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Web personalization: How it affects customer satisfaction Online

Daniel Correa Ahumada

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José Queirós de Almeida

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“A satisfied customer is the best business strategy of all”

Michael LeBoeuf

ABSTRACT

Title: Web Personalization: How it affects Customer Satisfaction Online

Author: Daniel Eduardo Correa Ahumada

Personalization has been a commonly used strategy since a notable period of time. It is based on the customers profiles, necessities and preferences. Web personalization is the result of a technological transformation of the typical personalization. Through this strategy, companies have the opportunity to create a more pleasant experience for the consumers which can have an effect on their satisfaction and perceptions of the companies. This can create value and lead to better company performance.

This thesis aims to analyze and understand if web personalization affects customer satisfaction online and which are their preferences regarding the different web personalization strategies. An online survey was conducted to get the results required in the study, with 386 valid responses. In the first section, two groups were asked to navigate into fictional Online Camera Store, one group with a personalized website, and the other with a non-personalized website. The second section pretended to understand the perception of the different web personalization strategies.

The key finding in the study suggests that web personalization increases customer satisfaction online, which is aligned to the previous literature studied. The study also suggests that the recommendation strategy is the one that offers more benefits to the customers. It is concluded that web personalization is a strategy that creates value for customers and can increase the company's chances to succeed.

Key Words: Customer satisfaction, personalization, online retail, e-commerce

RESUMO

Título: Personalização Web: Como afecta a Satisfação do Cliente Online

Autor: Daniel Eduardo Correa Ahumada

A personalização tem sido uma estratégia comumente utilizada desde um período de tempo notável. Baseia-se nos perfis, necessidades e preferências dos clientes. A personalização web é o resultado de uma transformação tecnológica da personalização típica. Através desta estratégia, as empresas têm a oportunidade de criar uma experiência mais agradável para os consumidores que pode ter efeito na sua satisfação e nas percepções das empresas. Isso pode criar valor e até um melhor desempenho da empresa.

Esta tese visa analisar e compreender se a personalização web afeta a satisfação do cliente online e quais são as suas preferências em relação às diferentes estratégias de personalização web. Uma pesquisa online foi realizada para obter os resultados exigidos no estudo, com 386 respostas válidas. Na primeira seção, dois grupos foram convidados a navegar numa loja de câmeras on-line fictícia, um grupo num site personalizado e o outro num site não personalizado. A segunda seção pretendia compreender a percepção das diferentes estratégias de personalização na web.

A principal conclusão do estudo sugere que a personalização da web aumenta a satisfação do cliente online, o que está alinhado com a literatura anterior estudada. O estudo também sugere que a estratégia de recomendação é a que oferece mais benefícios aos clientes. Conclui-se que a personalização web é uma estratégia que cria valor para os clientes e pode aumentar a possibilidade de sucesso das empresas.

Palavras-chave: Satisfação do cliente, personalização, online retail, e-commerce

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Table of content

1. Introduction.....	8
1.1. Background.....	8
1.2. Problem Statement.....	9
1.3. Relevance.....	9
1.3.1. Managerial Relevance.....	9
1.3.2. Academic Relevance.....	10
2. Literature Review.....	11
2.1. E-commerce.....	11
2.2. Online Services in Retail.....	12
2.3. Personalization.....	12
2.3.1. Customers privacy.....	13
2.3.2. Web personalization.....	14
2.3.2.1. Recommendation Strategy.....	15
2.3.2.2. Tailored messages Strategy.....	15
2.3.2.3. Location based Strategy.....	16
2.4. Customer Satisfaction.....	17
3. Methodology.....	18
3.1. Research Philosophy.....	18
3.2. Research Approach.....	18
3.3. Research Strategy and Method.....	19
3.3.1. Literature Review.....	19
3.3.2. Online Survey.....	20
3.3.2.1. Population and Sample.....	21
3.3.2.2. Time Horizon.....	21
3.3.2.3. Measures and Tests.....	22
3.3.2.3.1. Likert Scale.....	22
3.3.2.3.2. Semantic Differential Scale.....	22
3.3.2.3.3. Tests.....	22
3.3.3. Limitations.....	23
3.3.3.1. Limitations on the Data collection.....	23
3.3.3.2. Limitations on the Integration Process.....	23
3.3.4. Ethical Considerations.....	24

4. Research Hypothesis Formulation.....	25
5. Results.....	26
5.1. Sample Characterization.....	26
5.1.1. Demographics Profile.....	26
5.2. Customer satisfaction on the proposed website.....	27
5.3. Other insights on the proposed website.....	28
5.3.1. Discussion.....	30
5.4. Personalization strategies.....	30
5.4.1. Recommendation Strategy.....	30
5.4.2. Tailored messages Strategy.....	31
5.4.3. Location based strategy.....	31
5.4.4. Discussion.....	32
6. Conclusions	33
6.1. Final recommendations	35
6.2. Future studies.....	35
7. References	37
8. Appendix.....	42

1. Introduction

1.1. Background

Customer satisfaction has been a subject of study since a long period by academics and business experts. All of this, because it is critical for companies to reach the expected success and because of the importance on the performances of the companies. Nowadays technology plays an essential part in the relationship with the customers. It took over the world, and most of the industries had to adapt to these new technologies rapidly (Shankar, Smith & Rangaswamy, 2000). Through web services, customers and companies were able to create stronger relationships. It also, made it easier for both sides, companies and customers, to have selling and buying transactions (Arnold & Penard, 2007).

The access to information and different ways of communication made it easier for companies to create the most pleasant and exciting experience possible for the consumers on the web, creating an added value. It also made it easier for customers to understand the marketplace worldwide through the web (Lu & Hung, 2010). Following this approach, the CEO of Amazon, Jeff Bezos, stated almost twenty years ago that creating a compelling experience for the consumers in the Web is the primary key to have a competitive advantage (Bezos, 1999).

Companies developed different strategies in order to reach their goals online, being personalization commonly used nowadays. Some previous studies stated that by 2013, half of the companies would use this strategy in most of their goods offered to customers (Economist Intelligence Unit 2007). The reason of its popularity is that it is supposed to bring a series of benefits to the whole sell and buy process, including higher revenues, better customer retention rate and brand loyalty, and more efficiency (Bachem, 1999; Cooperstein, 1999).

Currently, this strategy still has a lack of studies and information that supports the statement of their benefits. As Mobasher said on 2005 “the evaluation of personalization systems remains a challenge due to the lack of understanding of what factors affect user satisfaction with a personalization system”. Hence, the objective of this Master’s Thesis is to understand the personalization strategy, how the customer satisfaction can increase while using personalization strategies online, and how can it help companies reach higher benefits and their expected goals.

1.2. Problem Statement

The primary purpose of this thesis is to understand and analyze how personalization affects customer satisfaction in retail companies in an online environment. In other words, it pretends to recognize how customers feel and behave towards personalization strategies and their preferences between the different types. The results presented by the study are expected to please companies on their need to understand how a personalization strategy can lead them to maximize their customer satisfaction and effectiveness in online their online environments. Also, which are the customer's preferences and perceptions while navigating through an online retail environment.

Based on these purposes, the thesis will be called: "*Web personalization: How it affects customer satisfaction online*".

In order to reach the main aim of the thesis, three research questions are addressed:

RQ1: Does web personalization increase customer satisfaction in retail environments?

RQ2: Which is the personalization strategy online that offers more benefits for the customers?

RQ3: What are the most valuable insights and recommendations for companies planning to use a web personalization strategy?

Also, to accomplish the aim of the dissertation project, five chapters were developed. The introduction is the first chapter, in which the objectives and goal of the research are established. The second chapter includes the literature review, with topics regarding customer satisfaction, e-commerce, e-tailing and web personalization. In the third chapter, the methodology used is described and the formulation of the hypothesis is presented. Afterwards, in the fourth chapter, the results of the research and the sequential analysis of it. The last chapter presents the main conclusions and recommendations of the study.

1.3. Relevance

1.3.1. Managerial relevance.

Companies have to adapt constantly to new strategies because of continuous development in the technologies and practices (Miles, 1989). Online commerce is commonly used by companies nowadays. Most of the retail companies are working with this approach, that allows them to reach new markets and customers worldwide. It is possible for the companies using it to increase their sales through this channel. The online service also can let the

company provide more information to customers that prefer to conclude their purchase on a more traditional channel (Bakos, 2001). On the year 2000, retail companies were expected to grow until 2005 their sales an 18,5%; this including the sales through the online channel, and the sales on traditional channels pushed by the online platform (Dykema, 2000). This means that since the beginning of the century, the retail companies are expected to support the whole sales process by different online channels.

To improve the whole online commerce process, different strategies have been used in this selling and buying platforms in order to increase their revenues, and their customer satisfaction and loyalty. Moreover, as stated before, this thesis aims to analyze and understand the personalization strategy. The results of this study are aiming to a show the capability to improve customer satisfaction by using systems for customer personalization in the retail companies with an online presence. Also, it intends to reach and help people in charge of the marketing decisions in the companies that work with online services. Moreover, the thesis pretends to show the preferences of the customers when using an online platform and their preferred attributes.

1.3.2. Academic relevance

Previous studies aimed to understand the behaviour of customers on the internet and different online platforms. Some literature explains theories about customer satisfaction and which are their preferences while purchasing a product from a retail company. Most of these studies are focused on a general view of online services. Personalization and recommendation systems in online environments are not deeply analyzed yet (Mobasher, 2005). There's also a lack of analysis in a different kind of measuring the personalization strategy and the effect of it over theory for companies (Day and Montgomery, 1999). This study is aiming to fulfil that gap in the literature by exploring this area. The outcomes want to create a more clear and comprehensive examination of the importance of the personalization in an online environment for retail companies. All this based on the customer experience and satisfaction. It also pretends to offer a better understanding of consumer behaviour towards different personalization strategies online.

2. Literature Review

2.1. E-commerce

The fast development in technologies has made the world change many aspects of traditional commerce. It was not possible to think about shopping and getting information so fast and easy as it is today, all this due to the appearance of electronic commerce (Jank & Shmueli, 2006). This kind of technology grew exponentially in the last years, and it is getting more popular through time. It is considered by academics that is everything that uses the internet and the World Wide Web to transact business (Traver & Laudon, 2012). The customer support provided on the online environments, as questions and extra information about the product/service purchased, is also a part of it (Chaffey, 2011)

The buying and selling process changed drastically by the electronic commerce, which brought new advantages and challenges for the companies. The main advantages this technology brought were that the borders were completely erased by this technology, that the way of communication between the two sides changed, and also let more innovations enter the market (Jank & Shmueli, 2006).

Also, electronic commerce increased the opportunities and created options for the companies working in every single industry and for the customers willing to buy different kind of products. Nowadays, it is easier to reach a higher number of possible buyers through this technology, with different demographic characteristics than the expected before (Huang & He, 2011). Also, the customers are can reach more suppliers, in order to see the whole offer of products in the market. On the other hand, researchers and academics also have higher possibilities for studies and investigation through electronic commerce. Nowadays they are able to gather more data than ever before more easily. One of the most common objectives of the studies is to help them understand and analyze the customers, companies and different social groups in a much broader way. (Jank & Shmueli, 2006).

The whole electronic commerce and the way customers relate with it nowadays is the base of the understanding of the web personalization. The fast development of this technique is a front-runner in the marketplace online, and it is essential to understand it as personalization that is the topic of study in this dissertation project.

2.2. Online services in Retailing

As stated before, the internet and different online services are the main shifters in the commercial world nowadays. Retail was one of the industries that took advantage of it and developed business models around the web since decades ago. This technology had such a significant impact on the industry that the term e-tailing is commonly used nowadays. It is described as a branch of e-commerce, which aims to target the end user of the product/service of retail goods (Burt & Sparks, 2003).

In order to develop an effective structure, the retail companies create a whole environment online for all the different areas inside and with their stakeholders outside, all this due to the facility that it provides. This is considered by academics, the proper business approach by academics. (Hedman & Kalling, 2003). The companies using that kind of focus have tremendous opportunities to expand and also have the possibility to step ahead of their competitors, in order to get a higher market share, increase their revenues and improve their customer loyalty. The business model in retail aims to create a higher value for the consumers than competitors and create a value appropriation for the company and their partners (Sorescu, 2011). In order to create that added value for consumers, companies adopt different strategies, in which the pricing, distribution channel, supply chain and positioning are vital points (Grewal, Iyer, and Levy 2004). One of the strategies adapted online is named personalization, and it is the principal aim of study in this thesis because of their popularity nowadays.

2.3. Personalization Strategy

Personalization is defined as the strategy in which companies use customers information to offer and deliver a targeted solution (Peppers and Rogers 1997). This process aims to completely fulfil customer needs and preferences through the analysis of previous behaviours or buying trend. It is also considered by other literature, as the process that transforms the functionality, interface, information content, or distinctiveness of a system to grow the personal relevance to a person (Bloom, 2000).

As said before, the constant evolution of technology creates a constant development in the commerce and its strategies. Personalization also continuously evolves because due to a more accessible data collection of most specific information about the customer, creating an

immense number of personalized possibilities and making it a trend in planning and strategies of the companies (Asif & Krogstie, 2012).

For the aim of this thesis is essential to define the differences between an automatic personalization, and the commonly used system called “customization”. The primary goal of both systems is the same; to offer the most custom-made environment for an individual. However, it differs in the controller of the process; in customization, customers are the one that creates their online atmosphere with their needs, requirements, and preferences, in some cases manually. By the other hand, an automatic personalization is controlled and continuously updated by the company, giving minimal power to the individual (Mobasher, 2007). The last one is the one studied in this thesis.

The automatic personalization can be divided into three main stages; the first one is considered as the simple personalization. It is when the customer adapts the parameters, and the system performs into the previous configuration. The second one is the profile-based personalization; in which the system modifies depending on their personal information and their interests. The last one is the contextual personalization; it uses a mix of the user profile and the contextual information as the location, time and activity (Asif & Krogstie, 2012).

Personalization strategy is the base and the beginning of the main topic studied in this thesis, web personalization. Its different strategies can be translated into online platforms, leading to a new age of personalization.

2.3.1. Customers privacy

As stated before, the data used to create a proper personalized environment for the customer is mostly based on the information the company can gather from the customer. This data collection has generated a constant concern about privacy invasion in the customer’s mind which leads in some cases to create an adverse effect on customer satisfaction (Lee, 2011).

Trough the past of the years, and as personalization gets more popular, the customers expressed their discontent with their personal information usage (Than and Grandon, 2002). Some companies are using the called “Fair Information Practices” as a solution. These are a group of standards in which the data collection and the usage of personal information is regulated (Federal Trade Commission, 2009). Studies state that using this kind of standards in the personalization process can lead to a competitive advantage between the other companies using personalization strategies without a customer’s privacy policy (Lee,2011).

Customer privacy is an essential topic between personalization techniques. This thesis pretends to provide a general understanding of it through the methodology proposed.

2.3.2. Web personalization

Offering to the customers what they need is the base of any personalization strategy; it is not the exception in the online services (Mulvenna, 2000). Web personalization is described by Eirinaki and Vazirgiannis as the process of tailoring the content and configuration of an online environment to a specific need of an individual. The process of developing a personalized web is based on historical navigational behaviours (2003).

One of the main goals of the strategy is to predict the possible consumers interest or need, for specific categories or products, and rank them according to their predicted preferences and values on the online environment used by the customer. The products with the higher probability of being purchased, or with a higher predicted interest value, are the ones offered and shown to the client (Mobasher, 2007). It can be presented to the customers in through different sections or media, as explained by Mobasher. He also states that this kind of technology should deliver dynamic content, as text, links, publicity or product suggestions, that are built to the exact needs or interests of a particular user (2005).

Allen (1998), and Peppers and Rogers (1997), agreed that the companies that invest in a web personalization strategy have the power to reach and generate a well compensating development. Supporting the efficacy of the strategy online, at the beginning of the century the companies with a commercial platform online, using a personalization system, reported an annual revenue increase up to 52% (Parkes 2001). Also, Amazon, one of the leading companies in the electronic commerce uses web personalization. Multiple techniques are used inside the company; like filtering and association rule mining. Also, Levi Strauss is an example of success, having on 2000, a 76% of acceptance by their customers on their item recommendation. (Cohan, 2000).

Some academics agreed that through the individualized content provided to the visitors, the interaction and relationship between customer and business are more effective (Ardissono, 2002). Also, the activity of the visitors and their customer journey can be more regulated by the company (Light and Maybury, 2002). Some companies are using data analysis from the customers profile to do different kind of personalization as banner promotions or personalized e-mails (Murthi & Sarkar, 2003), but those are not going to be analyzed in this study.

In this dissertation project, strategies including recommendation, tailored messages and location/time-based strategy are going to be analyzed in order to understand the perception and the preferences of the customers. This help in the general understanding of web personalization and the aim of this thesis.

2.3.2.1. Recommendation strategy

One of the most commonly used techniques of personalization presented to the customers is a recommendation system. It is based on previous purchases or interactions with the online environment and the company, where some product suggestions are shown. It doesn't intend to be a suggestion for the short-term needs, it pretends to be a historical and more extended approach (Smyth, 2004).

Companies use recommendation technologies online, in order to offer the customers, the more targeted options in the market. It is said that this strategy pretends to transform online visitors into real customers, through showing them clever support and product suggestions. (Smyth, 2004).

The recommendation system has been an essential factor in some studies about customer satisfaction (Singh and Mobasher, 2003), and it is known that one of the purposes of the system is to raise the customer satisfaction. However, it is necessary for most of the studies in the subject, to have a better infrastructure in order to do a proper test. The methodology proposed in this thesis pretends to provide more accurate conclusions regarding the recommendation strategy.

2.3.2.2. Tailored messages strategy

It is considered tailoring, the part of personalization in which the messages shown to a possible customer are based on their previous personal information, activities on the website, needs and their beliefs (Kreuter, Strecher, & Glassman, 1999). The messages shown to the possible clients are completely related into the audience, stage of purchase and product companies want customers to acquire. It can be considered a custom-made text on the online platform or headlines. The graphic design and imagines are replaced based on previous data, looking for a higher involvement of the possible customer. Multiple academics state that this kind of personalization increases the customer engagement and is more effective than the conventional communication system to the mass (Smeets, 2008).

The messages presented to the customer are more likely to be read, retained and view as it is directly significant (Brug, 1999). In other words, the tailored messages presented to the customer are perceived as more important because of a higher probability of accuracy. Simple messages when they are logged in their sessions as “Good morning Daniel” create a stronger relationship between the company and the customer. It is considered to be more processed information, that the content is less redundant and more straight to the point (Brug, 2003). A critical part of the process to show the proper language, is analyzing the number of visits. It is not the same to have a repeated visitor, which is already interested and closer to the purchase, than a new one, that is just looking for information. The call to action in those cases is entirely different because they are not on the same stage.

The benefits of the tailored messages in the personalized strategy have been stated and proposed several times by academics, but experiments about it have been few (Noar, 2009). Those studies have reached insights about their effectiveness and increased engagement, but those have been tested with just one mediator (Tam and Ho, 2006). For the aim of this study, the methodology proposed pretends to provide more details and information regarding the tailored messages in web personalization.

2.3.2.3. Location based strategy

Nowadays, consumers expect higher personalization from the companies in order to engage with them. The geographical location of the customers has always been one of the more critical variables to purchase a product, as most of the times they require physical objects (Sharma, 2004). Location based personalization is one of the critical strategies get the expected customer relationship. It is said that using the wireless media of a customer, including their location, season and time, can help to create a more personalized online environment (Yunos, 2003). The location gives the option of offering the possible customers different products or services, in their area and the specific season. Promotion and suggestions of nearby places or events happening nearby lead to faster customer action.

It is stated that there are three different types of location-based services. The first one is when the customer personalizes their online environment with their location information. The second one is when the location and time information is automatically adapted by the online environment, without a high exactness. The last one is a more advanced automatic system in which the location and time are discovered accurately. The last one advises places or event close by, depending on the customers preferences (Koeppel, 2003). The results of the

methodology proposed, expect to provide a deeper understanding of the location-based strategy and the second type, which is the one involved in this thesis.

2.4. Customer satisfaction

Customer satisfaction can be defined as the overall result evaluation of the complete customer journey before and after the purchase of a product (Fornell, 1992). It also can be considered as an indicator of the company's performance and all the activities done by them, due to the direct relation with the behavioural and economic consequences (Anderson, 1994). It is commonly proposed in multiple studies regarding the topic, that when the customer satisfaction increases, the customer loyalty and repurchases increases (Anderson and Sullivan 1993, Bearden and Teel 1983, Bolton and Drew 1991, Boulding et al. 1993, Fornell 1992, LaBarbera and Mazursky 1983, Oliver 1980, Oliver and Swan 1989, Yi 1991). It is also said that high customer satisfaction brings more benefits as higher profits and through the measurement of it, a more effective managerial strategy can be developed (Hauser, 1994).

Studies prove that personalization has a positive effect on the customer satisfaction. It also affects customer loyalty and their trust. It is said that typically affects together with more variables and in different ways. In fact, a personalized strategy has a better effect on customer when it is developed with a good communication structure. The complexity of the study of how customer satisfaction is affected by personalization requires an extensive study, but what is proven is that the strategy works positively on it (Ball, 2006). This thesis pretends to extend the understanding of the customer satisfaction when using web personalization and to confirm the previous literature explained.

3. Methodology

The purpose of the study is to fully understand the effect of web personalization in online retail environments on the customer satisfaction. In order to fulfil the purpose, a research strategy was developed. Based on a valuable secondary data collected, an online survey is going to be designed and distributed within the studied population. The main aim of the whole research is to get valid conclusions and insights regarding the subject. It is going to be explained broader in this chapter.

3.1. Research Philosophy

In order to fulfil the objective, a positivism philosophy is going to be used to get genuine insights. The positivism philosophy leads the study to develop knowledge on the subject, based on the participants interaction and reaction with a given variable. For the matter of this study, web personalization is the variable. The philosophy used, also tends to expose an unambiguous and more accurate description of the effect of the subject. In order to follow the philosophy structure, observable and measurable facts are going to be the used. (Saunders, 2015).

3.2. Research Approach

The research approach that is used in this dissertation is a deductive approach, with the aim of explaining the causal correlation among variables. The first part of this approach analyzes literature and academic articles regarding customer satisfaction and online environments. The next part is to design a structured planned to get evidence to test the premises created. For the aim of the study, is necessary to have hypothesis supporting and denying the premise (Saunders, 2015).

The online survey is going to be the instrument that will help to the required data collection to probe the previous theory. The data planned to be collected in this process is quantitative and measurable, which is going to be analyzed statistically.

If at the end of the testing process, the results are not the one expected to support the theory create, the hypothesis will be rejected, and the null hypothesis will be accepted. If the results are aligned with the study expectation, the premise is accepted, and the theory will be substantiated. (Saunders,2015).

3.3. Research Strategy and Method

The strategy that will be used for the aim of this thesis will use primary and secondary data. The most important one for this dissertation will be the one obtained from the online survey; being the primary data of the research, which pretends to probe the hypothesis proposed and to bring new insights in the topic. By the other hand, the secondary data in the strategy is going to be used to create an understanding of the topic studied and also will be the foundation to develop the proper questionnaire online.

The size of the collected data that is going to be used in this dissertation pretends to be large enough to reach conclusions based on facts. After collecting at least, the minimum valid responses, the data is going to be carefully analyzed in order to prevent mistakes in future calculations and procedures. The quantitative analysis starts when having a clean data set.

In order to get statistic results, all the results collected through the online survey will be analyzed through the statistical program called Statistical Package for the Social Sciences (SPSS). In this platform, tests as T-test and Ordinal regressions will be developed to give statistical answers to the research questions. The conclusions are deducted from the statistical results.

3.3.1. Literature Review

The understanding of secondary data found in previous theories, studies and researches in the topic had a significant impact in this thesis; they became the base of the study structure. The point of view of each study, the different methods they used and the relevant insights of the conclusions, were vital to create the key process of this study; the online survey. The main topics used for this part of the dissertation were customer satisfaction, e-commerce in the retail industry and personalization strategy in online environments. All the sources, in which this thesis was planned, are trustworthy scientific journals, marketing articles and online information.

3.3.2. Online survey

An online survey is going to be created in order to acquire the quantitative data required for the aim of this thesis (Exhibit 1). This data collection process can be defined as the procedure of gathering the information needed in order to deduce a valid and credible conclusion (Bryan and Bell, 2011). Previous studies on the effect of personalization on customer satisfaction stated that these effects could be studied through an experiment or a survey to the customers

(Ball, 2006). It was based on the insights of previous studies and articles mentioned in the literature review. This survey was planned to be conducted through an online platform called Qualtrics. This allows the participants to answer the survey at the most convenient place and moment for them. This increases the possibility to get a more significant number of respondents.

The survey is going to be divided into two main segments; the first one is going to present a scenario in which the participants are going to visit an online camera store to buy a camera for their next holiday trip. They are going to be divided into two groups; a control group and a group exposed to web personalization. In order to present a personalized website to the participants, user knowledge-based and functional knowledge-based systems are going to be used to tailor each website. In order to present a valuable personalization, it is mandatory to know the user, and it is stated that demographic information is an essential piece of it (Burke, 2002). For this study location, age and gender are going to be the user variables used.

By the other hand, understanding which the preference of the participants is while choosing their preferred kind of holiday will be vital too. Knowing these will fulfil the functionality knowledge, which pretends to understand the need to be satisfied (Burke, 2002). The mix of both knowledge-based recommender systems will provide a more personalized website to the participants of the survey and consequently better results. The primary goal of the section is to analyze the satisfaction while navigating through the online environment and compare the results of the two groups.

The second one pretends to present the different strategies in web personalization. Understand which the perceptions of the respondents between them are is the aim of the section. The last section is the demographics.

Before release, the survey on the Qualtrics platform is going to have different examinations processed in order to verify the optimal function and develop for each of the participants cases. After this checking process, the survey will be available for the participants online for a ten-day period, since November the ten. The strategy that is going to be used to reach the possible participants is through social networks. Facebook is going to be the platform with the highest spreading power through groups and shares, followed by LinkedIn and Instagram.

3.3.2.1. Population and Sample

The population of this study can be defined as customers of different retail online environments living in Portugal, within all ages. The country reported 10.5 million residents, counting the two islands of Madeira and Azores (ACS, 2009).

In order to reach relevant conclusions in this thesis project, the following assumptions are going to be used: 95% of confidence level, 0.5 standard deviation and a margin of error of around 5%. This means that the minimum sample collected should be 385 respondents (Saunders, 2015).

3.3.2.2. Time Horizon

This research is a cross-sectional study. It means that the online survey is designed to be conducted in one single point of time by a different group of people within the population planned in the study (Bryman, 2011). This represents the ten-day period that the survey was presented to the possible contestants.

One of the main reasons for choosing this kind of study is the ability to analyze different variables in the same period of time. Also, because of the need of gathering the data on a limited period, it is not possible to run a longitudinal study, which requires more than one observation of the identical variables.

3.3.2.3. The Measures and tests.

3.3.2.3.1. Likert Scale

After an extensive investigation of previous research about customer satisfaction, the Likert scale was found as the most proper measurement for this study. Then it is going to be adjusted to this specific case.

A Likert Scale can be defined as a bipolar scaling method used in questionnaires to understand the respondent preference, positive or negative, and degree of agreement with a set of statements (Malhora, 2006). It is a unidimensional technique, which means that it is possible to study a single variable. It is possible to use different types of Likert Scale, which allows having a lower or higher degree of specification. Typically used in an uneven number, having “Strong Disagree” at the end of one side, “Strongly Agree” at the end of the other, and in between “Neither Agree or Disagree”. There are some other cases in which is used an even number to force the participant to choose positive or negative agreement.

The scale chosen to use in this study was a five-pointer Likert Scale, being the levels of agreement: 1. Strongly Disagree, 2. Somewhat Disagree, 3. Neither agree or disagree, 4. Somewhat Agree and 5. Strongly Agree.

3.3.2.3.2. Semantic-differential scale

A semantic-differential scale is going to be used in the second of the section of the online survey for this dissertation project. It is a rating scale that aims to understand an attitude or perception of a person about an object or concept. In this study, pretends to understand the participant position in front of different web personalization strategies. It is designed with two antonym adjectives, each one in each border. For the aim of this study, a five-rate scale is going to be used.

3.3.2.3.3. Tests

In order to solve RQ1, a Likert scale is analyzed through an Independent T-test. This allows understanding the behaviour of two different groups. The first one is presented an online environment with web personalization and the second group without web personalization. Then, comparing the mean of the results between them, it is possible to analyze if there's an effect on customer satisfaction.

For RQ2, factors and benefits, presented through a semantic-differential scale, are going to be analyzed. An ordinal regression is going to be developed. It aims to understand the levels of preference of the participants between the different web personalization strategies presented.

3.3.3. Limitations

3.3.3.1. Limitations on the Data Collection

There are three main possible limitations presented through the process of data collection in the online survey. The first one is that participants may not be fully engaged while answering the survey. As they answer the survey remotely, there's a possibility of dishonesty and low commitment. This also can create data errors, because of a disorganized data collected with some invalid or unanswered segments.

The second is that the data collected from the online survey may be biased data. Maxwell states that the used sample is a crucial point to strength the validity of a statistical study (1992). For this specific case, a non-optimal sample can be caused by the distribution channel chosen and the lack of possibility to create a probability sampling inside a limited institution

(students of a university or employees of a company). In other words, the participants on the online survey may have similar perceptions of the analyzed topics in this dissertation caused by the different network selected to promote it (Bethlehem, 2010).

The last limitation is that the surveys are a snapshot of a period of time. It means that the responses of the participants are based on the situation and perception they have in that exact moment. Their answers can be affected by physical aspects like the location, social aspects as another person present while taking the survey, or just a temporal perspective of the respondent (Belk, 1975). Hence, it does not represent a consistent behaviour, but a situational behaviour.

3.3.3.2. Limitations on the Interpretation Process

The objective of this research is to obtain the purer results and don't interfere in the understating of the data. Because of this, researchers do as much as possible to be neutral and not relate themselves from the data reading. Maxwell considered that it is effectively impossible to avoid the researcher effect on the interpretation. It is also said that the situation is constructed by the researcher, which means it is already manipulated by him (Maxwell, 1992). The results of this study are aiming to avoid all kind of outside influences, but as it is proven and supported by academics and experts, it is unavoidable to have minimum influence.

In the interpretation process, generalization is another possible limitation presented. Even though this study is developing quantitative research, and it attempts to reach measurable results, the final explanations can be affected and nor entirely accurate (Maxwell,1992).

3.4. Ethical considerations

The methodology that is going to be used in this dissertation thesis is developed with honesty, integrity and carefulness. It aims to provide high analysis and data quality, in order to ensure the validity of the study. Also, it is meant to be shared with people interested in the area, and open to receive feedback and critics to improve knowledge in the field. Impartiality is one of the critical ethical consideration in the study. Also, all the respondents are going to participate voluntarily in the study, giving their consent of data share and analysis. All these, following the respect of anonymity of their responses. APA's reference system is used, in order to ensure the intellectual property of previous literature and studies (Economic and Social Research Council, 2015).

4. Research Hypothesis Formulation

The main focus of this dissertation project is to be a foundation of the understanding of the effect of web personalization in customer satisfaction. The proposed structure (Figure 1) shows that “web personalization” is the independent variable and “customer satisfaction” is the dependent. In order to fulfil the research model, two hypotheses for each research question were constructed.

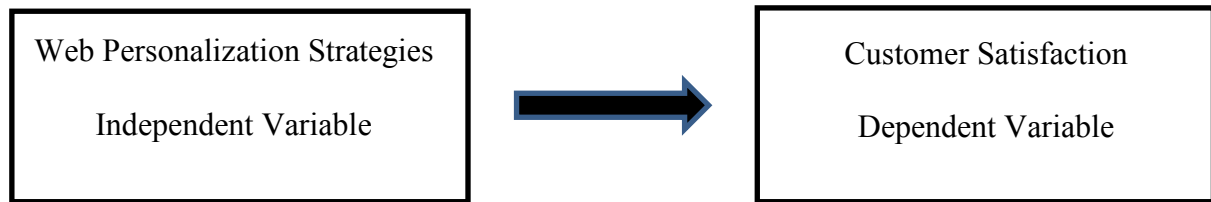


Figure 1 – Research Model

In order to develop a proper research model for the main aim of the thesis, two hypotheses are going to be created. This hypothesis is based on the previously explained statements of Ball, in it is stated that the personalization system has a positive effect on customer satisfaction (2006). As there is no specific literature on the web personalization, it is assumed for the purpose of this thesis that the strategy will have the same effect in online environments.

■ RQ 1: Does web personalization increase the customer satisfaction in retail environments?

H1: *Web personalization increases the customer satisfaction in retail environments.*

H0: *Web personalization doesn't increase the customer satisfaction in retail environments.*

For RQ2, regarding the preferences of the customers between the three personalization strategies presented, two hypotheses are also created. These are based on the literature of Smyth and Mobashed, in which recommendation system is the most used because of the benefits and personalization provided.

RQ2: Which is the personalization strategy online that offers more benefits for the customers?

H1: *Recommendation strategy offers more benefits to the customers.*

H0: *Recommendation strategy does not offer more benefits to the customers.*

5. Results

5.1. Sample Characterization

A sample of 506 responses was collected after the ten-day period planned on the first days of November. During the data cleaning process, 120 responses were found invalid. Eighty-one of these were not filled until the end of the survey, and 39 contained damaged data. Leaving 386 valid responses to be studied, which fulfilled the minimum sample size proposed in the methodology.

5.1.1. Demographic profile

The sample involved in the study was integrated by 201 females (52,1%) and 185 males (47,9%) (Exhibit 2). The age group with higher participation in the study was between 26 and 32 years old (41,7%), followed by the age group between 18 and 25 years old (37%). Only three participants were underage, and 14 were older than 40 years old (Exhibit 3).

As the population studied is defined as customers of different retail online environments living in Portugal, it was expected to have a high number of responses from Portuguese people with a 45,6% of the whole sample and 176 participants. It is followed by Colombia (22,5%), Germany (5,7%), United States of America (3,4%), United Kingdom (2,6%), Netherlands (2,1%), Spain (1,6%) and France (1,3%). People from other 34 countries also participated in the study, mainly with just one participant.

It was expected to have a majority of single participants (69,2%) because of their ages. Only 18,1% of the participants were married by the time the survey was presented, but an 11,1% was already living with a partner. Just five of the participants was divorced, and just one person was widowed (Exhibit 4).

In what regards the occupational situation of the participants, more than half of the participants work, 194 employed (50,3%), and 48 of them (12,4%) are self-employed. A quarter of the participants are full-time master's students (24,9%), 29 are full-time bachelor's students (7,5%), and only 4 are high school students (1%). The remaining answers account for participants that have a different occupation and didn't specify it at the time of the survey (Exhibit 5).

5.2. Customer satisfaction on the proposed website

As explained in the methodology, a fictional scenario in which customers were supposed to be interested in buying a new camera for their next holidays. *D Cam Camera Store* was the fictional online store created for the aim of this study. Customers were expected to navigate to the website, and check the different options on it, in order to express their option afterwards. The customer satisfaction on the personalized website was measured through an independent T-Test with a 95% confidence interval. Also, some other opinions about the website and their perceptions of it were analyzed through this test.

In order to be able to perform this kind of test, the sample was divided into two groups. A total number of 196 of the participants were exposed to a non-personalized website, and 190 of the others were exposed to a personalized website. These second group had eight different options of the personalized website depending on their age, gender, location and preference within holiday trip. The case with a higher number of participants was Case B, which is presented to an under 30 years old man, that prefers adventure travelling, followed by the Case C, an under 30 years old woman, that prefers luxury travelling (Exhibit 6).

The first group, with an exposure of a non-personalized website, presented a mean of 3,24 on the five Likert scale presented to the participants. That means that the participants chose in average the option neither agree or disagree about the statement “I feel completely satisfied with the website”. The second group, with an exposure of a personalized website, presented a mean of 3,75 on the same scale (Exhibit 7). That shows that the participants chose in average the option somewhat agree with the same statement. The result of the difference between their means is of 0,51. The standard deviation presented in the two groups is almost the same, 1,076 for the control group and 1,064 for the second group. This is aligned with the previous literature studied, in which Ball stated that the personalization strategy has a positive effect on customer satisfaction (2006).

The Levene’s Test for Equity of Variances allows probing that the standard deviation between the two groups is not statically significantly different from each other, which means that the two samples were taken from the same population and it is possible to continue with the analysis of the results. The statistic of the T-test between the two groups is -4,660 and 383 degrees of freedom (Exhibit 8).

The significance is 0,00 on the T-test, lower than 0,05, shows that the means difference in the satisfaction between the two groups is significant, and we reject the null Hypothesis that states “Web personalization does not increase the customer satisfaction in retail environments” and lead to accept the Hypothesis “Web personalization increases the customer satisfaction in retail environments”. Accepting this hypothesis was expected result based on the previous literature analyzed.

5.3. Other insights on the proposed website

While analyzing the customer satisfaction through the fictional online store of *DCam*, other statements were proposed to the participants in order to understand in a much broader way how the web personalization strategy is perceived.

Five statements related to the benefits of personalization and some attributes of an online store were shown to the participants. The group with a non-personalized website got a lower mean in all the four statements on the five Likert scale proposed to the participants. In a general overview, it would be possible to state that the personalized website had a positive effect on every single benefit studied. Even though it got better results, not all of them are significant.

After navigating through the *DCam* website, the participants of the two groups were asked to state their agreement with the statement “It is likely for me to buy from this website” in order to understand the likelihood of buying a product on the online camera store. The group with a non-personalized website had a lower agreement with a mean of 3,35 (Neither agree or disagree). The group navigating on a personalized website result on a mean regarding the statement of 3,73 (Somehow agree) (Exhibit 9). The Levene’s Test for Equity of Variances probed that the two groups were taken from the same population and it’s possible to continue the analysis of the results of the attribute. The T-test for Equity of Means result is lower 0,05, which means that the means of the two groups are different. It leads to state that web personalization strategy has a positive effect on the likelihood to buy of the customers (Exhibit 10)

When analyzing if the participants agreed with the statement “I important and unique while navigating through this website”, a difference between the means of 0,53 was presented between the groups. The group of participants without a personalized website got a mean of 2,85 and the group with a personalized website got a mean of 3,38 (Exhibit 9). Even though

there's a difference between the two means, both didn't agree or disagree with the statement. When running the Levene's Test for Equity of variances there's a result higher than 0,05, which leads to state that the variances are equal. When analyzing the significance of the T-test, which is lower than 0,05, it is possible to that the mean between the two groups is different, and web personalization has a positive effect on the feeling of importance and uniqueness of the customers (Exhibit 10)

The following benefit analyzed is the likelihood of finding the product the participants wanted, with the statement presented "It is likely to find a product I want". This statement got a mean difference of 0,39 between the two groups. The group that had a higher probability of finding the product was the one with a personalized website presented, with a mean of 3,84 (Somehow agree). The control group, in this case, got a mean of 3,45, which means they did not agree or disagree with the statement. When running the Levene's Test for Equality of variances is lower than 0,05, which leads to state the variances are statically significant different from each other. With this kind of result, there's not confidence in interpreting the following variables.

Regarding the participants satisfaction about the products on the website and the information provided of each one, another independent t-test was developed. The controlled group participants saw generic products offered on the *DCam* website, meanwhile the personalized group had a more tailored selection of products depending on the type of holiday there are planning to do. The control group got a mean of 3,49 (Neither agree or disagree). The group with a personalized website had a higher agreement with the statement with a mean of 3,93, which means they were somehow satisfied with the products and information on the website. When analyzing the Levene's test for Equality of variances, as the last attribute analyze, it is possible to state that there's a significant difference between each other and there's no confidence to analyze the following variables of the test.

By last, a control variable on the study was also analyzed to verify the validity of the different T-tests. The group with a non-personalized website and the personalized one had the same layout and design, which should lead to a similar perception of the participants. The opinion about the statement "The website has a trendy and likeable design" was asked to the participants. The control group got a mean of 3,68, which means they somehow agree with the statement. The group with a personalized website got a mean of 3,81, which also means that the group somehow agree. The small difference between the means can be explained as a

more likeable website because of the personalization. Even though, the difference between the two means is not significant, which leads to the expected result of same mean. When running the Levene's Test for Equality of variances, it is possible to state, as the last two results, that there's a significant difference between the variances. The significance of the T-test for Equality of means, differing from the previous two attributes, is higher than 0,05. It is possible to say that there's no a significant difference between the means, without the confidence of the two groups being from the same population.

5.3.1. Discussion

The primary goal of this study is to determine if customer satisfaction is affected by the personalization strategy online in retail environments. The analysis explained above, lead us to respond to the research question and developed on the research model.

■ RQ 1: Does web personalization increase the customer satisfaction in retail environments?

H1: *Web personalization increases the customer satisfaction in retail environments.*

H0: *Web personalization doesn't increase the customer satisfaction in retail environments.*

After running the Independent T-test between the two groups, it is possible to determine if web personalization has a positive effect on the customer satisfaction. When the independent variable, web personalization, is applied to one of the groups a difference between the satisfaction is observed. The control group presents a significant lower satisfaction, which leads to state that web personalization increases the customer satisfaction of customers.

5.4. Personalization strategies

5.4.1. Recommendation strategy

Analyzing the perceptions of the participants on regarding the recommendation strategy is the aimed objective of this section. The first website presented, which corresponds to a movies and streaming platform which gives suggestions and recommendations to the participant based on their historical viewer consumption was perceived as the most useful personalized website with an overall of 89,8% (58,2% Useful, 31,6% somehow useful). Only 5 participants (1,3%) stated that this kind of personalization strategy was useless (Exhibit 12).

The strategy was also considered as easy to use with an overall of 84,2% (51,3% Easy to use, 32,9% somehow easy to use) (Exhibit 15). Also, between the three personalization strategies presented, 80,6% of the participants found that recommendation is the one that can be

considered as a time saver. Only eight participants (2,1%) perceive this kind of strategy as the opposite of time saver (Exhibit 14).

The recommendation strategy was also perceived as the most convenient strategy presented. Three hundred thirty-seven of the participants find it entirely convenient (44,8%) or somehow convenient (42,5%) (Exhibit 17). Only two participants perceived this strategy as not convenient at all. Regarding the intrusiveness of the strategy, 104 participants (26,9%) find it completely intrusive, followed by somehow intrusive (29%) (Exhibit 16).

5.4.2. Tailored messages strategy

The second website presented, which corresponds to a clothing store with a tailored message for a loyal customer, was perceived by the participants as a strategy that makes the customers feel important because of the tailored message. One hundred seventy-two of participants (44,6%) perceived that the system makes them feel important, and 77 participants somehow make them feel important (19,9%). Only 24 participants (6,2%) did not feel important at any level with this strategy (Exhibit 19).

This website also presented the highest percentage of participants, between all the personalization strategies presented, that stated that the personalized strategy is intrusive. One hundred twenty-seven participants (32,9%) felt that it is a intrusive system, followed by 107 participants (27,7%) that perceived it as somehow intrusive. This can lead to a problem related to the privacy problem perceived by customers explained in the literature review (Lee, 2011) (Exhibit 18).

This strategy is perceived as the less useful by the participants. Even though the majority of participants somehow think it is useful, 124 participants (32,1%) don't perceive it as useful or useful, and 38 participants (9,8%) perceive it as useless (Exhibit 17).

5.4.3. Location based strategy

The third website presents, which corresponds to a location and seasonal personalized website of a local coffee store, was perceived as a convenient personalization strategy by 269 participants (42,2% somehow convenient, 27,5% extremely convenient). Only 6 participants (1,6%) considered it as an inconvenient strategy (Exhibit 28).

The participants also consider it as the second most useful strategy, 68,9% stated that it was entirely or somehow useful. Recommendation strategy as said before is the most useful

(Exhibit 25). A 45,9% of the participants stated that the location-based personalization strategy does not make feel the participants important, and 31,3% do not have an opinion about the statement (Exhibit 31).

The participants consider this strategy as the less intrusive between all the strategies presented. One hundred twenty-three of the participants (31,9%) stated that it is somehow not intrusive and 68 (17,6%) participants perceived as not intrusive at all (Exhibit 27).

5.4.4. Discussion

In order to understand which of the personalization strategies used and proposed in this study offers more benefits to the customers, RQ2 and two hypotheses were created.

RQ2: Which is the personalization strategy online that offers more benefits for the customers?

H1: *Recommendation strategy offers more benefits to the customers.*

H0: *Recommendation strategy does not offer more benefits to the customers.*

After analyzing the results, it is possible to accept the H1 in which is stated that the recommendation is the strategy that customers perceived to have more benefits. It is the strategy that got the highest statistical results by being considered useful, easy to use and convenient. The customers also feel important while using the strategy because of their characteristics.

6. Conclusions

The aim of this study is to understand if the personalization strategy increases the customers satisfaction in retail online environments. The main research question was designed in order to fulfil the thesis purpose: *Does web personalization increase customer satisfaction in retail environments?* The relevance of this study comes from the lack of understanding of the personalization strategy due to multiple variables affecting and its complexity (Mobasher, 2005). The study of this topic is also relevant because e-commerce is a trend nowadays, and as stated by some academics, by investing on a web personalization strategy companies will have more power and probability to have a positive development inside the company (Allen, 1998; and Peppers and Rogers, 1997).

An online survey was developed in order to best address the research. A total number of 386 valid answers was collected through social media. A situation in which they were going to buy a camera for their next holiday was presented to the participants. DCam, a fictional online camera store was designed and presented to the participants to state their opinion after navigating on it. A non-personalized website was presented to half of the sample, which can be called the control group. The other half received a personalized website based on their age, gender, location and functionality depending on their preferred holiday. Afterwards, some questions regarding their experience on the website were asked.

According to the answers obtained by the online survey, customers have a higher customer satisfaction while navigating into the personalized DCam online store than when using the non-personalized DCam online store. The results of the Independent T-test showed that the difference between the means of satisfaction was significantly relevant, which lead to reject the null hypothesis, and accept the hypothesis: *Web personalization increases the customer satisfaction in retail environments.*

Another important conclusion is that the customers navigating on an online store using web personalization as a strategy, have a significantly higher likelihood to buy than the customers that navigate through a non-personalized website. This is possible because the products selected to be shown on the personalized website are more accurate and tailored into their needs. This was an expected result align to literature suggesting that through the recommendation strategy pretends to transform the online visitors into real customers, through showing them clever support and product suggestions (Smyth, 2004).

The fictional situation also leads to gather a relevant insight regarding customers perception about companies using a personalization strategy online. A significant difference between the opinion of the two groups extends to state that web personalization makes customers feel more unique and important to the company.

Therefore, it is evident to conclude that a personalized strategy used in a retail online environment is a great added value and can increase their customer satisfaction. It can also result in the improvement of other variables inside the company, creating positive progress as stated in the literature (Allen, 1998; and Peppers and Rogers, 1997).

Regarding the second research question designed for the purpose of understanding the preferences of the participants between the three different online personalization strategies presented in retail companies, we can conclude that the one considered the one that offers more benefits to customers is the recommendation strategy. An 89,8% of the participants perceived the website presented of a movies and streaming platform, which gives recommendations to the customer based on their historical viewer consumption, as a useful strategy. It was also considered a highly time saver and an easy to use strategy.

The second website presented of a clothing online store g with shows tailored messages for customers resulted with positive benefits and a concerning one. It is the strategy that makes customers feel more important, with a 64,5% of the participants stating it. It is also considered as the most intrusive of the personalization systems presented which can lead to some concerns in customers mind (Lee, 2011). Finally, it was the strategy with the highest percentage of participants perceiving as a useless one.

The last strategy presented was of a local coffee store using a location and seasonal personalization. Participants perceived it as a convenient and useful personalization, after recommendation strategy. It is also considered as the less intrusive strategy, probably because it does not use personal information or historical consumption of the customer.

With the two-main research question answered with positive outcomes, we can verbalize the dissertation statement saying that: **web personalization increases customer satisfaction between customers on the retail industry.**

6.1. Final recommendations

This study pretends to provide retail companies with insights and recommendations regarding web personalization and their best practices. It also wants the help the development of relationships between customers and companies through the personalization strategy. Therefore, companies need to understand that it is worth it investing in a strategy of this kind, and with proper management, can lead to create strong boundaries with customers and a high customer satisfaction. It also will have a higher probability to succeed on the online platform, which is also supported by Allen (1998), and Peppers and Rogers (1997).

The goal of the strategy the company pretend to establish is fundamental when choosing the kind of personalization strategy that they should use. If they pretend to help customers on their purchase journey, a recommendation system based on their preferences and their historical consumption will be the best option. It is between customers as a useful and an easy to use the system, which can lead to a higher number of customer purchases. In a scenario in which a company wants to establish on the customer's mind as a brand that cares and feels that every customer is unique, a tailored messaging system is the best option. Customers feel more important when the messages are personalized especially for them, and it can lead to stronger loyalty and higher satisfaction.

The usage of multiple personalization strategies is commonly used nowadays, as the recognized company Amazon does. It can lead to even higher satisfaction and a clearer path to reach the expected success online. The implementation process of a web personalization is not simple because of its complexity, but it can improve performances in companies.

6.2. Future studies

Despite the conclusions this research provides, there are some improvements to be done in future studies. As this is a complex topic due to the multiple variables affecting it, it would be useful to develop a couple of focus groups to get more qualitative data and therefore, more insights about web personalization. Moreover, even though the sample of the study tried to be randomized, the channels used to distribute the online survey may affect. This could lead to have bias results because of their similar profiles. It would also be valuable to collect a larger sample in order to compare the groups with different demographic profiles.

On the other hand, as the results of this study presented a significant effect of the web personalization on the likelihood to buy, it would be valuable to develop a whole project focused on it.

Finally, as this study pretends to study a web personalization system for each of the participants, future studies that pretend to have more accuracy should develop a real experiment in which every single website presented to the participants is based on their exact personal information and preferences.

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8. Appendix

Exhibit 1 - Online Survey

General Introduction

Dear participant, thank you for agreeing to take part in this survey about Personalization in Online Retail environments.

This is a research for my Master's Thesis Project at Católica Lisbon School of Business and Economics. This survey will take approximately 4 minutes of your time. Today you will be sharing your thoughts and opinions about online environments in the retail industry. There are no right or wrong answers.

Be sure that all answers you provide, will be kept strictly confidential and anonymous and will be used for study purposes only.

Daniel Correa Ahumada.

Section 1.

Please imagine that you are looking for a new camera to take with you to your next holidays.

You find the following Website offering cameras in your area.

"DCam: Camera Store".

Find below the images of the main page or the link of the website.

Please check it and answer the questions regarding your satisfaction.

Link: <https://danielca50.wixsite.com/dcam1>

DCam: Company created for research purposes.

Case 1. No personalized website

DCam
A Picture Perfect Camera Store

Home Shop FAQ Contact Us

Shop Now

2 YEARS WARRANTY ON OUR ENTIRE LENSES SELECTION

New TIPOX Models **IN STOCK NOW!**

Same Day Shipping

Recommendations for you

Digital Cameras

DC N1 19,99 €	DC N12 19,99 €	DC N13 19,99 €	DC N2 18,99 € - 14,99 €

Lenses & Accessories

DC N5 19,99 €	DC N3 19,99 €	DC N7 19,99 €	DC N14 19,99 €

PRIAMO EXCIPIA TIPOX ROBUST Vide PEREÓ

Contact Us
Avenida Libertade 48
CA 94158 Tel: 123-456-7890
info@dcam.com

Customer Service
Contact Us > / Shipping >
Returns > / Payment & Warranty >

We Accept
MasterCard VISA

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Case 2. Personalized website.

Choose the option that best describes yourself.

A: I'm an under 30 years old woman, that prefers adventure traveling.

E.g.: Nature, extreme sports, etc.

B: I'm an under 30 years old man, that prefers adventure traveling.

E.g.: Nature, extreme sports, etc.

C: I'm an under 30 years old woman, that prefers luxury traveling.

E.g.: Resorts, massages, etc.

D: I'm an under 30 years old man, that prefers luxury traveling.

E.g.: Resorts, massages, etc.

E: I'm an over 30 years old woman, that prefers adventure traveling.

E.g.: Nature, extreme sports, etc.

F: I'm an over 30 years old man, that prefers adventure traveling.

E.g.: Nature, extreme sports, etc.

G: I'm an over 30 years old woman, that prefers luxury traveling.

E.g.: Resorts, massages, etc.

H: I'm an over 30 years old man, that prefers luxury traveling.

E.g.: Resorts, massages, etc.

Case 2.A.

DCam
A Picture Perfect Camera Store in PORTUGAL

Home Shop FAQ Contact Us

DISCOUNTS with a Valid Student ID!
Up to 25% Off All Our Products!
[Shop Now](#)

NEW PARTNERSHIP

OUR BLOG: TIPS FOR FEMALE SOLO TRAVELERS.

airbnb
BELONG ANYWHERE

Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Cameras

DC N1 19,99 €

DC N12 19,99 €

DC N13 19,99 €

DC N2 13,99 € - 14,99 €

Lenses & Accessories

new!

DC N5 19,99 €

DC N3 19,99 €

DC N7 19,99 €

DC N14 19,99 €

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Case 2.B.

DCam
A Picture Perfect Camera Store in
PORTUGAL

Home Shop FAQ Contact Us

DISCOUNTS with a Valid Student ID!
Up to 25% Off All Our Products!

Shop Now

NEW PARTNERSHIP

OUR BLOG: BEST PLACES TO GO IN THIS WINTER BREAK!

airbnb
BELONG ANYWHERE

Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Cameras

DC N1 19,99 €

DC N12 19,99 €

DC N13 19,99 €

DC N2 18,99 € 14,99 €

Lenses & Accessories

new!

DC N5 19,99 €

DC N3 19,99 €

DC N7 19,99 €

DC N14 19,99 €

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Case 2.C

DCam
A Picture Perfect Camera Store in
PORTUGAL

Home Shop FAQ Contact Us Call Us 1-800-000-0000

DISCOUNTS
with Valid
Student ID!
Up to 15% Off All
Our Products!

Shop Now

NEW PARTNERSHIP
El Corte Inglés

OUR BLOG:
TRAVEL FASHION TIPS
WHEN TRAVELLING

Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Digital Cameras

DC N1 19,99 €

DC N12 19,99 €

DC N13 19,99 €

DC N2 10,99 € - 14,99 €

Lenses & Accessories

DC N5 19,99 €

DC N3 19,99 €

DC N7 19,99 €

DC N14 19,99 €

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Case 2.D.

DCam
A Picture Perfect Camera Store in
PORTUGAL

Home Shop FAQ Contact Us Call Us 1-800-000-0000

Shop Now

DISCOUNTS
with Valid
Student ID!
Up to 15% Off All
Our Products!

NEW PARTNERSHIP

OUR BLOG:
The world's 30 best
places to visit in 2018-19

El Corte Inglés

Free Delivery in PORTUGAL | Same Day Shipping

Recommendations for you

Digital Cameras

DC N1 19,99 €

DC N12 19,99 €

DC N13 19,99 €

DC N2 15,99 € 14,99 €

Lenses & Accessories

DC N6 19,99 €

DC N3 19,99 €

DC N7 19,99 €

DC N14 19,99 €

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Case 2.E.




Home Shop FAQ Contact Us

PRICE DROP!
Just for this week
AGE = % discount!

Shop Now

NEW PARTNERSHIP





OUR BLOG:
TRAVEL TIPS FROM
EXPERIENCED WOMEN



Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Cameras



DC N1
19,99 €





DC N12
19,99 €

DC N13
19,99 €

DC N2
20,99€ - 14,99 €

Lenses & Accessories

new!



DC N5
19,99 €

DC N3
19,99 €



DC N7
19,99 €

DC N14
19,99 €

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49



Case 2.F.



Home Shop FAQ Contact Us







NEW PARTNERSHIP







Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Cameras

 DC N1 19,99 €	 DC N12 19,99 €	 DC N13 19,99 €	 DC N2 18,99 € 14,99 €
---	--	--	---



Lenses & Accessories

 DC N5 19,99 €	 DC N3 19,99 €	 DC N7 19,99 €	 DC N14 19,99 €
---	---	---	--

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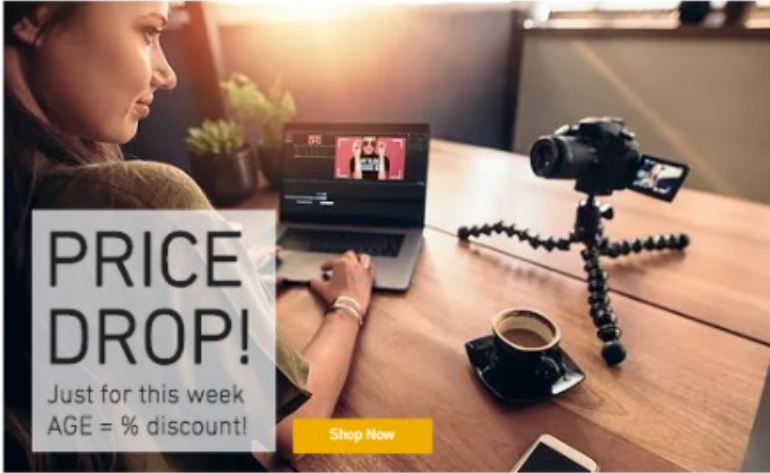
We Accept
 

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Case 2.G.

DCam
A Picture Perfect Camera Store in
PORTUGAL

Home Shop FAQ Contact Us



PRICE DROP!
Just for this week
AGE = % discount!
Shop Now





NEW PARTNERSHIP
El Corte Inglés

OUR BLOG:
7 Wineries you should visit during the Holiday Season





Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Digital Cameras

			
DC N1 19,99 €	DC N12 19,99 €	DC N13 19,99 €	DC N2 18,99 € 14,99 €

Lenses & Accessories

			
DC N5 19,99 €	DC N9 19,99 €	DC N7 19,99 €	DC N14 19,99 €

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Case 2.H.

DCam
A Picture Perfect Camera Store in PORTUGAL

Home Shop FAQ Contact Us

PRICE DROP!

Just for this week
AGE = % discount!

Shop Now

NEW PARTNERSHIP
El Corte Inglés

OUR BLOG:
7 Wineries you should visit during the Holiday Season

Free Delivery in PORTUGAL \ Same Day Shipping

Recommendations for you

Digital Cameras

DC N1 19,99 €	DC N12 19,99 €	DC N13 19,99 €	DC N2 19,99 € 14,99 €

Lenses & Accessories

DC N5 19,99 €	DC N9 19,99 €	DC N7 19,99 €	DC N14 19,99 €

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Question 1.

Let us know about your experience in the DCam website.

How well do you agree with the following statements?

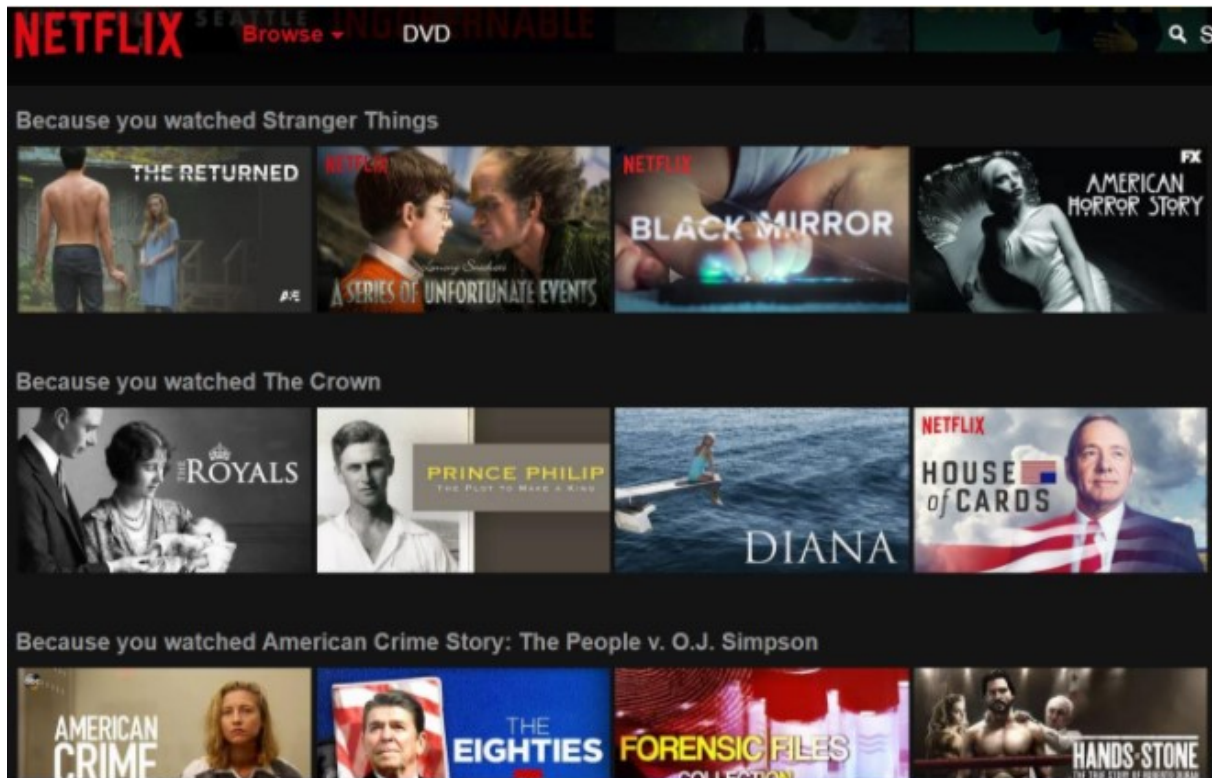
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
It is likely to find a product I want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel important and unique while navigating through this website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the information and products I found in the website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The website has a trendy and likeable design.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is likely for me to buy from this website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel completely satisfied with the website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 2.

In this section, you will be presented three different personalized websites.

Please check it and share your opinion.

Recommendations on a movies and streaming platform based on the historical behavior.



Please position your opinion somewhere between the two opposites.

Useless	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Useful
Not time saver	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Time saver
Not easy to use	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Easy to use
Not intrusive	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Intrusive
Uneffective	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Effective
Inconvenient	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Convenient
Doesn't make me feel important	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Makes me feel important

Please check it and share your opinion.

2. Personalized message presented to Shannon, a loyal customer on a clothing online store.



Please position your opinion somewhere between the two opposites.

Useless	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Useful
Not time saver	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Time saver
Not easy to use	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Easy to use
Not intrusive	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Intrusive
Uneffective	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Effective
Inconvenient	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Convenient
Doesn't make me feel important	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Makes me feel important

Please check it and share your opinion.

3. Seasonal personalization of a local coffee store.



Please position your opinion somewhere between the two opposites.

Useless	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Useful
Not time saver	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Time saver
Not easy to use	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Easy to use
Not intrusive	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Intrusive
Uneffective	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Effective
Inconvenient	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Convenient
Doesn't make me feel important	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Makes me feel important

Section 3.

Demographics.

1. What is your gender?

- Male
- Female
- Other

2. How old are you?

- <18
- 18 – 25
- 26 – 32
- 33 – 40
- >40

3. Where are you from?

Dropdown list

4. What best describes your marital status?

- Single
- Married
- Divorced
- Widowed
- Living with partner

5. What is your current occupation?

- High school student
- Full time bachelor's student
- Full time master's student
- Self-employed
- Employed
- Other

Final message

Thank you for taking the time to complete this survey!
I truly value the information you have provided!

Daniel Correa Ahumada.

End of the survey.

Exhibit 2 – Sample Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	185	47,9	47,9	47,9
	Female	201	52,1	52,1	100,0
	Total	386	100,0	100,0	

Exhibit 3 – Sample Age

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 18	3	,8	,8	,8
	Between 18 - 25	143	37,0	37,0	37,8
	Between 26 - 32	161	41,7	41,7	79,5
	Between 33 - 40	65	16,8	16,8	96,4
	> 40	14	3,6	3,6	100,0
	Total	386	100,0	100,0	

Exhibit 4 – Sample Marital Status

		MaritalStatus			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	267	69,2	69,2	69,2
	Married	70	18,1	18,1	87,3
	Divorced	5	1,3	1,3	88,6
	Widowed	1	,3	,3	88,9
	Living with partner	43	11,1	11,1	100,0
	Total	386	100,0	100,0	

Exhibit 5 – Sample Occupation

		Occupation			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School Student	4	1,0	1,0	1,0
	Full time Bachelor's Student	29	7,5	7,5	8,5
	Full time Master's Student	96	24,9	24,9	33,4
	Self-employed	48	12,4	12,4	45,9
	Employed	194	50,3	50,3	96,1
	Other	15	3,9	3,9	100,0
	Total	386	100,0	100,0	

Exhibit 6 – Personalized Website Options

CASE TYPE	Respondents
Case A: An under 30 years old woman, that prefers adventure traveling. E.g.: Nature, extreme sports, etc.	31
Case B: An under 30 years old man, that prefers adventure traveling. E.g.: Nature, extreme sports, etc.	43
Case C: An under 30 years old woman, that prefers luxury traveling. E.g.: Resorts, massages, etc.	35
Case D: An under 30 years old man, that prefers luxury traveling. E.g.: Resorts, massages, etc.	25
Case E: An over 30 years old woman, that prefers adventure traveling. E.g.: Nature, extreme sports, etc.	13
Case F: An over 30 years old man, that prefers adventure traveling. E.g.: Nature, extreme sports, etc.	14
Case G: An over 30 years old woman, that prefers luxury traveling. E.g.: Resorts, massages, etc.	16
Case H: An over 30 years old man, that prefers luxury traveling. E.g.: Resorts, massages, etc.	13
	190

Exhibit 7 – Customer Satisfaction Statistics

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction	Non-personalized	196	3,24	1,076	,077
	Personalized	190	3,75	1,064	,077

Exhibit 8 – Customer Satisfaction T-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Satisfaction	Equal variances assumed	,084	,772	-4,660	384	,000	-,508	,109
	Equal variances not assumed			-4,660	383,849	,000	-,508	,109

Exhibit 9 – Other Insights Statistics

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
LikelyToFind	Non-personalized	196	3,45	1,111	,079
	Personalized	190	3,84	,852	,062
FeelUnique	Non-personalized	196	2,85	,952	,068
	Personalized	190	3,38	1,086	,079
Information	Non-personalized	196	3,49	1,079	,077
	Personalized	190	3,93	,867	,063
Design	Non-personalized	196	3,68	1,087	,078
	Personalized	190	3,81	,931	,068
LikelyToBuy	Non-personalized	196	3,35	1,063	,076
	Personalized	190	3,73	1,111	,081

Exhibit 10 – Other Insights T-test

Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
LikelyToFind	Equal variances assumed	36,163	,000	-3,893	384	,000	-,393	,101
	Equal variances not assumed			-3,909	364,932	,000	-,393	,101
FeelUnique	Equal variances assumed	6,689	,010	-5,074	384	,000	-,527	,104
	Equal variances not assumed			-5,064	374,243	,000	-,527	,104
Information	Equal variances assumed	26,622	,000	-4,375	384	,000	-,437	,100
	Equal variances not assumed			-4,390	371,340	,000	-,437	,099
Design	Equal variances assumed	9,541	,002	-1,179	384	,239	-,122	,103
	Equal variances not assumed			-1,182	378,286	,238	-,122	,103
LikelyToBuy	Equal variances assumed	,000	,989	-3,476	384	,001	-,385	,111
	Equal variances not assumed			-3,473	381,842	,001	-,385	,111

Exhibit 11 – Recommendation Strategy Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
UsefulR	386	1	5	4,44	,807
TimeR	386	1	5	4,10	,942
EasyToUseR	386	1	5	4,32	,826
IntrusiveR	386	1	5	3,50	1,286
EffectiveR	386	1	5	4,03	,854
ConvenientR	386	1	5	4,28	,790
FeelimportantR	386	1	5	3,09	1,107
Valid N (listwise)	386				

Exhibit 12 – Recommendation Useful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1,3	1,3	1,3
	2	7	1,8	1,8	3,1
	3	27	7,0	7,0	10,1
	4	122	31,6	31,6	41,7
	5	225	58,3	58,3	100,0
	Total	386	100,0	100,0	

Exhibit 13 – Recommendation Useful Graphic



Exhibit 14 – Recommendation Time Saver

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	2,1	2,1	2,1
	2	19	4,9	4,9	7,0
	3	48	12,4	12,4	19,4
	4	161	41,7	41,7	61,1
	5	150	38,9	38,9	100,0
	Total	386	100,0	100,0	

Exhibit 15 – Recommendation Easy to Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1,0	1,0	1,0
	2	4	1,0	1,0	2,1
	3	53	13,7	13,7	15,8
	4	127	32,9	32,9	48,7
	5	198	51,3	51,3	100,0
	Total	386	100,0	100,0	

Exhibit 16 – Recommendation Intrusive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	40	10,4	10,4	10,4
	2	46	11,9	11,9	22,3
	3	84	21,8	21,8	44,0
	4	112	29,0	29,0	73,1
	5	104	26,9	26,9	100,0
	Total	386	100,0	100,0	

Exhibit 17 – Recommendation Convenient

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	,5	,5	,5
	2	11	2,8	2,8	3,4
	3	36	9,3	9,3	12,7
	4	164	42,5	42,5	55,2
	5	173	44,8	44,8	100,0
	Total	386	100,0	100,0	

Exhibit 18 – Tailored Messages Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
UsefulM	386	1	5	3,69	1,038
TimeM	386	1	5	3,16	1,113
EasyToUseM	386	1	5	3,78	,932
IntrusiveM	386	1	5	3,71	1,206
EffectiveM	386	1	5	3,61	1,017
ConvenientM	386	1	5	3,70	,929
FeelimportantM	386	1	5	3,87	1,251
Valid N (listwise)	386				

Exhibit 19 – Tailored Messages Useful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	4,1	4,1	4,1
	2	22	5,7	5,7	9,8
	3	124	32,1	32,1	42,0
	4	128	33,2	33,2	75,1
	5	96	24,9	24,9	100,0
	Total	386	100,0	100,0	

Exhibit 20 – Tailored Messages Intrusive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	26	6,7	6,7	6,7
	2	35	9,1	9,1	15,8
	3	91	23,6	23,6	39,4
	4	107	27,7	27,7	67,1
	5	127	32,9	32,9	100,0
	Total	386	100,0	100,0	

Exhibit 21 – Tailored Messages Intrusive Graphic

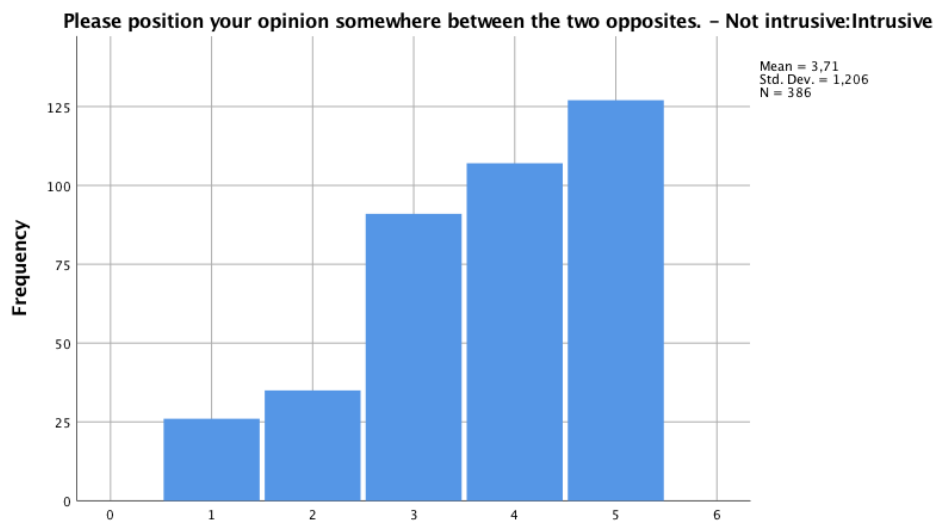


Exhibit 22 – Tailored Messages Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	6,2	6,2	6,2
	2	36	9,3	9,3	15,5
	3	77	19,9	19,9	35,5
	4	77	19,9	19,9	55,4
	5	172	44,6	44,6	100,0
	Total	386	100,0	100,0	

Exhibit 23 – Tailored Messages Importance Graphic

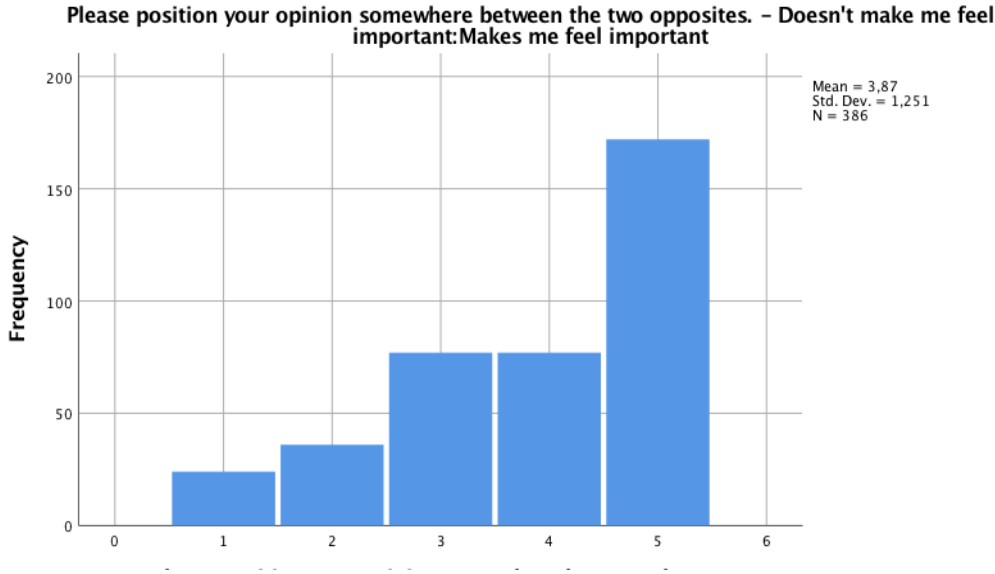


Exhibit 24 – Location Based Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
UsefulSL	386	1	5	3,88	,956
TimeSL	386	1	5	3,34	1,020
EasyToUseSL	386	1	5	3,73	,900
IntrusiveSL	386	1	5	2,67	1,198
EffectiveSL	386	1	5	3,70	,907
ConvenientSL	386	1	5	3,89	,920
FeelimportantSL	386	1	5	2,73	1,088
Valid N (listwise)	386				

Exhibit 25 – Location Based Useful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	1,8	1,8	1,8
	2	23	6,0	6,0	7,8
	3	90	23,3	23,3	31,1
	4	154	39,9	39,9	71,0
	5	112	29,0	29,0	100,0
	Total	386	100,0	100,0	

Exhibit 26 – Location Based Useful Graphic

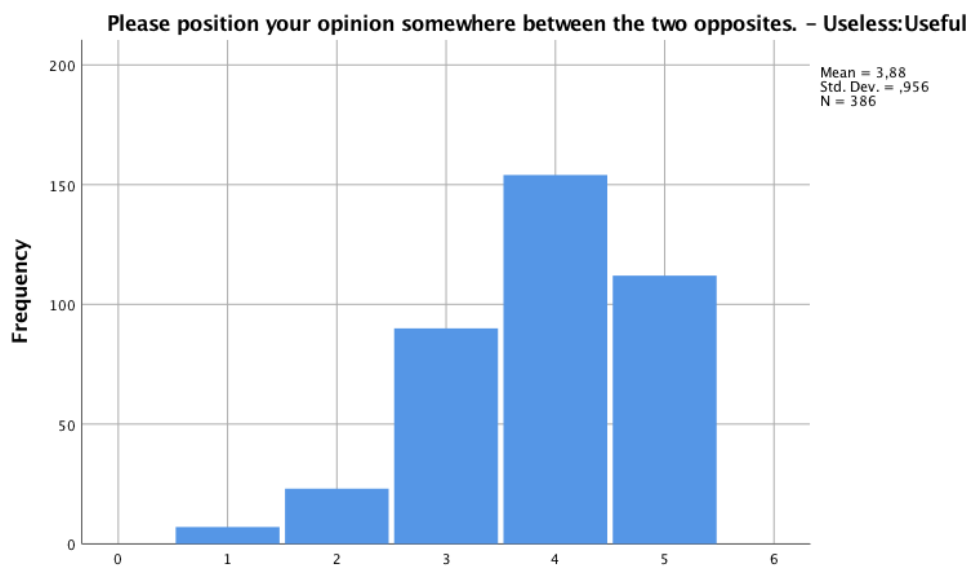


Exhibit 27 – Location Based Intrusive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	68	17,6	17,6	17,6
	2	123	31,9	31,9	49,5
	3	95	24,6	24,6	74,1
	4	67	17,4	17,4	91,5
	5	33	8,5	8,5	100,0
	Total	386	100,0	100,0	

Exhibit 28 – Location Based Convenient

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	1,6	1,6	1,6
	2	20	5,2	5,2	6,7
	3	91	23,6	23,6	30,3
	4	163	42,2	42,2	72,5
	5	106	27,5	27,5	100,0
	Total	386	100,0	100,0	

Exhibit 30 – Location Based Convenient Graphic

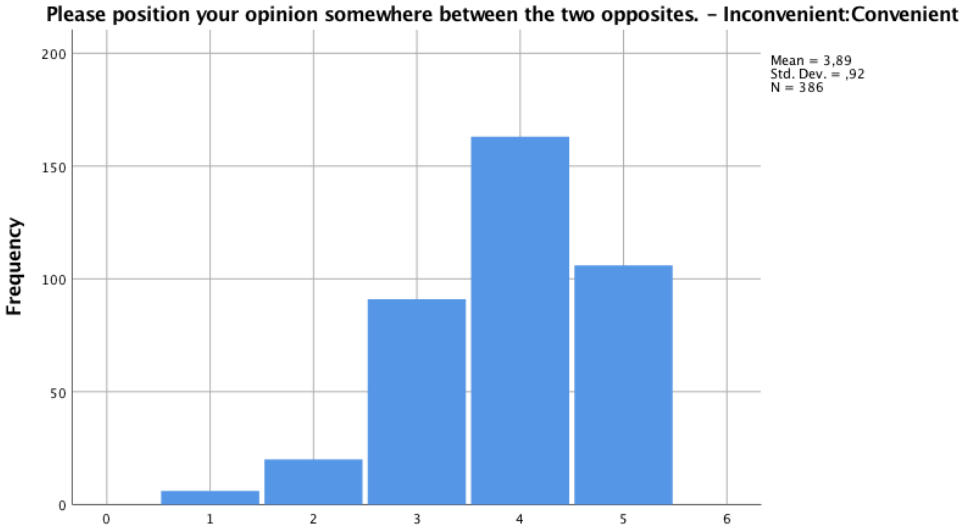


Exhibit 31 – Location Based Important

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	11,4	11,4	11,4
	2	133	34,5	34,5	45,9
	3	121	31,3	31,3	77,2
	4	59	15,3	15,3	92,5
	5	29	7,5	7,5	100,0
	Total	386	100,0	100,0	