Erasmus School of Economics

Thesis

To obtain the academic degree of

Master of Science in Economics & Business

(Major in Marketing)

Dealing with the GDPR

How companies can convince consumers to share personal information

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Date: 13th of July 2018

Abstract

Many previous studies have researched how companies can increase the amount of information consumers share with them. But in doing so, most studies have focused on consumers' attitudinal sharing behavior by using a survey, while more recent studies have found that there is a difference in consumers' attitudinal sharing behavior and their actual sharing behavior. By using an online experiment, this study examines the effect of trust (high vs. low), the offering of a monetary incentive (yes vs. no), the moderating effect of trust on the effect of offering a monetary incentive, and the effect of different types of companies (an advertising company vs. a mobile phone service provider) on consumers' actual sharing behavior.

Trust was found to have a significant positive effect on consumers' actual sharing behavior. Furthermore, a marginally significant difference was found in consumers' actual sharing behavior for different types of companies. In addition, consumers' actual sharing behavior was found to significantly differ for different types of information. Consumers shared more demographic and lifestyle information than ID information, and in turn shared more ID information than financial information and personal identifiers. Unexpectedly, the offering of a monetary incentive showed no significant effect on consumers' actual sharing behavior. Subsequently, trust did not significantly moderate the effect of the offering of a monetary incentive on consumers' actual sharing behavior.

Possible explanations for these research findings are proposed, as well as possible limitations of the study design used. Finally, directions for further research are proposed. This study contributes to the existing literature by increasing the understanding on the effects and relationships of different variables on consumers' actual sharing behavior. To conclude, this study made a first attempt to achieve the so often addressed and requested generalization for different types of companies, which earlier studies failed to achieve.

Keywords: GDPR, trust, monetary incentive, type of company, information request, privacy, privacy concern, self-disclosure, willingness to share, actual sharing behavior, and personal data

Table of Contents

List of figures

List of tables

1. Introduction

The innovations in the field of information and communication technology (ICT) have proven to be very useful in collecting personal information from consumers, often without consumers being aware of how much data is collected about them. It is safe to state that collecting and using personal information has a long history and more is yet to come. But in which direction is the field heading?

In the 1950s, Business Analytics emerged as a distinct discipline. During these years, tools were developed that made companies able to collect information and identify patterns and trends much faster than the human mind. However, at that time analysts spent more time collecting and preparing data than actually analyzing it. The most significant change occurred in the mid-2000s. During that era, Internet and social media giants such as Facebook and Google changed the game and signified the switch to Analytics 2.0. These companies began uncovering, collecting and analyzing a new type of data, now called big data. This new type of data was externally sourced, drawn from the Internet, public data sources, and many other sources of information. Because of the new possibilities of collecting information at that time, new technologies and processes were developed such as smarter databases and new processing frameworks (Villanova University, n.d.).

Nowadays, experts claim that we are living in a third era, Analytics 3.0. In this era, companies use analytics to provide a personalized user experience. Therefore, Analytics 3.0 enrichens the field of marketing. With upcoming responsive methods and machine learning, which can be paired with in-memory or in-database analytics, marketers are now able to deliver real-time consumer insights and results (Villanova University, n.d.).

All these developments have enrichened the field of marketing and have provided companies with the opportunity to collect a huge quantity and variety of personal information from consumers. Therefore, companies can benefit from the advantages of collecting and using personal information, such as the advantage that consumers tend to respond more positively to advertising on a particular website after they have revealed personal information on that website (Im, Lee, Taylor, & D'Orazio 2008; Moon, 2000). Or the benefit that by disclosing information, consumers react more generous in subsequent interactions. Thus, more grateful when those interactions result in positive outcomes and more “understanding” and “forgiving” when the interactions result in

negative outcomes (Moon, 2003). These findings show the positive effects of collecting and using personal information from consumers on the marketing strategy of a company.

However, the ease with which companies can collect data and the benefits of using it have led to a growing concern among consumers about how companies collect and use personal information (Culnan & Armstrong, 1999; Phelps, Nowak, & Ferrell, 2000). These concerns are primarily fed by the fact that more consumers are realizing that they are often unaware of which data companies are collecting about them, and how these companies collect the information (Graeff & Harmon, 2002).

Given the growing concerns among consumers and the new possibilities of collecting personal information, it came as no surprise that the European Union has recently adopted a new law focused on how companies collect personal information. To comply with the General Data Protection Regulation (GDPR), which became active on the 25th of May 2018 (European Union, 2016), many companies were forced to adjust their information management practices. This regulation allows companies to only store and process personal information (data) when the individual (consumer) has explicitly given permission to do so. Under the new GDPR individuals have:

- The right to access their own personal data.
- The right to have their data deleted when they are no longer customers or if they withdraw their consent from a company to use their personal data.
- The right to transfer their data from one service provider to another.
- The right to be informed before their personal data is gathered. Consumers have to opt in before their personal data can be gathered by companies.
- The right to have their personal data updated if the personal data is out of date, incomplete or incorrect.
- The right to request that their data is not used for processing. This way, their record can remain in place but cannot be used by the company.
- The right to stop the processing of their data for direct marketing.
- The right to be notified within 72 hours whenever there has been a data breach which comprises their personal data (Lund, 2018).

Organizations and companies that do not comply with the new GDPR guidelines can face major fines. The fines could reach up to 4% of annual global revenue, or 20 million Euros, whichever is greater (Lund, 2018). Given these penalties, obtaining consumers' permission to collect their personal information has been of growing importance lately. More specifically, convincing consumers to share their personal information has become more important than ever due to the GDPR. But thankfully, because retrieving and using personal information yields several benefits for companies, consumers' willingness to share personal information has received much academic attention in the past.

1.1 Problem statement and research questions

Earlier research by Awad and Krishnan (2006) suggests that firms are facing a "*Personalization Privacy Paradox*", since consumers who value information transparency features are also less likely to participate in personalized offerings. The authors indicate that a firm's effective use of consumer information is a critical success factor for the firm, but furthermore suggest that consumers who value information transparency are more wary of sharing personal information. Therefore they conclude that the biggest challenge for firms becomes collecting and using personal information from consumers in such a way that consumers feel comfortable with it.

Based on the importance of collecting personal information, many studies have consequently tried to identify different factors that tend to influence consumers' willingness to share personal information. However, willingness to share personal information might not prove to be the correct phrase to use. Studies by Hui, Teo and Lee (2007) and Premazzi et al. (2010) suggest that there is a difference between consumers' willingness to share and consumers' actual sharing behavior.

In this new era in which the GDPR was recently launched, more insights on the combination and relationships of different factors influencing consumers' actual sharing behavior would be extremely useful for marketers. Therefore, it is important to focus on consumers' actual sharing behavior. The overall goal of this master thesis is to increase the understanding of the effects and relationships of different variables on consumers' actual sharing behavior. Consequently, the main research question of this thesis is:

How can companies increase the amount of personal information shared with them by consumers?

Earlier research, which will be discussed in more detail in the next chapter, indicated several aspects that could affect consumers' willingness to share personal information and/or actual sharing behavior. Based on this research, multiple sub-questions have been developed. In order to give a comprehensive answer to the research question, the following sub-questions will be analyzed in detail:

How does trust in a company affect consumers' actual sharing behavior?

How does the offering of a monetary incentive affect consumers' actual sharing behavior?

Is the effect of the offering of a monetary incentive on consumers' actual sharing behavior moderated by the level of trust consumers' have in a company?

Is there a significant difference in consumers' actual sharing behavior for different types of companies?

1.2 Scientific and managerial relevance

A large part of the previous work in the field of marketing research has focused on conducting research on consumers' willingness to share personal information for one or few specific variable(s). Premazzi et al. (2010) is the first well-known study that combined trust, different compensation possibilities, and other important variables in one single empirical investigation, and furthermore focused on actual sharing behavior next to willingness to share. Furthermore, despite the fact that several researchers have addressed the importance of incorporating multiple types of companies or industries in one single empirical investigation, most previous work failed to address this generalization.

The lack of addressing this generalization could be due to the fact that previous research often focused on other research goals or topics. Furthermore, some researchers state that they have chosen for a simplification of the research design, and rather focused on other variables instead of multiple industries. Given this lack of generalization, the objective of this research is to increase the understanding of the combination and relationships of multiple factors affecting consumers' actual sharing behavior for different types of companies.

The contribution of this research is that it is delivering the often addressed generalization for different types of companies. In doing so, this research elaborates on the findings of multiple earlier conducted studies with one company or industry and one or few variable(s) in one single

empirical investigation by including different types of companies into one empirical investigation and by combining multiple earlier used variables.

In addition, whereas before the study of Premazzi et al. (2010) most research was designed using surveys, this study is designed using an experimental element in a survey. By guiding respondents from a survey to a website of a fictional company, where they can choose which personal information they want to share, this research combines both a survey and experimental design. With this experimental design, this research is proceeding on the findings of Hui et al. (2007) and Premazzi et al. (2010), suggesting that there is a difference in intentional and attitudinal behavior questioned with a survey, and actual behavior. The experimental design of this study focused on actual sharing behavior, in combination with the different types of companies included in the research design. With this design, this study is distinguishing itself from other studies that have tried to identify factors that influence consumers' willingness to share personal information (attitudinal), and studies that have failed to include multiple types of companies.

Besides its academic relevance, this study is also relevant in a managerial context. The findings of this master thesis can help marketers to improve their information management practices by extending their knowledge about the different factors affecting consumers' actual sharing behavior. This will eventually support marketers in adjusting to the new GDPR guidelines and thus help marketers improve their strategies for collecting and using consumers' personal information.

1.3 Structure of the thesis

This first chapter illustrated the research objectives and research questions, as well as their academic and managerial relevance. The second chapter will discuss the relevant literature regarding consumers' willingness to share personal information and actual sharing behavior, on which this master thesis builds upon. In addition, this chapter will display the conceptual model and present the hypotheses, which are based on the discussed literature. The third chapter will describe the research design and methodology, and chapter four will describe the data collected and used in this study. Chapter five will discuss the analyses and results with regard to the research questions and finally, in chapter six, the conclusions, limitations, and directions for future research will be discussed.

2. Literature review

This chapter presents the relevant literature on the different factors influencing consumers' willingness to share and actual sharing behavior. First, the concept of trust is defined and described by the effect it has on consumers' sharing behavior. In addition, the different components of trust are presented. Next, the effect of the offering of a monetary incentive is highlighted. Afterwards, the effect of the type of company requesting the personal information is discussed. Subsequently, the differences in sharing behavior for different types of information are discussed. Conclusively, the conceptual model is presented to give a graphical illustration of the hypothesized relationships. A table providing an overview of some of the previous studies focusing on consumers' willingness to share and/or actual sharing behavior is presented in Appendix 1 of this document.

2.1 Trust

A previous study by Phelps et al. (2000) found that consumers are concerned about the way companies use their personal information. Because marketers have access to and make use of consumers' personal information, there is inherent risk (from a consumer perspective) that such information could be used inappropriately (Chellappa & Sin, 2005). Therefore, earlier research suggested that trust plays an important role in consumers' willingness to share personal information (Grabner-Kraeuter, 2002; Milne & Boza, 1999; Schoenbachler & Gordon, 2002; White , 2004).

Schoenbachler and Gordon (2002) found that consumers are more willing to provide personal information to a company when they trust the company. These research findings are closely in line with the findings of Chellappa and Sin (2005), who found that consumers' intent to use personalization services is positively influenced by their trust in the vendor. These findings suggest that companies can improve their abilities to collect and use consumer information through trust building activities.

The findings of Chellappa and Sin (2005) and Schoenbachler and Gordon (2002) are in line with the findings of Grabner-Kraeuter (2002) and Morgan and Hunt (1994), who found that when companies develop a stronger trust relationship with consumers, the balance between consumers' perception of the benefits of the relationship and the negative concern about abuse of personal information might be optimal. The authors suggested that this optimal balance will eventually lead to an increase in consumers' willingness to share personal information. Adding to

these findings, Milne and Boza (1999) found that trust can strengthen consumer relationships, which, in turn, implies better information exchange. Furthermore, Tiffany White suggested that building perceived relational depth, i.e., "*a generally positive, long-term relationship in which relatively high levels of trust and satisfaction have been established"* (White , 2004, p. 49), can be effective in increasing consumers' willingness to provide privacy-related personal information. However, White suggested that there is a difference in consumers' willingness to share for different types of information, a finding that will later be discussed in more detail.

In addition, when a company is not trusted by consumers, this poses different effects on collecting personal information. In their study, Sheehan and Hoy (1999) assessed consumers' concerns with a series of situations regarding online privacy. They found that as privacy concerns increased, respondents reported that they were more likely to provide incomplete information to a website, and request removal from the mailing list. However, it is important to note that Sheehan and Hoy (1999) found several significant correlations between consumers' online privacy concerns and the resultant behavior. But as one knows, one cannot infer a causal relationship based on such linkages alone.

In contrast with the research findings discussed above, Premazzi et al. (2010) found that trust had no significant effect on consumers' atttudinal and actual behavior in sharing personal information. These contrasting findings could be caused by the fact that their study was one of the first that examined the effect of multiple variables in one single empirical investigation. Furthermore, the contrasting findings could also be caused by the fact that their study was among the first to measure actual behavior by conducting an experiment. Especially because previous studies suggested that there could be a difference between intentional behavior measured by a survey, and actual behavior measured in an online experiment.

In general, one can conclude, based on most of the research discussed above, that a higher level of trust generally increases consumers' willingness to share personal information. However, the contradictory findings of Premazzi et al. (2010) make it interesting to research whether a higher level of trust also increases consumers' actual sharing behavior. Despite the contradictory findings of Premazzi et al. (2010), it is hypothesized that:

H1: A higher level of trust in a company increases the amount of personal information that consumers share with that company.

2.1.1 The definition of trust

The earlier discussed studies suggested the importance of trust on consumers' willingness to share personal information and actual sharing behavior. But even though trust received sufficient academic attention as a factor influencing consumers' willingness to share personal information, it is difficult to find one universally accepted academic definition of trust in this context. A possible definition could come from Grabner-Kraeuter (2002). In her research she described trust as "*a mechanism to reduce the complexity of human conduct in situations where people have to cope with uncertainty"* (Grabner-Kraeuter, 2002, p. 44). However, she noted that the levels of trust have to be extended in computer-mediated environments.

In light of this definition, one could look at the research of Milne and Boza (1999) for a more specific definition of trust in the context of researching consumers' willingness to share personal information and actual sharing behavior. In their research, the authors defined trust, in the context of database marketing, as "*the expectancy of a customer to rely upon database marketers to treat their personal information fairly*" (Milne & Boza, 1999, p. 8). By using this definition, it is interesting to have a more detailed look at previous research conducted on the possibilities of companies to increase the level of trust when requesting or collecting personal information.

2.1.2 The components of trust

The earlier discussed research findings indicated that trust is an important factor affecting consumers' willingness to share personal information. However, the findings did not suggest how companies can reduce the level of concern about self-disclosure and thus increase the level of trust that consumers have in them and their information management practices. In this section, more details about increasing consumers' trust when collecting and using personal information will be provided.

Perceived control and a fair privacy policy

Andrade, Kaltcheva and Weitz (2002) found that the completeness of the privacy policy of a particular company reduced the level of concern about self-disclosure. Furthermore, perceived control over the collected data is found to have a positive effect on consumers' trust with a company's marketing information management practices and a negative effect on the concern with these practices (i.e., consumers are less concerned when they have perceived control over their data that has been collected) (Milne & Boza, 1999).

These findings are in line with the findings of Hoffmann, Novak and Peralta (1999), Phelps et al. (2000) and Sheehan and Hoy (2000), who found that when consumers had more control over their own personal information and the use of their personal information by the company, consumers felt more in control and thus less concerned with privacy. This was found to both increase consumers' willingness to share personal information and consumers' purchase intentions. In addition, Hoffman et al. (1999) found that a lack of trust partly came from the fact that consumers were concerned that companies sold their personal information to third parties without their knowledge or permission. This perception negatively influenced consumers' willingness to share personal information. Sheehan and Hoy (2000) add to these findings and found that consumers' privacy concern was mainly caused by the fact that consumers did not know how companies collected information about them, and also did not know how companies used the information they collected about them.

The findings discussed above suggest that fairly addressing privacy concerns is important in increasing consumers' willingness to share personal information and actual sharing behavior. In this light, it is interesting to look at the study of Culnan and Armstrong (1999). Their study focused on the tension that arises between the collection and use of personal information which consumers provide in the course of most consumer transactions, and their individual privacy. They found that consumers were more willing to disclose personal information, and have that information used to create profiles for marketing, when their privacy concerns were addressed by fair procedures, which is in line with the earlier discussed findings and the findings of Wang, Beatty and Foxx (2004). Culnan and Armstrong (1999) further found that consumers' privacy concerns can be addressed by explicitly telling consumers that the company will only use the data for fair information practices. Which is backed by the findings of Bies (1993) and Stone and Stone (1990), who found that consumers are less likely to perceive the information collection procedures of companies as privacy-invasive when they believe that their personal information will be used to draw reliable and valid inferences about them.

Past experience and company reputation

Next to control over data and a fair privacy policy, the past experience with a company and the reputation of a company were found to be other important indicators of trust in an organization (Milne & Boza, 1999), which is in line with the findings of Andrade et al. (2002) and Koufaris and Hampton-Sosa (2004). In these studies, consumers' ideas about an organization's reputation

included its name and background, and personal experiences. In addition, Koufaris and Hampton-Sosa (2004) found that the perceived usefulness, ease of use, and security control of the company's website also had a significant effect on the initial trust a consumer had in a company within their study. Furthermore, the fact that consumers knew that the organization did not share personal information with other organizations was another reason for trusting the organization in the study of Andrade et al. (2002), which is in line with the findings of Leon et al. (2013), Leon et al. (2014), and Phelps et al. (2000).

Herding effect and the use of a third-party privacy seal

Acquisti, John and Loewenstein (2011) found that showing that other consumers shared personal information could encourage trust and increase consumers' willingness to share personal information. This effect is called the herding effect (Devenow & Welch, 1996). Furthermore, Kim and Kim (2011) found that the use of a third-party privacy seal on an unfamiliar website had a significantly positive effect on consumers' level of trusting beliefs, and consumers' trusting intentions. Thus, unknown companies can increase consumers' trust in their personal information collection and usage by communicating their trustworthiness through a third-party privacy seal. This finding is backed by the study of Wang, Beatty and Foxx (2004).

However, the findings of the privacy seal are not supported by Hui et al. (2007), who found that the existence of a third-party privacy seal had no significant effect on the disclosure of information by participants of their study. Hui et al. (2007) suggested that this contradicting finding could be caused by the fact that their study focused on Singapore, a country that according to Geert Hofstede's analysis of cultural dimensions (Hofstede, n.d.) scores relatively low on uncertainty avoidance. As Hui et al. (2007) addressed, people scoring relatively low on this characteristic tend to be less concerned about their privacy (Milberg et al. 1995; Milberg et al. 2000 in Hui et al. 2007). Therefore, based on the other findings, one could still assume a third-party privacy seal to have a positive effect on consumers' level of trust.

Conclusion

To conclude, it seems that the level of trust a consumer has in a company and its information management practices can be affected by the reputation of a company, the completeness of a privacy policy which fairly addresses consumers' privacy concerns, offering consumers control over their own personal information, using personal information only for own company purposes,

the past experience with a company, knowing that other consumers also shared personal information, and the use of a third-party privacy seal.

2.2 Monetary incentives

Numerous studies have investigated the effect of payments in exchange for preventing companies to show personalized advertisements. In contrast, other studies have investigated the effect of offering monetary incentives in exchange for sharing personal information. The most important findings will be discussed in more detail in this section.

In their study, Leon et al. (2013) focused on a health website. This website was able to offer their resources to consumers for free because of the advertising space it offered to other companies. Leon et al. (2013) found that the majority of consumers were not willing to pay to prevent the company from showing personalized advertisements. One argument was that consumers knew they could find the resources somewhere else for free. Another important argument was that consumers felt that privacy is a right they should not have to pay for.

Looking at the offering of a monetary incentive in exchange for sharing personal information, Cranor and McDonald (2010) found a significant difference in willingness to pay to prevent companies from collecting data, and willingness to accept a discount to allow companies to collect data. In their study, only 11% of the respondents were willing to pay $1 a month to keep their favorite news site from collecting their personal data. In contrast, 31% of the respondents were willing to accept a $1 discount to disclose their personal data. This is remarkable because, in theory, there should be no difference between consumers' willingness to protect their privacy and their willingness to accept a payment for disclosing information. However, the authors suggested that this difference could have come from the difference in framing the questions. They noted that consumers who think they don't have the ability to control their own personal information, may value privacy less as a result, whereas those who believe they have control, may value privacy more as a result.

Furthermore, focusing on offering a compensation for sharing personal information, Premazzi et al. (2010) found that offering a compensation had a significant positive effect on consumers' actual sharing behavior when they did not trust the company. They found that consumers' actual disclosure behavior is higher when monetary compensation is offered in exchange for personal information when compared to compensation through a gift. In turn, actual

disclosure behavior is higher when compensation is offered through a gift when compared to when no compensation is offered.

As noted earlier, Premazzi et al. (2010) also found a difference between willingness to share and actual sharing behavior. Even though participants claimed that incentives had no significant effect on their willingness to share personal information, their actual behavior indicated that they were more willing to share personal information when they were promised an incentive. In line with these findings, Hui et al. (2007) found that offering a monetary incentive had a positive influence on consumers' disclosure of information. However, Hui et al. (2007) did indicate that there could be a self-selection bias in their sample.

The findings discussed above emphasize the positive effect of the offering of a monetary incentive on consumers' actual sharing behavior. But in slight contrast, Andrade et al. (2002) found that offering a reward for sharing personal information increases the concern of consumers about self-disclosure. This increase in concern leads to a lower level of trust, which is hypothesized to have a negative effect on consumers' actual sharing behavior. Similar findings are also addressed by Premazzi et al. (2010). It is already noted that Premazzi et al. (2010) found that the offering of a monetary incentive had a significant positive effect on consumers' actual sharing behavior when they did not trust the company. However, their findings also suggested that when consumers already trusted the company, the offering of a monetary incentive had a negative effect on consumers' willingness to share personal information.

Based on the above discussed research findings it is therefore hypothesized that:

H2: *Offering a monetary incentive increases the amount of personal information that consumers share with a company.*

H3: *A higher level of trust negatively moderates the relationship between offering a monetary incentive and the amount of personal information that consumers share with a company.*

2.3 Type of company

Several studies addressed the fact that consumers' willingness to share personal information and actual sharing behavior might differ for different types of companies. However, most of the previous research focused on consumers' willingness to share personal information and/or actual

sharing behavior with one specific industry or one type of company in one single empirical investigation.

Phelps et al. (2000) focused on general retail solutions and the purchase of clothing. In their study, they addressed the fact that while their research focused on providing personal information in a retail situation, the results might differ from a situation where a consumer applies for a credit card. They therefore concluded that even though their study provided valuable insights into consumers' general willingness to share personal information, such willingness could vary as a function of product and situational characteristics.

In addition, Premazzi et al. (2010) concluded that their study is limited because they only tested actual sharing behavior for one type of online company that had a relatively limited product mix. They suggested that shopping for travels, flowers or music might be a distinctly different experience than shopping for mobile phones, and therefore suggested that future research should increase the generalizability of their findings by investigating consumers' willingness to share personal information with respect to other products and services.

Based on these addressed limitations, it proves to be interesting to look at the study of Milne and Boza (1999). They found that there is a significant difference in trust between several types of companies. As discussed, trust is hypothesized to influence consumers' actual sharing behavior. The authors found that consumers tended to trust employers, drugstores, telephone companies, grocery stores, alumni associations, insurance companies, airlines, and banks. In contrast, consumers did not trust political organizations, direct mail clubs, video stores, internet access providers, magazine companies, credit card issuers, book stores, charities, and catalog companies. However, this research has been published in 1999. Since then, many new industries and companies have emerged. One should keep this in mind when interpreting these research findings.

Given the addressed limitations, it is interesting to provide a comprehensive overview of the types of companies that have been used in the previously mentioned studies. Table 1 provides such an overview.

Authors	Industry/Company	Measurement	Dependent variable
Premazzi et al. (2010)	Mobile phone service provider	Experiment	Willingness to provide information and behavioral information disclosure
Hui et al. (2007)	Website hosted by a Singapore firm (specialized in market research) about mobile computing products	Experiment	Behavioral disclosure of information
Kim and Kim (2011)	Online retailer	Experiment	Trust
Leon et al. (2013)	Health website	Survey	Willingness to permit the collection of 30 types of information
Leon et al. (2014)	Advertising company collecting personal information on a news website	Survey	Comfort with sharing personal information
Chellappa and Sin (2005)	Five different industries: • Personal computers • Automobile • Apparel • Financial services • Travel services	Survey	Likelihood of using personalization services

Table 1: Overview of industries/companies used in previous studies

Even though the studies presented above sometimes conducted research with different dependent variables, it is interesting to base the selection of companies for this master thesis on the research that has been done before. Furthermore, the actual sharing behavior towards an advertising company is interesting to study because of a recent scandal between Facebook and Cambridge Analytica (The New York Times, 2018). Based on the table presented above, a pre-test was conducted with the following four types of companies:

1. Mobile phone service provider
2. Online retailer
3. Insurance company
4. Advertising company

The results of the pre-test, further discussed in section 3.3, show that there is a significant difference in the willingness to share personal information for these different types of companies. Based on these findings and the discussed limitations of the previously discussed studies, it is hypothesized that:

H4: Consumers share more personal information with a mobile phone service provider than with an advertising company.

2.4 Type of information

In their study, Leon et al. (2014) found that consumers' willingness to share personal information differed based on the sensitivity of the information, the perceived necessity of collection, and perceived benefits or harms of disclosing specific data types, all of which can differ for different types of information. Even though almost half of the participants in their study were comfortable sharing information with advertising companies, they were not comfortable sharing all their personal information. Participants were not comfortable sharing data they considered personal information, information there was no need knowing, or information that was unnecessary for advertising.

In light of these findings, it is interesting to look at the study of Tiffany White (2004). As discussed, she found that consumers' willingness to share personal information is influenced by the type of relationship the consumers have with the company. In addition, she found that the type of information requested, and the purpose of collecting personal information also affects consumers' willingness to share personal information. She found that relational depth can positively influence consumers' willingness to disclose privacy-related personal information, but she also found that the opposite is true for embarrassing personal information. An explanation could be that consumers find it more difficult to share embarrassing information with someone they know (the company in this case) when compared with someone they do not know.

Further elaborating on the effect of different types of information, one could look at the study of Phelps et al. (2000). They found a significant difference in consumers' willingness to share for different types of personal information. In their study, most respondents were never or not very willing to provide marketers with information regarding of the type of credit card they possessed or their annual household income. But in contrast, respondents were always or somewhat willing to share their age, marital status, type of job, education, and two favorite hobbies. These findings suggest that consumers are more willing to share demographic and lifestyle information (i.e., age, marital status, favorite hobbies, favorite magazines, etc.) than purchase related information (which department stores they have shopped the most, last two credit card purchases, etc.). In turn, consumers are more willing to share purchase related information than financial information and personal identifiers (i.e., social security number, type of credit cards owned, annual income, etc.).

These findings are in line with the findings of Andrade et al. (2002) who found that the request for disclosing sensitive information (i.e., social security number or medical information) induced stronger concern than the disclosure of ID information (i.e., email address, phone number, name). Which, in turn, induced stronger concern than the disclosure of preferences and habits (i.e., product preferences and interests, and hobbies).

There are no hypotheses linked to this section of the literature review. However, possible differences for different types of information will be further discussed in section 5.2.1.

2.5 Conceptual model

The conceptual model presents an illustration of the hypothesized relationships between trust, the offering of a monetary incentive, and type of company with consumers' actual sharing behavior. This conceptual model is displayed below in Figure 1.

In summary, it is expected that trust has a positive effect on consumers' actual sharing behavior. Furthermore, it is expected that the offering of a monetary incentive has a positive effect on consumers' actual sharing behavior. However, the effect of the offering of a monetary incentive is expected to be moderated by the level of trust consumers have in a company. In addition, it is expected that consumers' actual sharing behavior is different between different types of companies. The method of examining these hypothesized relationships will be discussed in later sections.

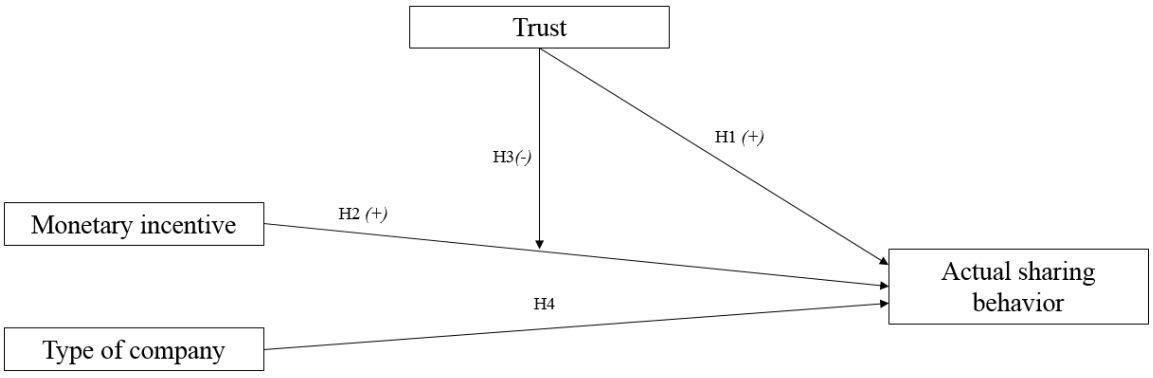

Figure 1: Conceptual model

3. Research methodology

After developing the theoretical and conceptual framework of this study and proposing the hypothesis, this chapter presents the empirical part of this study. First, the respondents of the research will be outlined. Second, the study design will be discussed. Next, the findings of the conducted pre-test will be presented. Subsequently, the data collection method will be discussed and finally, the stimulus material is described.

3.1 Respondents

The respondents who have participated in this study have been recruited by distributing the survey via WhatsApp, LinkedIn direct messages, and Facebook Messenger between May 15 and May 28, 2018. This was right before and during the time that the GDPR was launched (25th of May, 2018), when the GDPR received much attention both in businesses and newspapers. All respondents were known by the researcher and were recruited on a personal level in order to control for the command of the English language and the ability to browse a website. This makes the sample a non-probability convenience sample. The fact that the researcher knew all the respondents could have led to a selection bias. This will be further discussed in section 6.4.3. Furthermore, the fact that the study was conducted surrounding the launch of the GDPR is further discussed in section 6.4.4.

Out of the 240 respondents, 29 respondents did not manage to completely finish the survey after visiting the website (12.08%). This means that a total of 211 respondents (58.8% male, 39.8% female, 1.4% preferred not to say) with an average age of 26.30 (*SD = 6.82*) completed the questionnaire. The drop-out rate of 12.08% is acceptable based on research by Hoerger (2010), who estimated that a comparable survey (in length) would realize a drop-out rate of about 12%. Furthermore, given the sensitivity of information requested on the website, one could have expected the drop-out rate to be even higher for this study.

Most respondents were highly educated. The highest obtained degree was a bachelor's degree for 57.4% (*N = 121*) of the respondents, a master's degree for 28.4% (*N = 60*) and high school or lower for 14.2% (*N = 30*) of the respondents. In addition, the large majority of the respondents selected the Netherlands as their country of nationality (81.0%) and of the other respondents (19.0%) most selected Italy (17.5%), Greece (15.0%), or China (10.0%) as their country of nationality.

3.2 Study design

In order to test the hypotheses, this study was designed as a 2 (trust: high vs. low) x 2 (monetary incentive: yes vs. no) x 2 (type of company: advertising company vs. mobile phone service provider) between-subjects experiment. The study consisted of a Qualtrics survey and a fictitious company website on which respondents were asked to share personal information with a fictional company. Respondents were randomly assigned to one of the eight conditions. The eight different conditions are displayed in Table 2, including the corresponding website.

Condition	Company name	Hyperlink
Type of company: **Advertising** Trust: **High** Monetary incentive: **Yes**	ABC Advertising	abcadvertising.erasmus-thesis.com
Type of company: **Advertising** Trust: **High** Monetary incentive: **No**	ZYX Advertising	zyxadvertising.erasmus-thesis.com
Type of company: **Advertising** Trust: **Low** Monetary incentive: **Yes**	IJK Advertising	ijkadvertising.erasmus-thesis.com
Type of company: **Advertising** Trust: **Low** Monetary incentive: **No**	QPS Advertising	qpsadvertising.erasmus-thesis.com
Type of company: **Mobile phone service provider** Trust: **High** Monetary incentive: **Yes**	ABCD Mobile	abcdmobile.erasmus-thesis.com
Type of company: **Mobile phone service provider** Trust: **High** Monetary incentive: **No**	XYZ Mobile	xyzmobile.erasmus-thesis.com
Type of company: **Mobile phone service provider** Trust: **Low** Monetary incentive: **Yes**	IJK Mobile	ijkmobile.erasmus-thesis.com
Type of company: **Mobile phone service provider** Trust: **Low** Monetary incentive: **No**	PQS Mobile	pqsmobile.erasmus-thesis.com

Table 2: Overview of different websites used

This study was designed as a between-subjects experiment to keep the experiment as respondent-friendly and short as possible. If a within-subjects experiment was chosen, respondents would have needed to visit multiple company websites and return to the survey multiple times. Furthermore, when using a within-subjects experiment, it could have well been that respondents would share the exact same information on the second or third website based on their sharing behavior on the first website. This is also known as the carryover effect and has been discussed in

previous studies (Bickart, 1993; Tourangeau, Rasinski, Bradburn, & D'Andrade, 1989). The possible carryover effect, the length, and the level of difficulty when using a within-subjects design could have led to biased results.

3.3 Pre-test

To test for a significant difference in willingness to share personal information for different types of companies, and to decide which types of companies to use in this study, a pre-test was conducted. The pre-test measured for 68 respondents how likely they would share information with a mobile phone service provider, an insurance company, an online retailer and an advertising company. The questionnaire used for this pre-test is displayed in full in Appendix 2 of this document.

A within-subjects design was chosen in order to test whether there was a significant difference in sharing behavior between different types of company for each respondent. The order in which companies were presented to the respondents was randomized in order to control for a possible order effect bias (Perreault, 1975). If the different companies would have been presented in a consistent order to every respondent, the first company would always influence respondents' opinions of the other companies, but not the other way around. This would have biased the comparison between different types of companies.

A within-subjects paired-samples t-test was conducted to compare the likelihood of sharing personal information for different types of companies. The results indicated that there is a statistically significant difference ($p < 0.01$) in likelihood of sharing for different types of companies. Consumers were more likely to share personal information with a mobile phone service provider ($M = 2.97$, $SD = 1.21$), an insurance company ($M = 3.35$, $SD = 1.27$), and an online retailer ($M = 2.82$, $SD = 1.12$) when compared to an advertising company ($M = 2.31$, $SD = 1.14$).

Because Premazzi et al. (2010) focused on a mobile phone service provider, and consumers proved to be least likely to share information with an advertising company, these two types of companies were used for this master thesis.

3.4 Data collection

Subjects were recruited to participate in a study in order to obtain the academic degree of Master of Science in Economics & Business (Major in Marketing) at the Erasmus School of Economics. The respondents were provided with a short introduction, which informed them that they would be asked to share some personal information with a company (they were not obliged to share any personal information). No further information was given about the purpose of the research, because this potentially could have influenced consumers' behavior, which could have led to biased results.

Subjects were first provided with a website number and a hyperlink to one of the eight different websites. The subjects were asked to remember their website number, visit the website, and read the information provided on the website carefully. On the website, the respondents saw a short company introduction and were requested to share their website number (mandatory) and any other personal information they would like to share (all information fields were optional). Each website made a request for the same information in the same order:

- Age
- Favorite hobby
- Name
- Email address
- Marital status
- Annual income
- Social security number

Once the task of visiting the website and sending in the form was completed, respondents were asked to go back to the survey and answer some general questions. These questions measured the level of trust consumers had in the website and company (Koufaris & Hampton-Sosa, 2004; Leon, et al., 2013) their involvement with the products/service of the company, and their overall privacy concern (Premazzi, et al., 2010), their disposition to trust (Gefen, 2000), and their general willingness to share demographic and lifestyle information, ID information and personal information (i.e., social security number and annual income). Finally, respondents were asked to answer questions about their gender, age, highest received degree and nationality. The questionnaire used in this study is displayed in full in Appendix 3 of this document.

Because of the website number, which was required for sending the form which requested for personal information (see Appendix 4), it was possible to register and match back the personal information provided by each respondent to the corresponding online questionnaire. The method of using a website number had been used before by Premazzi et al. (2010).

3.5 Stimulus material

In the following sections the stimulus material used in this study will be further discussed.

3.5.1 Manipulation of trust on the website

Based on the components of trust retrieved from the earlier discussed literature, discussed in section 2.1.2, a few components were added to websites in the high trust condition to manipulate trust. The following components were added to the website:

- Addressing that respondents have control over their own collected personal information at any time (Hoffman, Novak, & Peralta 1999; Phelps et al. 2000; Sheehan & Hoy 2000)
- Addressing that collected personal information will only be used for own company purposes (Hoffman, Novak, & Peralta, 1999)
- A third-party privacy seal (Kim & Kim, 2011)

The websites assigned to the low trust condition did not provide any information about the use of personal information, did not mention anything about control over personal information, and did not display a third-party privacy seal. It was hypothesized that the lack of these components for the low trust condition would result in lower trust when compared to the use of these components for the high trust condition. To test whether the manipulation was successful, a manipulation check was conducted, which will be further discussed in section 4.2.

For every condition, both fictional companies and fictional website names have been used. If real website names would have been used, prior experience, consumer knowledge, prior relationships with the company and preformed attributes about the website or company could have affected a respondents' trust level, and subsequently one's disclosure behavior. The use of fictional companies and fictional website names allows the researcher to control for these confounding variables (Im et al., 2008). All eight websites, including their lay-out and content, are displayed in Appendix 4 of this document.

3.5.2 The offering of a monetary incentive on the website

The offering of a monetary incentive in return for sharing personal information has been discussed previously in the literature review. Because the aim of this study was also to test consumers' sharing behavior for different types of information, this research differs from the other previously discussed studies. In the study of Premazzi et al. (2010) respondents were obliged to share all personal information requested by the company, and they were randomly assigned to one of three groups. The first group was offered a monetary incentive in exchange for personal information, the second group was offered compensation through a gift in exchange for personal information, and the third group was offered no compensation in exchange for sharing personal information.

To be able to test for the sharing behavior for different types of information, respondents of this study were not forced to share any of the personal information requested. Given this difference, it proved to be undesirable to offer a fixed amount of money in exchange for sharing personal information. In that scenario, there would be nothing that would prevent respondents from just filling in a name, maybe even an incorrect name, and receive the same monetary incentive as if they had shared all their personal information.

To overcome this problem, one could have chosen to offer respondents a fixed amount of money per component of information requested. However, this scenario might have led to respondents calculating their risk (e.g., is it worth x euros to give my annual income to a company or do I only value my name and favorite hobby to be worth x euro per component?). In both of the above discussed scenarios, the results of this study could have been seriously biased for the effect of offering a monetary incentive. Therefore, the amount was kept unknown. The following paragraph was used to promise respondents who were in the monetary incentive condition a monetary incentive in exchange for sharing personal information:

> *"If you share your personal information with us in the form below, we will offer you a monetary incentive once you have finished the survey. The more information you share, the higher the monetary incentive you will receive. Do you not want to share any personal information? Just fill in your website number below and leave the rest of the fields blank."*

At the end of the experiment, respondents were thanked for their participation. In addition, they were also debriefed about the offering of a monetary incentive. The following text was used to thank respondents for their participation and to explain to them that they would not receive a monetary incentive even though some of the respondents were offered one:

"You have reached the end of the experiment. I would like to thank you for your time.

If you were in the experiment group that was promised a monetary incentive, I owe you a sincere apology. The effect of the promise of a monetary incentive was just one of the effects I wanted to test with this experiment. Unfortunately, I can't offer you the monetary incentive, but I do want to thank you once again for your participation.

If you have any further questions feel free to contact me at: 476512ja@student.eur.nl."

3.5.3 The purpose of collecting personal information

To keep the websites as similar as possible, no further specification was given of why the companies wanted to collect the personal information. This was done to only capture the difference in sharing behavior for different types of companies. The researcher could have specified, for example, that both companies would send emails with discounts or promotions. But this would be an offer in return for sharing personal information. This could have strongly influenced sharing behavior and would have made the analysis of the effect of offering a monetary incentive more difficult. Therefore, the only sentence that was used to explain why the companies needed the information was:

"*We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.*"

4. Data

This chapter presents the data that was collected and used in this study. First, the measurement scales of the different variables will be discussed. Subsequently, the results of the conducted manipulation check will be presented. Finally, the correlation analysis will be discussed in more detail.

4.1 Definition of measures

The sections below will discuss the definitions of the different variables that were used in this study and will conclude with a comprehensive summary of all measures.

4.1.1 Dependent variable

Total sharing behavior. The variable total sharing behavior measured the actual sharing behavior of respondents. The variable was constructed as a combination of the seven components of personal information that were requested by each fictitious company. These seven components have been presented in section 3.4. All components were coded as a binary variable, 0 when the component was not shared, and 1 when the information was shared. Subsequently, these seven variables were simply added up so that each respondent received a 7 when he or she had shared all personal information requested, a 4 when he or she had shared four information components (for example), and a 0 when he or she had shared no personal information. Even though the construct is relatively simple, the variable had a high degree of internal consistency (*Cronbach's alpha coefficient = 0.85; M = 4.11, SD = 2.26*).

4.1.2 Independent variables

Adjusted website trust level. The variable adjusted website trust level indicated whether a respondent had a low level of trust or high level of trust in the website of the company he or she had visited. The variable was coded as an ordinal variable, high when website trust level (later discussed in section 4.1.5) was 4.01 or higher, and low when website trust level was 4.00 or lower.

Monetary incentive. The variable monetary incentive indicated whether a respondent was randomly assigned to the monetary incentive condition or not. The variable was coded as a binary variable, 0 when the respondent was not promised a monetary incentive, and 1 when the respondent was promised a monetary incentive.

Type of company. The variable type of company indicated whether a respondent was randomly assigned to visit the website of an advertising company or to visit the website of a mobile

phone service provider. The variable was coded as a binary variable, 0 when the respondent had visited the website of an advertising company, and 1 when the respondent had visited the website of a mobile phone service provider.

4.1.3 Variables used for non-hypothesized relationships

Demographic sharing. The variable demographic sharing measured the actual sharing behavior of respondents for demographic information. The variable was constructed as a combination of the components age and favorite hobby, which were both requested on each website. Both components were coded as a binary variable, 0 when the information was not shared, and 1 when the information was shared. Subsequently, the two variables of both components were simply added up so that each respondent got a 2 when he or she had shared both components, a 1 when he or she had shared only one of the components, and a 0 when he or she had shared none of the requested two components. The component 'marital status' was deliberately skipped in the construct of the demographic sharing variable in order to keep the variables for each type of information of equal component size.

Identification sharing. The variable identification sharing measured the actual sharing behavior of respondents for identification information. The variable was constructed in the same way as the demographic sharing variable, only using the components name and email address for this specific variable. The two variables of both components were added up so that each respondent got a 2 when he or she shared both name and email address, a 1 when he or she had shared either name or email address, and a 0 when he or she had shared neither name nor email address.

Sensitive information sharing. The variable sensitive information sharing measured the actual sharing behavior of respondents for financial information and personal identifiers. The variable was constructed in the same way as the demographic sharing variable and the identification sharing variable, only using the components annual income and social security number for this specific variable. The two variables of both components were added up so that each respondent got a 2 when he or she had shared both annual income and social security number, a 1 when he or she had shared either annual income or email address, and a 0 when he or she had shared neither annual income nor social security number.

4.1.4 Control variables

The three control variables will be introduced below. After this introduction, the validity of the scales used for constructing these variables will be discussed.

Privacy concern. Earlier research (Phelps, Nowak & Ferrell, 2000; Sheehan & Hoy, 2000) suggested that one's level of general privacy concern could influence one's willingness to share personal information. Therefore, privacy concern was used as a control variable in this study. The variable was developed based on a scale earlier used by Premazzi et al. (2010), who had adopted the scale from the Concern of Information Privacy Instrument. Privacy concern was measured on a eleven-item seven-point scale (1 = strongly disagree, 7 = strongly agree). The eleven items are shown in Table 3 (*Cronbach's alpha coefficient = 0.84; M = 5.78, SD = 0.74*).

Dimension	Items
Collection	When companies ask me for personal information, I sometimes think twice before providing it
	It bothers me to give personal information to so many companies
	I am concerned that companies are collecting too much personal information about me
Access	Companies should devote more time and effort to preventing unauthorized access to personal information
	Companies should take more steps to make sure that unathorized people cannot access personal information in their computers
Accuracy	Companies should take more steps to make sure that the personal information in their database is accurate
	Companies should have better procedures to correct errors in personal information
	Companies should devote more time and effort to verifying the accuracy of the personal information in their databases
Use	When people give personal information to a company for a specific reason, the company should never use that information for other purposes
	Companies should never sell the personal information in their databases to other companies
	Companies should never share personal information with other companies unless it has been authorized by the individuals who provided the information

Table 3: Measure of Privacy Concern

Involvement. Research by Premazzi et al. (2010) suggested that one's involvement with a specific company (either an advertising company or a mobile phone service provider in this study, depending on which group the respondent was randomly assigned to) might impact one's actual sharing behavior. Therefore, the variable involvement was used as a control variable in this study. The variable was based on a scale used by Premazzi et al. (2010) and was measured using a eight-item seven-point semantic differential scale. The eight items used are shown in Table 4 (*Cronbach's alpha coefficient = 0.95; M = 3.64, SD = 1.27*).

Please indicate your feelings about the products/services of the website you have just visited		
Not important to me	1 2 3 4 5 6 7	Important to me
Of no concern to me	1 2 3 4 5 6 7	Of concern to me
Irrelevant	1 2 3 4 5 6 7	Relevant
Means nothing to me	1 2 3 4 5 6 7	Very meaningful to me
Does not matter to me	1 2 3 4 5 6 7	Matters to me
Not interesting	1 2 3 4 5 6 7	Interesting
Insignificant	1 2 3 4 5 6 7	Significant
Boring	1 2 3 4 5 6 7	Exiciting

Table 4: Measure of Involvement

Disposition to trust. Kim and Kim (2011) found that one's disposition to trust affects one's level of trust in an unfamiliair website. More generally, consumers who have a higher disposition to trust are more likely to place higher initial trust in an unfamiliar website, compared to those with a lower disposition to trust. Therefore, disposition to trust was used as a control variable in this study. The variable was measured using a five-item seven-point scale (1 = strongly disagree, 7 = strongly agree). The scale was initially developed by Gefen (2000) and was used before by Kim and Kim (2011). The five items are shown in Table 5 (*Cronbach's alpha coefficient = 0.86; M = 4.91, SD = 0.98*).

Disposition to trust
I generally trust other people
I tend to count upon other people
I generally have faith in humanity
I feel that people are generally reliable
I generally trust other people unless they give me reason not to

Table 5: Measure of Disposition to trust

Validity of the scales used for the control variables

Even though previous research indicated that the 24 items can be factored into three control variables, an exploratory factor analysis was conducted to determine whether this analysis would yield the same factors. To better interpret the outcome, a technique called factor rotation was employed, which allowed to discriminate between factors. The rotation ensures that all variables are loaded to the factor to which they relate the most (Field, 2013). Because both orthogonal rotation (factors do not correlate) and oblique rotation (factors are allowed to correlate) yielded similar results, a principal axis factor analysis with varimax rotation was conducted to test for the validity of scales.

The results of this analysis indicated the validity of the scales used for the three control variables. The sampling adequacy was verified by the Kaiser-Meyer-Olkin measure, *KMO = .871*, which is excellent ("meritorious*")* according to Hutcheson and Sofroniou (1999). In addition, all

the individual items had KMO values greater than .711, which is above the acceptable limit of .5 (Field, 2013). The three factors yielded eigenvalues over Kaiser's criterion of 1 and the three factors explained 57.21% of the variance when combined. As reported for each control variable, each control variable had a Cronbach's alpha coefficient of .84 or higher, indicating that all three control variables had sufficient internal consistency. Therefore, the scales used for constructing the control variables were concluded to be valid.

4.1.5 Variables used for the manipulation check

Trust. The variable trust indicated whether a respondent was randomly assigned to the high trust condition or low trust condition. The variable was coded as a binary variable, 0 when the respondent was assigned to the low trust condition, and 1 when the respondent was assigned to the high trust condition.

Website trust level. To test if trust was successfully manipulated, a new scale was developed which measured one's website trust level. A three-item seven-point scale (1 = strongly disagree, 7 = strongly agree) was used to measure one's level of trust in the website one was assigned to. The scale was based on questions used by Koufaris and Hampton-Sosa (2004) and Leon et al. (2013) and asked whether respondents had a positive impression of the website they had just visited, whether they believed the website they had just visited to be a trustworthy website, and whether they trusted the website they had just visited to keep their best interest in mind.

A new principal axis factor analysis with varimax rotation led to the composition of one variable, website trust level (*Cronbach's alpha coefficient = 0.87; M = 3.93, SD = 1.37*), containing all three questions stated above. The factor had an eigenvalue over Kaiser's criterion of 1 and explained 78.93% of the variance. Based on these results, the scale used for constructing this variable was concluded to be valid.

4.1.6 Summary of measures

To summarize, Table 6 provides a summary of each of the variables described above, and the other variables used in this study.

Variable name	Description	Measurement	Type
Total sharing behavior	Count of information shared by the respondent	Continuous (range 0-7)	Scale
Adjusted website trust level	Whether a respondent had a high or low level of trust in the website of the company he had visited	High = website trust level > 4.01; Low = website trust level < 4.00	Ordinal
Monetary incentive	Whether a monetary incentive was promised to the respondent	Yes = 1; No = 0	Dummy
Type of company	Type of company assigned to the respondent	Mobile phone service provider = 1; Advertising company = 0	Dummy
Demographic sharing	Count of demographic information shared by the respondent	Continuous (range 0-2)	Scale
Identification sharing	Count of identification information shared by the respondent	Continuous (range 0-2)	Scale
Sensitive information sharing	Count of sensitive information shared by the respondent	Continuous (range 0-2)	Scale
Privacy concern	Whether a respondent is concerned about his privacy (in general)	High = 7; Low = 1	Scale
Involvement	Whether a respondent felt involved with the products/services of the company	High = 7; Low = 1	Scale
Disposition to trust	Whether a respondent tends to trust others in general	High = 7; Low = 1	Scale
Overall willingness to share	The respondent's overall willingness to share demographic information, identification information and sensitive information	Extremely unlikely = 1; Somewhat unlikely = 2; Neither likely nor unlikely = 3; Somewhat likely = 4; Extremely likely = 5	Ordinal
Website trust level	Whether a respondent had high level of trust in the website of the company he had visited	High = 7; Low = 1	Scale
Trust	Trust condition	High = 1; Low = 0	Dummy
Gender	Indicator of gender	Male = 1; Female = 2; I prefer not to say = 3	Nominal
Age	Age of the respondent	29 or younger = 0; 30 or older = 1	Ordinal
Degree	Highest obtained degree	High school or lower = 1; Bachelor's degree = 2; Master's degree = 3; PhD = 4	Ordinal
Country of nationality	The respondent's country of nationality	The Netherlands = 1; Other = 2	Nominal

Table 6: Summary of variables used

4.2 Manipulation check

Trust was an important variable in this study. Therefore it was crucial that the respondents actually trusted the website more when they were assigned to the high trust condition when compared to the low trust condition. The results of a one-way between-subjects ANOVA suggested that trust

was successfully manipulated, i.e., website trust level was statistically significantly higher ($p < 0.05$) for the high trust condition ($M = 4.11, SD = 1.39$) when compared to the low trust condition ($M = 3.73, SD = 1.31$).

However, further analyses indicated that the website trust level of the eight experimental groups did not significantly differ from each other ($p > 0.05$), and descriptive statistics furthermore indicated that the mean of website trust level for one of the low trust groups was higher than for some of the high trust groups. Based on these findings, the variable trust was concluded to be inappropriate for analyzing differences in actual sharing behavior between low trust and high trust. Therefore, the variable adjusted website trust level was constructed and used in all subsequent analyses.

4.3 Correlation analysis

The mean, standard deviation and correlations derived from the conducted correlation analysis are presented in Table 7. All the correlations that are marked with either '*' ($p < 0.05$) or '**' ($p < 0.01$), will be discussed below and proved to be statistically significant.

First, gender was positively correlated to privacy concern ($r = .178, p < 0.01$). I.e., females and respondents who preferred not to state their gender showed higher levels of pricacy concern in this study. In addition, age was negatively correlated with overall willingness to share ($r = -.181, p < 0.01$), but positively correlated with privacy concern ($r = .139, p < 0.05$). This indicates that older respondents in this study had a lower level of overall willingness to share and a higher level of privacy concern.

Furthermore, the highest obtained degree was negatively correlated to website trust level ($r = -.305, p < 0.01$). Meaning that respondents with higher obtained degrees had lower website trust levels in this study. Next, total sharing behavior was positively correlated with overall willingness to share ($r = .263, p < 0.01$), demographic sharing ($r = .844, p < 0.01$), identification sharing ($r = .842, p < 0.01$), sensitive information sharing ($r = .752, p < 0.01$), involvement ($r = .243, p < 0.01$), and website trust level ($r = .314, p < 0.01$). Which shows that respondents who shared more information had a higher level of overall willingness to share, felt more involved, and had a higher level of website trust. Subsequently, when a respondent shared more information in total, he or she shared more demographic information, identification information and or sensitive information.

In addition, overall willingness to share was positively correlated with demographic sharing ($r = .172, p < 0.05$), identification sharing ($r = .234, p < 0.01$), sensitive information sharing ($r = .266, p < 0.01$), involvement ($r = .139, p < 0.05$), disposition to trust ($r = .153, p < 0.05$), and website trust level ($r = .211, p < 0.01$). This indicates that respondents with a higher overall willingness to share, shared more demographic information, identification information, and sensitive information and furthermore felt more involved, had a higher disposition to trust, and a higher website trust level. In contrast, overall willingness to share was negatively correlated with privacy concern ($r = -.231, p < 0.01$). This indicates that respondents with a higher overall willingness to share were less concerned about their privacy in general.

Next, demographic sharing was positively correlated with identification sharing ($r = .584, p < 0.01$), sensitive information sharing ($r = .450, p < 0.01$), involvement ($r = .176, p < 0.05$), and website trust level ($r = .196, p < 0.01$). This indicates that respondents who shared more demographic information also shared more identification information and sensitive information, felt more involved and had a higher website trust level. In addition, identification sharing was positively correlated with sensitive information sharing ($r = .490, p < 0.01$), involvement ($r = .293, p < 0.01$), and website trust level ($r = .300, p < 0.01$). Sensitive information sharing was positively correlated with involvement ($r = .149, p < 0.05$), and website trust level ($r = .290, p < 0.01$). Furthermore, the results indicated that involvement was positively correlated with website trust level ($r = .388, p < 0.01$). This shows that respondents who felt more involved had a higher level of website trust. Finally, website trust level was positively correlated with trust ($r = .136, p < 0.05$), meaning that a respondent assigned to the high trust group had a higher level of website trust. However, in interpreting the results, please note that one should know that one cannot infer a causal relationship based on correlations alone.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. **Gender**	1.43	0.52	1	.026	.031	-.088	-.053	-.004	.003	-.045	-.096	-.068	.178**	-.003	.056	.009	-.061	-.014
2. Age	26.30	6.82	.026	1	-.066	.055	.077	-.181**	.023	.086	.125	-.068	.139*	.050	.035	-.043	.054	.103
3. Degree	2.14	0.64	.031	-.066	1	-.202**	-.094	-.036	-.009	-.095	-.122	-.065	-.070	-.046	-.305**	-.097	-.101	.016
4. Country	-	-	-.088	.055	-.202**	1	-.054	-.018	-.124	.023	-.020	-.001	.033	.017	.081	.063	.089	-.045
5. Total sharing behavior	4.11	2.26	-.053	.077	-.094	-.054	1	.263**	.844**	.842**	.752**	.243**	-.066	.072	.314**	.040	-.032	.130
6. Overall willingness to share	2.60	0.64	-.004	-.181**	-.036	-.018	.263**	1	.172*	.234**	.266**	.139*	-.231**	.153*	.211**	-.101	-.044	.019
7. Demographic sharing	1.53	0.75	.003	.023	-.009	-.124	.844**	.172*	1	.584**	.450**	.176*	.044	-.003	.196**	.078	-.100	.079
8. Identification sharing	1.24	0.87	-.045	.086	-.095	.023	.842**	.234**	.584**	1	.490**	.293**	-.129	.106	.300**	.100	-.058	.121
9. Sensitive information sharing	0.62	0.70	-.096	.125	-.122	-.020	.752**	.266**	.450**	.490**	1	.149*	-.080	.112	.290**	-.097	.089	.126
10. Involvement	3.64	1.27	-.068	-.068	-.065	-.001	.243**	.139*	.176*	.293**	.149*	1	-.080	-.009	.388**	-.073	.008	.029
11. Privacy concern	5.79	0.74	.178**	.139*	.070	.033	-.066	-.231**	.044	-.129	-.080	-.080	1	.001	-.113	.107	.030	.028
12. Disposition to trust	4.91	0.98	-.003	.050	-.046	.017	.072	.153*	-.003	.106	.112	-.009	.001	1	.103	-.036	-.077	-.057
13. Website trust level	3.93	1.37	.056	.035	-.305**	.081	.314**	.211**	.196**	.300**	.290**	.388**	-.113	.103	1	.038	.136*	.052
14. Monetary incentive	0.52	0.50	.009	-.043	-.097	.063	.040	-.101	.078	.100	-.097	-.073	.107	-.036	.038	1	.032	.014
15. Trust	0.53	0.50	-.061	.054	-.101	.089	-.032	-.044	-.100	-.058	.089	.008	.030	-.077	.136*	.032	1	-.004
16. Type of company	1.50	0.50	-.014	.103	.016	-.045	.130	.019	.079	.121	.126	.029	.028	-.057	.052	.014	-.004	1

Table 7: Output correlation analysis

Note: N = 211.

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

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

5. Analysis and results

In this chapter, the results of the conducted study are presented. First, a brief summary of the sample characteristics and drop-out rates per experimental group will be presented. Subsequently, the analysis of not hypothesized relationships will be discussed. Finally, the results of testing the proposed hypotheses will be presented. To run the analyses, IBM SPSS version 24 was used.

5.1 Descriptive analysis

In earlier sections, some general descriptive statistics from the survey population and most important variables have already been discussed. This section provides more details about the sample characteristics for the different experimental groups[1], and the drop-out rates per experimental group.

5.1.1 Sample characteristics per experimental group

As discussed before, 240 respondents participated in this study and were assigned to one of the eight experimental groups. Because 29 respondents did not manage to completely finish the survey after visiting the website (12.08%), a sample of 211 respondents remained. Even though the researcher tried to reach an equal distribution by using quotas, the use of quotas failed to help achieve an equal distribution of respondents per experimental group. This was mainly due to the fact that drop-out rates (i.e., the rate of people who did not finish the survey after visiting the website) differed per experimental group. However, as discussed in section 3.1, the drop-out rate was concluded to be acceptable based on previous research (Hoerger, 2010).

As displayed in Table 8, over the eight experimental groups, 58.2% of the respondents were male, 39.8% were female, and 1.4% preferred not to say. The average age was 26.30 years (*SD = 6.82*) and most respondents were highly educated (i.e., bachelor's degree or higher). When comparing demographics of the different groups, it can be noted that in seven of the eight groups more men than women participated. Only in group eight more women participated than men. Furthermore, the average age for each group was between 24 and 28. In addition, in all experimental groups most of the respondents (> 44%) had obtained a bachelor's degree as their highest degree. There were no respondents in this study who obtained a PhD. Finally, in each group most of the respondents were born in the Netherlands (> 74.1%).

[1] An explanation and overview of the conditions manipulated for each experimental group was provided earlier in this document in section 3.2.

The results of multiple Pearson chi-square tests indicated that the experimental groups did not significantly differ ($p > 0.05$) on gender, age, education and country of nationality. Therefore, the random assignment of respondents to experimental groups was concluded to be successfully achieved.

		Total	1	2	3	4	5	6	7	8
Sample size		211	29	27	25	25	30	25	25	25
Gender	Male	58.8%	58.6%	59.3%	52%	60%	66.7%	64%	60%	48%
	Female	39.8%	41.4%	40.7%	44%	40%	26.7%	36%	40%	52%
	Prefer not to say	1.4%	0%	0%	4%	0%	6.6%	0%	0%	0%
Age		26.30	24.41	26.78	25.52	25.80	28.27	27.16	25.68	26.68
Education	High school or lower	14.2%	10.4%	14.8%	24%	8%	20%	16%	12%	8%
	Bachelor's	57.3%	72.4%	63%	44%	52%	50%	60%	68%	48%
	Master's	28.5%	17.2%	22.2%	32%	40%	30%	24%	20%	44%
	PhD	0%	0%	0%	0%	0%	0%	0%	0%	0%
Country	Netherlands	81%	82.8%	74.1%	88%	84%	83.3%	80%	92%	64%
	Other	19%	17.2%	25.9%	12%	16%	16.7%	20%	8%	36%

Table 8: Sample characteristics per experimental group

5.1.2 Drop-out rates

Even though a respondent not finishing the survey can be accounted for as a "non-response error", the drop-out rates can provide additional information about the effect of the different websites and the reactions and behavior of respondents. As one can derive from Table 9, the advertising company in the low trust condition who did not offer a monetary incentive (4) had the most drop-outs and the highest drop-out rate. In contrast, the lowest number of drop-outs, and the lowest drop-out rate, was for the mobile phone service provider who offered a monetary incentive and was in the high trust condition. However, these drop-out rates cannot simply be explained by the manipulated conditions. It should be noted that fatigue, technical problems and many other reasons can lead to a respondent not finishing the survey. Therefore, even though the drop-out rates are interesting to display, one should be careful with making conclusions based on these rates alone.

	1	2	3	4	5	6	7	8
# drop-outs	2	2	4	9	1	4	3	5
% of drop-outs	6.7%	6.9%	13.8%	25.7%	3.2%	13.7%	10.7%	16.7%
Mean	.93	.93	.86	.74	.97	.86	.89	.83
Standard deviation	.254	.258	.351	.97	.180	.351	.315	.379
Mean difference to group 5	-.034	-.037	-.106	-.225		-.106	-.075	-.134
p-value (two-tailed)	.542	.523	.154	.008*		.154	.275	.086

Table 9: Drop-out rates per experimental group

*. Significant at the 0.05 level (2-tailed)

5.2 Analysis of not hypothesized relationships

Before testing the different hypotheses of this study, the data was further analyzed for other relationships between different variables. This section presents the results of these conducted analyses.

5.2.1 Different sharing behavior for different types of information

Earlier research (Andrade et al., 2002; Leon, et al., 2014; Phelps et al., 2000; White , 2004) suggested that there could be a difference in actual sharing behavior for different types of information requested by companies. In this study, further research was conducted to test this suggestion.

Andrade et al. (2002) and Phelps et al. (2000) suggested that consumers were more willing to share demographic and lifestyle information than ID information. This suggestion was tested by conducting a paired-samples t-test. The results confirmed that there is a statistically significant difference ($p < 0.01$) between consumers' actual sharing behavior for demographic and lifestyle information, and ID information. The results indicated that consumers' shared more demographic and lifestyle information ($M = 1.53, SD = 0.75$) than ID information ($M = 1.24, SD = 0.87$).

Subsequently, Andrade et al. (2002) and Phelps et al. (2000) suggested that consumers were more willing to share ID information than financial information and personal identifiers (i.e., social security number and annual income). To test this suggestion, a new paired-samples t-test was conducted. The results indicated that there is a statistically significant difference ($p < 0.01$) in the suggested direction between consumers' actual sharing behavior for ID information ($M = 1.24, SD = 0.87$) and consumers' actual sharing behavior for financial information and personal identifiers ($M = 0.62, SD = 0.70$). In addition, these results furthermore indicated that consumers

shared more demographic information than financial information. This result was also statistically significant ($p < 0.01$).

Based on findings by Hui et al. (2007) and Premazzi et al. (2010), which suggested a difference between attitudinal behavior and actual sharing behavior, a third paired-samples t-test was conducted to test if there was a significant difference in consumers' willingness to share information (attitudinal) for the three different types of information. The results indicated that consumers were more willing to share demographic information than ID information ($p < 0.01$), and financial information and personal identifiers ($p < 0.01$). Furthermore, the results indicated that consumers were more willing to share ID information than financial information and personal identifiers ($p < 0.01$). These results indicated that both attitudinal and actual behavior showed the same differences for the different types of information. However, it should be noted that it was not possible to test whether consumers would be willing (attitudinal) to share the same amount of information as they actually shared in this study.

5.2.2 Demographic characteristics and actual sharing behavior

Although not listed in this study as formal hypotheses, multiple between-subjects ANCOVA tests were conducted to test for a significant relationship between demographic characteristics and consumers' actual sharing behavior, controlling for involvement, privacy concern, and disposition to trust. However, none of the tested demographic characteristics (i.e., age, gender, degree, and country of nationality) had a statistically significant relationship with consumers' actual sharing behavior. Therefore, the methods and results of these analyses will not be discussed in more detail.

5.3 Hypotheses testing

In this section, the results of the analyses conducted in order to test the hypotheses will be discussed. First, the testing of the underlying assumptions of the conducted tests will be discussed. Next, the results of the conducted tests will be discussed for each hypothesis.

5.3.1 Testing for possible violations of assumptions

Before testing the hypotheses of this master thesis, multiple analyses were conducted to test for possible violations of assumptions underlying the use of ANCOVA. The violations that occurred will be discussed in more detail below. Assumptions that were not violated, such as the homogeneity of variance assumption, will not be discussed below.

Normality assumption

For all hypotheses, the normality assumption was violated. However, based on the central limit theorem, which explains that even though the population scores are not normal, the sample is big enough so that the sampling distribution is normal (Lumley, Diehr, Emerson, & Chen, 2002), all sample sizes were concluded to be large enough to deal with the violation of the normality assumption.

Independence of the covariate and treatment effect

When this assumption is violated, the effect of the independent variable is confounded with the effect of the control variable. When this happens, the control variable reduces the effect of the independent variable because the control variable explains some of the variance that would otherwise be explained by the independent variable. When this assumption is violated, the interpretation of the ANCOVA is seriously compromised (Wildt & Ahtola 1978 in Field 2013). After testing for possible violations of this assumption, the results indicated that the control variable involvement violated this assumption for the planned tests for hypothesis 1 and hypothesis 3. Therefore, involvement was concluded to be inappropriate to use when testing these hypotheses.

Homogeneity of regression slopes

The homogeneity of regression slopes assumption suggests that the relationship between the dependent variable and the control variable is the same for each treatment group. After testing for possible violations of this assumption, the results indicated that the control variable involvement violated this assumption for testing hypothesis 1 and hypothesis 3. Given the fact that this control variable also violated the assumption of independence of the covariate and treatment effect for these hypotheses, involvement was concluded to be inappropriate to use when testing these hypotheses.

5.3.2 Trust and actual sharing behavior

To compare the main effect of trust on consumers' actual sharing behavior (H1), a between-subjects ANCOVA controlling for disposition to trust and overall privacy concern was conducted. This test yielded an F ratio for the main effect of $F(1, 207) = 7.042$, $p < 0.01$. This indicates a statistically significant difference in actual sharing behavior between high adjusted website trust level ($M = 4.63$, $SD = 2.22$) and the low adjusted website trust level ($M = 3.75$, $SD = 2.23$), when taking overall privacy concern and disposition to trust into account. Thus, H1 is supported.

5.3.3 Monetary incentive and actual sharing behavior

To compare the main effect of the offering of a monetary incentive on consumers' actual sharing behavior (H2), a between-subjects ANCOVA controlling for involvement, overall privacy concern and disposition to trust was conducted. The main effect yielded an F ratio of $F(1, 206) = .972$, $p > 0.05$. This indicates that there was no statistically significant between consumers' actual sharing behavior when offered a monetary incentive ($M = 4.20$, $SD = 2.10$) and not offered a monetary incentive ($M = 4.02$, $SD = 2.43$), when controlling for involvement, overall privacy concern, and disposition to trust. Thus, H2 is not supported.

5.3.4 Trust moderating the effect of offering a monetary incentive

To test if trust significantly moderated the effect of the offering of a monetary incentive on consumers' actual sharing behavior (H3), a between-subjects ANCOVA controlling for disposition to trust and overall privacy concern was conducted.

The estimated marginal means for consumers' sharing behavior differed in the hypothesized direction for the interaction between trust and the offering of a monetary incentive, as Figure 2 displays. As one can see, respondents with a high trust level shared, in general, more information ($M = 4.63$, $SD = 2.22$) than consumers with a low trust level ($M = 3.75$, $SD = 2.23$). However, when offered a monetary incentive respondents with high trust shared less information ($M = 4.60$, $SD = 2.05$) than when no monetary incentive was offered ($M = 4.66$, $SD = 2.43$). In contrast, respondents with low trust shared more information when offered a monetary incentive ($M = 3.90$, $SD = 2.10$) compared to when no monetary incentive was offered ($M = 3.59$, $SD = 2.36$).

However, the between-subjects ANCOVA yielded an F ratio for the moderation effect of $F(1, 205) = .498$, $p > 0.05$. This indicates that trust did not significantly moderate the effect of the offering of a monetary incentive on consumers' actual sharing behavior. Thus, H3 is not supported.

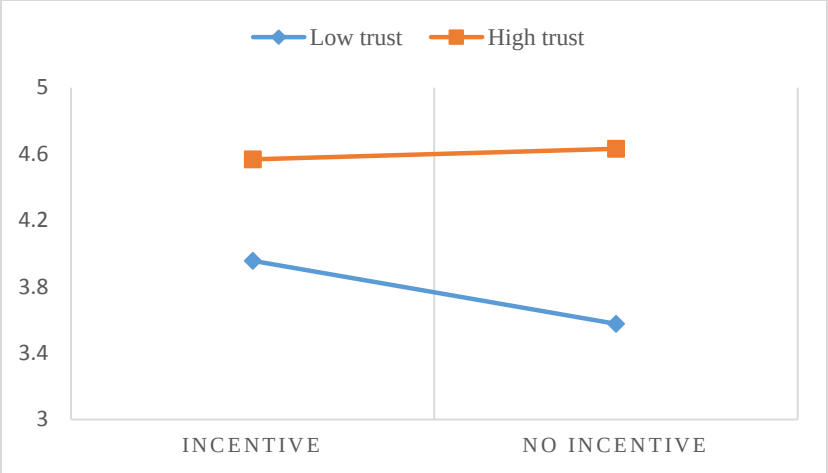

Figure 2: Estimated marginal means of actual sharing behavior

5.3.5 Type of company and actual sharing behavior

To compare the main effect of different types of companies (H4) on consumers' actual sharing behavior, a between-subjects ANCOVA controlling for involvement, overall privacy concern and disposition to trust was conducted. The main effect yielded an F ratio of $F(1, 206) = 3.762$, $p = .056$. This indicates a marginally statistically significant difference between consumers' actual sharing behavior towards an advertising company ($M = 3.82$, $SD = 2.23$) and consumers' actual sharing behavior towards a mobile phone service provider ($M = 4.41$, $SD = 2.27$), when controlling for involvement, overall privacy concern and disposition to trust. Thus, H4 is partially supported.

5.3.6 Further exploring the data

Based on the lack of support for hypothesis 2, the data was further explored in order to gain other meaningful insights. The analyses conducted will be discussed in more detail below.

Binomial logistic regressions on the main effect of a monetary incentive on sharing behavior

Because the dependent variable, total sharing behavior, was aggregated from the seven different information components requested on each website, it could be that the lack of support for H2 comes from the aggregation of this variable. Therefore, seven independent regression tests were conducted to test whether the offering of a monetary incentive had a statistically significant effect on the actual sharing behavior for one of the seven information components requested. The results indicated that for the offering of a monetary incentive, a statistically significant effect was found for consumers' actual sharing behavior for sharing their name. This effect was positive ($\beta = .757$), i.e., when consumers were offered a monetary incentive they shared their name more often. Furthermore, a marginally significant effect was found for consumers' actual sharing behavior for

sharing their social security number. This effect was negative (β = - *.821*), i.e., when consumers were offered a monetary incentive they shared their social security number less often. For the other information components, the effect of offering a monetary incentive was not statistically significant (*p > 0.10).* Table 10 displays the results for all seven independent regression tests.

Dependent variable	Independent variable and covariate(s)	P-value for main effect	Result
Shared age*	Monetary incentive Privacy concern Disposition to trust	.337	Insignificant
Shared hobby	Monetary incentive Involvement Privacy concern Disposition to trust	.207	Insignificant
Shared name	Monetary incentive Involvement Privacy concern Disposition to trust	.019	Significant
Shared email address*	Monetary incentive Involvement Disposition to trust	.276	Insignificant
Shared marital status*	Monetary incentive Privacy concern Disposition to trust	.654	Insignificant
Shared annual income	Monetary incentive Involvement Privacy concern Disposition to trust	.543	Insignificant
Shared social security number	Monetary incentive Involvement Privacy concern Disposition to trust	.056	Marginally significant

Table 10: Results of seven binomial logistic regression tests for the effect of a monetary incentive

*. One of the covariates was dropped due to failing to meet the assumption of linearity of the logit

5.3.7 Hypotheses overview

To conclude, Table 11 below provides an overview of the hypotheses that were tested and the results from the conducted analyses.

Hypothesis	Analysis method	Dependent variable	Independent variable(s)	Covariates	P-value	Result
H1: A higher level of trust in a company increases the amount of personal information that consumers share with that company.	ANCOVA	Total sharing behavior	Adjusted website trust level	Privacy concern Disposition to trust	.009	Supported
H2: Offering a monetary incentive increases the amount of personal information that consumers share with a company.	ANCOVA	Total sharing behavior	Monetary incentive	Involvement Privacy concern Disposition to trust	.325	Not supported
H3: A higher level of trust negatively moderates the relationship between offering a monetary incentive and the amount of personal information that consumers share with a company	ANCOVA	Total sharing behavior	Adjusted website trust level Monetary incentive	Privacy concern Disposition to trust	.481	Not supported
H4: Consumers share more personal information with a mobile phone service provider than with an advertising company.	ANCOVA	Total sharing behavior	Type of company	Involvement Privacy concern Disposition to trust	.054	Partially supported

Table 11: Overview of the conducted analyses and the results of the hypotheses testing

6. Conclusion

The main findings of this study are discussed in this chapter by linking the results to the theory and answering the research question: *How can companies increase the amount of personal information shared with them by consumers?* Furthermore, all four research questions will be addressed. Subsequently, both the academical contribution and managerial implications of this study are presented. Finally, the limitations of this study are discussed and directions for future research are given.

6.1 General discussion and research questions

The introduction of this master thesis pointed out that convincing consumers to share personal information has become more important than ever since the European Union recently implemented the GDPR. Thankfully, consumers' willingness to share personal information had received much academic attention in the past, but other studies (Hui et al., 2007; Premazzi et al., 2010) suggested that willingness to share personal information might not be the correct phrase to use. These studies found a difference between willingness to share (attitudinal) and actual sharing behavior. Furthermore, few studies had combined multiple companies and variables (possibly) influencing consumers' actual sharing behavior in one single empirical investigation. Therefore, the objective of this master thesis was to increase the understanding of the effects and relationships of different variables on consumers' actual sharing behavior.

The main research question examined in this master thesis was: *How can companies increase the amount of personal information shared with them by consumers?* To give a comprehensive answer to this question, it was subdivided into several questions:

How does trust in a company affect consumers' actual sharing behavior?

How does the offering of a monetary incentive affect consumers' actual sharing behavior?

Is the effect of the offering of a monetary incentive on consumers' actual sharing behavior moderated by the level of trust consumers have in a company?

Is there a significant difference in consumers' actual sharing behavior for different types of companies?

The answers to these questions and the main research question will be discussed in the subsequent sections.

6.1.1 The effect of trust on consumers' actual sharing behavior

The results of this study confirmed most of the earlier research findings (Grabner-Kraeuter, 2002; Milne & Boza, 1999; Schoenbachler & Gordon, 2002; White , 2004), further strengthening the suggestion that trust has a positive effect on consumers' actual sharing behavior. In other words, if consumers have a higher level of trust in the website of the company on which the information is requested, they are more likely to share personal information with the company. This implicates that increasing consumers' trust is important for marketers in order to increase the amount of information shared with them by consumers.

Earlier research (Andrade et al., 2002; Bies, 1993; Culnan & Armstrong, 1999; Hoffman et al., 1999; and many other studies) suggested multiple components which marketers can use to positively influence consumers' level of trust. However, based on the results of the conducted manipulation check, one could question whether all these components truly positively influence consumers' level of trust. Mainly because some of the components which were suggested to increase consumers' trust are mandatory under the new GDPR legislation.Therefore, future research should assess the effect of these components on consumers' level of trust in this new era with the GDPR, even though the problems that arose with the manipulation check could also be due to a limitation of this study, further discussed in section 6.4.2.

6.1.2 The effect of offering a monetary incentive on consumers' actual sharing behavior

Previous studies (Kim & Kim, 2011; Premazzi, et al., 2010) had investigated the effect of offering a monetary incentive in exchange for sharing personal information, but the results of this study failed to support their findings. Whereas both previously conducted studies found a significant positive effect for the offering of a monetary incentive on consumers' willingness to share personal information or actual sharing behavior, this study found no significant effect for the offering of a monetary incentive on consumers' actual sharing behavior.

The lack of support for these findings could be caused by differences between the study design used for this master thesis and the study designs used for the previously mentioned studies. These studies have tested the offering of a monetary incentive by offering a fixed amount of money when requesting the information, and required consumers to share all personal information

requested. In contrast, this study only mentioned that a monetary incentive was offered and that consumers would receive a higher monetary incentive if they shared more personal information. In addition, consumers were free to decide which information they wanted to share. Because no component of information was required, consumers were free to only share their name or favorite hobby, or no information at all. This study deliberately made use of a different study design, since this design made it possible to test consumers' actual sharing behavior for different types of information. However, it could be that this is the reason for failing to find a significant effect on consumers' actual sharing behavior for the offering of a monetary incentive.

6.1.3 The moderating effect of trust on the effect of offering a monetary incentive

Contradicting the findings of previous studies (Andrade et al., 2002; Premazzi, et al., 2010), trust was not found to have a significant moderating effect on the effect of offering a monetary incentive on consumers' actual sharing behavior. Even though the estimated marginal means moved in the hypothesized direction, i.e., when trust was high the offering of a monetary incentive negatively influenced consumers' actual sharing behavior, the effect was found to be insignificant. This might indicate that for requesting personal information from consumers when giving consumers the possibility to share only the information they want to share, i.e., it's not required to share all personal information requested, trust is not relevant for the effect of offering a monetary incentive. However, the lack of support for earlier research findings could also be caused by the difference in study design and the difference in offering a monetary incentive, as discussed in the previous section.

6.1.4 Consumers' actual sharing behavior for different types of companies

Milne and Boza (1999) found a significant difference in trust between different types of companies. This might indicate that different types of companies ignite different reactions from consumers when requesting personal information. Furthermore, several studies (Phelps et al., 2000; Premazzi, et al., 2010) had addressed the importance of incorporating multiple types of companies or industries in one single empirical investigation.

This study found a marginally significant difference in consumers' actual sharing behavior for different types of companies (i.e., an advertising company and a mobile phone service provider). This supports the suggestion that different types of companies ignite different reactions when requesting personal information. Therefore, this study made a first attempt to achieve the so often addressed and requested generalization for different types of companies, which earlier

studies failed to achieve. However, more steps need to be taken in order to be conclusive in answering the question whether consumers' actual sharing behavior differs for different types of companies. This will be further discussed in section 6.4.5.

6.1.5 Increasing consumers actual sharing behavior

When answering the main research question of this master thesis (i.e., *How can companies increase the amount of personal information shared with them by consumers?*), the findings of this study suggest that this might prove to be different for different types of companies. In this study, consumers shared more personal information with a mobile phone service provider than with an advertising company, and it could be that their actual sharing behavior further differs between other types of companies.

Furthermore, the findings of this study suggest that trust plays an important role in convincing consumers to share personal information. In general, when consumers' have higher levels of trust in the company and their website, they share more personal information than when their level of trust is lower. However, it should be noted that this research did not require consumers to share all the personal information requested. This might prove to be a good strategy for marketers when requesting personal information. However, further research needs to be conducted before conclusions can be drawn on this strategy.

Earlier research found that the order in which information is requested has a significant effect on sharing behavior (Acquisti et al., 2011). Given this finding, it could be interesting to also conduct research on the difference in sharing behavior between when consumers are required to share all information requested and when consumers are not required to share all information requested. Especially since this study found that consumers were more likely to share demographic and lifestyle information than ID information, and subsequently were more likely to share ID information than financial information and personal identifiers. But for now, based on this research, companies can increase the amount of information shared by consumers by focusing on consumers' trust level.

6.2 Academical contribution

With the new GDPR active since the 25th of May, several things have changed regarding collecting and requesting personal information. This study made a first attempt in researching consumers' actual sharing behavior in the period surrounding the launch of the GDPR legislation. However,

further research is needed regarding the implications of this new regulation. Furthermore, the fact that this research was conducted in the period surrounding the launch of the GDPR legislation could have influenced the results of this master thesis, as further discussed in section 6.4.4.

As indicated previously, some of the components which are suggested to increase consumers' trust could be questioned for their actual relevance due to the fact that some components are mandatory based on the new GDPR legislation. Furthermore, the findings of this study extend on past research conducted on actual sharing behavior. Most previous studies have focused on consumers' willingness to share personal information. This study extends on the findings of Hui et al. (2007) and Premazzi et al. (2010) who were among the first to research consumers' actual sharing behavior instead of consumers' attitudinal willingness to share. Whereas the study of Premazzi et al. (2010) failed to find a significant effect of trust on consumers' actual sharing behavior, even though most earlier research found this significant effect on attitudinal willingness to share (Grabner-Kraeuter, 2002; Milne & Boza, 1999; Schoenbachler & Gordon, 2002; White , 2004), this study's findings support most of the earlier findings on attitudinal sharing behavior and is among the first to find support for this finding while focusing on actual sharing behavior.

In addition, this study differs from other studies in the study design used. This study is among the first to request consumers to share personal information with a company while consumers are not required to share any of the personal information requested. This study design therefore enabled the researcher to find a significant difference in consumers' actual sharing behavior for different types of information. A difference that had been suggested by previous studies on attitudinal willingness or with other dependent variables (Andrade et al., 2002; Leon, et al., 2014; Phelps et al., 2000; White , 2004), but a difference that was not yet supported by a study focusing on consumers' actual sharing behavior.

Finally, this study made a first attempt to achieve the generalization on consumers' actual sharing behavior for different types of companies. Where earlier research had suggested a difference (Milne & Boza, 1999) or addressed the lack of generalization for different types of companies or industries (Phelps et al., 2000; Premazzi, et al., 2010), this study found a marginally significant difference in consumers' sharing behavior for different types of companies. However,

more research has to be conducted in order to test the difference in consumers' actual sharing behavior for more than two types of companies.

6.3 Managerial implications

Next to academical contributions, this study also bears managerial implications. For those in charge of managing a company's information management practices, this study shows the value of consumers' trust in the company and its website. Marketers who are able to increase consumers' trust are more likely to increase the amount of information consumers share with them. However, there is still no conclusive answer on which components significantly increase consumers' trust in a company and their website with the GDPR being implemented.

In addition, this study might suggest a new strategy for marketers in order to increase consumers' sharing of personal information. By making a distinction between different types of information and giving consumers freedom to choose which information they want to share and which information they do not want to share, marketers could increase the amount of information shared. However, the suggestion of giving consumers freedom to choose which information they want to share requires further research before drawing conclusions on this strategy. Marketers could experiment with the findings of this study and test whether giving consumers freedom in sharing personal information positively influences consumers' actual sharing behavior.

6.4 Limitations and Directions for Future Research

This section presents some limitations of this study and some directions for future research on consumers' actual sharing behavior for personal information.

6.4.1 Correctness of information

Previous research by Sheehan and Hoy (1999) found that the frequency with which consumers provide incomplete information to a website increased as their privacy concerns increased. Furthermore, Leon et al. (2014) found that some respondents would deliberately make their personal information inaccurate when a company would provide them with the opportunity to access their data. Furthermore, the possibility of a consumer providing false information was also addressed by Hoffman et al. (1999). Given these findings, it should be noted that the incorrectness of personal information could pose serious problems for companies. However, it was not possible within this study to check whether consumers participating in this study shared correct information or whether they shared false or inaccurate information. However, one could also question why

consumers would share false information in this study, since it was not required to share any information at all. Regardless, one should keep in mind that, when interpreting the findings of this study, it was not possible to determine whether or not the shared information was correct.

6.4.2 Website limitations

Even though the use of websites is more realistic than using surveys, which is earlier discussed by mentioning the found differences in actual behavior and attitudinal behavior, the use of websites also yields some limitations in this study. In this study, fictional companies were developed for requesting personal information. As previous research (Im et al., 2008) suggested, this helped in controlling for earlier experiences with companies and other confounding variables. However, these fictional websites also add some limitations to the study.

First, the fact that fictional websites and companies were used might have influenced the effect of the offering of a monetary incentive. It could be that consumers thought they would not receive the monetary incentive, since they might have recognized that the websites and companies were fictional. This might have influenced their actual sharing behavior.

Furthermore, due to the fact that companies were fictional and the websites of the different types of companies were kept as similar as possible, this study was unable to provide consumers with a comprehensive statement on the website stating the use of the collected personal information by the company collecting the information. Previous studies (Hoffman et al., 1999 ;Sheehan & Hoy, 2000) have suggested that consumers' privacy concern is partly caused by the fact that consumers do not know how companies use the information they collect about them. Therefore, one should keep this limitation in mind when interpeting the results of this study. However, one should also note that all eight websites could be affected by this limitation, therefore differences found between different experimental groups could still prove to be meaningful.

Finally, it could be that the simplicity of the website made it difficult for respondents to answer the subsequent questions about the level of trust they had in the website.

6.4.3 Sample limitations

The fact that a non-probability convenience sample was used in this study could have influenced the results of this study and yields some limitations.

First, due to the fact that the researcher knew the respondents participating in this study, it might be that the respondents were more willing to share information because they knew it was for the researcher's master thesis. This selection bias could have led to biased results. More specifically, 5 respondents indicated that they shared more information with the company because they knew the researcher in person. However, deleting these respondents from the data set had no effect on the results of this study. Nevertheless, it could be that more respondents shared more information than they actually would have shared if they did not knew the researcher.

Furthermore, the fact that a convenience sample was used led to the fact that most of the respondents were of the same age (approximately) as the researcher and were born in the Netherlands. It could be that younger people have a different actual sharing behavior regarding personal information, even though this research did not find any proof of this when analyzing not hypothesized relationships. In addition, the Netherlands is a country that, according to Geert Hofstede's analysis of cultural dimensions (Hofstede, n.d.), scores relatively high on uncertainty avoidance. People scoring relatively high on this characteristic tend to be more concerned about their privacy (Milberg et al. 1995; Milberg et al. 2000 in Hui et al. 2007), which might influence the results of this study. Therefore, in interpreting the results of this study, it is important to keep this sample limitation in mind.

6.4.4 Limitations due to priming

Earlier research (Iyengar & Simon, 1993; Valentino, 1999; among other studies) suggested that media outlets and the news presented by media outlets can have a significant influence on consumers' behavior. This is often addressed as the priming effect, suggesting that media broadcasts and images stimulate consumer's thoughts and behavior. The fact that this study was conducted in the period surrounding the launch of the GDPR legislation could prove to be a limitation of this study. A lot of media outlets, both in the Netherlands as in the rest of the world, have placed emphasis on the legislation and the importance of privacy. These broadcasts could have influenced the consumers' minds and their actual sharing behavior during this study. Therefore, future researchers could repeat this study at a later point in time when less attention is given to privacy and the GDPR by media outlets.

Furthermore, the priming effect could also have affected consumers' actual sharing behavior with the advertising company. As earlier discussed, a scandal between Facebook (an

advertising company) and Cambridge Analytica occurred in the period surrounding the data collection for this master thesis, March and April 2018 to be precisely (The New York Times, 2018). Many media outlets have placed emphasis on this scandal and in addition, have placed emphasis on the importance of privacy and being aware of the personal information consumers share. Therefore, consumers' actual sharing behavior could have been affected by this broadcasting. This possible limitation makes it even more valuable to repeat this study at a later point in time, as proposed above.

6.4.5 Directions for Future Research

As discussed, one could question whether the components which previous research suggested to positively influence consumers' level of trust really do positively influence consumers' level of trust in the new era of the GDPR. As indicated, some of the components suggested are mandatory under the new GDPR legislation. Therefore, a new study exploring the different components influencing consumers' level of trust could provide valuable new insights for marketers to increase consumers' trust when requesting personal information. In addition, a new study at a later point in time could provide different insights given the fact that by then the attention for privacy and the GDPR can be expected to be decreased.

Another direction for future research is to explore whether there is a difference in consumers' actual sharing behavior between when consumers are required to share all requested information and when consumers are not required to share all information requested, i.e., consumers are free to only share the information they would like to share. It could prove to be interesting to study if there is a difference in consumers' actual sharing for these two different scenarios. As this study found a significant difference in actual sharing behavior between different types of information, a follow-up study exploring the differences in sharing behavior for these different situations might provide valuable new insights for marketers in designing the way they request personal information from consumers.

Furthermore, this study found a marginally significant difference in consumers' actual sharing behavior for different types of companies. The companies used in this study were fictional in order to control for earlier experiences. However, as noted before, the use of fictional companies could possibly be the source of some limitations. Therefore, replicating this study at a later point in time, with existing companies and controlling for earlier experiences in a different way might

provide more valuable insights on the actual sharing behavior between different types of companies.

In addition, one of the limitations of this study is the fact that the researcher knew the respondents, which could have led to a selection bias. Therefore, it could prove to be even more interesting to conduct this study using existing companies. If researchers could engage existing companies to cooperate in this research, researchers would gain access to many respondents they do not know in person. However, future master thesis researchers could also choose to make use of sources as Survey Cirle and Poll-Pool in order to find respondents who are not known by the researcher.

Finally, this study made a first attempt to achieve the so often addressed and requested generalization for different types of companies which earlier studies failed to achieve. However, the study design only allowed this study to use two different companies. A follow-up study exploring consumers' actual sharing behavior for multiple different types of (existing) companies could add to the findings of this study and provide marketers with a more conclusive answer on the difference in consumers' actual sharing behavior for different types of companies.

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Appendix

Appendix 1 Overview of studies focused on consumers' willingness to share, actual sharing behavior and/or different influencing factors

Authors	Industry /Company	Dependent variable(s)	Independent variable(s)	Measurement	Findings	Journal
Schoenbachler and Gordon (2002)	Multiple industries	Trust in organization Willingness to provide personal information	Multiple factors of trust	Survey	Consumers are more willing to provide personal information to a company when they trust the company.	Journal of Interactive Marketing
Chellappa and Sin (2005)	Multiple industries	Likelihood of using personalization services	Value for personalization Concern for privacy Trust building factors	Survey	Consumers' intent to use personalization services is positively influenced by his/her trust in the vendor.	Information Technology and Management
Milne and Boza (1999)	Multiple industries	Trust in the organization Privacy concern	Multiple factors of trust	Survey	Perceived control over information has a positive effect on the trust with a company's marketing information management practices and reduces the concern with these practices. The past experience with a company, the reputation of a company, the use of the information, and the type of company all have an impact on the trust a consumer has in a company and its marketing information management practices.	Journal of Interactive Marketing
White (2004)	Grocery and drugstore delivery service	Perceived disclosure consequences Willingness to reveal personal information	Relationship type Marketer benefit offerings Type of information	Experiment	The type of relationship between consumers and the company, the use of the data (customized vs. non-customized), and the type of information gathered influence a consumers' willingness to disclose	Journal of Consumer Psychology

Authors	Industry /Company	Dependent variable(s)	Independent variable(s)	Measurement	Findings	Journal
					"privacy-related" or "embarrassing" personal information.	
Andrade, Kaltcheva, and Weitz (2002)	Unknown Website	Consumers' concern about self-disclosure	Type of relationship between consumer and company Completeness of the privacy policy Offering of a reward Nature of the information	Survey	A good company reputation and the completeness of the privacy policy of the particular company reduce the level of concern about self-disclosure. The offering of a reward for sharing personal information increases the concern of consumers about self-disclosure. The impact on concerns about self-disclosure are significantly different between different types of information.	Advances in Consumer Research
Hoffman, Novak, and Peralta (1999)	n/a	n/a	n/a	Researching secondary data	Lack of trust is stopping consumers from getting into an exchange relationship with a company. Lack of trust comes from the fact that consumers are concerned that companies will sell their personal information to third parties without their knowledge or permission.	Communications of the ACM
Leon et al. (2013)	Health website	Willingness to permit the collection of 30 types of information.	Type of information Retention period Scope of use Access to collected data Site familiarity	Survey	More restrictive data-retention and scope-of-use policies increase consumers' willingness to share personal information Access to data has minimal impact on consumers' willingness to share personal information.	The ninth symposium on usable privacy and security
Leon et al. (2014)	Advertising company collecting personal	Comfort with sharing personal information	Type of information Scope of collection Scope of use	Survey	Consumers' willingness to share personal information is based on the sensitivity of information, the scope of collection and use, perceived necessity of collection, and	Workshop on Privacy in the Electronic Society (WPES 2014)

Authors	Industry /Company	Dependent variable(s)	Independent variable(s)	Measurement	Findings	Journal
	information on a news website		Necessity of collection Benefits or harms for disclosing information Access to personal information		perceived benefits or harms of disclosing specific data types.	
Premazzi et al. (2010)	Mobile phone service provider	Willingness to provide information Behavioral information disclosure Behavioral disclosure of sensitive information	Privacy concern Attitude toward online shopping Involvement with mobile phone services Trust	Experiment	Initial trust and compensation have no significant effect on consumers' attitudinal willingness to provide personal information. Initial trust has no significant effect on consumers' actual behavior in sharing personal information. Compensation has a significant effect on consumers' actual behavior in sharing personal information. Even though consumers claim that incentives have no significant effect on their willingness to share personal information, their actual behavior indicated that they were more willing to share personal information.	International Journal of Electronic Commerce
Hui et al. (2007)	Website hosted by a Singapore firm (specialized in market research) about mobile computing products	Behavioral disclosure of information	Multiple privacy assurances	Experiment	The existence of a privacy statement has a positive effect on the disclosure of information by consumers The offering of a monetary incentive has a positive effect on the disclosure of information by consumers	MIS Quarterly

Authors	Industry /Company	Dependent variable(s)	Independent variable(s)	Measurement	Findings	Journal
					The existence of a privacy seal has no significant effect on the disclosure of information by consumers	
Phelps, Nowak, and Ferrell (200)	No specific industry or company	Overall concern about the ways companies use personal information	Type of personal information requested Amount of information control offered Potential consequences and benefits Consumer characteristics	Survey	There is a significant difference in the willingness to share for different types of personal information. Most consumers are concerned about the way companies use their personal information. Consumers desire more control over their personal information (vs. less control or no control). Information control has a positive impact on consumers' purchase intention.	Journal of Public Policy & Marketing
This study	Multiple industries/companies	Actual sharing behavior	Trust Monetary incentive Type of company	Survey experiment	Trust has a significant positive effect on consumers' actual sharing behavior There is a marginally significant difference in consumers' actual sharing behavior for different types of companies There is a significant difference in consumers' actual sharing behavior for different types of information	n/a

Appendix 2 Pre-test questionnaire
A. Introduction text

Welcome and thank you for agreeing to take part in this short test. This test will only take one minute of your time.

With this test, I would like to measure your willingness to share personal information for different types of companies. However, please note that you don't have to share your personal information with me, nor the company. The four questions of this survey are just to measure your willingness to share.

The data that is obtained with this test will be used for my thesis to obtain the academic degree of Master of Science in Economics & Business (Major in Marketing).

If you have any questions about the survey please don't hesitate to contact me. You can find my email address below.

Thanks in advance,

Jeroen Adelmund (476512ja@student.eur.nl)

B. Questions (Randomized)

Q1 How likely would you share information (e.g., demographics, personal interests, financial information) with a **mobile phone service provider**?

- ○ Extremely unlikely (1)
- ○ Somewhat unlikely (2)
- ○ Neither likely nor unlikely (3)
- ○ Somewhat likely (4)
- ○ Extremely likely (5)

Q2 How likely would you share information (e.g., demographics, personal interests, financial information) with an **insurance company**?

- ○ Extremely unlikely (1)
- ○ Somewhat unlikely (2)
- ○ Neither likely nor unlikely (3)
- ○ Somewhat likely (4)
- ○ Extremely likely (5)

Q3 How likely would you share information (e.g., demographics, personal interests, financial information) with an **online retailer**?

- ○ Extremely unlikely (1)
- ○ Somewhat unlikely (2)
- ○ Neither likely nor unlikely (3)
- ○ Somewhat likely (4)
- ○ Extremely likely (5)

Q4 How likely would you share information (e.g., demographics, personal interests, financial information) with an **advertising company**?

- ○ Extremely unlikely (1)
- ○ Somewhat unlikely (2)
- ○ Neither likely nor unlikely (3)
- ○ Somewhat likely (4)
- ○ Extremely likely (5)

Appendix 3 Survey questionnaire
A. Introduction text

Q1 Dear participant,

With this message, I would like to invite you to participate in a research study to be conducted in order to obtain the academic degree of Master of Science in Economics & Business (Major in Marketing) at the Erasmus School of Economics.

In this study, you will be exposed to a website. On this website, you will be requested to share some of your personal information. However, you are not obliged to share your personal information. If you do not want to share any personal information at all, this is also fine. If you want to share some personal information, but not everything, this is also perfectly fine. The choice is all yours and there is no right or wrong.

After visiting the website, you will be presented with a series of questions regarding your response to the website and some general questions. Participating in this study will take around 7 minutes of your time, for which I am very grateful.

While conducting this research, I guarantee that your anonymity will be safeguarded, and that your personal information will not be passed on to third parties under any conditions.

I hope that I have provided you with sufficient information. For more information about this research, you are welcome to contact me at any time at 476512ja@student.eur.nl.

I would like to thank you in advance for your assistance with this research, which I greatly appreciate.

Kind regards,

Jeroen Adelmund.

- Next page

After you click through to the next page you will be presented with a website number and a URL to a website. Please visit the website and enter the number on the website. Furthermore, please take your time to read the information on the website carefully and share the personal information you would like to share.

Please note once again that you are not obliged to share any information except for the website number you receive in the next section. The choice is all yours and there is no right or wrong in sharing information

B. Introduction text per experimental group

Experimental group 1:

Your website number is ${e://Field/Website%20number}.

Please visit http://abcadvertising.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 2:

Your website number is ${e://Field/Website%20number}.

Please visit http://zyxadvertising.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 3:

Your website number is ${e://Field/Website%20number}.

Please visit http://ijkadvertising.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 4:

Your website number is ${e://Field/Website%20number}.

Please visit http://qpsadvertising.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 5:

Your website number is ${e://Field/Website%20number}.

Please visit http://abcdmobile.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 6:

Your website number is ${e://Field/Website%20number}.

Please visit http://xyzmobile.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 7:

Your website number is ${e://Field/Website%20number}.

Please visit http://ijkmobile.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

Experimental group 8:

Your website number is ${e://Field/Website%20number}.

Please visit http://pqsmobile.erasmus-thesis.com/, fill in the number above, read the information on the website carefully and share the personal information you would like to share. Afterwards, please return back to this survey to answer the questions that follow.

C. Control question

Did you enter your website number on the website you have just visited? If not, please return to the website to enter your number.

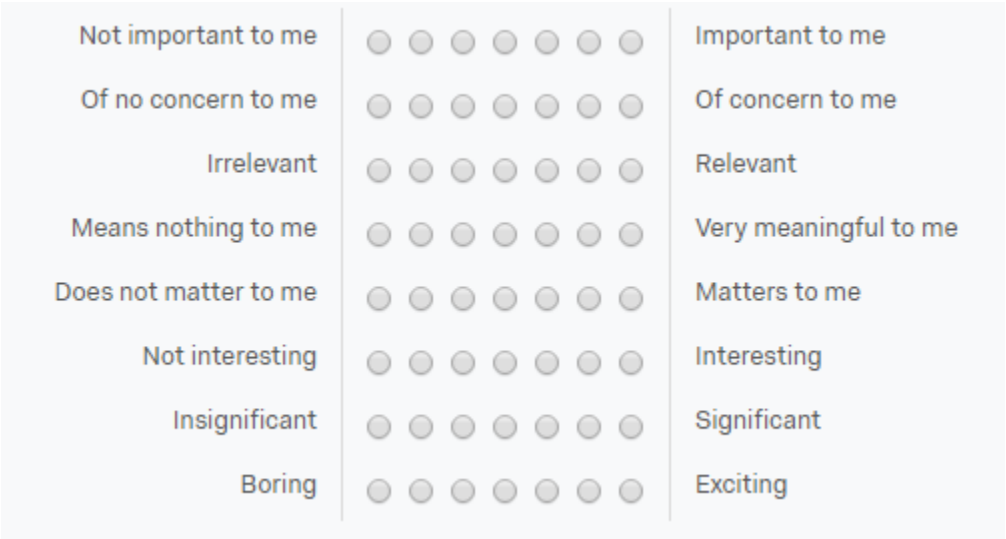
- ○ I have entered the website number on the website (1)

D. Survey

Q1. Please state to what extent you agree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I have a positive impression of the website I have just visited	○	○	○	○	○	○	○
I believe the website I have just visited to be a trustworthy website	○	○	○	○	○	○	○
I trust the website I have just visited to keep my best interest in mind	○	○	○	○	○	○	○

Q2. Please indicate your feelings about the products/services of the website you have just visited



Q3a. Please state to what extent you agree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When companies ask me for personal information, I sometimes think twice before providing it							
It bothers me to give personal information to so many companies							
I am concerned that companies are collecting too much personal information about me							
Companies should devote more time and effort to preventing unauthorized access to personal information							
Companies should take more steps to make sure that unauthorized people cannot access personal information in their computers							
Companies should take more steps to make sure that the personal information in their database is accurate							

Q3b Please state to what extent you agree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Companies should have better procedures to correct errors in personal information	○	○	○	○	○	○	○
Companies should devote more time and effort to verifying the accuracy of the personal information in their databases	○	○	○	○	○	○	○
When people give personal information to a company for a specific reason, the company should never use that information for other purposes	○	○	○	○	○	○	○
Companies should never sell the personal information in their databases to other companies	○	○	○	○	○	○	○
Companies should never share personal information with other companies unless it has been authorized by the individuals who provided the information	○	○	○	○	○	○	○

Q4. Please state to what extent you agree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I generally trust other people	○	○	○	○	○	○	○
I tend to count on other people	○	○	○	○	○	○	○
I generally have faith in humanity	○	○	○	○	○	○	○
I feel that people are generally reliable	○	○	○	○	○	○	○
I generally trust other people unless they give me reason not to	○	○	○	○	○	○	○

Q5. In general, how likely would you share the following types of information with a company?

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Demographic and lifestyle information (i.e., hobbies, age, favourite magazines, etc.)	○	○	○	○	○
ID-information (i.e., name, email address, telephone number, etc.)	○	○	○	○	○
Personal information (i.e., social security number [BSN in Dutch], annual income, credit cards owned, etc.)	○	○	○	○	○

Q6. What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ I prefer not to say (3)

Q7. How old are you?

_____

Q8. What is the highest degree or level of school you have completed? *If currently enrolled, highest degree received.*

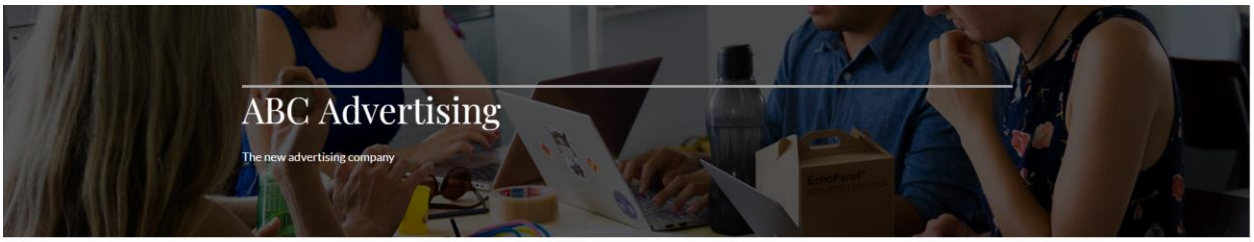
- ○ High school or lower (1)
- ○ Bachelor's degree (2)
- ○ Master's degree (3)
- ○ PhD (4)

Q9. Please select the country of your nationality

A dropdown menu was used here with which respondents could choose their nationality

Appendix 4 Different websites used

Experimental group 1: ABC Advertising (trust = yes; incentive = yes)



Share your personal information and receive a monetary incentive

We are ABC Advertising, the new advertising company specialized in all sorts of social media advertisements. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

If you share your personal information with us in the form below, we will offer you a monetary incentive once you have finished the survey. The more information you share, the higher the monetary incentive you will receive. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank. Please note that we only use your information for own company purposes and offer you the possibility to access and delete your own personal information at any time.

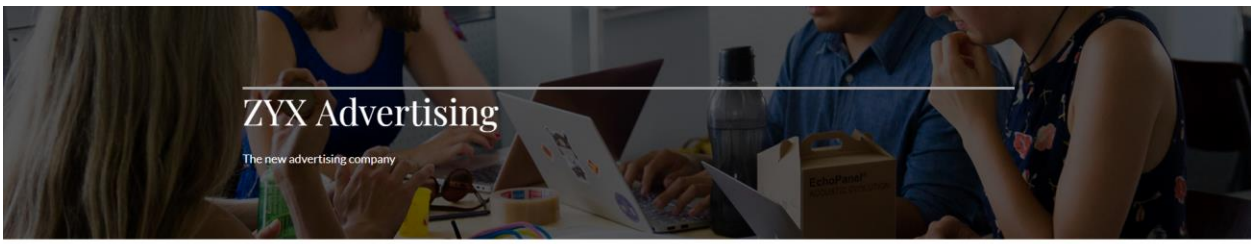
Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

Your information

Website number (from survey) * **Age**

Favourite hobby

Experimental group 2: ZYX Advertising (trust = yes; incentive = no)



Share your personal information

We are ZYX Advertising, the new advertising company specialized in all sorts of social media advertisements. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

Please share the information you would like to share with us below. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank. Please note that we only use your information for own company purposes and offer you the possibility to access and delete your own personal information at any time.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

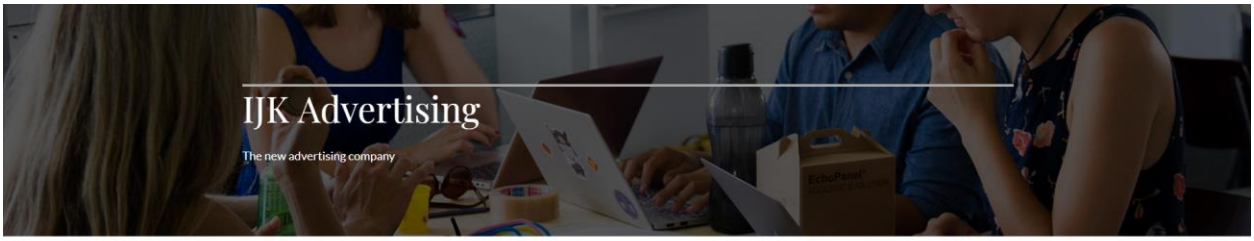
Your Information

Website number (from survey) * **Age**

Favourite hobby

First Name

Experimental group 3: IJK Advertising (trust = no; incentive = yes)



Share your personal information and receive a monetary incentive

We are IJK Advertising, the new advertising company specialized in all sorts of social media advertisements. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

If you share your personal information with us in the form below, we will offer you a monetary incentive once you have finished the survey. The more information you share, the higher the monetary incentive you will receive. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

Your information

Website number (from survey) *

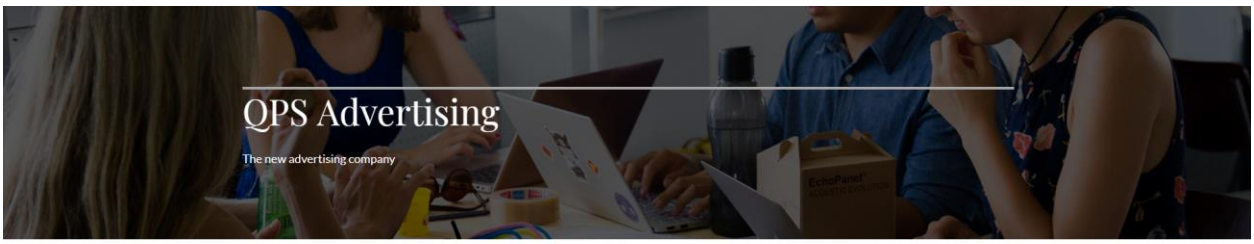
Age

Favourite hobby

First name

Email Address

Experimental group 4: QPS Advertising (trust = no; incentive = no)



Share your personal information

We are QPS Advertising, the new advertising company specialized in all sorts of social media advertisements. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

Please share the information you would like to share with us below. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

Your information

Website number (from survey) *

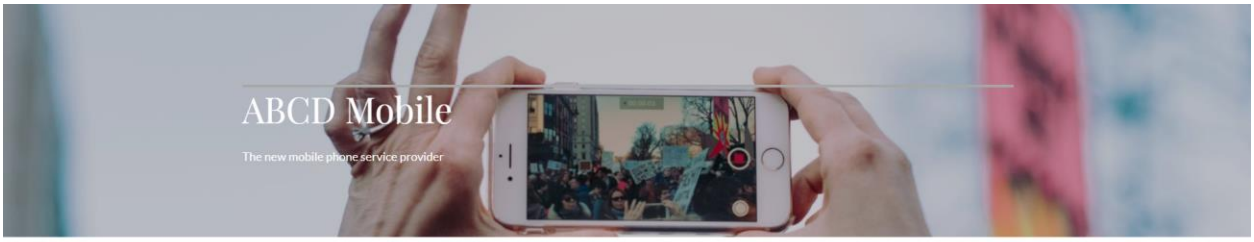
Age

Favourite hobby

First name

Email Address

Experimental group 5: ABCD Mobile (trust = yes; incentive = yes)



Share your personal information and receive a monetary incentive

We are ABCD Mobile, the new global provider of mobile services, offering consumer and corporate communications solutions. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

If you share your personal information with us in the form below, we will offer you a monetary incentive once you have finished the survey. The more information you share, the higher the monetary incentive you will receive. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank. Please note that we only use your information for own company purposes and offer you the possibility to access and delete your own personal information at any time.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

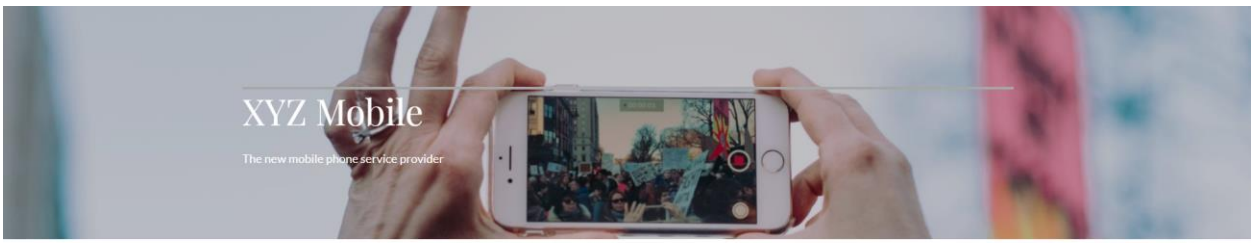
Your information

Website number (from survey) *

Age

Favourite hobby

Experimental group 6: XYZ Mobile (trust = yes; incentive = no)



Share your personal information

We are XYZ Mobile, the new global provider of mobile services, offering consumer and corporate communications solutions. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

Please share the information you would like to share with us below. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank. Please note that we only use your information for own company purposes and offer you the possibility to access and delete your own personal information at any time.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

Your information

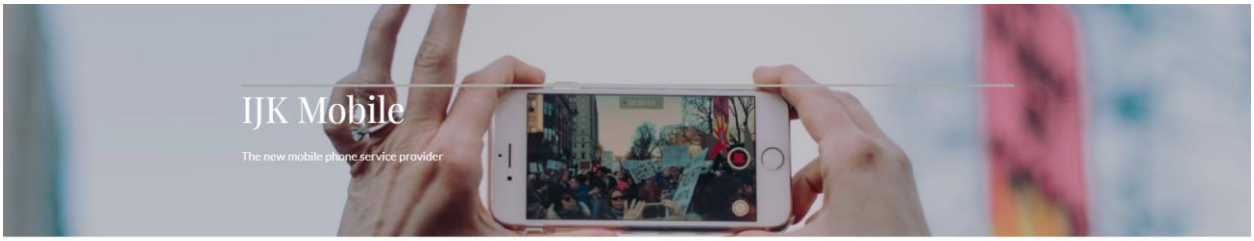
Website number (from survey) *

Age

Favourite hobby

First name

Experimental group 7: IJK Mobile (trust = no; incentive = yes)



Share your personal information and receive a monetary incentive

We are IJK Mobile, the new global provider of mobile services, offering consumer and corporate communications solutions. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

If you share your personal information with us in the form below, we will offer you a monetary incentive once you have finished the survey. The more information you share, the higher the monetary incentive you will receive. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

Your information

Website number (from survey) *

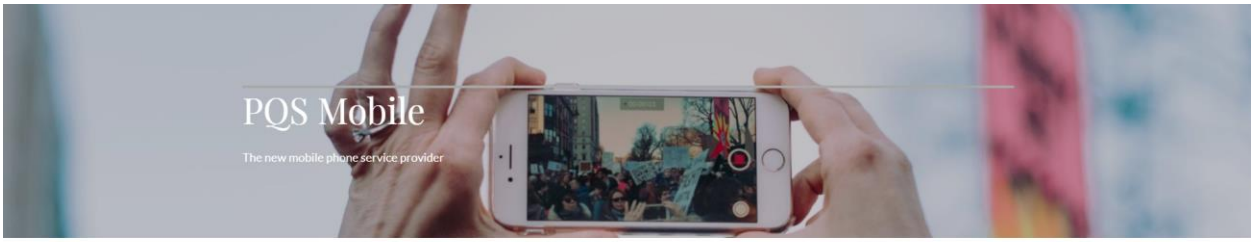
Age

Favourite hobby

First name

Email Address

Experimental group 8: PQS Mobile (trust = no; incentive = no)



Share your personal information

We are PQS Mobile, the new global provider of mobile services, offering consumer and corporate communications solutions. We are a start-up, and we want to get to know you. That is why we would like to ask you to share your information with us.

Please share the information you would like to share with us below. *Do you not want to share any personal information?* Just fill in your website number below and leave the rest of the fields blank.

Please *do not forget to insert your website number from the survey*. Done sharing? Please return to the survey to answer some additional questions.

Your information

Website number (from survey) *

Age

Favourite hobby

First name

Email Address