group perceives the e-newspaper as easier to use than the older age group.

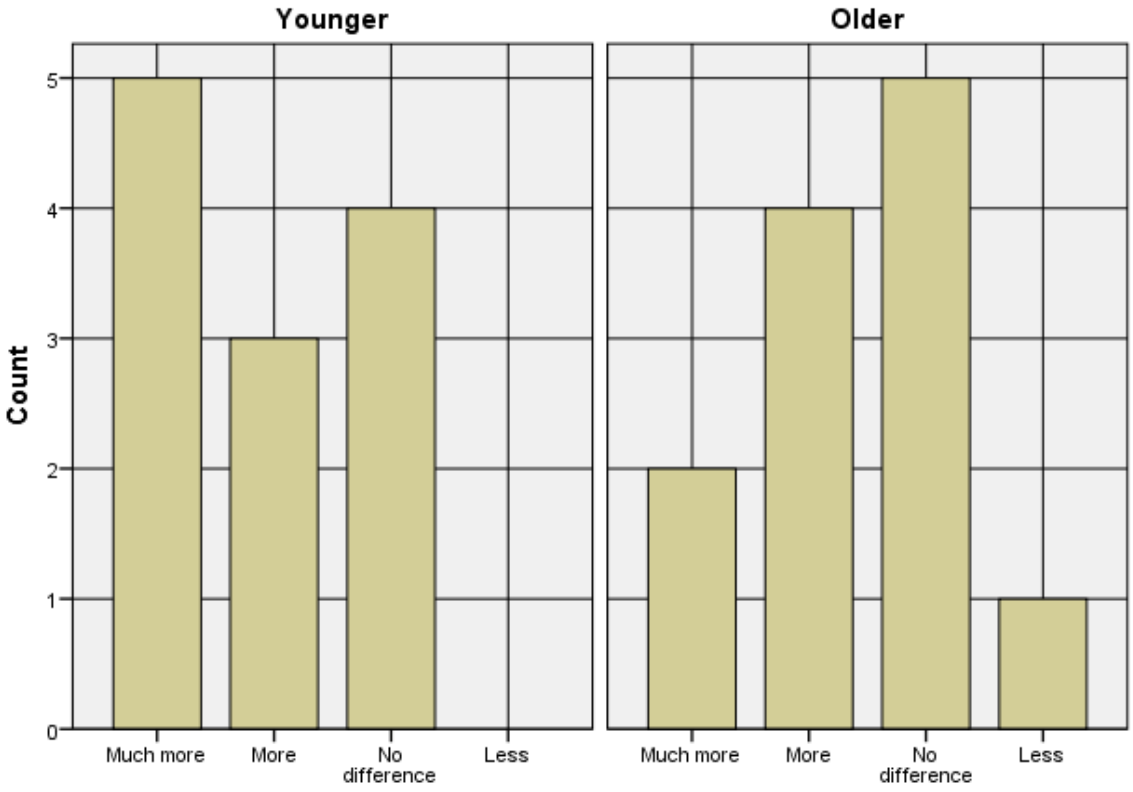
Table 11 - Age - Perceived ease of use

Test Statistics

Mann-Whitney U	29,500
Z	-2,889
Asymp. Sig. (2-tailed)	,004
Exact Sig. [2*(1-tailed Sig.)]	,004

The number of younger interviewees that belief more or much more that digital news leads to better goal reaching is higher than for older interviewees (8 compared to 6), where there is one older employee that thinks that digital news leads to worse goal reaching (see figure 22). It can thus be seen that in general the interviewees seem to believe that an e-newspaper leads to better goal reaching.

Figure 22 – Age group – Goal reaching



The differences between age groups are not significant, when performing a Mann Whitney-U test. A p value of 0,242 is found, which is higher than $\alpha = 0,05$ (see table 12). Therefore it cannot be stated that either age groups associates a e-newspaper with higher or lower quality than the other age group does.

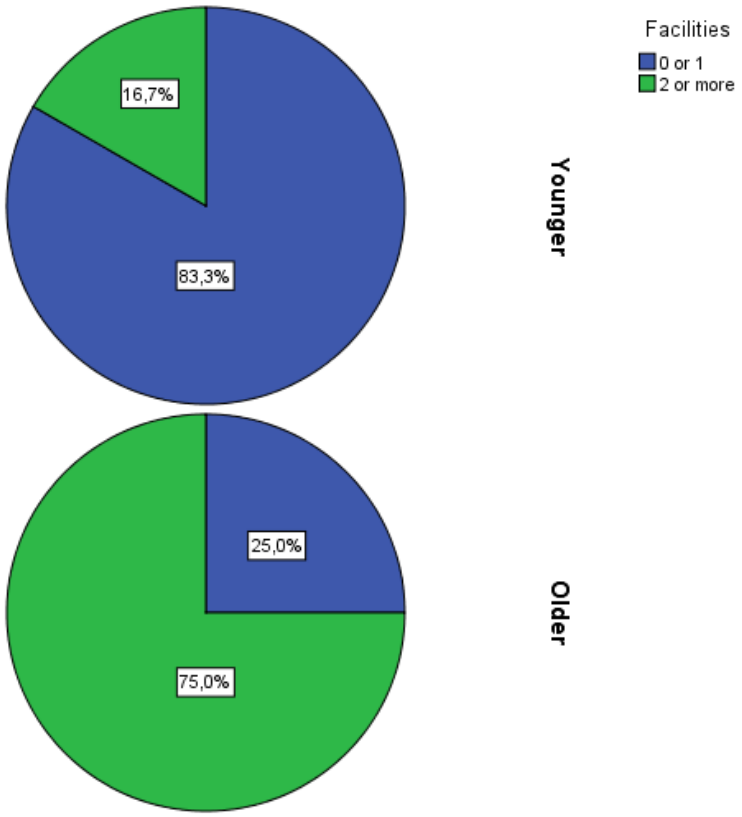
Table 12 - Age group – Goal reaching

Test Statistics

Mann-Whitney U	51,000
Z	-1,279
Asymp. Sig. (2-tailed)	,201
Exact Sig. [2*(1-tailed Sig.)]	,242

Figure 23 shows that of the younger interviewees, 83,3% state to use 0 or 1 facility to access the internet for news, where this is only 25,0% for the older interviewees.

Figure 23 – Age – Facilities for internet



When performing a Chi-squared test and a Fisher-exact test to find out if the means for younger and older interviewees differ significantly, a p value of 0,012 is found, which is less than $\alpha = 0,05$ (see table 13). This means that the older interviewees use significantly more facilities to access the internet than younger interviewees.

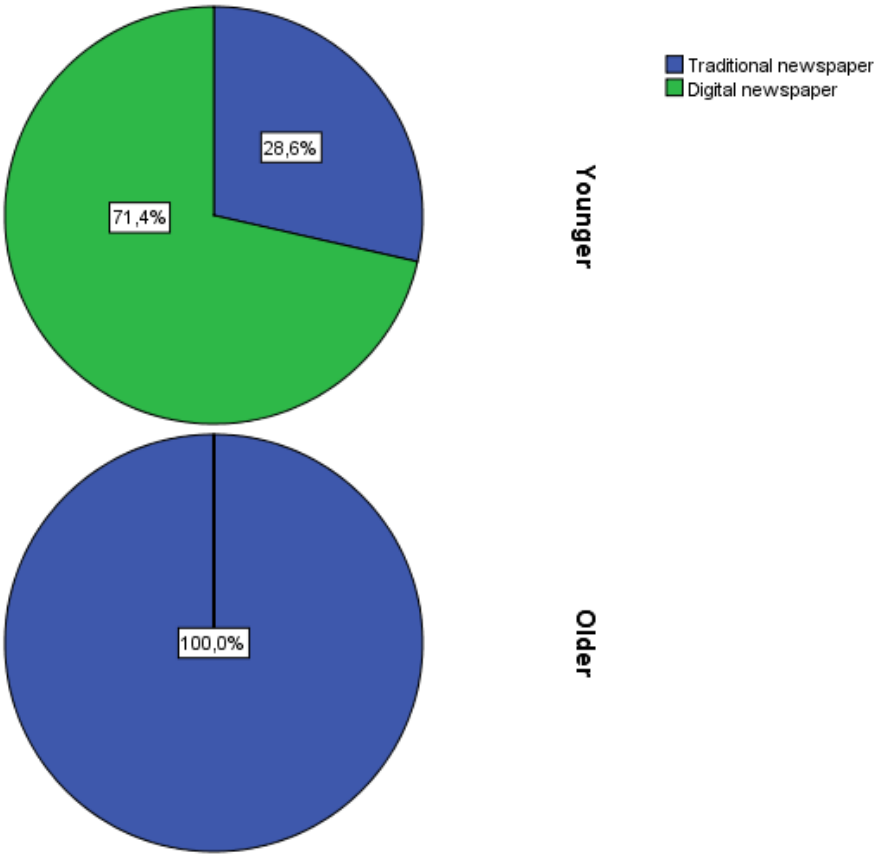
Table 13 - Age groups – Facilities for internet

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,224	1	,004	,012	,006
Fisher's Exact Test				,012	,006
N of Valid Cases	24				

Looking at figure 24, the differences are clear. No older interviewee clearly stated to have social contacts that prefer e-newspapers without having social contacts that prefer traditional newspapers as well. For younger interviewees, 71,4% stated to have social contacts that prefer the e-newspaper, where 28,6% of the younger interviewees stated to have social contacts that prefer the traditional newspaper.

Figure 24 - Age - Social influence



When performing a Chi-squared test and a Fisher-exact test to find out if the means for younger and older interviewees differ significantly, a p value of 0,045 is found, which is less than $\alpha = 0,05$ (see table 14). This means that younger interviewees are more likely to have

social contacts that prefer the e-newspaper, whereas older interviewees are more likely to have social contacts that prefer the e-newspaper.

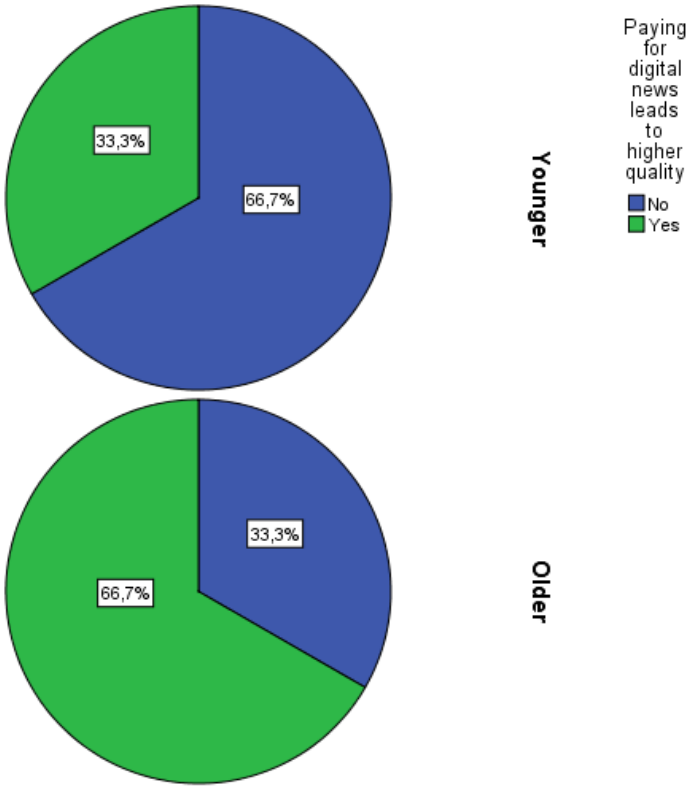
Table 14 - Age - Social influence

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,238	1	,022	,061	,045
Fisher's Exact Test				,061	,045
N of Valid Cases	11				

When looking at the beliefs of the interviewees whether or not paying for a e-newspaper would lead to a higher quality (allowing the interviewee to reach its goals better), 50% of the interviewees beliefs it does and 50% of the interviews beliefs it does not. When looking at the distribution among age groups, it becomes clear that these differ per age group (see figure 25). Of the younger interviewees, 66,7% does not believe that paying for the digital news would lead to higher quality, whereas 33,3% thinks it does. Of the older interviewees, 33,3% does not believe that paying for digital news would lead to higher quality, where 67,7% belies it does.

Figure 25 – Age groups – Paying for quality



When performing a Chi-squared test and a Fisher-exact test to find out if the means for younger and older interviewees differ significantly, a p value of 0,142 is found, which is more than $\alpha = 0,05$ (see table 15). This means that it cannot be said that younger interviewees belief relatively more or less than older interviewees that paying for e-newspapers leads to higher quality based on this sample. Either a bigger sample with similar results, or more clear differences in this sample could provide a significant result.

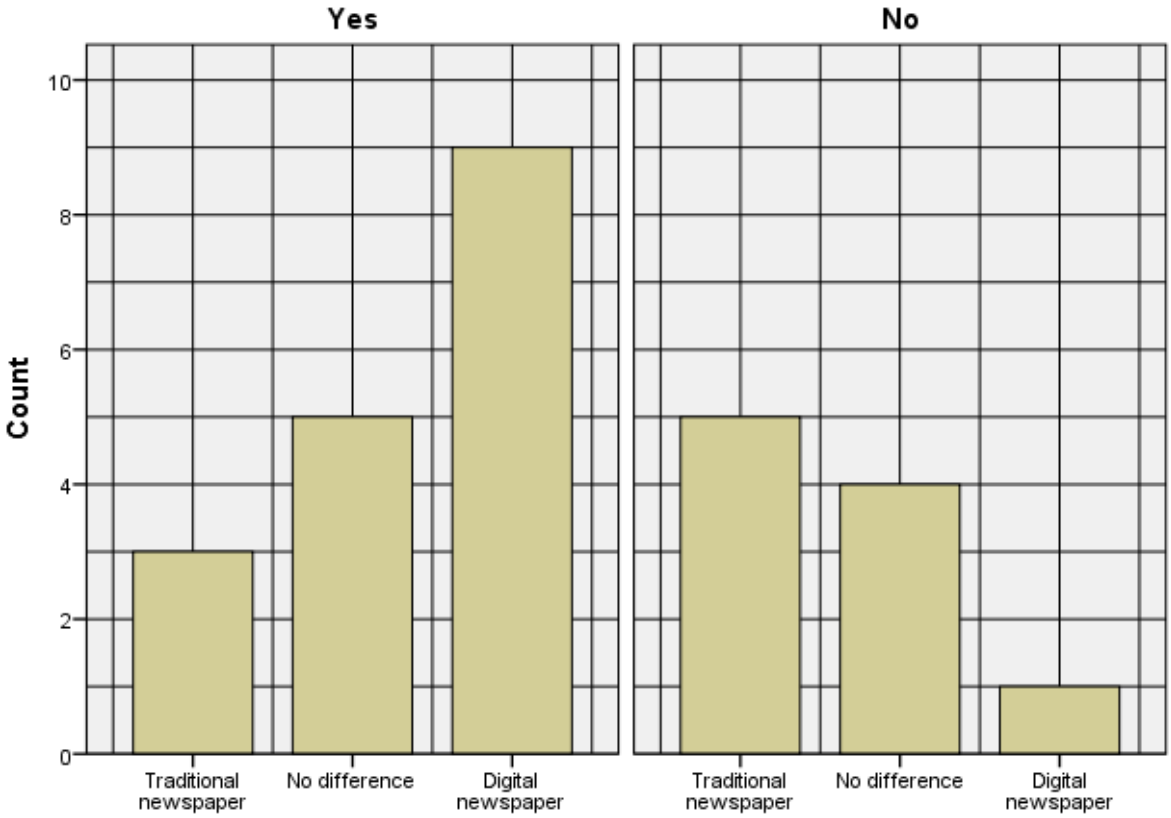
Table 15 - Age groups – Paying for quality

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,291	1	,130	,198	,142
Fisher's Exact Test				,198	,142
N of Valid Cases	21				

Looking at figure 26, where the expected performance of the newspaper and the likelihood of choosing either newspaper are shown, a relationship can be seen. When the interviewee perceives the e-newspaper to better allow for goal reaching, the interviewee is more likely to read the e-newspaper than the traditional newspaper (9 over 3), whereas the interviewee that does not perceive the e-newspaper to be more effective is more likely to read the traditional newspaper over the e-newspaper (5 over 1).

Figure 26 – Quality – Likelihood of reading type of newspaper



When performing a Chi-squared test and a Fisher-exact test to test this relationship, a p value of 0,065 and 0,056 respectively are found, which are higher than $\alpha = 0,05$ (see table 16). This means that it cannot be said that the believe that a newspaper leads to better goal reaching leads to the user being more likely to read one newspaper instead of the other. Either a bigger sample with similar results, or more clear differences in this sample could provide a significant result.

Table 16 - Quality – Likelihood of reading type of newspaper

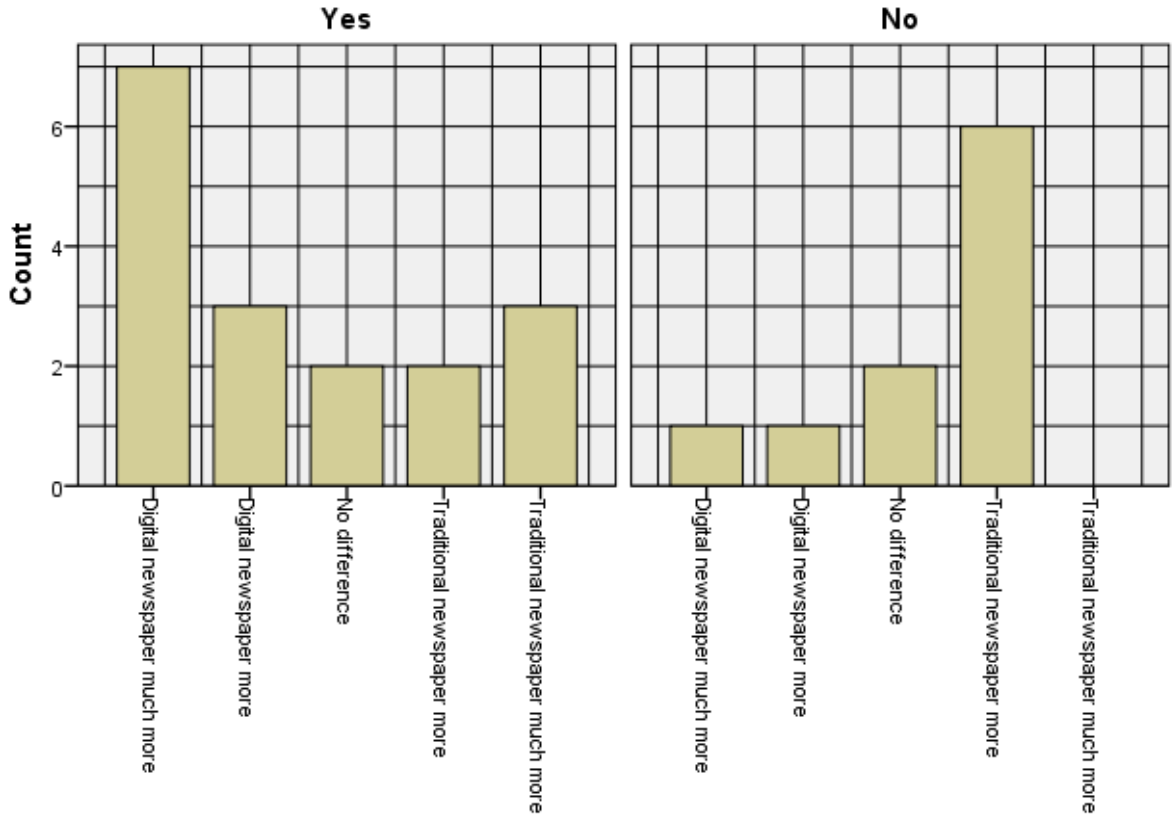
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	5,571	2	,062	,065
Fisher's Exact Test	5,520			,056
N of Valid Cases	27			

When looking at the relationship between the variables *Digital newspaper leads to higher quality* and *Preference for type of newspaper* it is not easy to see if there is any (see figure

27). Even three interviewees that prefer the traditional newspaper much more, believe the e-newspaper allows for much better goal reaching. Interviewees that prefer the e-newspaper much more tend to believe that the e-newspaper leads to better goal reaching (10 over 2).

Figure 27 – Quality – Newspaper preference



When performing a Mann Whitney-U test to test the relationship, a p value of 0,187 is found, which is more than $\alpha = 0,05$ (see table 17). This means that it cannot be said that the believe that a newspaper leads to better goal reaching leads to the preference of a kind of newspaper. Either a bigger sample with similar results, or more clear differences in this sample could provide a significant result.

Table 17 - Quality – Newspaper preference

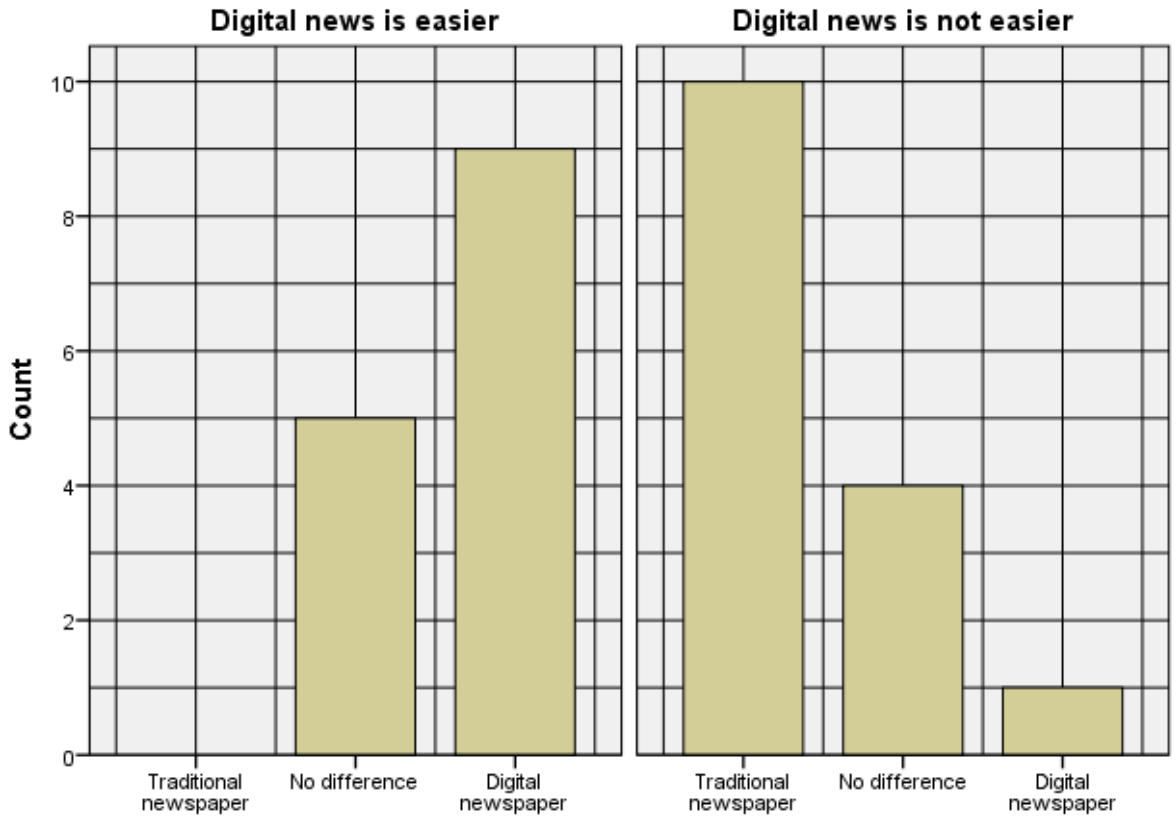
Test Statistics

Mann-Whitney U	58,000
Z	-1,397
Asymp. Sig. (2-tailed)	,162
Exact Sig. [2*(1-tailed Sig.)]	,187

When looking at the perceived ease of use and the likelihood of choosing either type of newspaper, clear differences are visible (see figure 28). This picture clearly shows that

interviewees who perceive digital news to be easier are more likely to read the e-newspaper, whereas the interviewees that do not perceive digital news to be easier are more likely to read the traditional newspaper.

Figure 28 - Perceived ease of use - Likelihood of reading type of newspaper



To test this relationship a Chi-squared test and Fisher-exact test are used since both variables are of a nominal level. This gives a p value of 0,000, which is less than $\alpha = 0,05$ (see table 18). This means that the relationship between perceived ease of use and the likelihood of choosing either newspaper is highly significant.

Table 18 - Perceived ease of use - Likelihood of reading type of newspaper

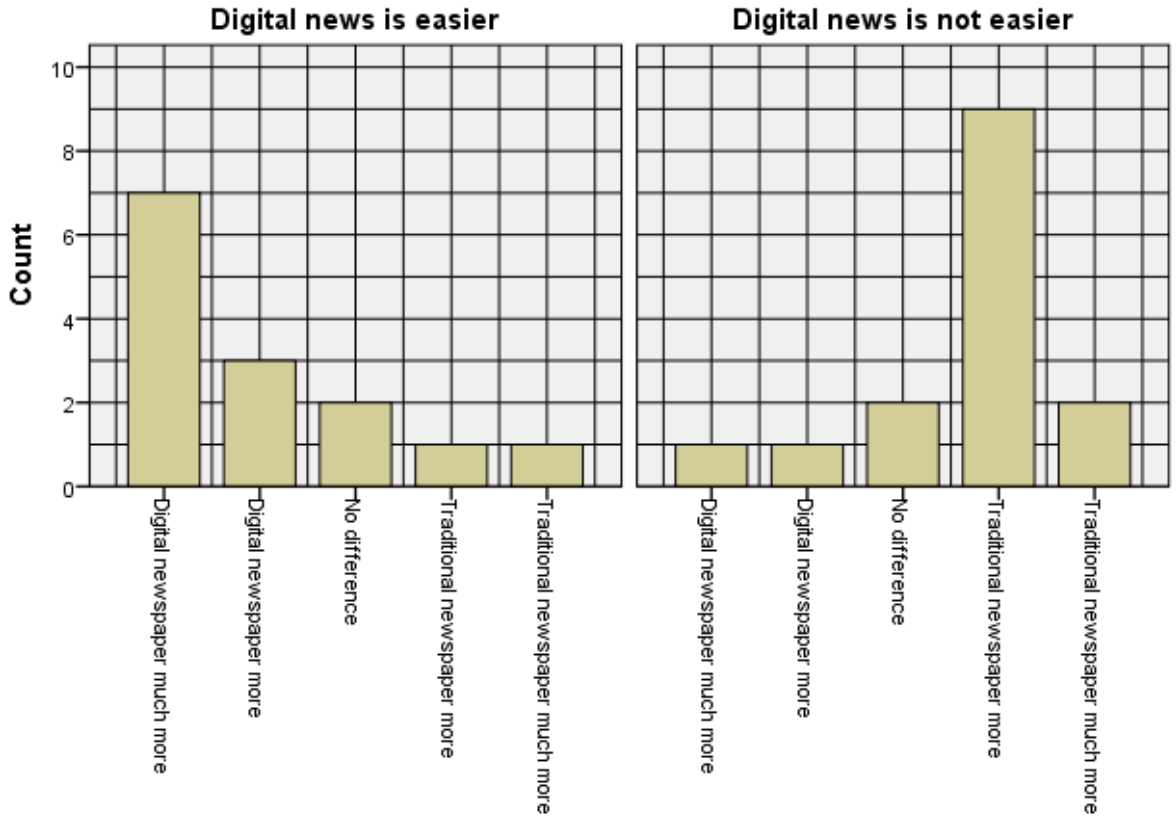
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	16,496	2	,000	,000
Fisher's Exact Test	17,719			,000
N of Valid Cases	29			

Looking in a similar vein at the relationship between perceived ease of use and a preference for either type of newspaper, results are comparable. Looking at figure 29 it is clear to see that

interviewees that perceive digital news as easier prefer the e-newspaper (10 over 2), whereas interviewees that do not perceive the digital news as easier prefer the traditional newspaper (11 over 2).

Figure 29 - Perceived ease of use - Newspaper preference



To test this relationship a Mann Whitney-U test is used, since the preference for any type of newspaper is of ordinal level. This gives a p value of 0,002, which is less than $\alpha = 0,05$ (see table 19). This means that the relationship between perceived ease of use and the preference for either newspaper is highly significant.

Table 19 - Perceived ease of use - Newspaper preference

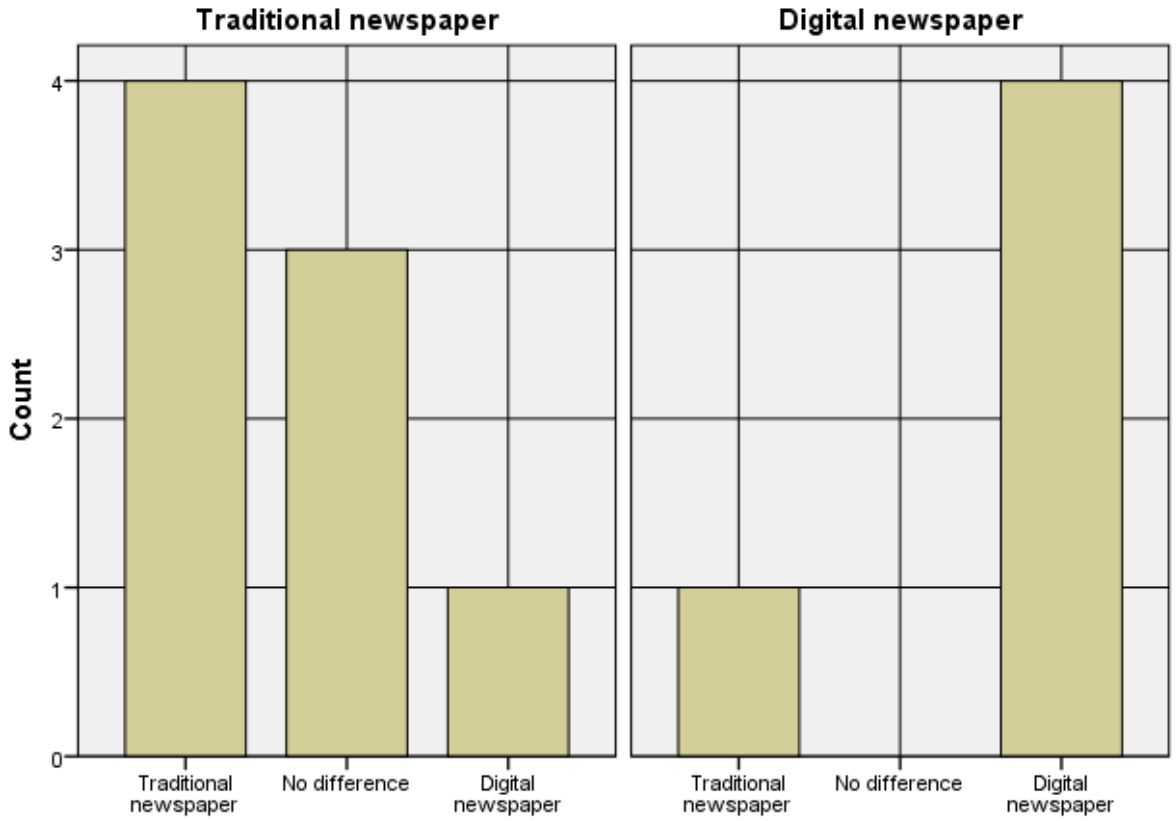
Test Statistics

Mann-Whitney U	36,500
Z	-3,095
Asymp. Sig. (2-tailed)	,002
Exact Sig. [2*(1-tailed Sig.)]	,002

When the social influence is compared with the likelihood of reading any type of newspaper (see figure 30), it becomes clear that if the interviewee has social contacts that prefer the

traditional newspaper, the interviewee is more likely to read the traditional newspaper than the e-newspaper (4 over 1). Also, when the social contacts of the interviewee prefer the e-newspaper, the interviewee is more likely to read the e-newspaper than the traditional newspaper (4 over 1).

Figure 30 - Social influence – Likelihood of reading type of newspaper



To test this relationship a Chi-squared test and Fisher-exact test are used since both variables are of a nominal level. This gives a p value of 0,099, which is more than $\alpha = 0,05$ (see table 20). This means that it cannot be said that the social contacts influence the likelihood of reading either type of newspaper. Either a bigger sample with similar results, or more clear differences in this sample could provide a significant result.

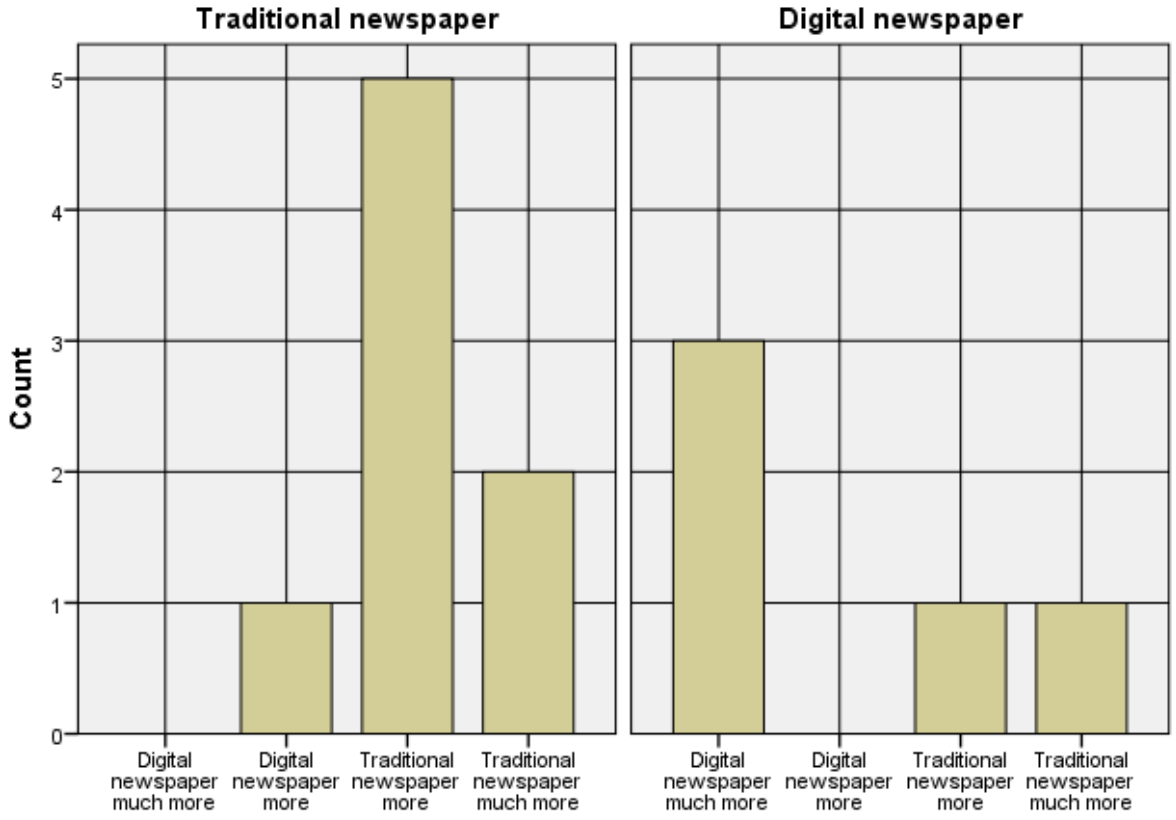
Table 20 – Social influence - Likelihood of reading type of newspaper

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	6,240	2	,044	,099
Fisher's Exact Test	5,336			,099
N of Valid Cases	13			

Looking in a similar vein at the relationship between social influence and a preference for either type of newspaper, results are less obvious (see figure 31). Interviewees with social contacts that prefer the traditional newspaper prefer the traditional newspaper over the e-newspaper (7 over 1), and interviewees with social contacts that prefer the e-newspaper prefer the e-newspaper over the traditional newspaper (3 over 2).

Figure 31 - Social influence - Newspaper preference



This relationship is tested using a Mann Whitney-U test, which leads to a p value of 0,171 which is more than $\alpha = 0,05$ (see table 21). This means that it cannot be said that the social contacts influence the preference for any type of newspaper. Either a bigger sample with similar results, or more clear differences in this sample could provide a significant result.

Table 21 - Social influence - Newspaper preference

Test Statistics

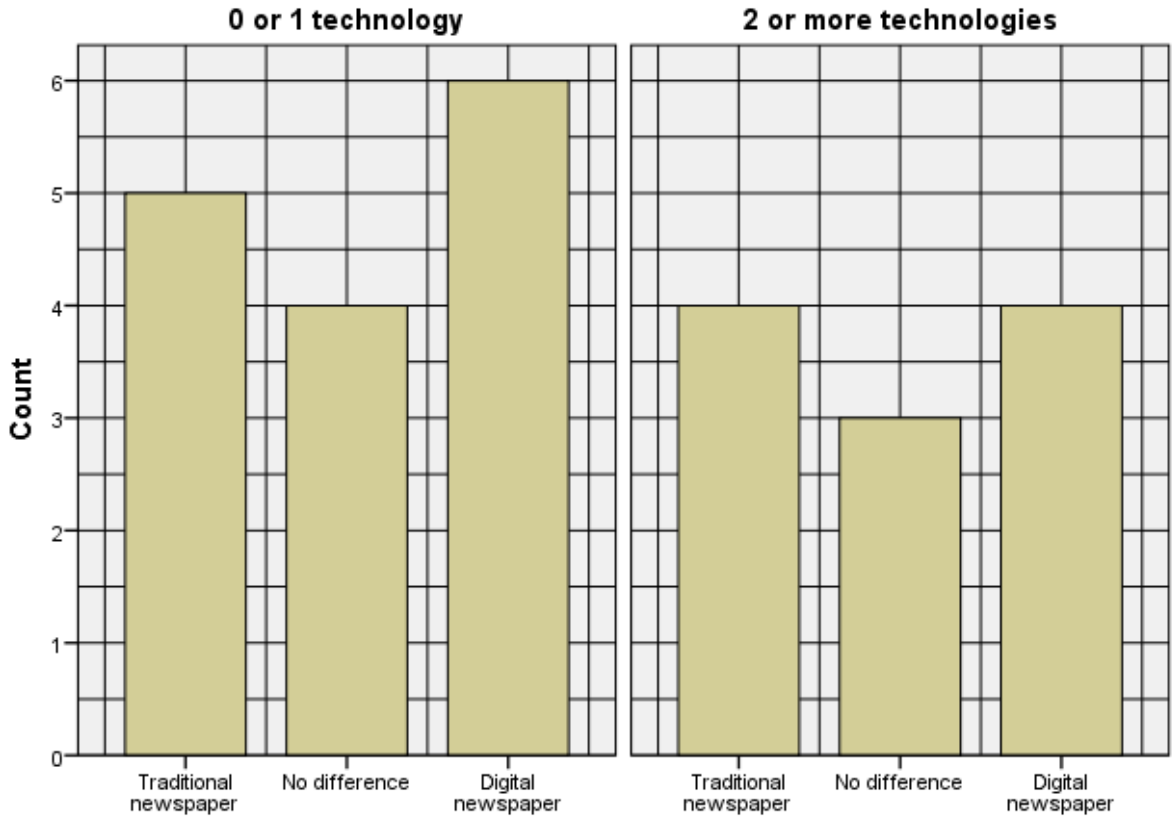
Mann-Whitney U	10,500
Z	-1,481
Asymp. Sig. (2-tailed)	,139
Exact Sig. [2*(1-tailed Sig.)]	,171

All interviewees state that they have internet, so to some level all interviewees are able to access e-newspapers. On the other hand, not all interviewees state to have the same means of

accessing the internet, where some only use a pc, and others a pc, mobile phone, and a tablet. Besides 1 interviewee, all interviewees have at least 1 technology to access the internet. The fact that some interviewees have more ways of accessing the internet can still make a difference in the likelihood for reading any newspaper, or the preference for any newspaper. Therefore two groups are used, one group which has 0 or 1 means of accessing the internet, and one group which has more than 1 means of accessing the internet.

The number of technologies to access the internet, and the likelihood of reading any type of newspaper can be seen in figure 32. It seems that there is no relationship between the two variables. For both amount of technologies the likelihood of reading any type of newspaper is alike.

Figure 32 - Facilities - Likelihood of reading type of newspaper



This relationship is tested using a Chi-squared test and a Fisher-exact test (see table 22). A p value of 1,000 is found, which means that there seems to be no relationship between the number of facilities to access the internet, and the likelihood of reading any type of newspaper.

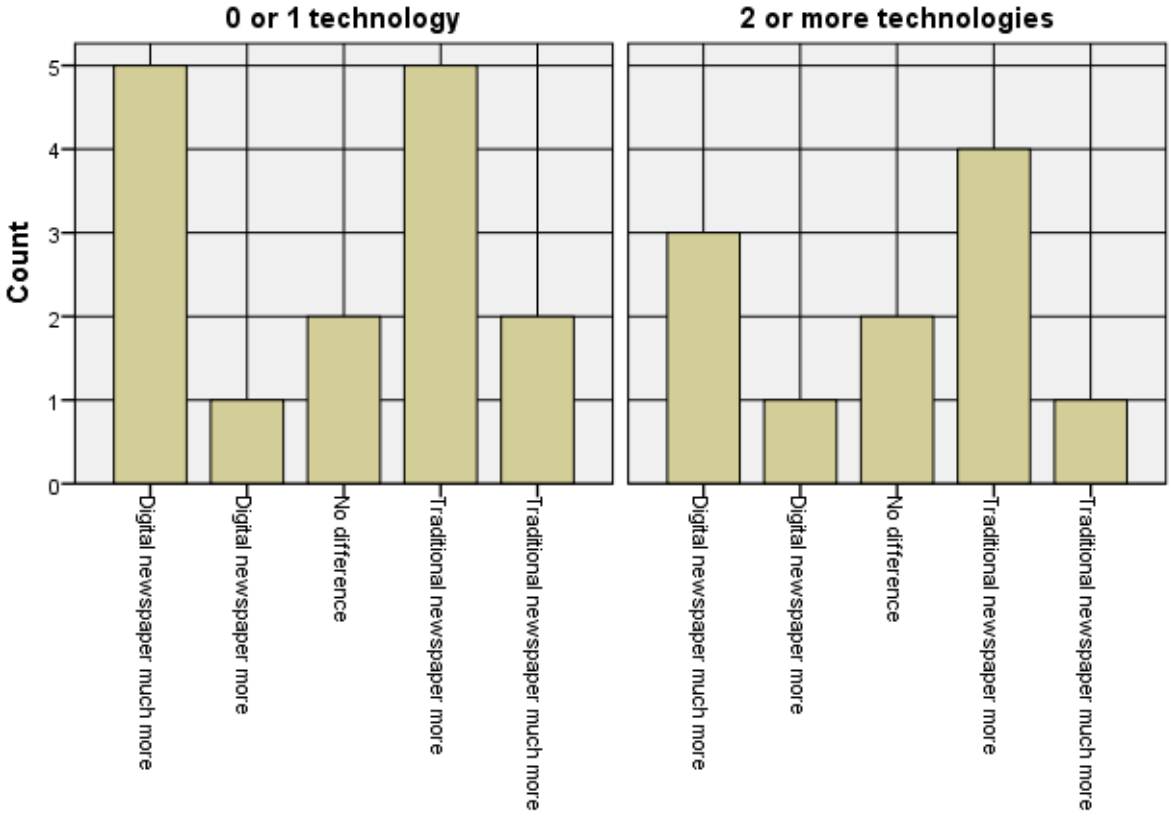
Table 22 - Facilities - Likelihood of reading type of newspaper

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	,040	2	,980	1,000
Fisher's Exact Test	,200			1,000
N of Valid Cases	26			

Looking in a similar vein at the relationship between the number of facilities of accessing the internet and the preference for a type of newspaper, similar results are found (see figure 33). Here too no correlation seems to exist between the number of technologies, and the preference for any type of newspaper.

Figure 33 - Facilities - Newspaper preference



Using a Mann Whitney-U test to test the relationship, a p value of 1,000 is found. This means that the number of technologies to access the internet also does not seem to matter for the preference for any type of newspaper (see table 23).

Table 23 - Facilities - Newspaper preference

Test Statistics

Mann-Whitney U	82,000
Z	-,027
Asymp. Sig. (2-tailed)	,978
Exact Sig. [2*(1-tailed Sig.)]	1,000

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