

Erasmus
School of
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Master Thesis

Erasmus School of Economics
MSc. Business and Economics in Marketing

We've updated our Privacy Policy

The effect of the General Data Protection Regulation on
re-consent of newsletters

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Abstract

The General Data Protection Regulation (EU) 2016/679 (GDPR) is enforced on May 25th 2018. The regulation is meant to protect citizens of the European Union and their privacy (European Parliament, 2016). Because of this regulation companies that operate in the EU are obligated to ask their customers for their freely given, specific, informed and unambiguous consent to send their customers newsletters by e-mail. This results into the obligation for companies to ask their customers for their re-consent. During this research twelve possible influencing factors on the willingness to give re-consent of customers are examined.

Throughout the study it becomes apparent that the variables *purchasing method* and *internet experience* have a significant effect on the willingness to give re-consent. This is examined with a survey and tested with a binomial logistic regression. In general are customers with a higher internet experience more willing to give re-consent than customers with a lower internet experience. Likewise are customers with a preference for online shopping more willing to give their re-consent than customers with a preference for offline shopping.

Keywords: GDPR; re-consent; privacy; newsletters; e-mail

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1. Introduction

Since May 25th of 2018 a new European regulation entered into force. This regulation is meant to protect the citizens of the European Union and their privacy. It is fully called: General Data Protection Regulation (EU) 2016/679 (GDPR). According to the European Commission (European Parliament, 2016), the stronger rules on regulating the personal data of consumers aspire:

- People have more control over their personal data
- Businesses benefit from a level playing field

The GDPR protects the processing of the personal data of citizens of the EU. Companies that process the personal data of citizens are obligated to protect the personal data they receive. The GDPR also gives certain rights to the citizens of the EU. They have the right to be forgotten, the right to claim insights into the personal data a certain company has of them and they have the right to object the processing of their personal data by a company (European Parliament, 2016). A company who doesn't comply with the GDPR can be sanctioned by the Data Protection Supervisory Authorities. This sanction is an administrative fine, which can amount up to four percent of the company's worldwide annual turnover, or 20 million euros, whichever is higher. (European Parliament, 2016).¹

The GDPR was proclaimed two years before it entered into force. This means companies had two years to prepare for the new regulation and ensure their policy complies with the GDPR. Firstly, companies had to ensure themselves that they were aware of the data they gathered from their customers. After that, the companies must enforce software, so they are able to provide customers the required information regarding their rights concerning their personal data and the way that company processes that data. Most companies had to change their privacy policy and some hired a special Data Protection officer to ensure the company complies with the GDPR.

One of the areas that is affected by the GDPR is e-marketing, in particular newsletters. E-marketing is used by companies (Baggott, 2007):

- to share information;
- to inform customer of promotions;

¹ Article 83 REGULATION (EU) 2016/679

- to improve brand building;
- to guide customers to their website;
- to notify customers of the status of their order.

E-marketing has been used by marketers as a way of communicating with their customers. Since 1999 the number of e-mails that was send was twice that of the physical letters (Merisavo & Raulas, 2004). E-marketing is very popular among marketers as it enables them to reach the desired target group, measure the results efficient and effectively and it is less expensive than traditional marketing (Taherdoost & Jalaliyoon, 2014).

One element of e-marketing is e-mail marketing, which main focus is on newsletters. Newsletters “are perhaps the most common vehicles for establishing ongoing dialogue with customers, probably because they provide a terrific mechanism for communicating a highly personalized blend of information, entertainment, and promotions” (Brondmo, 2000). A newsletter will provide a better, closer and more profitable relationship between the company and its customers (Merisavo & Raulas, 2004). Therefore, it can be said newsletters are one of the pillars of customer relationship management.

The relationship between the company and their customers can be measured using the customer relationship management (CRM) factors (Kumar, Venkatesan, Bohling, & Beckmann, 2008). The RFM marketing analysis can be used to analyse which customers will be profitable to the company. This analysis method is based on three parameters: recency, frequency and monetary (Cheng & Chen, 2009). Recency will tell the marketer when the last time was that a particular customer bought something. Frequency determines the number of purchases a customer made during a specific period of time. Lastly, monetary provides information regarding the amount of money that customer spend during that same period.

The company can use the RFM model to determine how valuable a customer is to the company and it enables the company to predict how valuable a customer will be in the future. After the introduction of the GDPR companies have to ask customers for their unambiguous re-consent, before they may process the personal data of customers (European Parliament, 2016).² Re-consent for newsletters of a customer means that the customer provides the company with the

² Article 32 REGULATION (EU) 2016/679

approval to use their data for the purpose of sending company e-mails. The companies can use the RFM model to examine whether valuable customers are more likely to give their re-consent.

Another factor that might influence a customer's willingness to give re-consent, is their internet usage. In this thesis the variables that will make up the factor internet usage include: social media usage, internet experience and online/offline purchasing method.

After the introduction customers must give their consent before companies are allowed to process the personal data of these customers. This means companies may only send e-mails to their customers if these customers have given their consent. If a customer refuses to give its consent, a company is unable to gather information about that customer, including their e-mail and personal data, such as purchasing behaviour. This means the company is unable to build a profile of that customer and examine whether it is a profitable customer or not. The GDPR therefore affects the ability of companies to build a customer relationship management system. This in turn, will affect the company's ability to build relationships with their customers and improve the company's profits. Therefore, this thesis will discuss the following research question:

Which factors lead to a higher re-consent of newsletters, in which the re-consent has to be given because of the introduction of the General Data Protection Regulation?

The question will be answered using two separate surveys. The *product category survey* is a pre-survey as the results of this survey will be used to analyse which product categories are valuable to investigate in the *re-consent survey*. Both surveys are spread amongst customers from different countries of the EU.

The first section of the product category survey is concerned with the demographics of the participants. In the second section 35 product categories are listed. The participants are asked of which categories they receive newsletters. Those categories most participants receive newsletters of will be investigated further in the re-consent survey.

The re-consent survey consists of three different sections. These sections are concerned with the factors that are mentioned in the research questions. The factors that will be tested during this research are divided over 3 sections: socio-demographics, internet usage and RFM.

The first section is concerned with the socio-demographics of the participants. According to these socio-demographics the participant's responses, and their differences, can be analysed. Furthermore, these demographics will give confirmation of the respondents are being compatible throughout both surveys, so that the results of the *product category survey* can be transmitted to the questions used in the *re-consent survey*. The following sub-question will be answered using the socio-demographics of customers:

1. Which socio-demographic factors are related to a customer's willingness to give re-consent?

The second part is about the internet usage of the participants. The questions are concerned with their time spend on the internet, their social media usage and their purchasing method regarding online and offline shopping. Participants' responses will be used to answer the following sub-questions:

2. Is the use of social media related to a higher re-consent?
3. Are participants who are more active on the internet more willing to give their re-consent?
4. Are participants who prevail online shopping over offline shopping more willing to give their re-consent?

The last section of the survey is concerned with the elements of the RFM model among different product categories. The participants are asked about the last time they bought something in that particular product category (recency), how often they bought something (frequency) and how much money they have spent in that product category (monetary). Based on the responses the RFM model can be measured. The survey will contain the product categories that are determined by the product category survey. A part of this section is concerned with whether the participants have given their re-consent to the companies in this category. In order to answer the research question, the following sub-questions will be answered:

5. Is a higher recency related to a higher willingness into giving re-consent?
6. Is a higher frequency related to a higher willingness into giving re-consent?
7. Is a higher monetarization related to a higher willingness into giving re-consent?

Not all customers are willing to give their re-consent. If a customer decides he will not give their consent for receiving a company's newsletter by e-mail, this company will not be able to reach the customer through this channel. A customer can even go this far that a company is not

allowed to process any personal data of that customer. Therefore, a company might be willing to offer their customers an incentive to persuade them to give their re-consent. In order to find out whether customers are prone to such incentives the last sub-question is drafted:

8. Are customers who are given an incentive more willing to give their re-consent?

1.1 Structure of the paper

This thesis will consist of eight chapters. Chapter two is concerned with the explanation of the theory that is used throughout this thesis. Among others, in chapter two the direct email marketing theory and the use of the Recency, Frequency and Monetary (RFM) model will be explained. In chapter three the most important rules of the GDPR, in respect to this thesis, will be discussed. The importance of obtaining consent of customers will be explained. Thereafter, in chapter four, the theory explained in chapters two and three will be used to create hypotheses that help answer the research question. Chapter five is then concerned with the methodology of the research as to how the hypotheses are tested and how the results are analysed. These results are shown in chapters six and seven. Lastly, chapter eight will evolve around the conclusion about the factors that influence the re-consent given by consumers. In this chapter the shortcomings of the research will be mentioned as well as some suggestions for further research concerning this topic that go beyond the scope of this thesis.

2. Theoretical framework

In this chapter two main issues will be discussed: direct e-mail marketing and Recency, Frequency and Monetary (RFM) Model. Firstly, the direct e-mail marketing theory will be discussed with a segment specifically on the efficiency of incentives in direct e-mail. Secondly, the RFM model will be explained.

2.1 Direct E-Mail Marketing

Sending customers an e-mail with the latest fashion, a sale announcement or a how-to explanation of your newest product can be a lucrative business (Cases, Fournier, Dubois, & Tanner Jr., 2010). The use of e-mails by companies has become a more popular way to interact with customers as it has low set up and distribution cost and it is an easy way to connect with the target group. (Moustakas, Ranganathan, & Dequenoy, 2006).

E-mail marketing is a form of direct marketing because it enables companies to have direct correspondence with their customers (Fill, 2005). Direct marketing, thus e-mail marketing, ensures companies can communicate with their customers in a more possible manner, due to which a more personal relationship can be built between the company and the customer (Finne & Gronroos, 2009). Other ways of direct marketing are: catalogues, personal selling, search engine marketing and telemarketing (Fill, 2005).

As e-mail marketing is a form of e-Marketing as well, companies can, by using e-mails, attract customers to their website and webshop (Brodie, Winklhofer, Coviello, & Johnston, 2007) (Hongshuang & Kannan, 2014). Although getting customers to your website is an important part of e-mail marketing, it is not the best way to get a conversion. Conversions can be established through a chain of touch points (Hongshuang & Kannan, 2014). Such online touch points can be referrals, entering the website through the URL or by using display banner ads. All these different touch points have their own influence on the customers and can ultimately lead to a conversion. (Petersen, et al., 2009).

Although getting customers to your website is an important part of e-mail marketing, it is not the best tool to get a conversion. However, as before mentioned, e-mail can be a link in the chain towards that conversion. Besides having a direct influence, e-mail marketing has some other positive effects for a brand. Direct e-mail marketing can not only play a role in obtaining

a conversion, but it can have a positive effect on the brand loyalty of customers as well (Merisavo & Raulas, 2004). Customers who were contacted through e-mail show an enhanced brand loyalty as they appreciate regular communication with the company (Sheth & Parvatiyar, 1995). Furthermore, direct e-mail marketing can increase a customer's interest in the brand, as it is an accepted and desired informal way of communication between the customer and the company (Merisavo & Raulas, 2004).

A newsletter is used for the following purposes: recall the existence of the company, provide information to customers and to potential customers, raise the credibility of the brand, lead readers to ordering products or services and giving customers the possibility to give feedback. Research shows that in 2017 93 percent of the Dutch citizens has a subscription to one or more newsletters (Westerhuis, 2017), while this was only 85 percent in 2016 (Westerhuis, 2016). This should indicate that there is a high percentage of interested customers. However, research also shows that the response and click through rates of these e-mails are low, namely two to three percent. (Ellis-Chadwick & Doherty, 2012). A newsletter performs the following tasks: recalls the existence of the company, provides information to customers and to potential customers, raises the credibility of the brand, leads readers to ordering products or services and giving customers the possibility to give feedback (Hudak, Kianickova, & Madlenak, 2017).

2.1.2 Incentives in e-mail marketing

Companies might consider giving customers an incentive to persuade them into giving their re-consent. This is the "what's-in-it-for-me factor" for the customer, what does the customer gain from giving their re-consent (Chaffey, 2007). Research shows that with the right incentive people are willing to provide companies with the data these companies desire (Acquisti, John, & Loewenstein, 2013). Incentives can be categorised into a monetary and non-monetary incentives. Examples of monetary incentives are discounts, which can be relative (10% discount) or absolute (-€10) (Gneezy, Meier, & Rey-Biel, 2011). A non-monetary incentive can be social pressure (Sorauren, 2000).

Research has been done through content-analysis of 957 promotional e-mails of 20 different retailers active in different industries. The analysis of these e-mails shows which types of incentives are being used. The table below shows the percentages of the incentives that are being used (Ellis-Chadwick & Doherty, 2012):

Incentive	Percentage of total
Contest	5.1%
Collect voucher	1.5%
Collect reward points	0.6%
Complete a quiz	0.2%
Total	7.4%

So in only 7.4% of the promotional e-mails is an incentive is used, while research shows that e-mails that contain some type of incentive have a higher click-through-rate (CTR) (Rettie & Chittenden, 2003). A higher CTR indicates a higher interest in the brand and therefore it is possible that it is an indication to a higher willingness to give re-consent (Kumar, Zhang, & Luo, 2014).

2.3 Recency, Frequency and Monetization Model

The RFM model is developed over 30 years ago to measure the influence of the effectiveness of direct marketing that companies use (Gupta, et al., 2006) (Hughes, 1994). Nowadays it is mostly used in target marketing programs, of which email marketing is a part, to analyse and improve the e-mail' response rates of profitable customers (Jonker, Piersma, & Poel, 2002). The RFM model consists of three elements (Bult & Wansbeek, 1995): Recency, Frequency and Monetary. In the next section the elements will be discussed, as well as how to bring the elements together into one variable.

2.3.1 Recency

Recency is represented by the R, which refers to the interval between the present and the time of the latest consumption (Cheng & Chen, 2009). Studies show that the larger the value R is, the more likely the customer is to consume again (Wu & Lin, 2005). Study also show that the newsletter' response rate of customers varies most dependent upon their recency (Hughes, 2005).

2.3.2 Frequency

Frequency is represented by the F and refers to the number of transactions a customers has made in a particular period of time (Bult & Wansbeek, 1995). This can for example mean that a customer has done two transactions in a year or two times in a month. Study shows that a customer who frequently consumes from a company is more likely to consume again (Wu & Lin, 2005).

2.3.3 Monetary

The last variable of the model is monetary which is represented by the M. Monetary refers to an amount of money that was spent in a particular period of time (Bult & Wansbeek, 1995). Study shows that the more money a consumer spends, the more likely that customer will consume again (Wu & Lin, 2005).

2.3.4 RFM Score

Customers are assigned individual scores for all three variables of the RFM model. The scores will be assigned as follows (Miglautsch, 2000):

- Recency: The recency score is based on the time interval between the present and the most recent purchase. The time interval will be split into three bins. The customers who most recently purchased a product will be placed in bin three and the customer with the least recent purchase in bin one.
- Frequency: The customers who most frequently consume products in this product category will be placed in bin three and the customers who least frequently purchase a product will be placed in bin one.
- Monetary: Lastly, customers will be ranked according to the money they spend in a particular period of time. Customers who spend most will be placed in bin three and the customers who have spent less will be placed in bin one.

The three bins combined result in an overall RFM-score (Hughes, 1994):

$$RFM = R * 100 + F * 10 + M$$

Or said otherwise: The R is represented by the first number, the F by the second and the M by the third.

The most valuable customers are the ones that have a RFM-score of 333, while the least valuable customers

have a RFM-score of 111. This means customers can be allocated to, $3*3*3=27$, different RFM-scores. Table 2.1 shows an overview of how the different RFM-scores are interpretable. Thus, a customer with the highest F score, no matter the R and M (in the table shown as -), is a loyal customer to that company.

Table 2.1	
Explanation of RFM Score	
RFM Score	Customer Meaning
333	Best customers
-3-	Loyal customers
--3	Highest paying customers
-31	Loyal but not paying much
31-	New customers
11-	Once Loyal, Now gone
111	Best to lose customers

3. General Data Protection Regulation

As of May 25th, the new law that must protect all processing personal data of the citizens of the European Union become enforceable. This law is fully called (European Parliament, 2016): *REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).*

This law is the successor of the Data Protection Directive (DPD) from 1995 (European Parliament, 1995). The DPD was introduced in a time when only one percent of the European citizens was active on the internet (Nabben & Post Uiterweer, 2017). In the last decades society has changed into a digital environment so much, due to which this law was no longer considered to be sufficient.

So in 2012 the European Commission presented a proposition to reconsider the privacy laws in Europe, with the goal to “make Europe fit for the digital age” (European Commission, 2015a). With this “General Approach” the Member States agreed on:

- **One continent, one law** – The regulation is established as a set of rules concerned with data protection. The rules are applicable throughout the entire EU. This means that companies that are in business with more than one country in the EU will no longer endure unnecessary requirements if they comply with the rules of the GDPR. According to calculations done by the European Commission this will save business around €2.3 billion a year (European Commission, 2015a).
- **Strengthened and additional rights** – Under the GDPR new rights are enforced which give citizens the control over their own data back. Such rights include the right to be forgotten and the right to have access to their own personal data the company possesses of them. (European Commission, 2015b).
- **European rules on European soil** – Companies outside of Europe that do business with citizens on European soil are required to comply with the regulations (European Commission, 2015a).
- **More powers for independent national data protection authorities** – National authorities are given the competence to sanction companies that do not comply with the regulation (European Commission, 2015a).

- **The ‘one-stop shop’** – Each member state has one national supervisory authority. Companies can be sanctioned by the supervisory authority of the member state they are located in and the supervisory authority of the member state of the citizens of which they process personal data. There are specific rules as to when a supervisory authority is competent, which makes the sanctioning of companies simpler and cheaper than before. (European Commission, 2015b).

After years of negotiations, the Member States came to an agreement by signing the General Data Protection Regulation on 27 April 2016. The Member States agreed that the regulation would become enforceable on 25th May 2018. All parties concerned with the new regulation had two years to prepare and comply with the regulation.

3.1 Article 4 GDPR - Definitions

Article 4 defines a variation of important terms that are used in the regulation and are of importance in this thesis³:

- **Personal data** – Any information relating to an identified or identifiable natural person (‘data subject’); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.
- **Processing** – Any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organization, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction.
- **Consent** - The data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her.

³ Article 4 sub 1, 2 & 11 REGULATION (EU) 2016/679

3.2 Article 5 GDPR - Processing of personal data

Article 5 states that personal data should be⁴:

- Processed lawfully, fairly and in a transparent manner;
- Collected for specified, explicit and legitimate purposes;
- Adequate, relevant and limited to what is necessary;
- Kept up to date.

3.3 Article 7 GDPR - Conditions for consent

Article 7 states four conditions for consent that will be explained, the actual legal text can be found in appendix A:

- A company must be able to prove a consumer has explicitly given his consent.
- The request for consent must be represented using plain and clear language. The request for consent must be distinguished from other requests and must be easily accessible.
- The 'data subject' should be informed that he or she can withdraw at all times, before giving consent. The 'data subject' has the right to withdraw its consent at all times. And in addition to that the possibility to withdraw the consent should be as straightforward as its permission.
- The consent must be given freely. The consent may not be a condition of the performance of a contract of service.

3.4 Article 83 GDPR - General Conditions for imposing administrative fines

Supervisory authorities can fine companies that do not comply with the regulation. The authorities can choose between three different ways to impose a fine:

- A fine with a maximum of €10.000.000 or 2% of the worldwide annual revenue, whichever is higher⁵, for violating obligations that have a procedural nature.
- A fine with a maximum of €20.000.000 or 4% of the worldwide annual revenue, whichever is higher⁶, for violating obligations that have a material nature or a violation that affects the involved in a direct manner.

⁴ Article 5 sub 1 REGULATION (EU) 2016/679

⁵ Article 83 sub 4 REGULATION (EU) 2016/679

⁶ Article 83 sub 5 REGULATION (EU) 2016/679

- A fine with a maximum of €20.000.000 or 4% of the worldwide annual revenue, whichever is higher⁷, for not following the orders that have been given by the supervisory authorities.

3.5 Conclusion

The GDPR defines the right the citizens of the EU have concerning the processing of their personal data by companies. All companies that process personal data of the citizens of the EU must comply with the regulations and thus play by the same rules and obey the same laws (European Parliament, 2016).

As to the rights of the citizens. They must unambiguously and freely give their consent to the processing of their personal data by companies. Moreover, companies have an obligation to inform the citizens about the processing of the personal data and have to respect the preferences of the citizens concerning the objecting to and the removal of the processing of this data.

⁷ Article 83 sub 6 REGULATION (EU) 2016/679

4. Hypotheses

In this chapter the theory will be linked to the sub-questions. The chapter will be divided into three sub-chapters in which the three sections, socio demographics, internet usage and RFM model, will be discussed separately.

4.1 Hypotheses 1 - Socio Demographics

Socio Demographics are the statistics about the population (Stafford, 1996). An overview of the demographics that influence a person's willingness to give their re-consent can be created through analysis. By using this overview companies can group and target the customers who are most likely to give their re-consent (Kotler & Armstrong, 1991). Moreover, demographics variables take less effort to measure than other variables (Lazer, 1994). The four socio demographics that are being analyzed include gender, age, education and income.

Gender

The effect of gender on privacy concerns has been broadly discussed in the literature. These studies reveal that males and females have different attitudes towards their privacy (Sheehan, 1999). Females are consistently more concerned with their privacy than males (Rowan & Dehlinger, 2014) (Park Y. J., 2015) (Youn & Hall, 2008) (Lewis, Kaufman, & Christakis, 2008). However, males often take more measures to protect their privacy than females (Sheehan, 1999). This predicts that females are more willing to give their re-consent than males. This leads to the following hypothesis:

H1a. Females are expected to be more willing to give re-consent than males.

Age

Older people who use the internet are more likely to be sensitive towards privacy issues. (Greaff & Harmon, 2002) (Bellman, Johnson, Kobrin, & Lohse, 2004). They feel a greater need to have their information removed from mailing lists (Milne & Rohm, 2000). However, research shows younger customers are more aware of the processing of data and know, more than older customers do, how it can be beneficial to them (Earp & Baumer, 2003). Younger customers have a better understanding the "what's-in-it-for-me" factor. This leads to the following hypothesis:

H1b. Younger consumers are expected to be more willing to give re-consent than older consumers.

Education

Most studies reveal there is no significant relation between a person's education and privacy concerns (Bellman, Johnson, Kobrin, & Lohse, 2004) (Milne & Rohm, 2000) (Sheehan & Hoy, 2000) Research that does find a correlation between education and privacy concern states that a lower level of education is correlated to a higher privacy concern (Zukowski & Brown, 2007). This results in the following hypothesis:

H1c. Customers with a higher level of education are more willing to give their re-consent than customers with a lower level of education.

Income

The last socio demographic that is being tested is income. Higher income levels seem to be related to greater awareness of privacy information practices (O'Neil, 2001). This might be due to the fact that consumers with a higher income experience higher level of threats when they give up their privacy. Hypothesis 1d will review the relationship between income and re-consent:

H1d. Consumers with a lower income will be more willing to give their re-consent than consumers with a higher income.

Figure 4.1 shows the conceptual model of the hypotheses tested during the first part of the questionnaire.

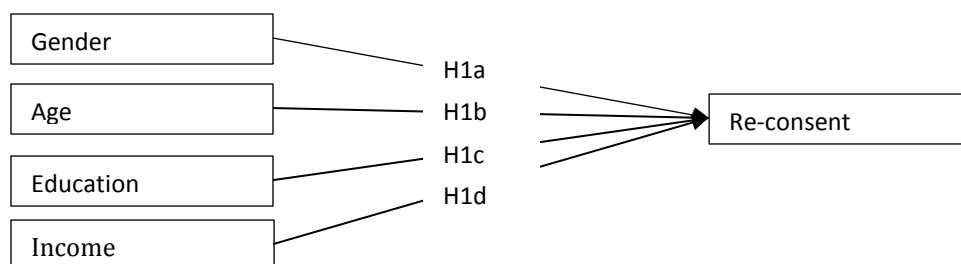


Figure 4.1 – Conceptual model hypotheses 1

4.2 Hypotheses 2 - Internet Usage

Internet Experience

The literature that reports about online privacy concerns suggests that internet users are generally concerned with the personal information they provide (Young & Quan-Haase, 2009). Moreover, customers with more internet experience, thus customers who spent more time online, are more likely to have installed a virus scanner to protect themselves (LaRose, Rifon, & Enbody, 2008), delete cookies or change their passwords (Lee, La Rose, & Rifon, 2008).

However, a study by Miyazaki and Fernandez (2001) reports that internet users who are more experienced demonstrate a lower concern about their online privacy. And at last, people with more internet experience are more likely to have multiple subscriptions to newsletters of companies (Hosseini, 2015). This leads to the following hypothesis:

H2a. People who are more experienced with internet are more likely to give their re-consent than less experienced users.

Purchasing Method

Online shopping has been a worldwide growing phenomenon in the past decades (Kau, Tang, & Ghose, 2003). Studies show that consumers who prefer to shop online tend to trust online companies with whom they have had encounters with (Sheehan & Hoy, 2000). The following hypothesis can be drawn up:

H2b. Customers who prefer online shopping are more willing to give their re-consent than customers who prefer offline shopping.

Social Media Usage

Research has explored the use of social networking sites (SNS) and privacy concerns. The key issue in most studies is the trade-off between, on the one hand, providing the best and latest features and, on the other hand, the privacy the users have to give up in order to create these features (Spiliotopoulos & Oakley, 2013). People who often use SNS are less concerned with their privacy and don't show any behavior that protects their privacy (Johnson, Egelman, & Bellovin, 2012). However, this study focuses more on the internal than external privacy (Krasnova, Gunther, Spiekermann, & Koroleva, 2009) (Acquisti & Gross, 2006). This entails that people are more worried about what others can see on their SNS pages, than what the owners of the SNS do with the information the users post on their pages. Hence, this leads to the following hypothesis:

H2c. Customers who often use social networking sites are expected to be more willing to give their re-consent than customers who use social networking sites less often.

Figure 4.2 shows the conceptual model of hypothesis 2.

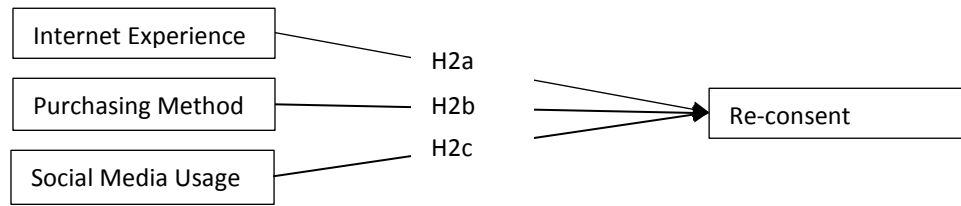


Figure 4.2 – Conceptual model hypothesis 2

4.3 Hypotheses 3, 4 & 5 - RFM

Hypothesis 3 focuses on the three variables of the RFM model: Recency, Frequency and Monetary (Bult & Wansbeek, 1995). The model explains that if the recency of a customer is low, this customer wasn't a recent customer of that company (Wu & Lin, 2005). Therefore, a larger recency might suggest the customer is no longer interested in that company. Moreover, the model explains that customers with a higher frequency, thus those who more frequently buy something from that company, might be more interested in the company (Wu & Lin, 2005). Furthermore, the more money a customer spends, the higher the monetary value which again might suggest the customer is more interested in the company (Wu & Lin, 2005).

Sheehan and Hoy (2000) concluded that people who are familiar with a company are less likely to doubt that company and are more trustful towards the company with their personal information. This leads to the following hypotheses:

- H3a. Customers with a higher recency score are more willing to give their re-consent.
- H3b. Customers with a higher frequency score are more willing to give their re-consent.
- H3c. Customers with a higher monetary score are more willing to give their re-consent.

The total RFM score is measured with the RFM formula of paragraph 2.3.4, this is to check which customers are most willing to give their re-consent. Research suggests that more valuable customers to the company have a higher RFM score (Miglautsch, 2000). And more valuable customers are also more loyal customers in this case, because of the high frequency score involved in the total RFM score. It can be concluded that customers with a higher RFM score are more interested in the information they are given by that company's newsletters, this leads to the following hypothesis:

- H4. Customers with a higher RFM score are more willing to give their re-consent.

The last factor that might influence the customer’s willingness to give their re-consent is the incentive a company might give to their customers to persuade those customers into giving their re-consent. Customers that have been given the option to benefit from giving their re-consent are more willing to give their re-consent (Acquisti, John, & Loewenstein, 2013). This results into the fifth hypothesis:

H5. Customers that have received an incentive are more willing to give their re-consent.

Figure 4.3 shows the conceptual model of hypothesis 3, 4 and 5.

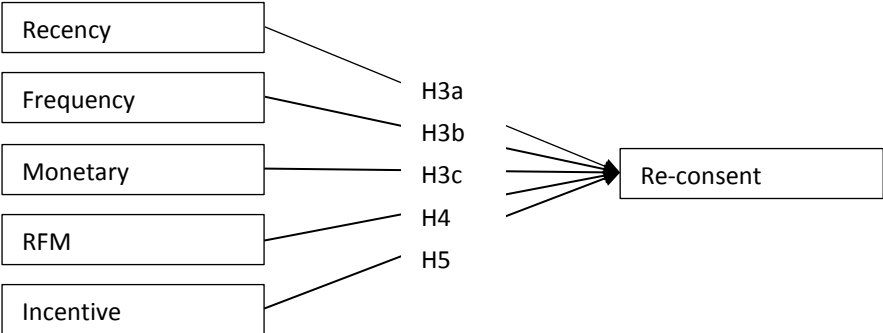


Figure 4.3 – Conceptual model hypothesis 3, 4 & 5

4.4 Overview of all hypotheses

During this research twelve variables will be tested to reject or support the hypotheses. This will be done by a binomial logistic regression, further details on this test will be provided in chapter 7. During this regression all factors that are described in this chapter will be considered to have an influence on the willingness to give re-consent of customers. For this the following conceptual model is conducted:

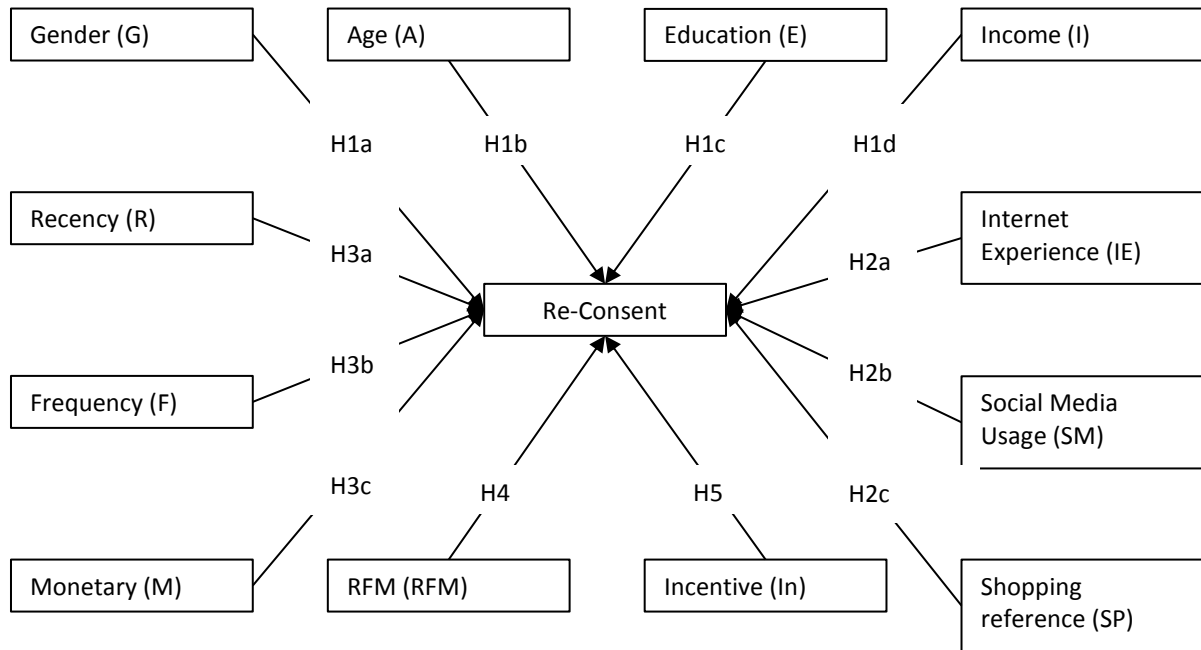


Figure 4.4 – Conceptual model all hypotheses

With this model the following equation will be conducted in this paper:

$$\begin{aligned}
 &P_{re-consent}(Y_i = 1) \\
 &= \frac{e^{\beta_0 + \beta_1 * G + \beta_2 * A + \beta_3 * E + \beta_4 * I + \beta_5 * IE + \beta_6 * SM + \beta_7 * SP + \beta_8 * In + \beta_9 * R + \beta_{10} * F + \beta_{11} * M + \beta_{12} * RFM}}{1 + e^{\beta_0 + \beta_1 * G + \beta_2 * A + \beta_3 * E + \beta_4 * I + \beta_5 * IE + \beta_6 * SM + \beta_7 * SP + \beta_8 * In + \beta_9 * R + \beta_{10} * F + \beta_{11} * M + \beta_{12} * RFM}}
 \end{aligned}$$

5. Methodology

The aim of this thesis is to investigate which factors are related to a customer's willingness to give their re-consent on receiving a newsletter from a company. The research will be conducted by distributing two surveys among consumers, the conducted surveys can be reviewed in appendix B and C. The first survey examines which product categories customers receive the most newsletters from. These product categories will be used in the second survey. The second survey reviews customer's demographics, internet usage, RFM and re-consent.

This chapter will provide the questionnaire design, participants and data collection of both of the surveys. This chapter will also explain how the *RFM* score is established and how variables *social media usage* and *internet experience* are measured.

5.1 Study 1 – Product Category Survey

The first study that has been done is the *product category survey* (Appendix B). This survey is meant as a preliminary survey to investigate from which product categories consumers want to receive newsletters. It is a small survey that took consumers approximately two minutes to complete.

5.1.1 Questionnaire design

The survey contains two blocks of questions. The first block is a set of questions concerned with socio demographics. The second set is a list of 33 product categories. Participants have to check the boxes of the product categories they receive a newsletter from.

The company categories are based on the NACE-codes, it is the French term for: “Nomenclature statistique des Activités économiques dans la Communauté Européenne”, which translates to Statistical Classification of Economic Activities in the European Union. These codes are drawn up by the European Union (European Parliament, 2006) and are used as a classification system to identify different types of industries. The NACE uses four levels of hierarchy:

- Sections: For example section A is Agriculture, Forestry and fishing
- Divisions: A01 is Crop and animal production, hunting and related service activities
- Groups: A01.1 Growing of non-perennial crops
- Classes: A01.11 Growing of cereals (except rice), leguminous crops and oil seeds

The examples shows that there are numerous categories that are not interesting for consumers because the companies in these categories operate in a business-to-business market. These categories are deleted, which leaves a list of 33 categories.

5.1.2 Respondents and data collection

The sample needs to be representative in order to investigate from which product category customers receive the most newsletters. This is essential since the *product category survey* is a preliminary questionnaire that provides the second survey its research material. In both surveys the same socio demographics are asked to make sure the first and second survey entail similar sample groups. This will be further tested in chapter 6.1 with a T-test. To be able to do this T-test the power has to be calculated. The program G*Power 3.1.9.2 is run to ensure that the appropriate sample sizes are being met. Both groups should have at least 88 respondents in order to run a proper independent T-test (see appendix D).

Respondents will be selected through the use of social networking sites and multiple peer-to-peer survey sites. The link of the survey is distributed through social networking sites: WhatsApp, Facebook and LinkedIn. Peer-to-peer sites such as SurveyCircle, SurveySwap and poll-pool are used as well. To make sure the survey is filled in only by respondents that are affected by the GDPR, the first question is concerned with the nationality of the participant. In case the participant is not from an EU Member State, he is kindly thanked for their interest, but will not be asked to fill out the rest of the survey. Since, the GDPR only influences EU Member States.

5.2 Study 2 – Re-consent Survey

The second survey is designed to study which factors influence a customer's willingness to give their re-consent for receiving newsletters from that particular country (the entire survey can be found in appendix C).

5.2.1 Questionnaire Design

The survey is divided into three blocks. The first block is the socio demographics, as mentioned earlier this is to see if the results of the first survey are transmittable to the second one. Besides that, these demographics are also factors that are used to analyse hypothesis 1.

The second block will investigate hypothesis 2, it contains questions about the online behaviour of the participants. These are questions about how much time they spend online, their social media usage and whether they prefer online or offline shopping or are indifferent.

The third and final block is divided into six components and each component contains a product category from the *product category survey*. Firstly, the participant is asked whether or not they have received a newsletter from this category. If the participant answers “no” he will continue to the next category and so on. If the participant answers “yes”, he will be asked a series of questions about his behaviour in that category. This will be done according to the RFM model theory (Bult & Wansbeek, 1995). According to this model the participant will first be asked about when the last time was he bought something (R), how many times he bought something in a certain time period (F) and how much he spend in that time period (M). After that he will be asked if he has received any kind of incentive to persuade him into giving his re-consent. Lastly, the participant will be asked if he has given his re-consent to receive the newsletter of that company. This block will answer hypotheses 3, 4 and 5.

5.2.2 Measures

Different questions from the survey are combined into one variable. In this way the variable becomes more valuable. The following three variables have resulted from such combination of questions: *social media usage*, *internet experience* and *RFM*. These variables are discussed below.

Social Media Usage

The results of the following questions make up the variable *social media usage*:

- Are you active on social media (examples: Facebook, Instagram, Twitter, LinkedIn)? (Q8)
- Which of the following social media platforms are you currently active on? Facebook Instagram, Twitter, LinkedIn, Pinterest, Tumblr and Google+ (Q9)
- How often do you check the following social media platforms? (only the ones that have been checked in the last question will appear) (Q10)

Question eight will be used to test if people are active on social networking sites (SNS). Participants who are not active on social media receive a 0 for the variable *social media usage*. If they are active on SNS they have to answer on which platforms they are active and how much time they spent on those platforms. To calculate the social media usage of a participant, the following formula is used:

$$\text{Social Media Usage} = (\text{Facebook} * \text{Check}_{\text{Facebook}} + \text{Instagram} * \text{Check}_{\text{Instagram}} + \text{Twitter} * \text{Check}_{\text{Twitter}} + \text{LinkedIn} * \text{Check}_{\text{LinkedIn}} + \text{Pinterest} * \text{Check}_{\text{Pinterest}} + \text{Tumblr} * \text{Check}_{\text{Tumblr}} + \text{Google}^+ * \text{Check}_{\text{Google}^+})$$

The answer on question nine can be either be 0, being not active on that platform, or 1, being active on that platform. The answers of question ten can be: never = 1, rarely = 2, sometimes = 3, very often = 4 and always = 5. So for example if someone is active on Facebook, Instagram and LinkedIn and this person checks Facebook very often, Instagram always and LinkedIn sometimes, this person will receive a score of:

$$\text{Social Media Usage} = (1 * 4 + 1 * 5 + 0 * 0 + 1 * 3 + 0 * 0 + 0 * 0 + 0 * 0) = 12$$

This variable can therefore vary between 0 and 35.

Internet Experience

The variable *internet experience* is conducted by using the following questions:

- How often do you (actively) spend time on the internet? (Q6)
- On average, how many hours per day do you (actively) spend on the internet? (Q7)

To calculate the internet experience these two variables will be combined in the following manner:

$$\text{Internet Experience} = (\text{Internet}_{\text{days per week}} * \text{Internet}_{\text{hours Per day}})$$

This will calculate the amount of time someone spends on the internet per week. It is assumed that someone who spends more time on the internet is more experienced. In the equation question six is used as the first component of the variable. The answers to that question can be: daily=7, 4-6 days per week=5, 2-3 days per week=3, 1 day per week=1, never=0. The second component is the answer to question seven. If someone spends less than one hour a day on the internet he will receive a 1, 1-2 hours a day=2, until the last possibility of more than 8 hours a day=9. So if someone is active daily and spends three to four hours a day on the internet, this participant will receive a score of:

$$\text{Internet Experience} = (7 * 4) = 28$$

This variable can vary between 0 and 63.

RFM

The variable *RFM* is a combined factor of three variables: *recency*, *frequency* and *monetary*. These three variables are split according to the RFM theory (Bult & Wansbeek, 1995). Due to the small sample size, the choice has been made to use two instead of three bins. This entails

that some of the explanatory value might be lost. However the variables *recency*, *frequency* and *monetary* are also tested as continues variables individually. This way it is ensured that the explanatory value of the variables stays the same. Then the RFM is calculated with the RFM formula (Hughes, 1994):

$$RFM = R * 100 + F * 10 + M$$

The values of the outcome may have a different asset to different companies. Some companies might value a loyal customer more than a big spender or the other way around. The search of an overall variable was inevitable as companies prefer different outcomes of the RFM formula and this thesis deals with different product categories and thus different companies (Dean, 2014). Therefore, there has been chosen to give the R, F and M the same value. A 1 for the R is as valuable as a 1 for the F. This provides the outcome possibilities for the RFM as shown in table 5.1.

The least valuable customer is a customer with a RFM score of 111. This customers does not purchase often, has not purchased something in a long time and has not spend much. The customer that is above average on one of the variables, so a RFM score of 112, 121 or 211, has the same value as the distinction between the values cannot be made and are therefore considered to be the same. The same applies for the RFM score 221, 122 and 212. And at last the most valuable customer is the one that scores above

RFM Score	RFM variable
111	1
112	2
121	2
211	2
221	3
122	3
212	3
222	4

average on all three variables in the RFM model: 222. The RFM variable that is used in this paper is constructed by concerting the RFM score into four different values. Hereby, the variable is transformed from a nominal variable into a scale variable.

5.2.3 Respondents and Data Collection

The second survey reviews consumer behaviour in different product categories concerning the re-consent they have given to companies for receiving their newsletter. The sample needs to be representing all kinds of customers. A random sample will be taken because there are no specific socio demographics that have to be accounted for. The random sampling method will be used, this eliminates bias and gives every member of the population an equal chance of being selected.

The G*Power 3.1.9.2 is again used to ensure that the appropriate sample size is used in which all levels of customers are being sufficiently represented. The results will be generated using the binominal logistic regression with a confidence interval of 95 percent. The total sample size must consist of 761 (Appendix D).

The respondents are again selected through social networking sites and peer-to-peer survey sites. The same social networking sites and peer-to-peer survey sites have been used as for the *product category survey*. And again participants be will asked where they are from to make sure that only participants that are effected by de GDPR will respond.

6. Results – Product Category Survey

In total 94 responses have been recorded for this survey. Considering that this survey is meant to be a pre-survey the amount of respondents is lower than that of the second survey. In table 6.1 the descriptive statistics of the demographic part of the survey is shown. Below the table the measures are briefly discussed. These measures are used to control for the similarity of the means of both questionnaires.

	N		Mean	Median	Std. Deviation	Minimum	Maximum	Quartiles		
	Valid	Missing						25	Median	75
Nationality	94	0	20.47	20	4.576	2	28	20	20	20
Gender	94	0	1.6	2	0.493	1	2	1	2	2
Age	94	0	3.45	3	0.85	2	6	3	3	4
Education	94	0	3.36	3	0.788	1	5	3	3	4
Income	94	0	2.11	2	1.159	1	5	1	2	3

Nationality = nominal variable, 1=Austria, 2=Belgium, 3=Bulgaria, 4=Croatia, 5=Cyprus, 6=Czech Republic, 7=Denmark, 8=Estonia, 9=Finland, 10=France, 11=Germany, 12=Greece, 13=Hungary, 14=Ireland, 15=Italy, 16=Latvia, 17=Lithuania, 18=Luxembourg, 19=Malta, 20=Netherlands, 21=Poland, 22=Portugal, 23=Romania, 24=Slovakia, 25=Slovenia, 26=Spain, 27=Sweden, 28=United Kingdom, 29=None of the above (Q1)

Gender = nominal variable, 1=male, 2 = female (Q2)

Age = scale variable, 1 = 1-10, 2 = 11-20, 3=21-30, 4=31-40, 5=41-50, 6=51-60, 7=61-70, 8=71-80, 9=81-90 (Q3)

Education = scale variable, 1=high school, 2=technical degree, 3=bachelor's degree, 4=master's degree, 5=doctorate (Q4)

Income = scale variable, 1=0-1000, 2=1000-2000, 3=2000-3000, 4=3000-4000, 5=4000-5000, 6=>5000, 7=Prefer not to say (missing) (Q5)

During this survey the participants were asked to check the boxes that corresponded with the product categories that they received newsletters from. This resulted in the following top ten product categories (a total overview of the results can be found in appendix E):

#	Category	Newsletters
1	Hotels	68
2	Airline	62
3	Supermarket	54
4	Car	50
5	Electronics	46
6	Clothing	42
7	Cosmetics	30
8	Shoe	26
9	Bank	22
10	Sporting Clubs	18

The analysis resulted in a top six product categories that are worth to further investigate: hotels, airlines, supermarkets, cars, electronics and clothing. These categories will be used in the *re-consent survey*.

6.1 Sample mean test

To test if the sample of the population of the *product category survey* can be conveyed to the *re-consent survey* a t-test is performed to test the socio demographic variables. The results are presented in table 6.3, the corresponding null hypothesis is that there is no difference between the variables of survey 1 and survey 2. None of the variables are significant so the null hypothesis is not rejected. The population samples are considered to be the same, so the product categories that are used in the *re-consent survey* comply with the results of the *product category survey*.

	t	df	sig.
Gender	-0.400	253	0.690
Age	-1.866	248	0.063
Education	1.442	253	0.151
Income	-0.946	222	0.345

7. Results – Re-consent Survey

In total 189 responses have been recorded and after the data is collected a consistency check has been conducted. The consistency check consists of the removal of unfinished responses, outliers and responses that contain abnormalities. Twenty-two responses have been removed because of an unfinished response. Independent of the stage in the survey the participant decided to withdraw from the research the response has been removed. In addition, six responses have been removed because of abnormal responses. These contain people that have spent more than a million euros in multiple categories while having an income of 0 to 1000 euros per month. It is expected that these participants have not taken the questionnaire seriously and their responses are likely to contain unreliable data that affects the results. No outliers have been removed, since they have no influence on the results. The data is analysed using the remaining 161 respondents.

Responses – before consistency check	189
Missing	22
Outliers	0
Abnormalities	6
Responses – after consistency check	161

7.1 Measures

Out of the 161 respondents 38% were male and 62% female, the income varied between zero and more than 5000 euros net per month with an average between 1000 and 2000 euros net per month. Most of the respondents (41.6%) have obtained a master’s degree and are between 21 and 30 years old (60.2%) (for all descriptive statistics of the measures see appendix F).

When analysing the questions that are concerned with the topic newsletters, out of the 966 possible newsletter that could have been received (161 respondents*6 product categories) participants received 344 or 35.6% newsletters. Out of those 344 recipients of newsletters, 243 (70.6%) have received an e-mail asking for their re-consent. This number should have been 100 % because of the rules of the GDPR. The percentage of participants who were explicitly asked about their re-consent varies between 46.7% and 80.5% of the different product categories.

7.2 Assumptions

After testing the normal distribution of the independent variables by doing the Kolmogorov-Smirnov test (shown in table 7.2), inspecting the histograms and examining the Q-Q plot, it can be concluded that the measures are not normally distributed. This means the assumption of normality is not met and the variables cannot be tested using an ANOVA or linear regression.

A test that can be used is the binomial logistic regression. This regression predicts the probability that an observation falls into one of two categories of a dichotomous dependent variable based on one or more independent variables. One of the assumptions of the binomial logistics regression is that there has to be a linear relationship between any continuous independent variables and the logit transformation of the dependent variable. This has been tested with the Box-Tidwell analysis for linearity. Linearity of which the results of are shown in table 7.2. The null hypothesis of the Box-Tidwell test is that there are no interactions between the continuous predictor and its corresponding logs. Both the variable *social media usage* and *monetary* are significant when the interaction term is added. This signifies that the results of these variables should be handled with great care during the analysis of the logistic regression.

At last the assumption whether the variables show any signs of multi-collinearity needs to be tested. Multi-collinearity exists when two or more independent variables of the regression model are moderately or highly correlated. The VIF and Tolerance analysis is done to make sure the variables are not related. This is shown in table 7.2.

	Kolmogorov-Smirnov	Shapiro-Wilk	Box-Tidwell		Tolerance	VIF
	Sig	Sig	Sig	Sig (Ln Value)		
Gender	0.000**	0.000**	0.546		0.810	1.235
Age	0.000**	0.000**	0.179	0.238	0.443	2.259
Education	0.000**	0.000**	0.151	0.223	0.949	1.054
Income	0.000**	0.000**	0.104	0.131	0.540	1.853
Internet Experience	0.000**	0.000**	0.175	0.258	0.830	1.205
Purchasing Method	0.000**	0.000**	0.086		0.668	1.497
Social Media Usage	0.000**	0.000**	0.047*	0.056	0.939	1.065
Recency	0.000**	0.000**	0.768	0.873	0.574	1.744
Frequency	0.000**	0.000**	0.319	0.364	0.529	1.891
Monetary	0.000**	0.000**	0.040*	0.043*	0.957	1.045
RFM	0.000**	0.000**	0.413	0.394	0.378	2.643
Incentive	0.000**	0.000**	0.056		0.917	1.090

* Significance at the 0.05 level (2-tailed)

** Significance at the 0.01 level (2-tailed)

A variable shows signs of multi-collinearity if the Tolerance value is less than 0.10 and the VIF value is higher than 10 (Hair, Black, Babin, & Anderson, 2010). None of the variables show signs of multi-collinearity. However, during the model designing for binomial logistic regression the variables shifted from significant to not significant and the other way around. This does imply that the independent variables influence each other. The Pearson correlation has been performed to test the strength of this influence. The results show there is a strong significant correlation ($r \geq 0.5$), which are visualized in table 7.3 (the remainder of the correlations can be found in Appendix G).

Table 7.3
Strong significant correlation

	Age	Income	Recency	Frequency	RFM
Age		0.608**			
Income	0.608**				
Recency					-0.629**
Frequency					0.589**
RFM			-0.626**	0.589**	

* Correlation coefficient is significant at the 0.05 level (2-tailed)

** Correlation coefficient is significant at the 0.01 level (2-tailed)

As shown in the table there is a strong significant relationship between *age* and *income*, *recency* and *RFM* and *frequency* and *RFM*. These variables should be handled with great caution when analysing the results. If two variables are correlated in a model, they are very likely to give the same information. This might certainly be true for *RFM* that is correlating with *recency* and *frequency* because the *RFM* variable is made up of those two variables. For age and income the explanation that they correlate might be easily explained by the fact that older people have more working experience which often leads to a higher income (Akman & Mishra, 2010).

7.3 Model Design

To test the different hypotheses combined, one model will be formed based on a forward stepwise regression analysis (Bendel & Afifi, 1977). A sequence of regression models is developed by adding the independent variables one at a time using a stepwise analysis. The independent variables are added into the model based on their VIF value. The variable with the lowest VIF value (*monetary*) was added first, second education until the last variable with the highest VIF value: *RFM*. The models will be analysed using the R^2 and the model with the highest R^2 is selected. The higher the R^2 , the more the model explains the variation. The Cox and Snell R^2 and the Nagelkerke R^2 are analysed. The final model can be found in table 7.4, the

other models that have been formed and the model summary results of the regression are shown per model in appendix H.

Table 7.4 shows the independent variables and the dependent variable, which is re-consent. The dependent variable *re-consent* is a “yes/no” question and can therefore be used for the binomial logistic regression. The outcome of the dependent variable is conducted so that: 0 is “yes” and 1 is “no”.

Table 7.4 shows that the model ($\chi^2(13)=36.861$, $p=0.000$) is significant and as shown in appendix H this model has the highest R^2 . The model will be analysed further in paragraph 7.4, to see which variables influence the dependent variable.

Independent Variables		χ^2	Sig	Cox & Snell R^2	Nagelkerke R^2	Classification
Monetary	Scale	36.861	0.000**	0.168	0.233	66.20%
Education	Scale					
Purchasing Method	Nominal					
Incentive	Nominal					
Social Media Usage	Scale					
Gender	Nominal					
Internet Experience	Scale					
Recency	Scale					
Income	Scale					
Frequency	Scale					
Age	Scale					
RFM	Scale					

7.4 Results

In this paragraph the results of the final model will be further discussed and analysed. The equation values of the independent variables in the binomial logistic regression will be presented as well.

The final model considers all variables. This indicates once more that *age*, *recency*, *frequency* and *RFM* will have to be handled with great caution as they are correlated with other variables in the model. Also, the linear relationship between any continuous independent variables and the logit transformation of the dependent variable has to be accounted for. These have been found during previous analysis using a Box-Tidwell test (table 7.2). These tables show that *social media usage* and *monetary* are variables that have to be handled with great care in case

they are significant during the logistic regression. The results of the variables in the equation of the logistic regression are presented in table 7.5.

Variables in the Equation	Sig	B	Wald	Exp(B)
Monetary	0.099	0.000	2.721	1.000
Education	0.100	-0.304	2.704	0.738
Purchasing Method	0.046*	0.811	3.973	2.250
Incentive	0.058	0.768	3.604	2.155
Social Media Usage	0.125	-0.053	2.348	0.949
Gender	0.640	-0.184	0.219	0.832
Internet Experience	0.000**	-0.046	13.186	0.955
Recency	0.488	0.060	0.480	1.062
Income	0.527	-0.102	0.401	0.903
Frequency	0.070	-0.123	3.281	0.884
Age	0.694	-0.077	0.154	0.926
RFM	0.094	0.387	2.797	1.472
Constant	0.097	2.149	2.755	8.576

* Significance at the 0.05 level (2-tailed)

** Significance at the 0.01 level (2-tailed)

The binominal logistic regression is performed to determine the effects of all tested variables on the likelihood that customers are willing to give their re-consent to companies to receive their newsletters. The logistic regression was statistically significant ($\chi^2(13)=36.861$, $p=0.000$), as shown in table 7.4, the model explained between 16.8% (Cox & Snell R^2) and 23.3% (Nagelkerke R^2) of the variance and correctly classified 66.2% of the cases.

To be sure that *social media usage* and *monetary* are not altering the data with their presence they have been investigated further, due to their significance during the Box-Tidwell test. They do not show signs of altering the results since the significance and beta values don't shift much during the stepwise model design. After analysing the variables the conclusion can be made that these two variables do not alter the rest of the results.

So thereafter, the regression analysis shows no significant results for ten of the twelve variables. The significant variables were *internet experience* and *purchasing method*. As *internet experience* has a negative beta and the re-consent being coded in a way that 0=yes and 1=no, this means that an increase in *internet experience* was associated with an increase in the likelihood of the willingness to give re-consent. Similarly, for *purchasing method*, as its beta is positive and the variable being coded as 0=online shopping, 1=offline shopping, a preference for offline shopping leads to a higher willingness to give re-consent.

8. Conclusion and Discussion

Companies can use newsletters as an easy and inexpensive way to communicate with their customers (Moustakas, Ranganathan, & Dequenoy, 2006). Furthermore, newsletters have a positive effect on the brand loyalty of companies (Merisavo & Raulas, 2004). Therefore, it is understandable that companies want to hold on to their mailing lists in order to reach their customers. However, due to the rules of the GDPR companies are forced to ask the re-consent of their companies. In order to understand which factors influence the willingness of customers to give their re-consent, this research has focused on twelve variables that are expected to have an effect on the willingness to give re-consent.

The first variables that have been investigated were the socio demographic factors. These include: *gender*, *age*, *education* and *income*. This is also the analysis of the first hypothesis and of which the results are shown in table 8.1.

	Gender	Age	Education	Income
Statistical test	H1a	H1b	H1c	H1d
Binominal logistic regression	Rejected	Rejected	Rejected	Rejected

Table 8.1 reveals that hypothesis 1 is not supported. Gender does not influence a person's willingness to give their re-consent. This corresponds with the literature. In line with these results, Cho (2007) was unable to find a significant difference between gender behaviour and privacy concerns. Furthermore, there hasn't been found any evidence that either *age*, *education* or *income* are related to a person's willingness to give re-consent. Therefore, none of the socio demographic factors analyzed throughout this thesis influence the willingness to give re-consent.

The second variables that have been tested is related to a customer's internet usage. The three variables that have been tested are: *internet experience*, *purchasing method* and *social media usage*. This is also the review of the second hypothesis of which the conclusion can be found in table 8.2.

	Internet Experience	Purchasing Method	Social Media Usage
Statistical test	H2a	H2b	H2c
Binominal logistic regression	Supported	Supported	Rejected

As shown in table 8.2, hypothesis 2a and 2b are supported. People who spent more time online, and therefore have more *internet experience*, are more willing to give their re-consent. This theory is supported as consumers who have a higher internet experience are more willing to give their re-consent. In accordance to the theory it is supported that consumers that have a higher *internet experience* are more willing to give their re-consent (Hosseini, 2015) (Miyazaki & Fernandez, 2001). Also, in accordance to the theory: customers who have a preference for online shopping are more likely to be willing to give their re-consent, then customers who have a preference for offline shopping (Kau, Tang, & Ghose, 2003) (Sheehan & Hoy, 2000). The remaining factor, *social media usage*, has been rejected and does not influence the willingness to give re-consent.

Lastly, hypothesis 3, 4 and 5 will be analysed. The results can be found in table 8.3. All the variables of hypothesis 3 including *recency*, *frequency* and *monetary*, are rejected. The combined variable of the variables mentioned above, the RFM, form the independent variable of hypothesis 4 and is rejected as well. The last variable that has been tested, namely incentive, is also rejected.

Table 8.3 Conclusion of Hypotheses 3, 4 & 5					
	Recency	Frequency	Monetary	RFM	Incentive
Statistical test	H3a	H3b	H3c	H4	H5
Binominal logistic regression	Rejected	Rejected	Rejected	Rejected	Rejected

The conceptual model is adjusted according to the results. The variables that don't influence a customer's willingness to give their re-consent are omitted from the original model. The model is shown in paragraph 4.4. This will make the model look as follows:

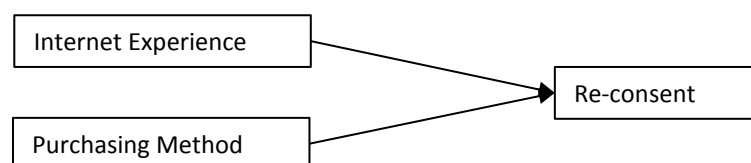


Figure 8.1 – Final Model

The research question of this paper is:

Which factors lead to a higher re-consent of newsletters, in which the re-consent has to be given because of the introduction of the General Data Protection Regulation?

After analysing the results it became clear that the answer to that question is: *Internet Experience* and *Purchasing Method*. The equation that can be conducted is:

$$P_{re-consent}(Y_i = 1) = \frac{e^{-0.046*Internet\ Experience+0.811*Purchasing\ Method}}{1 + e^{-0.046*Internet\ Experience+0.811*Purchasing\ Method}}$$

The odd ratio (Exp(B)) of the significant variable, *internet experience*, is equal to 0.955. This means that when the internet experience of a person increases by 1%, the chance that person is willing to give their re-consent increases by 4.5%. This is the same for the variable *purchasing method*. Its Exp(B) is 2.250, which means that a customer who prefers online shopping is 2.25 times more likely to give their re-consent than a customer who prefers offline shopping.

8.1 Limitations

Throughout the research several limitations have surfaced which have to be taken into account while interpreting the results. First, most participants in the survey originate from one age group and one educational group. This is not in agreement with the normal socio demographics of European citizens, according to the European Commission (2018). This implies that not the right sample group has been taken. Apart from this, the sample size, especially per category, is also considered small. In case the size of the sample would have been larger, the outcome of the research might have been more valuable.

Another limiting factor was that the survey was conducted seemingly late after the regulation entered into force. Therefore imaginable that people do not remember whether they received an e-mail from companies asking their re-consent. Participants could check their e-mail inbox during the survey, which (partly) eliminates this limitation. However, some people might have deleted such e-mails and don't remember receiving them.

8.2 Further Research

Future research could focus on the view people have on their own privacy and how this view affects their willingness to give re-consent. This can help distinguish which customers could be worth to target next. Furthermore, after establishing the influencing factors on the willingness of giving re-consent during this research, it might be useful to investigate how marketers could use these factors in their daily jobs. Ultimately, this research can inspire other researchers to obtain a more practical understanding of the factors that influence a customer's willingness to give their re-consent to newsletters, thus allowing them to help companies be better leveraged for greater business.

Appendix A – GDPR Text

- “The controller shall be able to demonstrate that the data subject has consented to processing of his or her personal data.”⁸
- “If the data subject's consent is given in the context of a written declaration which also concerns other matters, the request for consent shall be presented in a manner which is clearly distinguishable from the other matters, in an intelligible and easily accessible form, using clear and plain language. Any part of such a declaration which constitutes an infringement of this Regulation shall not be binding.”⁹
- “The data subject shall have the right to withdraw his or her consent at any time. The withdrawal of consent shall not affect the lawfulness of processing based on consent before its withdrawal. Prior to giving consent, the data subject shall be informed thereof. It shall be as easy to withdraw as to give consent.”¹⁰
- “When assessing whether consent is freely given, utmost account shall be taken of whether, inter alia, the performance of a contract, including the provision of a service, is conditional on consent to the processing of personal data that is not necessary for the performance of that contract.”¹¹

⁸ Article 7 sub 1 REGULATION (EU) 2016/679

⁹ Article 7 sub 2 REGULATION (EU) 2016/679

¹⁰ Article 7 sub 3 REGULATION (EU) 2016/679

¹¹ Article 7 sub 4 REGULATION (EU) 2016/679

Appendix B – Product Category Survey

“Thank you for your participation in this survey contributing to my master thesis at the Erasmus University Rotterdam. In this survey you will be asked to which company categories you have a subscription to their newsletter, before the 25th of May.

I would like to ask you to please open your mailbox that you use for newsletters and go to a date before the 25th of May.

The survey will take about 5 minutes to complete. The survey is anonymous, and all answers will be treated confidentially. If you have any questions regarding this survey, please feel free to contact me.

372134nz@eur.nl

Nial van Zijp”

Part 1 – Demographics

In this part I would like to ask you some questions about who you are.

Question	Answer possibilities								
1. What is your nationality	Austria	Estonia	Italy	Portugal					
	Belgium	Finland	Latvia	Romania					
	Bulgaria	France	Lithuania	Slovakia					
	Croatia	Germany	Luxembourg	Slovenia					
	Cyprus	Greece	Malta	Spain					
	Czech Republic	Hungary	Netherlands	Sweden					
	Denmark	Ireland	Poland	United Kingdom					
	None of the above								
<i>If, “none of the above” is answered, the survey will end and the participant is thanked for their time.</i>									
2. What is your gender?	Male	Female							
3. What is your age?	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	
4. What is your highest level of education?	High school	Technical Degree	Bachelor’s Degree		Master’s Degree		Doctorate		
5. What is your income (net per month)?	0-1000	1000-2000	2000-3000	3000-4000	4000-5000	>5000	Prefer not to say		

Part 2 – Company Categories

In this part I would like for you to click on the categories of which you have a subscription for their newsletter.

Category	Examples			
Supermarket	Albert Heijn	Jumbo	Spar	
Shoe stores	Omoda	Sarenza	van Haren	

Cosmetics stores	Douglas	Ici Paris	
Clothing stores	H&M	Zara	
Electronics store	MediaMarkt	BCC	
Car industry	Volkswagen	Opel	Hyundai
Airlines	KLM	EasyJet	RyanAir
Bike shops	Fietsenwinkel.nl	Halforts	Stella
Furniture stores	Ikea	Goossens	Alexandrium
Sporting goods stores	Actiesport	Decathlon	Intersport
Toy store	Intertoys	Bart Smit	
Energy companies	Essent	Nuon	
Department stores	de Bijenkorf	Hudson's Bay	
Gas stations	Shell	Esso	Total
Hardware store	Praxis	Gamma	Hornbach
Public Transport	NS	RET	GVB
Hotels	Booking.com	Other Hotels	
Cinema			
Banks	Rabobank	ING	ABN AMRO
Rental services	Bo-rent	Sixt	
Employment Agencies	Tempo-Team	Randstad	
Educational institutes	Your school	University	
Hospitals			
General Practitioner (GP)			
Day-cares			
Museums/Libraries			
Performing arts/Events/Festivals	Theatre	Festivals	
Sporting Clubs	Football Club	Tennis	
Theme parks	Efteling	Walibi	
Wellness centres	Hairdresser	Beauty salon	
Hobby clubs			
Radio	Qmusic	538	Slam FM

Appendix C - Re-consent Survey

“Thank you for your participation in this survey contributing to my master thesis at the Erasmus University Rotterdam.

In this survey you will be asked about your experience with newsletters after the introduction of the new European Privacy Law (GDPR).

The survey will take about 5 minutes to complete. The survey is anonymous, and all answers will be treated confidentially. If you have any questions regarding this survey, please feel free to contact me.

372134nz@eur.nl

Nial van Zijp”

Part 1 – Demographics

Question	Answer possibilities							
1. What is your nationality	Austria	Estonia	Italy	Portugal				
	Belgium	Finland	Latvia	Romania				
	Bulgaria	France	Lithuania	Slovakia				
	Croatia	Germany	Luxembourg	Slovenia				
	Cyprus	Greece	Malta	Spain				
	Czech Republic	Hungary	Netherlands	Sweden				
	Denmark	Ireland	Poland	United Kingdom				
	None of the above							
<i>If, “none of the above” is answered, the survey will end and the participant is thanked for their time.</i>								
2. What is your gender?	Male	Female						
3. What is your age?	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80
4. What is your highest level of education?	High school	Technical Degree	Bachelor’s Degree		Master’s Degree		Doctorate	
5. What is your income (net per month)?	0-1000	1000-2000	2000-3000	3000-4000	4000-5000	>5000	Prefer not to say	

Part 2 - Internet usage

Questions	Answer possibilities					
6. How often do you spend time (actively on the internet)?	Daily	4-6 times a week	2-3 times a week	Once a week	Never	
<i>If “never” is selected, the survey will continue at part 2</i>						
7. On average, how many hours per day do you spend actively on the internet?	Less than 1 hour a day	1-2 hours	2-3 hours	3-4 hours	More than 4 hours a day	
8. Are you active on social media (Examples: Facebook, Instagram, Twitter, LinkedIn)?	Yes	No				
<i>If “No” is selected, the survey will continue on question 11</i>						

9. Which of the following social media platforms are you currently active on? (check all that apply)	Facebook	Instagram	Twitter	LinkedIn	
	Pinterest	Tumblr	Google+		
10. How often do you check the following social media platforms (only the ones that have been checked in the last question will be shown)	Never	Rarely	Sometimes	Very often	Always
11. Do you shop online	Yes	No			
<i>If "No" is selected, the survey will continue at part 2</i>					
12. Which do you prefer?	Online Shopping	Offline Shopping	No preference		
13. How often do you shop online	Never	Rarely	Sometimes	Very often	Always
14. How much do you spend on shopping (on average) per month	Online	€			
	Offline	€			

Part 3 – RFM Model

“After the introduction of the new privacy law companies are obliged to explicitly ask for your personal information and to ask your permission to send you e-mails. In the second part of the survey you will be asked about different product categories and the possible e-mails you have received.

I would like to ask you to please open your mailbox that you use for newsletters and go to a date before the 25th of May. (Newsletter is defined as: A periodic and informative e-mail which includes up-to-date information on promotions, new products, events and commercial offers)

After that you will be asked some questions about your buying behaviour in that category and if you have given permission to email you again.”

Part 3.1 - Airlines

15. Do you receive a newsletter from the following product category: **Airlines (examples: KLM, EasyJet, RyanAir)?**

- Yes
- No

If yes,

“You will now be asked 6 questions about your behaviour and your re-consent in the category: **Airlines**. The definition of re-consent is: giving your permission, willingness or approval again. Since 25th of May, companies are required to ask for your re-consent for sending you newsletters.”

16. When was the last time you bought something in this product category? (**in months**)

0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	18 – 20	>20
-------	-------	-------	-------	--------	---------	---------	---------	---------	-----

17. How many times in the past **12 months** did you buy something in this product category?

0	1	2	3	4	5	6	7	8	9	10	>10
---	---	---	---	---	---	---	---	---	---	----	-----

18. How much did you spent in the past **12 months** in this product category? (**in euro**)

Open

19. Did you receive an email regarding the new privacy law in which they asked for your re-consent? (If you receive newsletters of multiple companies in this category please pick the company most valuable to you)

- Yes
- No

If no, the survey will continue at part 2.2 Hotels

20. Did you receive any kind of incentive (like a discount or free items) to give your re-consent?

- Yes
- No

21. Did you give re-consent to receive the newsletter of a company in this product category?

- Yes
- No

Part 3.2 - Hotels

22. Do you receive a newsletter from the following product category: **Hotels (Example: Booking.com)**?

- Yes
- No

If yes,

“You will now be asked 6 questions about your behaviour and your re-consent in the category: **Hotels**. The definition of re-consent is: giving your permission, willingness or approval again. Since 25th of May, companies are required to ask for your re-consent for sending you newsletters.”

23. When was the last time you bought something in this product category? (**in months**)

0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	18 – 20	>20
-------	-------	-------	-------	--------	---------	---------	---------	---------	-----

24. How many times in the past **12 months** did you buy something in this product category?

0	1	2	3	4	5	6	7	8	9	10	>10
---	---	---	---	---	---	---	---	---	---	----	-----

25. How much did you spent in the past **12 months** in this product category? (**in euro**)

Open

26. Did you receive an email regarding the new privacy law in which they asked for your re-consent? (If you receive newsletters of multiple companies in this category please pick the company most valuable to you)

- Yes
- No

If no, the survey will continue at part 2.3 Supermarket

27. Did you receive any kind of incentive (like a discount or free items) to give your re-consent?

- Yes
- No

28. Did you give re-consent to receive the newsletter of a company in this product category?

- Yes
- No

Part 3.3 - Supermarket

29. Do you receive a newsletter from the following product category: **Supermarket (Albert Heijn, Jumbo, Spar)**?

- Yes
- No

If yes,

“You will now be asked 6 questions about your behaviour and your re-consent in the category: **Supermarket**. The definition of re-consent is: giving your permission, willingness or approval again. Since 25th of May, companies are required to ask for your re-consent for sending you newsletters.”

30. When was the last time you bought something in this product category? (**in days**)

0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	18 – 20	>20
-------	-------	-------	-------	--------	---------	---------	---------	---------	-----

31. How many times in the past **month** did you buy something in this product category?

0	1	2	3	4	5	6	7	8	9	10	>10
---	---	---	---	---	---	---	---	---	---	----	-----

32. How much did you spent in the past **month** in this product category? (**in euro**)

Open

33. Did you receive an email regarding the new privacy law in which they asked for your re-consent? (If you receive newsletters of multiple companies in this category please pick the company most valuable to you)

- Yes
- No

If no, the survey will continue at part 2.4 Electronic Store

34. Did you receive any kind of incentive (like a discount or free items) to give your re-consent?

- Yes
- No

35. Did you give re-consent to receive the newsletter of a company in this product category?

- Yes
- No

Part 3.4 - Electronics Store

36. Do you receive a newsletter from the following product category: **Electronics store** (Example: Media Markt, BCC)?

- Yes
- No

If yes,

“You will now be asked 6 questions about your behaviour and your re-consent in the category: **Electronic store**. The definition of re-consent is: giving your permission, willingness or approval again. Since 25th of May, companies are required to ask for your re-consent for sending you newsletters.”

37. When was the last time you bought something in this product category? (**in months**)

0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	18 – 20	>20
-------	-------	-------	-------	--------	---------	---------	---------	---------	-----

38. How many times in the past **6 months** did you buy something in this product category?

0	1	2	3	4	5	6	7	8	9	10	>10
---	---	---	---	---	---	---	---	---	---	----	-----

39. How much did you spent in the past **6 months** in this product category? (**in euro**)

Open

40. Did you receive an email regarding the new privacy law in which they asked for your re-consent? (If you receive newsletters of multiple companies in this category please pick the company most valuable to you)

- Yes
- No

If no, the survey will continue at part 2.5 Clothing Stores

41. Did you receive any kind of incentive (like a discount or free items) to give your re-consent?

- Yes
- No

42. Did you give re-consent to receive the newsletter of a company in this product category?

- Yes
- No

Part 3.5 - Clothing Stores

43. Do you receive a newsletter from the following product category: **Clothing Store** (**Example: H&M, Zara**)?

- Yes
- No

If yes,

“You will now be asked 6 questions about your behaviour and your re-consent in the category: **Clothing stores**. The definition of re-consent is: giving your permission, willingness or approval again. Since 25th of May, companies are required to ask for your re-consent for sending you newsletters.”

44. When was the last time you bought something in this product category? (**in months**)

0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	18 – 20	>20
-------	-------	-------	-------	--------	---------	---------	---------	---------	-----

45. How many times in the past **3 months** did you buy something in this product category?

0	1	2	3	4	5	6	7	8	9	10	>10
---	---	---	---	---	---	---	---	---	---	----	-----

46. How much did you spent in the past **3 months** in this product category? (**in euro**)

Open

47. Did you receive an email regarding the new privacy law in which they asked for your re-consent? (If you receive newsletters of multiple companies in this category please pick the company most valuable to you)

- Yes
- No

If no, the survey will continue at part 2.6 Car Industry

48. Did you receive any kind of incentive (like a discount or free items) to give your re-consent?

- Yes
- No

49. Did you give re-consent to receive the newsletter of a company in this product category?

- Yes
- No

Part 3.6 - Car Industry

50. Do you receive a newsletter from the following product category: **Car Industry (Example: Volkswagen, Opel, Hyundai)**?

- Yes
- No

If yes,

“You will now be asked 6 questions about your behaviour and your re-consent in the category: **Car industry**. The definition of re-consent is: giving your permission, willingness or approval again. Since 25th of May, companies are required to ask for your re-consent for sending you newsletters.”

51. When was the last time you bought something in this product category? (**in years**)

0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	18 – 20	>20
-------	-------	-------	-------	--------	---------	---------	---------	---------	-----

52. How many times in the past **10 years** did you buy something in this product category?

0	1	2	3	4	5	6	7	8	9	10	>10
---	---	---	---	---	---	---	---	---	---	----	-----

53. How much did you spent in the past **10 years** in this product category? (**in euro**)

Open

54. Did you receive an email regarding the new privacy law in which they asked for your re-consent? (If you receive newsletters of multiple companies in this category please pick the company most valuable to you)

- Yes
- No

If no, the survey will end.

55. Did you receive any kind of incentive (like a discount or free items) to give your re-consent?

- Yes
- No

56. Did you give re-consent to receive the newsletter of a company in this product category?

- Yes
- No

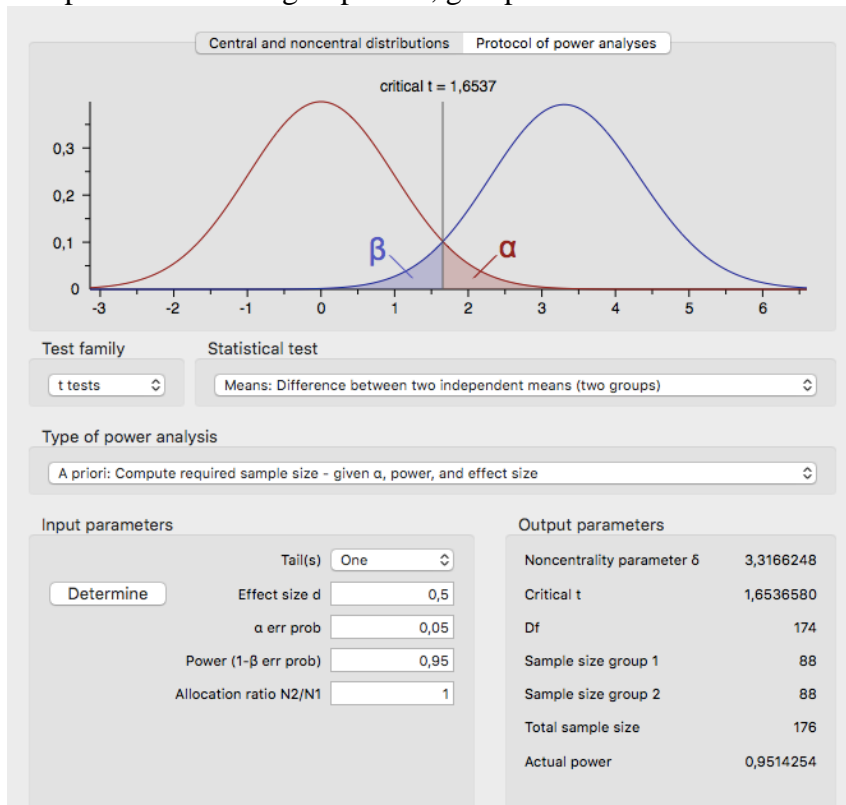
Thank you for participating, your answers are recorded.

- End of survey-

Appendix D – Sample size determination

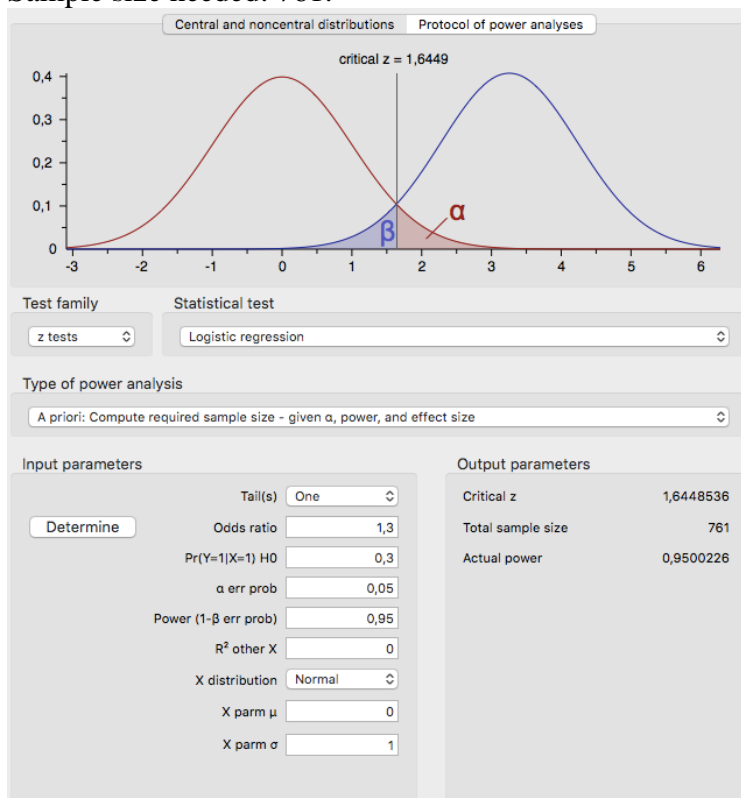
Power test for T-test.

Sample Size needed: group 1: 88, group 2: 88.



Power test for Logistic regression.

Sample size needed: 761.



Appendix E – Results Product Category Survey

#	Category	Newsletters	#	Category	Newsletters
1	Hotels	68	18	Wellness Centres	8
2	Airline	62	19	Sporting Goods	6
3	Supermarket	54	20	Museums	6
4	Car	50	21	Toy	2
5	Electronics	46	22	Energy	2
6	Clothing	42	23	Hardware	2
7	Cosmetics	30	24	Employment Agencies	2
8	Shoe	26	25	Hobby Clubs	2
9	Bank	22	26	Bike	0
10	Sporting Clubs	18	27	Gas	0
11	Online Department Store	16	28	Rental	0
12	Educational Institutes	16	29	Hospitals	0
13	Department Store	10	30	GP	0
14	Performing Arts	10	31	Day Cares	0
15	Furniture	8	32	Theme Parks	0
16	Public Transport	8	33	Radio	0
17	Cinema	8			

Appendix F – Descriptive statistics

	N		Mean	Median	Std. Deviation	Min	Max	Quartiles		
	Valid	Missing						25	50	75
Gender	161	0	1.62	2	0.487	1	2	1	2	2
Age	161	0	3.70	3	1.275	2	8	3	3	4
Education	161	0	3.19	3	1.014	1	5	3	3	4
Income	144	17	2.26	2	1.389	1	6	1	2	3

Gender = nominal variable, 1=male, 2 = female (Q2)

Age = scale variable, 1 = 1-10, 2 = 11-20, 3=21-30, 4=31-40, 5=41-50, 6=51-60, 7=61-70, 8=71-80, 9=81-90 (Q3)

Education = scale variable, 1=high school, 2=technical degree, 3=bachelor's degree, 4=master's degree, 5=doctorate (Q4)

Income = scale variable, 1=0-1000, 2=1000-2000, 3=2000-3000, 4=3000-4000, 5=4000-5000, 6=>5000, 7=Prefer not to say (missing) (Q5)

	N		Mean	Median	Std. Deviation	Min	Max	Percentiles		
	Valid	Missing						25	50	75
Internet Experience	966	0	28.85	21	16.025	1	63	14	21	35
Purchasing Method	882	84	1.95	2	0.844	1	3	1	2	3
Social Media Usage	966	0	8.87	9	5.293	0	24	6	9	12

Internet Experience = scale measure, the amount of hours spend online per week. Ratio can possibly vary between 0 (never per week on Internet times zero hours per day) and 63 (7 days per week times more than 8 hours per day). (Q6 & Q7)

Purchasing Method = nominal measure, 1=online shopping, 2=offline shopping, 3=no preference. (Q12)

Social Media = scale measure, the sum of all social media platform times how often this social media account is checked. Ratio can possibly vary between 1 (no social media accounts and never use them) and 35 (7 social media accounts that are always used). (Q9 & Q10)

	N		Mean	Median	Std. Deviation	Min	Max	Percentiles		
	Valid	Missing						25	50	75
Recency	344	622	2.7	1	2.634	1	11	1	1	3
Frequency	344	622	4.32	3	3.272	1	12	2	3	6
Monetary	344	622	1211.63	250	5451.431	0	70000	86	250	600
RFM	344	622	2.41	2	1.079	1	4	2	2	3
Incentive	243	723	1.79	2	0.405	1	2	2	2	2

Recency= scale variable, 1=0-2, 2=2-4, 3=4-6, 4=6-8, 5=8-10, 6=10-12, 7=12-14, 8=14-16, 9=16-18, 10=18-20, 11=>20 (Q16, 23, 30, 37, 44, 51)

Frequency= scale variable, 1=0, 2=1, 3=2, 4=3, 5=4, 6=5, 7=6, 8=7, 9=8, 10=9, 11=10, 12>10 (Q 17, 24, 31, 38, 45, 52)

Monetary= scale variable

RFM= scale variable, score given after the RFM has been calculated, 111=1, 112=2, 121=2, 211=2, 122=3, 221=3, 212=3, 222=4

Incentive= nominal variable (Q20, 27, 34, 41, 48, 55)

	N		Mean	Median	Std. Deviation	Min	Max	Percentiles		
	Valid	Missing						25	50	75
Airlines_reconsent	66	95	1.53	2.00	0.503	1	2	1.00	2.00	2.00
Hotels_reconsent	60	101	1.60	2.00	0.494	1	2	1.00	2.00	2.00
Supermarket_reconsent	30	131	1.33	1.00	0.479	1	2	1.00	1.00	2.00
Electronics_reconsent	13	148	1.54	2.00	0.519	1	2	1.00	2.00	2.00
Clothing_reconsent	67	94	1.37	1.00	0.487	1	2	1.00	1.00	2.00
Cars_reconsent	7	154	1.57	2.00	0.535	1	2	1.00	2.00	2.00
Re-consent	243	723	1.48	1.00	0.501	1	2	1.00	1.00	2.00

Airlines = nominal variable, 1=yes, 2 = no (Q21)

Hotels = nominal variable, 1=yes, 2 = no (Q28)

Supermarket = nominal variable, 1=yes, 2 = no (Q35)

Electronics = nominal variable, 1=yes, 2 = no (Q42)

Clothing = nominal variable, 1=yes, 2 = no (Q49)

Cars = nominal variable, 1=yes, 2 = no (Q56)

Re-consent= nominal variable, sum of all product categories of the answers to the willingness to giving re-consent, 1=yes, 2=no

	Airlines		Hotels		Supermarket		Electronics		Clothing		Cars		Total	
Newsletter	82		86		50		22		89		15		344	35.6
Email	66	80.5%	60	69.8%	30	60.0%	13	59.1%	67	75.3%	7	46.7%	243	70.6%
Incentive	8	9.8%	15	17.4%	7	14.0%	0	0.0%	19	21.3%	1	6.7%	50	14.5%
Re-consent	31	37.8%	24	27.9%	20	40.0%	6	27.3%	42	47.2%	3	20.0%	126	36.6%

Newsletter = the total amount of newsletters received in that category (Q15, 22, 29, 36, 43, 50)

Email = the total amount of e-mails received in that category regarding the question if the customer is willing to give their re-consent (Q19, 26, 33, 40, 47, 54)

Incentive = the total amount of e-mails received in that category that included an incentive, where the e-mail was subjected to asking the customer for re-consent (Q20, 27, 34, 41, 48, 55)

Re-consent = the total amount of re-consent that has been given in that category. (Q21, 28, 35, 42, 49, 56)

Appendix G – Correlation Results

	Correlation (Pearson Correlation)											
	Gender	Age	Education	Income	Social media Usage	Internet Experience	Purchasing Method	Recency	Frequency	Monetary	Incentive	RFM
Gender	1.000	-.197**	.043	-.327**	.337**	-.038	-.028	-.062	-.016	-.031	.109	.027
Age	-.197**	1.000	-.053	.608**	-.230**	-.442**	.151**	.028	-.066	.141**	.001	-.049
Education	.043	-.053	1.000	-.013	.197**	-.017	.119**	-.095	-.032	.045	.068	.060
Income	-.327**	.608**	-.013	1.000	-.261**	-.186**	.166**	.024	-.059	.115*	.029	.020
Social media Usage	.337**	-.230**	.197**	-.261**	1.000	.038	.073*	-.084	.058	-.057	-.041	-.036
Internet Experience	-.038	-.442**	-.017	-.186**	.038	1.000	-.237**	-.053	.133*	-.077	.122	.100
Purchasing Method	-.028	.151**	.119**	.166**	.073*	-.237**	1.000	-.025	.045	.039	-.053	-.003
Recency	-.062	.028	-.095	.024	-.084	-.053	-.025	1.000	-.425**	-.020	.035	-.629**
Frequency	-.016	-.066	-.032	-.059	.058	.133*	.045	-.425**	1.000	.014	-.040	.589**
Monetary	-.031	.141**	.045	.115*	-.057	-.077	.039	-.020	.014	1.000	.021	-.004
Incentive	.109	.001	.068	.029	-.041	.122	-.053	.035	-.040	.021	1.000	.018
RFM	.027	-0.049	.060	.020	-.036	.100	-.003	-.629**	.589**	-.004	.018	1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix H – Model Design

Model summary statistics							
Model	Independent Variables		χ^2	Sig	Cox & Snell R ²	Nagelkerke R ²	Classification
1	Monetary	Scale	0.066	0.798	0.000	0.000	51.70%
2	Monetary Education	Scale Scale	3.925	0.140	0.019	0.026	55.70%
3	Monetary Education Purchasing Method	Scale Scale Nominal	6.418	0.040*	0.050	0.067	56.70%
4	Monetary Education Purchasing Method Incentive	Scale Scale Nominal Nominal	12.212	0.032*	0.059	0.079	60.7%
5	Monetary Education Purchasing Method Incentive Social Media Usage	Scale Scale Nominal Nominal Scale	15.507	0.017*	0.074	0.099	58.70%
6	Monetary Education Purchasing Method Incentive Social Media Usage Gender	Scale Scale Nominal Nominal Scale Nominal	15.663	0.028*	0.075	0.100	62.20%
7	Monetary Education Purchasing Method Incentive Social Media Usage Gender Internet Experience	Scale Scale Nominal Nominal Scale Nominal Scale	31.79	0.000**	0.146	0.195	64.20%
8	Monetary Education Purchasing Method Incentive Social Media Usage Gender Internet Experience Recency	Scale Scale Nominal Nominal Scale Nominal Scale Scale	31.848	0.000**	0.149	0.195	63.20%
9	Monetary Education Purchasing Method Incentive Social Media Usage Gender	Scale Scale Nominal Nominal Scale Nominal	32.721	0.000**	0.150	0.200	64.20%

	Internet Experience	Scale					
	Recency	Scale					
	Income	Scale					
10	Monetary	Scale	33.892	0.000**	0.155	0.207	65.20%
	Education	Scale					
	Purchasing Method	Nominal					
	Incentive	Nominal					
	Social Media Usage	Scale					
	Gender	Nominal					
	Internet Experience	Scale					
	Recency	Scale					
	Income	Scale					
	Frequency	Scale					
11	Monetary	Scale	34.013	0.001**	0.156	0.208	65.70%
	Education	Scale					
	Purchasing Method	Nominal					
	Incentive	Nominal					
	Social Media Usage	Scale					
	Gender	Nominal					
	Internet Experience	Scale					
	Recency	Scale					
	Income	Scale					
	Frequency	Scale					
	Age	Scale					

* Significance at the 0.05 level (2-tailed)

** Significance at the 0.01 level (2-tailed)

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