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by

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under the supervision of

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"Our job is to wake up the consumers.
If we become predictable, that's not waking them
up."
(Philip Kotler, 2020)

"Le groupe pense, sent, et agit tout autrement
que ne feraient ses members s'ils étaient isolés."
(Émile Durkheim, 1895)

" Mais que suis-je donc ? Une chose qui pense.
Qu'est-ce que cela ? C'est bien une chose qui doute,
qui connaît, qui affirme, qui nie, qui veut,
qui ne veut pas, qui imagine aussi et qui sent."
(René Descartes, 1641)

"Enquanto prosseguíeis com o
percurso escolar, deveis tomar
a decisão sobre o que estudar, e começar a
especializar-vos frente ao que fareis
na vida. Isso é justo e conveniente.
Mas lembrai-vos sempre que toda a
matéria que estudais se insere em um
horizonte mais amplo. Não vos reduzíeis
jamais a um horizonte restrito. "
(Pope Benedict XVI, 2010)

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Abstract

In an online context, marketers can only benefit from sensorial marketing by exploiting visual stimuli through objective sensory features (OSF). These play a determining role in the brand-consumer connection, arousing emotions, feelings, and impressions in the consumer's subconscious. For decades, retail brands have been benefiting from sensory marketing to deliver a unique and engaging brand experience and consequently, increase sales.

Previous research has shown that the OSF of a website is one of the key dimensions to impact user's emotions and impressions. However, the relationship between OSF and consumer purchase intentions (PI) lacks research. Moreover, the following two dimensions of OSF, picture size (PS) and menu titles and filters (M&FT) that impact the aesthetics of a webpage layout, will enhance the consumers' response to a retail brand website. Nonetheless, there are still few empirical studies on this area.

This dissertation aims to understand the role of OSF in customer PI through the manipulation of two of its dimensions, PS and M&FT, explain the importance of these dimensions in a website and provide guidelines for companies to take advantage of these crucial, relatively unexplored dimensions of OSF.

This research was conducted through a random distribution of four questionnaires, representing a different combination of two OSF dimensions, applied to cosmetics online e-commerce. The collected data were analysed through a variance analysis with two factors for repeated measures (Factorial ANOVA) and three linear regressions to validate the hypotheses of the proposed model.

The results demonstrate that an "affective website" increases consumers' PI due to the intermediating role of affective responses (AR) and trust. By using positive website's OSFs through moderate-high stimuli, brands can induce

hedonic emotions and impressions such as interest and comfort and, consequently, trust. Finally, the results determined that the greatest OSF combination is large pictures and simple menus and, that the most determinant OSF dimension to influence consumers' ARs is PS.

To conclude, this study provides a contribution to the literature by explaining the role of OSF in consumers' PIs. Also, by presenting a set of relevant implications, it aims to increase the knowledge of companies and researchers on this relevant topic.

Keywords: E-commerce website, objective sensory features (OSF), picture size (PS), menus and filters title (M&FT), affective responses (AR), trust, purchase intention (PI)

Número de Palavras: 9958

Resumo

Num contexto online, os *marketers* só podem beneficiar do marketing sensorial explorando estímulos visuais através de funcionalidades sensoriais objetivas (OSF). Estas desempenham um papel determinante na ligação marca-consumidor, despertando emoções, sentimentos e impressões no subconsciente do consumidor. Durante décadas, as marcas retalhistas têm beneficiado do marketing sensorial para proporcionar uma experiência única e envolvente com a marca e, consequentemente aumentar as vendas.

Pesquisas anteriores demonstraram que a OSF de um *website* é uma das dimensões chave a ter impacto nas emoções e impressões de um utilizador. Porém, a relação entre OSF e as intenções de compra dos consumidores (PI) carece de investigação. Além do mais, as duas seguintes dimensões-chave do OSF, tal como o tamanho da imagem (PS) e os títulos dos menu e filtros (M&FT) que têm impacto no layout da *webpage* e, por conseguinte, na ligação entre a marca e o consumidor, enfrentam uma lacuna significativa.

Esta dissertação visa compreender o papel do OSF na PI do cliente através da manipulação de duas das suas dimensões, PS e M&FT, explicar a importância destas dimensões num *website* no comércio eletrónico de cosméticos e fornecer diretrizes para que as empresas possam tirar partido destas dimensões cruciais do OSF, relativamente inexploradas.

Esta pesquisa foi realizada através de uma distribuição aleatória de quatro questionários, que representam uma diferente combinação de duas dimensões do OSF, aplicadas ao comércio online de cosméticos. Os dados recolhidos foram analisados através de uma análise de variância com dois fatores para medidas repetidas (*Factorial* ANOVA) e de três regressões lineares para validar as hipóteses do modelo proposto.

Os resultados demonstram que um "*website* afetivo" aumenta as PI dos consumidores devido ao papel de intermediação da resposta afetiva (AR) e da confiança. Ao utilizar as OSF positivas de um website através de estímulos moderados-altos, as marcas podem provocar emoções e impressões hedónicas como interesse e conforto e, consequentemente, a confiança. Por último, os resultados também demonstraram que a combinação mais forte são as grandes imagens e simples menus e que a dimensão mais determinante nas ARs dos consumidores é o tamanho da imagem.

Em conclusão, este estudo contribui para a literatura explicando o papel das OSF nas PI dos consumidores. Contudo, ao apresentar um conjunto de implicações relevantes, pretende ser um contributo para aumentar o conhecimento das empresas e dos investigadores sobre esta área.

Palavras-chave: *Website* de comércio eletrónico, funcionalidades sensoriais objetivas (OSF), tamanho da imagem (PS), títulos dos menus e filtros (M&FT), respostas afetivas (AR), confiança, intenção de compra (PI)

Table of Contents

Index of Figures

Index of Tables

Chapter 1

Introduction

In the current competitive global market, brand differentiation is more important than ever. Companies are constantly confronted with consumers' proactive attitude (Labrecque et al., 2013) and the need to maintain competitive advantages through the brand-consumer connection (Pollak et al., 2021).

Given that traditional marketing is not as effective as before, for being too rational, companies must explore consumers' subconscious and adapt to this new marketing era. In this new phase sense-based marketing is used to elicit behaviours (Perkins, 2013), feelings (Hanna & Hall, 2004), and impressions (Vogel et al., 2020) since they are all driven by emotions rather than reason. Hence, just like the market's evolution, marketing mutated into a multidimensional brand-customer conversation, where products find their voices in consumers' subconscious (Krishna, 2012).

As objective sensorial features (OSF) is the first element users notice in a website, brands should invest in enhancing it. This website dimension shapes consumers' perceptions (Henderson et al., 2003), emotions (Bufquin et al., 2020), behaviours (Foulds et al., 2021), and impressions (Vogel et al., 2020). Indeed, given the immediate connection between the eyes and brain, 80% of the sensorial information is transmitted through sight by the optical nerve (Manzano et al., 2019). Therefore, OSF quickly affects consumers emotions and impressions (Hepola et al, 2017). Thus, this research will focus on this key website visual dimension.

Research on this topic, only studied the impact of functional and aesthetic features of OSF on consumers' affective response (AR). However, the correlation between OSF and purchase intention (PI) has not been studied yet, especially

when applied to the cosmetics industry where aesthetics is crucial. Moreover, few studies have focussed on picture size (PS) and menu and filters title (M&FT), the two dimensions of OSF addressed in this dissertation.

To understand the role of OSF on consumers' PI, in the cosmetics market, this thesis aims to answer the following questions:

RQ1: How can OSF impact consumers' ARs?

RQ2: How does AR influence consumers' trust?

RQ3: How does trust influence consumers' PI?

This dissertation pretends to fulfil the following purposes: understand the role of a OSF on customers' PI through the manipulation of two of its dimensions, PS and M&FT, explain the importance of a website's OSF, focusing on the particular case of cosmetics, and provide guidelines for companies to profit from these relatively unexplored crucial dimensions of OSF.

With this aim in mind, this research will start by providing a deep analysis of the literature regarding the most relevant theories and concepts on e-commerce websites, OSF, PS, M&FTs, AR, trust, and PI. Then, the successive chapters will provide a full description of the research methodology, followed by a presentation and discussion of the study's results. Finally, a conclusion will outline this thesis's main theoretical implications and derive suggestions for future research avenues.

Chapter 2

Literature Review

Research on sensorial marketing has been consistently done with a focus on visual and auditory senses (Hulten, 2020; Krishna, 2012). For example, according to extant research, simpler webpage backgrounds are more effective than complex ones, given that complexity arouses awareness but not pleasantry, interest or satisfaction (Bruner & Kumar, 2000). Withal, marketers have also found, through eye-tracking, that following the brand's logo, users focus on the navigation menu and pictures (Djamasbi et al., 2010). However, research on stimuli such as PS or M&FT, that impact the user's decision of remaining and leaving the website, is still limited.

Prior research suggests that the relationship between website features, namely PS and M&FT, and users' first impressions remain very consistent during the entire exposure time (Pengnate & Sarathy, 2013). For this reason, in an online context where consumers can only rely on their visual senses to form an opinion about the brand and its products, OSF is crucial. Indeed, a website's aesthetic features, and, in particular OSF, will initially drive the emotions and behaviours (ARs) that consumers will experience (Kouki-Block & Wellbrock, 2021).

PS can influence AR, emotions, and behaviours, specifically happiness, boredom and excitement (Keib et al., 2016), and perceptions, namely, the brand's transparency and honesty, as larger pictures can compel customers to develop a trustworthy relationship (Lim & Ang, 2013).

M&FT influences a website's symmetry, aesthetics and its organization and therefore, it affects a website's layout which influences users' emotions and behaviours (Garett et al., 2017)

2.1 E-commerce Websites

From a business point of view, e-commerce is a time lifesaving opportunity that benefits both suppliers and customers with a 24/7 availability, higher product selection, the absence of waiting lines, reduced rent, salary costs and more brand, product, and price information, (Sunitha & Gnanadhas, 2014).

Currently, the global online market size nearly reached €4 trillion, and by virtue of the growth of internet connectivity and e-commerce websites, the number of online shoppers in 2020 has increased to 2.14 billion which conveys that 27.6% of the world's population is an online shopper (Oberlo, 2021).

In 2019, the European cosmetics industry gained more than €112 billion with the largest markets being Germany (€14 billion), France (€11.5 billion), the UK (€9.8 billion), and in 12th place, Portugal (€1.05) (Statista, 2021). Nonetheless, only 37.2% of cosmetics products are purchased online. Therefore, it is important to emphasise that cosmetic retailers need to improve their e-commerce websites to stimulate online purchase.

Furthermore, in the European Union (EU), 73% of internet users shopped online (Eurostat, 2021), where they spent an average of five hours per week.

Thus, an article from Harvard Business Review (Fineman, 2013) defends that regardless of working several hours at the office, suffering from dry eyeballs and lacking focus when accomplishing activities, individuals jump to internet folders or social media every 90-120 minutes (Xu & Yang). It is essential for brands to profit from this situation by having interesting websites that capture users' attention to make them return to the website on the following break (Stojmenovic et al., 2014).

According to Wargo (2006), only 0.05s is required for a first impression to be formed. It is indispensable for brands to design a website that will promptly stimulate consumers' senses and positively influence their ARs (Hanna & Hall, 2004). These stimuli, namely, the brand's logo, imaging display, text-

background, layout, saturation, menu presentation, thus, all OSF features that were sent by the optical nerve will be received and interpreted by the user's brain (Norman, 2002).

Nevertheless, as websites can appear to be unreliable, since shoppers cannot exploit their five senses, brands are obliged to exploit visual stimuli to compel them to navigate the website and purchase.

2.2 Objective Sensorial Features

2.2.1 Picture Size

Also known as product disposition, PS refers to each picture size presented on a website and therefore, to the number of products presented on each line (Djamasbi et al., 2010). These authors proved that pictures increase the user's positive impression of the brand and arouse warm feelings, only when suitable with the theme and human imaging (West, 2016).

Knoche & Sasse (2009) also studied how pictures influence an individual's emotions, perceptions, communication, and behaviours. This research also underlined that pictures must be clear to ensure that users received the correct message. Thus, previous studies indicate that this element of OSF is key to provide a more pleasing customer journey, by guaranteeing users will be exposed to an appealing website with clear and interesting pictures for them to observe (Hollebeek et al., 2020).

Research further shows that PS improves product information and reduces the complexity associated with the task and, consequently, arouses emotions (Bekkers & Moody, 2011). In this respect, it is worth emphasizing that emotions, particularly boredom, drives impulse purchase (Bozaci, 2020). To illustrate, a bored customer exposed to a website with bigger images will have a more pleasant customer-journey and, may end up purchasing (Liu et al., 2013)

compared to an interested customer navigating that same website but with smaller images.

Moreover, Kim & Lennon (2008) stated that despite verbal description having more impact on consumers' decision-making, larger pictures are more effective in evoking positive ARs towards products (Xia et al., 2020). Thus, it is assumed that a website with smaller pictures and verbal text will bore and tire consumers. On the contrary, that same website with bigger images will encourage consumers to feel more interested with higher PI.

As the cosmetic industry is based on aesthetics and beauty (Hassenzahl, 2004), customers prefer to visualise the products clearly by only selecting a few products per row to focus on details. This argument is confirmed by most cosmetic websites that chose to display four products per row and with larger pictures so the user can notice all the details, instead of the 7 product display. This way, brands will have more satisfied consumers who experienced a better customer-journey and will stimulate positive e-WOM and repurchase (Cantallops et al., 2018).

Ultimately, PS reduces online risk perception by providing a more reliable website (Lee et al., 2014) that highlights each product (Kim & Lennon, 2009) and, therefore, overcomes the challenge of consumers not being able to touch or experience the product (Heller et al., 2019). Compared to retail shoppers, online cosmetic shoppers are more insecure about e-commerce. As a result, brands use new digital features. These new tools can enhance product visualization and improve conversion rates (Nair, 2021) through the zooming option or, they can facilitate the online experience (Jiang & Benbisat, 2016) with the try-it-on options like NYX does. Interestingly, to access these tools the customer must open the product's link. Therefore, if a website's OSF is not appealing, the users will abandon the website before even reaching this tool. It is important to emphasize how these features do not replace PS since customers must be exposed to an appealing website and feel positive ARs (Evans, 2021) before considering using

these tools. Lastly, it is imperative to understand how PS impacts consumers' AR, especially with the rise of e-commerce.

2.2.2 Menus and Filters Title

Present in all websites, M&FT comprises the navigation menu that organizes all products into categories and narrows a user's search with the requested features. Despite the limited research done on this topic, several studies have proved its impact on aesthetics and usability (Chaparro & Phillips, 2009) and thereupon, on consumers' ARs and attitudes towards websites (Wu et al., 2018).

Studies on visual complexity, describing the overall visual richness of an interface, indicate that users often weigh pre-use decisions on M&FT. They prefer a stimulating website over a simpler one (Eytam et al., 2017) and the more appealing it is, the more time users will spend on the website. However, Pandir and Knight disagree and proved a negative correlation between complexity and pleasure (2006). Nevertheless, this complexity regards highly visual complex websites, with an accentuating difficulty of understanding the interface and over-elaboration of the website's OSF, which discourages users.

Considering the findings of prior studies, it is assumed that consumers will respond more favourably towards websites that fall within a moderate-high range of perceived complexity (Geissler et al., 2013). In fact, as first impressions are the consequence of visual features (stimuli) that affect the user and not its content, users prefer websites that moderately-highly stimulate them. This is the case of websites that have invested in interesting menus instead of displeasing, long or complex menus.

Furthermore, as first impressions are quite quick to form, once a user receives complex stimuli (with M&FT), the brain will be very stimulated, and the user's valence will increase. In this respect, it is important to emphasize that brands

should not misinterpret visual complexity with puzzling messages that detain a pleasant customer exposure.

Moreover, the navigation menus are also responsible for the user's customer experience. For instance, the option for users to "open and select the associated filters" captures consumers interest and arouses them. Hence, by providing a pleasing interaction with the website, M&FT will affect their actions and perceptions (Lemon & Verhoef, 2016). As the M&FT presentation will significantly influence user experience, consumers' PI and user satisfaction (Tang et al., 2022), brands must understand how to present them. Usually, users spend an average of 6.44s looking at it (Alsudani & Casey, 2009), hence, all M&FTs effects are formed very quickly.

In addition to what has been said, this variable also influences the website's ease of navigation. Regardless, it is imperative to delineate that the only effect understudy in this dissertation is the aesthetic role of M&FT on AR.

2.3 Affective Response

Defined as the emotional response to a stimulus or a situation, AR indicates the nature and significance of a person's ongoing interaction with the environment (Altman & Wohlwill, 2012), considering all feelings and responses, positive or negative, related to emotional behaviours, knowledge, or beliefs (Lazaris et al., 2020).

ARs are multi-componential responses transmitted by the nervous system, originating from a stimulus, that affects the individual's actions, expressions, affective evaluations, and attitudes (Wuensch et al., 2021; Zhang, 2013).

Indeed, literature confirmed that ARs have a stronger and direct impact on job satisfaction (Nikolaev et al., 2019), decision-making and shopping behaviours (Mittal & Ross, 1998), the consumer-brand relationship (Balconi & Fronda, 2020),

impressions (Forgas, 2011) and trust (Myers & Tingley, 2017) compared to cognitive decisions.

It is notable that most induced states and immediate ARs are not influenced by cognitive procedures, but solely caused by a stimulus (Lin & Xuemei, 2022). For that reason, they are triggered faster than rational responses (Keltner et al., 2019). Withal, according to Kardes et al. (2008), contrary to general assumptions, despite the subjectiveness of ARs, consumers exhibit greater similarity in ARs compared to reason-based assessments. Interestingly, they neglect functionality and usability issues when a website induces positive ARs whereas, a website with low ARs but highly functionality and useful information will generate negative ARs and impressions (Lindgaard & Dudek, 2002). Accordingly, it is possible to suggest that the aesthetic impact of OSFs on consumers' ARs is stronger than the functionality and usability dimensions of a website.

Arguably, this phenomenon can be partially explained by the "halo effect", the tendency of making an overall impression or judgement of an object/person based on one of its traits (Thorndike, 1920; Mora, 2012). A website with appealing visual cues, in particular big images (OSF), will increase the user's ARs, which influences customers' expectations and emotions (Gräf & Unkelbach, 2016) and translates into trust, comfort and a positive website impression (Geest & Dongelen, 2017). However, the opposite was also verified. If a consumer is exposed to a website that is not visually appealing, his/her brain will make an overall negative impression on the brand and its website. In such circumstances, this case is explained by virtue of the "horn effect", thus the tendency of an overall unfavourable impression based on one negative trait (Richetin et al., 2021). In this example, the user will be experiencing non-hedonic emotions such as discomfort, distance and uncertainty towards the website and the brand. Finally, it is important to note that those non-hedonic emotions can also increase consumers' distrust.

Furthermore, ARs are subconsciously immediately acknowledged, and they influence consumers judgements (Tractinsky et al., 2000; Friese et al., 2009) and website interaction (Pisterman & Campbell, 2017) during the brief exposure time. Evidently, the more brands can induce positive and intense ARs, caused by numerous OSF stimuli, the more interested users will be on their products and consequently, less distrusted towards cosmetics e-commerce. Nevertheless, in accordance with the affect appraisal theories (Gregor et al., 2014), to have stronger impressions and judgements, a cognitive process should be involved when making affective evaluations.

Without time restraints, users only need between 0.30-1s to form a first impression on the website, which will mainly be due to the aesthetic levels of OSF and ARs (Qin et al., 2021). Moreover, this argument is in agreement with the previous conjecture of only 0.05s being needed for a website's first impression to be formed (Wargo, 2006). Thus, brands are compelled to have appealing websites to attract users (Tuch et al., 2009) and stimulate their desire to explore them (Varela et al., 2013). In addition, it was reported in literature that only 6% of the users' feedback on the website depended on its actual content (Liu et al.,2021). Hence aesthetics, visual appeal and website navigation have the greatest influence on consumers' first impressions and emotions, especially in the cosmetic industry. This argument is also supported by Pengnate and Sarathy (2013), when stating that during the entire process of evaluating a website's OSF, the relationships between its aesthetic components and the users' ARs remains very consistent.

Regarding stimuli, moderate stimuli are considered to be the optimal conditions for positive ARs, hence the importance of studying their nature and role on users' ARs. Whereas, in accordance with previously mentioned theories, low intensity stimuli are insufficient to produce significant changes and high intensity stimuli can be perceived as ineffective or unpleasant (Berger & Molt, 2000; Ekkekakis et al., 2007).

Ultimately, as ARs are physiological subconscious responses, brands must profit from OSF to enhance consumers' ARs without a cognitive interference in this process (Lindgaard et al., 2006) and thereby, their knowledge.

Subsequently, considering all the previous analysis, this dissertation aims to (build on the findings of prior studies) analyse the relationship between PS and M&FT and consumers' AR.

In order to address this dissertation's problematic outlined above, the following hypotheses were formulated in respect to the impact of PS and consumers' AR:

H1: PS will have an impact on consumers' AR.

H1a: Larger images will increase consumers' AR.

H1b: Smaller images will decrease consumers' AR.

Furthermore, based on the findings of previous studies regarding the impact of M&FT on AR, the following hypotheses are proposed:

H2: M&FT will have an impact on consumer's AR.

H2a: Simple websites (only M&FTs showing) will increase consumer's AR.

H2b: Complex websites (M&FTs and associated categories showing) will decrease consumer's AR.

Furthermore, despite the existence of some studies, the research in PS and M&FT remains limited. Consequently, the following hypothesis was formulated in respect to this relationship, given the importance of analysing the combination of these two dimensions. Thus:

H3: There is an interaction effect of PS and M&FTs in a way that the positive effect of larger images on AR is increased when website menus and filters are present.

2.4 Trust

Imperative when performing online activities (Gibreel et al., 20 18), trust outlines "a customer's disposition of being vulnerable to a seller's actions when performing online transactions" (Lee & Turban, 2001, pp. 75-91).

According to Casaló & Cisneros (2008) this concept combines three dimensions: benevolence, relationship deprived of opportunist situations (Carol et al., 2014); honesty, belief of third parties standing by their word and doing what is right (Lee et al., 2012) and competence, alluding to a website with all technical and commercial infrastructures performing successfully.

However, other theories add another dimension, vulnerability. As defended by Nienaber et al. (2015), online trust can only exist when a consumer feels a certain vulnerability and risk (Nienaber et al., 2015). In this case, it is reasonable to assume that the vulnerability felt by a consumer originates from the uncertainty of cosmetics e-commerce. Consequently, the previously presented argument suggests that brands must seize OSF to increase online trust and reduce risk perception.

Basic principles of trust-building process demonstrated that a trustor's experience with an object determines how much trust towards that object will be established (Bachmann & Inkpen, 2011). As attested by Bauman & Bachmann (2017), in an online context, the trust's object is the website, which depending on a user's experience when observing and navigating it, will assess customers' trust. Hence, after being exposed to the website's stimuli, consumers' AR will determine their trust and perception on whether the brand is able to deliver the promised value (Janmohammadi, 2022). Prior investigations underline the connection between perceived website interactivity and repurchase intention (Jeon et al., 2018) and suggest that this dimension is a driver of user decision-making that induces behavioural PI (Hansen et al., 2018).

Moreover, trust and reliability on a website are 75% based on the overall aesthetics (Oyibo & Vassileva, 2017). Thus, customers' buying intentions are largely dependent on their experience with the website (Alsudani & Casey, 2009). When navigating a website, users are constantly exposed to stimuli (Budur et al., 2021), such as the website's colours and background disposition, brand's logo, name, products' features, pictures, and text that influence their subsequent opinions and feelings (Lindgaard, 2007). Each stimulus is interpreted by the user's brain and depending on the AR to these stimuli, the user will issue an opinion on the website's reliability and perceived trust. Yang et al. (2015) defend that, when a user feels attached and comfortable while navigating the website, their brand trust and product engagement increases.

To conclude, prior research identified trust as a critical response variable as it reduces perceived risk and creates positive e-WOM, increasing online PI (Alfina et al., 2016).

Considering the findings of prior studies, it is assumed that AR will positively influence consumer trust, hence, the following hypothesis is proposed:

H4: Consumer's AR will positively impact his/her trust.

2.5 Purchase Intention

Defined as the "likelihood that an individual will purchase a particular product based on the interaction between customer needs, attitude and perception towards the product or brand" (Beneke et al., 2016, pp. 171-201), PI is influenced by environmental stimuli and emotions (Wang & Li, 2016).

Other authors define PI as a future behaviour depending on consumers' judgement or their overall evaluation of a product (Engel et al., 2001). In 1991, Dodds et al., described it as the personal commitment to repurchase a product or visit a store and, despite being a subjective process, literature states that PI is

influenced by the brand's trust, product perception, and e-WOM (Pavlou, 2003), which are determinant drivers of consumer's behavioural intentions (Moslehpour et al., 2020).

PI emerges when consumers build a sincere disposition towards a product/service (Wells et al., 2008). Thus, websites that stimulate favourable ARs, are perceived as trustworthy, resulting in an ecstatic mood and then, higher PIs. In conformity with Qalati et al. (2021), it is imperative to decrease consumers' risk perception and uncertainty when purchasing cosmetics online. Consequently, if brands improve brand-consumer connection through visual stimuli, they could enhance consumer PI.

Prior research reports that emotions, trust, perceived quality, and reviews are the main drivers of PI (Wang et al., 2019). And perceived risk, whether it is financial loss or privacy, and, security violation, its main inhibitors (Chopdar et al., 2018).

Due to the lack of face-to-face human interaction and need-for-touch (Lazaroiu et al., 2020; Sillivan & Kim, 2018) in e-commerce, OSF plays an even more important role in triggering positive ARs and promoting trust to increase PI.

Furthermore, perceived risk significantly decreases consumers' PI (Ariffin et al., 2018). Inevitably, as trust, perceived usefulness, aesthetics, and navigability positively affect website's PI (Cho & Sagynov, 2015), OSF must invoke these responses. Indeed, a website perceived as honest, that ensures quality, and provides a unique customer experience, increases the likelihood of higher PIs. Similarly, other studies confirmed this premise by demonstrating that trust is the greatest promoter of PI followed by a satisfying e-WOM (Ling & Yazdanifard, 2014; Lăzăroiu et al., 2020). Thus, considering the findings of prior research, we present our last research hypothesis:

H5: Trust will positively influence PI.

2.6 Proposed Model

This research intends to study the impact of OSF on the cosmetics industry, by manipulating two of its dimensions, PS and M&FT, and to analyse their effects on consumer's ARs and, consequently, on trust and PI. As previously stated, most studies outline the importance of other OSF dimensions such as the logo, website's colour (Brady & Philips, 2003) or light saturation rather than these two dimensions of OSF that immediately influence the user.

Based on the reviewed literature, OSF plays a determinant role on consumers' perceptions about a website, on their browsing enjoyment level and, thereby, on their ARs (Parboteeah et al., 2008). The website's visual attributes will dictate consumers' emotions (Bhandari et al., 2019) and behaviours (Liu & Li, 2013). Thus, online brands may want to develop "affective websites" to create positive emotions, in terms of valence and arousal, and consequently, positive shopping outcomes.

According to previous studies, PS allures consumers (Codispoti & Cesarei, 2010), provokes emotions and feelings (Horvat et al., 2015) catches the consumers eye and attracts them to the product (Wijntjes et al., 2008) but none of these relates PS to consumers' PI.

Always present on websites, M&FTs provide a clearer and organized view (Rentinck, 2007), elicit a stronger connection with the website (Thelwall & Harries, 2003), influence performance (Sonderegger & Sauer, 2010) and modify the website's symmetry (Weideman & Ngindana, 2004). However, most studies addressed the website's navigability and usability instead of their aesthetics, which forms the visitors' first impact.

Moreover, Bashir et al. (2018), have provided insights on the long-term positive effect of visual attributes (OSF) and social networks on empowerment and brand commitment through ARs, but have not included trust or PI on their model. In addition, another empirical study defined the purchase decision-

making through a stimulus-organism-response framework by manipulating a website's navigability (Kim & Lennon, 2013). This study also investigated the role of cognitive and ARs to visual stimuli and their impact on utilitarian browsing, information quality, trust, and impulse buying (Kimiagari & Malafe, 2021). In turn, Kim and Lennon discovered that product presentation significantly affects consumers' emotional, affective, and cognitive responses independently of their PI (Kim et al., 2009). Huang and Zhou (2021) investigated the role of pictures on consumers' ARs when shopping online for groceries but consumers' trust was not figured on this study.

The impact of a website´s OSF on consumers´ AR, and impulsive buying has been the core of some investigations, but their connection to trust and PI has not been explored (Bhandari et al., 2019; Miesler et al., 2011; Chen et al., 2020). Indeed, none of these researchers have acknowledged the impact of these two aesthetic dimensions of OSF on consumers' AR and consequently on trust and PI. As the literature does not demonstrate which dimension of OSF has a more significant impact on consumers' AR, this study also aims to fulfil this gap. PS immediately attracts the user's attention. However, consumer's eyes are automatically sent to the M&FT website's location making them equally effective.

To address this gap, the present study introduced OSF, with PS and M&FT, as antecedents of AR, trust, and PI. As presented in Figure 2, PS (large vs small) and M&FT (simple vs complex) are the OSF design elements selected for this research, therefore being the independent variables of this study. Furthermore, AR and trust will be the dependent and intermediate variables of this study. Lastly, as PI is highly linked to OSF (Lowry et al., 2013), it will be considered the last dependent variable of this research.

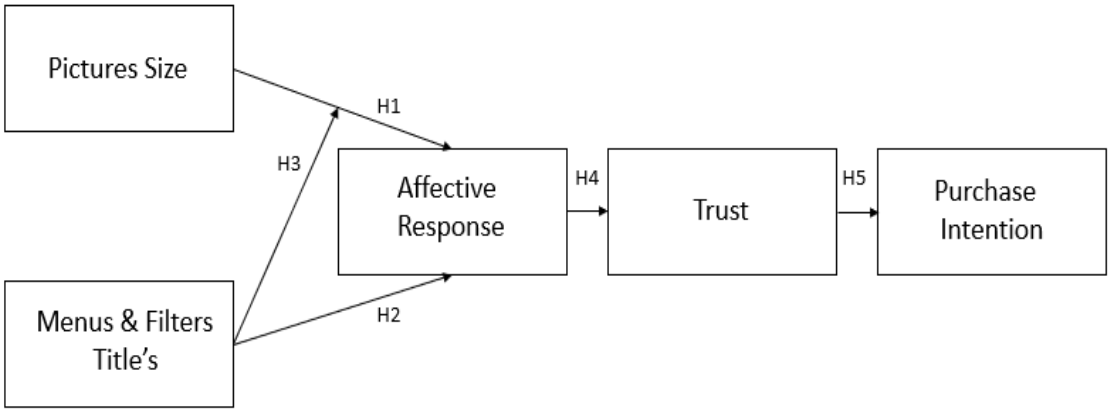


Figure 1 – Framework
Own schematization

Chapter 3
Methodology

3.1 Overview

This dissertation followed a quantitative research approach given that it collected and quantified data to classify, analyse, and interpret it (Malhotra et al., 2017). Furthermore, considering that this dissertation's ultimate purpose is to explain outcome variables based on a set of explanatory variables, this dissertation consists of an explanatory study. After establishing the research problem, a thorough literature review was used to understand the main concepts and to state and support the research hypotheses.

To test the hypothetical model, primary data was collected through an online survey given its flexibility, higher response rates, accessibility, and convenience (Wright, 2005).

The hypotheses were tested by an experimental study with a 2x2 between-subjects design. The design was comprised of two independent variables, namely PS (large vs small pictures) and M&FT (simple vs complex menus), and three dependent variables, AR, trust and PI.

Subsequently, the obtained data was statistically analysed through linear regression to investigate the causal relationship between the variables using the statistical software SPSS AMOS 21.0.

3.2 Questionnaire's structure and procedures

The questionnaire used for data collection was built in the online platform Google Forms. In the introduction, all participants were informed on the academic nature of this experiment and the topic under observation. Then, they

were randomly assigned to respond only to one of four questionnaire versions, corresponding to the four experimental conditions (Table 1), to avoid comparisons between websites and reduce bias.

With the conceptual model in mind, a simple static (non-functioning) cosmetic webstore page was created. Only the website's picture was provided in the questionnaire (instead of a link for the participants to navigate through it like with Martínez-Sal et al., 2020; Distante et al., 2014; Katsanos et al., 2010), to reduce the number of external factors influencing the experiment and for the participants to keep their interest.

Four conditions were carefully designed for this experiment. Regarding PS, in the two versions with "large" PS, four products per row were presented, while in the two versions with "small" PS, seven cosmetics per row were depicted (which is the most common in cosmetics websites). Concerning M&FT, the two versions with "simple" menu depict category, brand, price, and discount, while the two versions with "complex" menu depict the aforementioned titles and the associated filters notably, Hugo Boss, Hermès, price range or discount of 10%. The menus and associated filters used correspond to real filters present in cosmetic websites belonging to the price and olfactory family. All the websites were ensured to be identical in all conditions, except for the manipulated attributes.

The four versions of the questionnaire can be found in Table 1 and with more detail in Appendix 1.

Questionnaire Version	PS	M&FT
1	Large	Simple (Only M&FT)
2	Small	Simple (Only M&FT)
3	Large	Complex (M&FT & Associated Categories)
4	Small	Complex (M&FT & Associated Categories)

Table 1 - Questionnaires Versions

As for the structure, the questionnaires were divided into four sections. The first section aimed to get an overview of consumers' habits; thus, participants were questioned about their cosmetics e-commerce buying behaviour. Then, they were exposed to the website with the two OSF stimuli where they were asked to evaluate their ARs. In the second and third section, consumers positioned themselves on a trust and PI scale, always taking into account the website they have been exposed to. Finally, a few standard social-demographic questions were asked to define the sample. The completion of this survey enabled the determination of which website had higher ARs, which was more appreciated, and untimely, which OSF and combination attributes were seen and considered as the most important to online consumers All questions were closed-ended and marked as mandatory.

To maximise the response rate and guarantee the correct understanding of each query avoiding misunderstandings if answered in a foreign language, this online questionnaire was conducted in Portuguese. All the queries provided clear and the needed information for users to give an answer.

3.3 Scales

The conceptual model's variables were measured based on valid scales adapted from previous studies which, despite being translated from English to Portuguese, maintained their original meaning, as detailed in Appendix 2.

These scales were carefully chosen according to two criteria: their adequacy for the topic under investigation and their reliability, otherwise known as internal consistency.

This last concept, developed by Lee Cronbach (1951), illustrates how closely related a set of items are as a group, given it tests the reliability of multi-item measures with the intent to measure latent variables, particularly difficult to assess.

The higher the Cronbach Alpha, the greater the internal consistency. Typically, the minimum value of alpha for a measure to be considered reliable is 0.7 (Joseph et al., 2010), as presented in Table 2.

Cronbach's Alpha (α)	Internal Consistency
$0.5 > \alpha$	Unacceptable
$0.5 \geq \alpha > 0.6$	Poor
$0.6 \geq \alpha > 0.7$	Questionable
$0.7 \geq \alpha > 0.8$	Acceptable
$0.8 \geq \alpha > 0.9$	Good
$0.9 \geq \alpha$	Excellent

Table 2 - Cronbach's Alpha Classification

The participants' AR was measured by combining two five items with seven-points semantic-differential scales, adapted from two existing scales, developed by Grossman & Till (1998) and Simonin & Ruth (1998). Both scales had an excellent reliability of $\alpha = 0.91$ and 0.951, respectively.

Then, the variable trust was measured with four items with 5-point Likert scale ("strongly disagree / strongly agree"), originally from Doney & Cannon (1997) and later adapted by Jarvenpaa et al. (2000) and Mou & Cohen (2014) to quantity trust felt by a consumer in a store (α=0.927 and 0.89, respectively).

Finally, PI was based on a combination of five items from two 5-point Likert scales ("strongly disagree /strongly agree") developed by Chang & Liu (2009) and Spears & Singh (2004), to determine the impact of consumer's PI in brand attitude, both with high reliability α= 0.97 and 0.92, respectively.

Chapter 4
Results

4.1 Sample

In accordance with Polit and Hungler, population refers to an "aggregate or totality of all the objects, subjects or members that follow a set of specifications" (1999, pp. 416-417).

Considering the inability of studying the entire population, only a representative part of the population will be studied through a sample. This concept refers to a smaller and manageable set of elements extracted from a target population on which conclusions are drawn (MacCallum & Widaman, 1999).

In this study, a combined total of 260 valid responses have been obtained and, from this sample 172 were female and only 88 were male. Regarding the age distribution, this sample was predominantly composed of people between 21 and 30 years old (50.4%), followed by 7.3% between 31 and 40 years old, 19.2% between 41 and 55 years old, 12.7% under 20 and 10.4% over 50 years old, as represented in Table 3. As one-third of Gen-Z consumers shopped for beauty products online at least a month making them the leading consumers of cosmetics e-commerce across all generations (Statista, 2021), Gen-Z consumers are logically the leading consumers.

Survey Version	n	%	Sex (%)		Age				
			Female	Male	≤ 20	21-30	31-40	41-55	≥ 55
S1	66	25.4%	63.6%	36.4%	9	29	5	9	14
S2	67	25.8%	71.6%	28.4%	6	44	3	11	3
S3	63	24.2%	61.9%	38.1%	11	31	6	10	5
S4	64	24.6%	68.8%	31.2%	7	27	5	20	5
TOTAL	260	100%	172	88	33	131	19	50	27

Table 3 - Total Sex and Age Distribution

The analysis of the education level shows that 60% of the participants have a bachelor's degree while 20% have a master's degree and 2% have a PhD. In addition, 18% of them are high school graduates. This sample did not have any respondents belonging to the elementary school as represented in Table 4.

Survey	n	Elementary School	High School	Bachelor's Degree	Master's Degree	PhD.
S1	66	0	8	40	17	1
S2	67	0	13	41	11	2
S3	63	0	17	35	9	2
S4	64	0	8	39	15	2
TOTAL	260	0	46	155	52	7

Table 4 - Total Education Level Distribution

Another interesting result is the fact that 98.85% of the participants closed a website in the first milliseconds for not finding it visually appealing (interesting, pleasing, and good), therefore, they experienced negative ARs. As for the

remaining 1.15% of this sample, they were elderly people aged 75, 78 and 80 years.

Respecting another participant's online behaviour, this sample revealed that 56.92% of the participants purchase cosmetics at least once a month, 24.23% twice a month, 10.03% a few times per year, 5.76% once a year and only 1.15% have never purchased cosmetics online. To this end, this result also elucidated on the sample's good representation of the population since the participants had reliable opinions and knowledge on cosmetics e-commerce.

Finally, when questioned about what was more important when analysing and evaluating a website's visual appeal, most of the female respondents (84%) answered PS whereas 79% of men answered equally PS and M&FT.

4.2 Data Analysis

To ensure data quality by eliminating extreme values in the variables, an outlier univariate analysis was executed but no outliers were found. Hence a total of 260 responses were considered for analysis.

In order to analyse the effect of website's sensory attributes on consumer responses, the independent variables were treated as two dummy variables, where PS=1 indicates the presence of large images and PS=0 of small images; M&FT=1 regards to simple menus and M&FT=0 regards to complex menus. To this end, the two fixed factors, or independent variables, described and defined each website combination.

4.2.1 Reliability Test

Before the model testing procedures, the scales' reliability was verified through the computation of Cronbach Alpha with SPSS.

After measuring the scales coefficient, it was concluded that all scales had an excellent reliability (Table 5) since, α was higher than 0.9 (Lavrakas, 2008).

Then, the total scores of each scale were computed by averaging each item's result of each construct into new variables, as indicated in Table 5. The total scores computation was the preferable option instead of the integration of the measurement model in the structural equation model due to the moderate size of this sample. The three new variables, composed by the total scores, were used on the following analysis to test the model's hypothesis.

Variable	Cronbach's Alpha (α)
AR	0.962
Trust	0.928
PI	0.929

Table 5 – Reliability
Source: SPSS

4.2.2 Descriptive Statistics

Table 6 depicts the distribution of participants by the four experimental conditions evidencing that the surveys were proportionally randomly distributed since the frequencies inside each group are well balanced.

Variable		n	%	Total %	Total n
PS	1=Large	129	49.6%	100%	260
	0=Small	131	50.4%		
M&FT	1=Simple	127	51.2%	100%	260
	0=Complex	133	48.8%		

Table 6 – Frequencies
Source: SPSS

Regarding this study's dependent variables, their descriptive statistics are figured in Table 7. As presented below, this table displays the mean, standard deviation, standard error of mean (SEM), and variance of each of three experimental variables. Further detailed description regarding the frequencies of AR, trust and PI are presented in Appendix 3.

Variable	Mean	Standard Deviation (σ)	Standard Error of the Mean (SEM)	Variance
AR	4.459	1.829	0.113	3.344
Trust	3.502	1.121	0.070	1.256
PI	3.497	1.119	0.069	1.251

Table 7 - Descriptive Statistics
Source: SPSS

Withal, before proceeding to this model's analysis, a Pearson correlation test was conducted to measure the correlation between the framework's variables, as illustrated on Table 8. This test is a statistical technique that measures the relationship between two variables with values ranging between -1 (total negative relationship) and 1 (total positive relationship) (Boslaugh & Watters, 2008).

As the results below displayed indicate, this model had strong and positive relationships between all the dependent variables.

Hence, when a consumers' AR changes, their trust shifts in the same direction and, since r=0.973, these variables have a moderate-strong positive relationship (Benesty et al., 2009). Then, as r=0.784 ($p<0.001$), it was verified that all changes in consumers' PIs follow the same direction as previous alterations in their ARs. Moreover, the correlation between these components is strong considering r=0.8 ($p<0.001$). To conclude, the strongest positive correlation of this model is between consumers' trust and PIs, owing to the fact r=0.989 ($p<0.001$).

Variable	AR	Trust	PI	P-Value
AR	1	-	-	<0.001
Trust	0.973	1	-	<0.001
PI	0.784	0.989	1	<0.001

Table 8 - Correlation test between variables
Source: SPSS

4.2.3 Model Test

Results of Factorial ANOVA

To test the hypothesis of the empirical framework, a factorial ANOVA with a 2x2 between-subjects design was used to estimate how the fixed factors, PS and M&FT, affected the dependent variables, AR, trust and PI.

As previously mentioned, this model and analysis implies the combination of two independent variables with two levels each. Hence, this experiment tests four conditions in total, as illustrated in Figure 2.

PS \ M&FT	Simple M&FT	Complex M&FT
Large PS	Survey 1	Survey 3
Small PS	Survey 2	Survey 4

Figure 2 - Model's combinations and corresponding survey

By using the multifactor ANOVA, the two main effects (of PS and M&FT) on the three dependent variables, together with the interaction effect, PS*M&FT were tested. The main effect is the impact of each independent variable and the interaction effect, the combined effects of factors on the three dependent variables, AR, trust and PI.

Table 9 represents the descriptive statistics (and ANOVA results) obtained for each effect on the three dependent variables: AR, trust, and PI, as a function of PS and M&FT.

In the sample under analysis, the combination of larger images and simple M&FT (version S1), is the one that generates more positive responses towards the website, as suggested in the literature review. The second best combination is larger images, and complex M&FT (version S3), followed by smaller images and simple M&FT (version S2), and finally, smaller images and complex M&FT (version S4), as depicted in Table 9.

Variables	M&FT				ANOVA F-Value		
	Simple M&FT		Complex M&FT		PS	M&FT	PS*M&FT
	Mean	(σ)	Mean	(σ)			
AR					5404.62*	1839.38*	2.18
Large PS	6.87	0.34	5.13	0.39			
Small PS	3.84	0.40	1.97	0.20			
Trust					3445.59*	678.22*	11.00
Large PS	4.88	0.315	4.11	0.32			
Small PS	3.00	0.237	2.01	0.20			
PI					3346.14*	651.68*	11.44

Large PS	4.86	0.336	4.11	0.32			
Small PS	3.00	0.224	2.01	0.20			

*P< 0.001

Table 9 - Descriptive Statistics and Analysis of Variance (ANOVA) Results for AR, trust and PI as a function of M&FT and PS
Source: SPSS

According to ANOVA, the positive effect of PS on consumers' ARs was considered statistically significant since, $F(1,6036.120)= 5404.62, p<0.001$ thus, H1 was confirmed. This implies that the main effect of PS yielded an effect size of eta Square (η^2) equal to 0.072 indicating that 7.20% of the variance in the dependent variable is explained by PS.

Then, there was a significant main effect of M&FT on participants' ARs. Hence, H2 was confirmed and statistically significant as, $F(1,6036.120)= 1839.38,<0.001$. Consequently, the main effect of M&FT contributed to an effect size of $\eta^2=0.0245$, hence 2.45% of the variance of AR is explained by M&FT.

However, the interaction effect between PS and M&FT was not supported by the data. There was no significant interaction between PS and M&FT, as $F(1,6036.120)=2.18$, $p<0.001$. Furthermore, unlike initially though, the combinations between OSF were not statistically significant. Hence, consumers' ARs are driven by OSF separately (H3 rejected).

Thereupon, brands cannot neglect any dimension of OSF, considering that all of them impact the website's evaluation (ARs) and more importantly, one dimension cannot replace the effect produced by another.

To conclude, PS and M&FT individually enhance consumers' ARs as H1 and H2 were confirmed and the interaction effect of PS and M&FT on a consumers' ARs is not statistically significant. Therefore, when analysing a website and evaluating their ARs, users will look at all OSF separately and come up with an evaluation instead of the combination or whole OSF dimensions to form his/her opinion on the website.

Linear Regression:

In order to study the linear relationship between AR and trust, AR and PI and trust and PI, three linear regression analyses were executed.

Firstly, a general analysis of the model was made and, the first parameter to be analysed was the coefficient of determination (r^2) as indicated on Table 10. For the first relationship, a coefficient of 0.947 indicates that 94.7% of the variation that occur in consumer's trust is explained by the variation of ARs ($F=4585.78$, $p<0.01$). Additionally, 80.3% of the variation that occur in consumer's PI is explained by the variation of ARs since $r^2=0.803$ ($F=4580.78$, $p<0.01$). Lastly, an $r^2=0.989$ confirms that 98.9% of the variation is explained by the variation in trust ($F=430999.94$, $p<0.01$).

Thus, the highest estimate effect (r^2) occurs between trust and PI, followed by AR and trust and by AR and PI.

In conclusion, all the regression coefficients between this model's variables are excellent. These obtained values verified both the strong and positive relationship between all variables throughout this empirical study and the adequacy of this experimental research.

Correlation between variables	Pearson Correlation (r)	Coefficient of Determination (r^2)	F-Value	P-Value
AR-Trust	0.973	0.947	4585.78	<0.001
AR-PI	0.896	0.803	4580.78	<0.001
Trust-PI	0.989	0.978	430999.93	<0.001

Table 10 - Correlation between variables
Source: SPSS

Table 11 displays the obtained regression coefficients, confirming all the hypotheses being tested (H4 and H5). Thus, as indicated by Table 11, AR is a

good predictor of trust (β=0.796, p<0.01) and PI (β=0.595, p<0.01), while trust is an excellent predictor of PI (β=0.998, p<0.01).

Research hypothesis	Standardized Coefficient (β)	t value	p-value
AR -> Trust	0.796	67.718	<0.001
AR -> PI	0.595	681	<0.001
Trust-> PI	0.998	656.506	<0.001

Table 11 - Three Linear Regression
Source: SPSS

According to the previous table, AR was determined to directly impact consumers' trust since its F=4585.776>1and their p-value=0.000<α=0.01. Hence, H4 was confirmed with 99% of confidence.

With respect to AR and PI, as F=4580.779>1and p-value=0.000<α=0.01, the impact of consumers' AR on consumers' PI was confirmed, with 99% of confidence. However, according to the theoretical model figured in Chapter 2, this relationship did not have a previously established hypothesis.

Finally, for H5, results have supported the established hypothesis by showing that trust positively impacts consumers' PI at a statistically significant level since, F=430999.943>1and p-value=0.000<α=0.01. Thus, H5 was confirmed with 99% of confidence.

4.3 In-Depth Analysis

With these findings, cosmetic brands should focus on their website's OSF by selecting bigger pictures and simple M&FTs to enhance consumers' AR and by consequent trust and PI.

Table 12 depicts the acceptance and rejection of the established hypotheses.

Hypothesis		Accepted/Rejected
H1	PS will have an impact on consumers' AR	Accepted
H1a	Larger images will increase consumers' AR	Accepted
H1b	Smaller images will decrease consumers' AR	Accepted
H2	M&FT will have an impact on consumer's AR	Accepted
H2a	Simple websites (M&FTs showing) will increase consumer's AR	Accepted
H2b	Complex websites (M&FTs and associated categories showing) will decrease consumer's AR	Accepted
H3	There is an interaction effect of PS and M&FTs in a way that the positive effect of larger images on AR is increased when website menus and filters are present.	Rejected
H4	Consumer's AR will positively impact his/her trust	Accepted
H5	Trust will positively influence PI	Accepted

Table 12 - Hypothesis
Source: SPSS

Chapter 5
Discussion

5.1 Theoretical Implications and Contributions

This section will interpret and connect the main concepts discussed in the course of this dissertation, with the goals of this research and the results obtained throughout the investigation.

As expected, the analysis of the results confirmed that a website's OSF can influence consumers' ARs and thereby, their trust and PIs, which is consistent with this study's main assumptions.

Supported by the results presented in the previous chapter, this research presents additional contributions to the existing literature. For instance, this dissertation demonstrated the role and importance of OSF in a website and, it established that compared to M&FTs, PS have a higher effect on consumers' ARs.

Currently, the cosmetic industry is very competitive, and, inevitably, it is extremely important for companies to understand their customers' needs and wants in order to carefully design their business strategies (Chaovalit, 2014). This research contributes to a clearer understanding of the best approach to explore a website's OSF, highlighting that retailers should use bigger pictures and simple menus to engage with customers, by favourably influencing their ARs and, consequently, increase their trust and PI.

As the human brain has an unlimited memory storage, it can memorize most stimuli it has already been exposed to (Schmidt & Blankenburg, 2018). Thus, when confronted with an identical stimulus, the brain will remember its first exposure and respond to it in the exact same way. To this end, brands can forecast consumers' emotions, behaviours, and impressions (Zarantonello & Schmitt,

2010) by manipulating PS and M&FT in websites. From a business point of view, this fact denotes the importance for brands to master these two dimensions of OSF which have not been sufficiently explored.

Through the overall results analysis, it is possible to conclude that PS is the most significant dimension of OSF. This finding is in accordance with both the model analysis and the participants' answer when confronted with this question. Nonetheless, even if β_{PS} has a higher value than $\beta_{M\&FT}$, this result could have also been affected by the high composition of women in the sample. However, as the cosmetic industry is composed of a majority of women shoppers, except for shaving products that are predominantly acquired by men (Statista, 2021), these results must be considered when improving a website's OSF.

In addition, an unexpected result from this experiment was that simple menus provoke higher ARs compared to smaller images, even if M&FTs are not the most significant OSF dimension (compared to PS) impacting consumers' AR.

Moreover, these results indicate that M&FTs can impact a website's aesthetics, not merely its usability. In consequence, this premise contributes to new insights on the decisive role of M&FT on consumers' behaviours and emotions, as it is the second element to be noticed in a website. This outcome is corroborated by the stimuli intensity theory, as moderate-high stimuli increase consumer's valence and arousal (Geissler et al., 2013), unlike extreme stimuli, as portrayed by S1 and S4.

Interestingly, another result of this research deserving a distinct analysis is the rejection of H3. The non-confirmation of this hypothesis suggests that users tend to analyse and assess each OSF independently. Withal, this effect indicates that brands cannot neglect any dimension of OSF as all of them will be considered when evaluating the website and determining consumers' ARs. This contribution is considered a relevant and useful contribution to the existing literature, as these two dimensions of OSF have never been analysed together and with this purpose.

Furthermore, the literature attests the impact of trust on consumers' PIs, and, once again, this research confirmed the conclusions of prior studies, by determining that trusting users have higher PIs towards a website (Ventre & Kolbe, 2020). As defended by Qalati et al. (2021), this relationship may be explained by the decrease in the risk perception and uncertainty felt by consumers when exposed to an affective website. As a result, brands will make consumers feel comfortable and motivated navigating through the website and their product interest will rise. This study also revealed that users' greater concern when purchasing online, mainly cosmetics, is security and quality. Thus, in order to enhance PI brands need to increase consumers' trust. Indeed, in e-commerce, consumers can only rely on visual elements through-out the shopping process (Wongadoonwit et al., 2014). Consequently, the need for online trust drastically increases, especially in the cosmetic industry where uncertainty is high.

Withal, this study provides two relevant findings. On one hand, lower ARs are caused by an exposure to a website with smaller images and/or complex M&FT (H1b and H2b). In line with the hypothesis confirmation, this process can be explained by the negative sensory message that reached consumers' brains and induced negative ARs. After being exposed to smaller images and complex M&FTs, the stimuli will elicit consumer's subconscious with negative ARs such as boredom, uninterest and non-attachment towards the website (Capota et al., 2017). Consequently, these responses will result in a significant decrease of online trust as consumers could not overcome the bad impression and distrust left by the website and will have utterly low PIs. These findings are corroborated by Stahelski and Radeke (2020), when defending that a messy, poorly designed, and visually complex website transmit unfavourable impressions and non-hedonic emotions.

The other conclusion this research provided is that positive OSF, bigger images and simple M&FTs (H1a and H2a), are irrefutable drivers of high ARs

and, therefore, of trust and PI. These OSFs increase users' valence, thereupon, the level of pleasantness generated by the website's stimuli. In this case, the optical nerve will transmit a positively valenced message, which will generate hedonic ARs, such as joy, pleasure, comfort, or interest (Pinto et al., 2021; Razali et al., 2021). Investing in enjoyable OSFs in a website will induce positive impressions towards a brand and its website, which is essential, as this will lead to positive judgements, enhance online trust (Kim et al., 2013) and prompt higher PIs. The findings are aligned with the theories proposed by Evans (2021) and Eytam et al. (2017), as the authors defend that users prefer appealing and stimulating websites which induce positive ARs. This experiment adds to a growing corpus of research on OSFs, by explaining the role of PS and M&FTs on consumer's ARs instead of the usual research on the presence of pictures in e-commerce.

In conclusion, the findings established that in e-commerce, trust is immediately evoked by positive website aesthetic features (OSF) and, consequently by users' emotional responses (ARs) (Bart et al., 2015). To that end, trust can mediate the relationship between ARs and consumers behavioural intentions, such as PI or impulse buying (Yahia et al., 2018; Carranza et al., 2018; Nia & Shokouhyar, 2020).

5.2 Managerial Implications

From a managerial perspective, this dissertation provides relevant guidelines for brands to analyse.

By positively affecting PIs, a website's OSF can ultimately be responsible for increasing financial indicators for instance, online sales, convention rate, revenue per client, net profit margin, key performance indicator (KPI), ROI, and ROE. Due to this reason, brands cannot neglect or misuse OSF. It is important to highlight that given the minor conversion and shopping rate of online cosmetics,

brands must attend the website's OSF particularly, by using bigger PS and simple M&FT.

Moreover, this study discovered that, the majority of cosmetic brands have extremely appealing PS but often neglect their M&FTs, which is the second element to be noticed in a website. Besides, as OSF main effects are stronger than the interaction (H1 and H2 versus H3), even if bigger pictures are more attractive and preferable, M&FTs also increase users' PIs. Withal, M&FT connect aesthetics with usability and navigability, therefore, brands must create stimulating websites to continue to attract users. Thus, despite PS and M&FT being the dimensions understudy, all OSF dimensions must be attended and well-managed, to influence consumers' behaviours, perceptions, and impressions.

As determined by this dissertation, users prefer simple M&FT. Consequently, cosmetic brands should only provide the menus titles and leave the option for the user to check the associated categories and channel his/her choices.

The obtained results confirmed that favourable and attractive websites attract customers' attention and illicit warm ARs. However, when managers invest on a cosmetic website, their focus is directed to logos and colourful webpages, rather than other OSF dimensions equally as important, as demonstrated in this thesis.

Interestingly, even if all PS and M&FT combinations proved a positive correlation with AR, as they all move in the same direction, this study revealed that small PS and complex M&FT significantly reduce consumers' ARs when compared to large PS and simple M&FTs. Thus, brands must ensure these two dimensions are both aligned to induce hedonic emotions and favourable impressions.

Furthermore, engineers, designers and marketers have found other options to visually stimulate consumers through AI technologies. Yet, these tools are only reached if the previous stimuli exposure (OSF) was positive and strong enough for users to remain on the website. Otherwise, they would have abandoned the website, as shown in this study, and not profit from these new marketing tools

that increase KPIs and other financial indicators. Hence, this dissertation provides new insights on the importance of OSF on consumers' PI and the fact that no other feature can replace its effect.

Finally, this thesis confirms that creating an "affective website" can help businesses to gain a competitive advantage (Pengnate & Sarathy, 2017). However, to achieve that sustainable advantage, managers must pay attention to the target groups' profiles, gender differences, and preferences to design the perfect website that meets customers' needs. In particular, results demonstrated that men tend to pay more attention to M&FTs than women. Thus, understanding gender differences when creating a stimulating website enables brands (Bonanni & Cyr, 2005) to develop the most suitable strategy for their business and captivate their target consumers. Independently of their industry, brands should produce and evoke optimal stimuli depending on the gender and target groups. To this end, brands do not fall on gender bias by favouring one gender over another (Nissen & Krampe, 2021), neither do they lose customers' interest for not having adequate OSF.

Chapter 6
Limitations and Future Research

6.1 Limitations

This thesis provided a relevant contribution on the impact of OSF on consumers' ARs and perceptions and consequently, on PI, particularly in the online cosmetic industry. However, during this investigation a few limitations were found, and, despite the reliability of the obtained findings, their quality might have been affected.

Firstly, a non-probabilistic convenience sample was used, which indicates that the obtained results might have provided an under-or-over representation of the population given the difficulty of knowing how well the population was represented (Suen et al., 2014). Hence, researchers are advised to use a probabilistic sample, typically simple random samples (SRS), in future investigations.

Additionally, as this sample was only collected in Portugal, a more extensive data collection is recommended. This implies a larger and diversified sample that preferably should be conducted in different countries and cultures. Despite this sample's profile being predominantly constituted by young adults and women, the results of this research must not be diminished as the predominant generation and gender to purchase online cosmetics are women and young adults (Statista, 2021). Thereupon, this sample was a good representation of the population in view that the most significant demographic groups were figured. Nevertheless, this solution should improve the quality and generalization of the results.

As every investigation on consumer behaviour, a wide and complex range of variables is implicit, and regardless of the delimitation of the incidence camp to

a smaller set of variables (only website's stimuli) other factors could have affected the research, as previously explained. Nonetheless, based on existing literature and prior investigations, this research focused on the variables that seemed to be more relevant for the topic under analysis.

In this respect, it is important to highlight that this dissertation only studied the impact of two dimensions of OSF, namely PS and M&FT, whilst many others could have been analysed. To give an example, this study could have addressed other OSF dimensions such as logos, webpage colour, shapes, text, or symmetry that have an impact on the website's aesthetics and consequently, on consumers' emotions and impressions.

6.2 Future Research

Aiming to test the results' tangibility, future research is necessary to validate the conclusions that can be drawn from this study. It has become increasingly difficult to argue that a website's aesthetics should be downplayed in favour of functionality given its immediate impact on consumers' ARs. For instance, financial websites have been attempting to communicate through visual symbols like graphics, however functionality is still their primary focus. Therefore, future investigations should apply this conceptual model to other industries such as retail, finance, or grocery, where aesthetics is not as important.

Moreover, all market predictions forecast an increase of e-commerce, through apps, thus, further investigations must be done. Whilst both websites and apps are usable in e-commerce, consumers access them in different electronic devices. For instance, apps are mostly accessed on mobile phones and websites through computers. For this reason, as this dissertation was applied to websites, these findings might not be verified for apps. Hence, for a better understanding OSFs,

future studies could fruitfully explore this issue further by exploring the similarities and differences between the role of OSF in the two platforms.

In addition, future research should consider the potential effects of brand-consumer-connection, brand experience, consumers' memory and e-WOM with this conceptual model. Those studies should analyse the possible relationship between the independent variables included in the research model and outcome variables aforementioned. However, these constructs can only be measured and analysed with the appropriate neuromarketing tools for example, EEG and fMRI.

Further research should consider different website's OSF to analyse the relationship between combinations of these different dimensions and consumer responses. In particular, an interesting topic for future work is the analysis of the correlation between the two elements first noticed in a website, the logo and M&FT, and their impact on ARs.

To conclude, all findings and contributions in this field are essential due to the importance of visual senses and the potential OSF offers for online retailers, when correctly mastered.

References

Alfina, I., Ero, J., Hidayanto, A., & Muhammad Rifki , S. (2016). The Impact of Cognitive Trust and EWom on Purchase Intention in C2C E-Commerce Site. *Journal of Computer Science, 10*(12), 2518-2524. https://doi.org/10.3844/jcssp.2014.2518.2524

Alsudani, F., & Casey, M. M. (2009). The Effect of Aesthetics on Web Credibility. *People and Computers XXIII Celebrating People and Technology.* British Computer Society. https://doi.org/10.14236/ewic/HCI2009.64

Altman, I., & Wohlwill, J. (2012). *Behavior and the Natural Environment.* Springer Science & Business Media. https://doi.org/10.1007/978-1-4613-3539-9

Ariffin, S., Mohan, T., & Goh, Y.-N. (2018, Otober 16). Influence of consumers' perceived risk on consumers' online purchase intention. *Journal of Research in Interactive Marketing, 12*(3). https://doi.org/10.1108/JRIM-11-2017-0100

Bachmann, R., & Inkpen, A. (2011, March 3). Understanding Institutional-based Trust Building Processes in Inter-organizational Relationships. *Organization Studies, 32*(2), 281-301. https://doi.org/10.1177/0170840610397477

Balconi, M., & Fronda, G. (2020, October 29). Morality and management: An oxymoron? fNIRS and neuromanagement perspective explain us why things are not like this. *Cognitive, Affective, & Behavioral Neuroscience, 20*, 1336-1348. https://doi.org/10.3758/s13415-020-00841-1

Bart, Y., Shankar, V., Sultan, F., & Urban, G. (2015, Ocotber 1). Are the Drivers and Role of Online Trust the Same for All Web Sites and Consumers? A Large-Scale Exploratory Empirical Study. *Journal of Marketing, 69*(4), 133-152. https://doi.org/10.1509/jmkg.2005.69.4.133

Bashir, A., Wen, T., Kim, E., & Morries, J. (2018, April). (The Role of Consumer Affect on Visual Social Networking Sites: How Consumers Build Brand Relationships 2018) (Design benefits, emotional responses, and brand

engagement). *Journal of Current Issues and Research in Advertising, 39*(1), 1-14. https://doi.org/10.1080/10641734.2018.1428250

Bauman , A., & Bachmann, R. (2017, July 3). Online Consumer Trust: Trends in Research. *Journal of technology Management and Innovation, 12*(2), 68-79. https://doi.org/10.4067/S0718-27242017000200008

Bekkers, V., & Moody, R. (2011, October). Visual events and electronic government: What do pictures mean in digital government for citizen relations? *Government Information Quarterly, 28*(4), 457-465. https://doi.org/10.1016/j.giq.2010.10.006

Beneke, J., Sousa, S., Mbuyu, M., & Wickham, B. (2016). The effect of negative online customer reviews brand equity and purchase intention of consumer electronics in South Africa. *The international review of retail, distribution and consumer research,, 26*(2), 171-201. https://doi.org/10.1080/09593969.2015.1068828

Benesty, J., Chen, J., huang, Y., & Cohen, I. (2009). *Pearson correlation coefficient.* Springer. http://dx.doi.org/10.1007/978-3-642-00296-0_5

Berger, B., & Molt, R. (2000). Exercise and mood: A selective review and synthesis of research employing the Profile of Mood States. *Journal of Applied Sport Psycholog, 12*, 69-92. https://doi.org/10.1080/10413200008404214

Bhandari, U., ChangK, K., & Neben, T. (2019, January). Understanding the impact of perceived visual aesthetics on user evaluations: An emotional perspective. *Information & Management, 56*(1), 85-93. http://doi.org/ 10.3390/sym12091403

Bonanni, C., & Cyr, D. (2005, January). Gender and website design in e-business. *International Journal of Electronic Business, 3*(6), 565-582. http://doi.org/10.1504/IJEB.2005.008536

Boslaugh, S., & Watters, P. A. (2008). *Statistics in a Nutshell: A Desktop Quick Reference.* O'Reilly Media.

Bozaci, I. (2020, May 1). The Effect of Boredom Proneness on Smartphone Addiction and Impulse Purchasing: A Field Study with Young Consumers in

Turkey. *The Journal of Asian Finance, Economics and Business, 7*(7), 509-517. http://doi.org/10.13106/jafeb.2020.vol7.no7.509

Brady, L., & Philips, C. (2003, February). Aesthetics and Usability: A Look at Color and Balance. *5*(1). http://doi.org/10.1016/j.apergo.2009.09.002

Bruner, G. C., & Kumar, A. (2000, January). Web Page Background and Viewer Attitudes. *Journal of Advertising Research, 40*(4), 29-34. https://doi.org/10.2501/JAR-40-1-2-29-34

Budur, T., Demir, A., & Cura, F. (2021). University Readiness to Online Education during Covid-19 Pandemic. *International Journal of Social Sciences and Educational Studies, 8*(1), 180-200. https://10.23918/ijsses.v8i1p180

Business Insider. (2021). https://www.businessinsider.com/

Cantallops, A., Cardona, J., & Salvi, F. (2018, May). The impact of positive emotional experiences on eWOM generation and loyalty. *Spanish Journal of Marketing, 22*(2), 142-162. https://doi.org/10.1108/SJME-03-2018-0009

Capota, K., Hout, M., & Geest, T. (2017). Measuring the Emotional Impact of Websites:. *Designing Pleasurable Products and Interfaces*, (pp. 135-147). Helsinki, Finland. https://doi.org/10.3389/feduc.2022.807627

Carol, X. J., Pavlou, P. A., & Davison, R. M. (2014). Swift Guanxi in Online Marketplaces: The Role of Computer-Mediated Communication Technologies. *Management Information Systems Quarterly, 45*(3), 209-230. https://doi.org/10.25300/MISQ/2014/38.1.10

Carranza, R., Díaz, E., & Martín-Consuegra, D. (2018, July 13). The influence of quality on satisfaction and customer loyalty with an importance-performance map analysis: Exploring the mediating role of trust. *Journal of Hospitality and Tourism Technology, 9*(3). https://doi.org/10.1108/jhtt-09-2017-0104

Casaló, L. V., & Cisneros, J. (2008). An Empirical Test of the Multiplicative Effect of Usability on Consumer Trust. *19th International Conference on Database and Expert Systems Application.* Turin, Italy: IEEE. https://doi.org/10.1109/DEXA.2008.139

Chang, H., & Liu, Y. (2009). The impact of brand equity on brand preference and purchase intentions in the service industries. *The Service Industries Journal, 29*(12), 1687-1706. https://doi.org/10.1080/02642060902793557

Chaovalit, P. (2014). Factors Influencing Cosmetics Purchase Intention in Thailand: A Study on the Relationship of Credibility and Reputation with in Persuasive Capabilities of Beauty Bloggers. Retrieved from http://www.assumptionjournal.au.edu/index.php/AU-GSB/article/view/445

Chaparro, B., & Phillips, C. (2009, January 2). Visual Appeal vs. Usability: Which One Influences User Perceptions of a Website More? *Computer Science, Business*.

Chen, W.-K., Lin, Y.-C., & Chen, C. (2020, July 17). Understanding the influence of impulse buying toward consumers' post-purchase dissonance and return intention: an empirical investigation of apparel websites. *Journal of Ambient Intelligence and Humanized Computing*. https://doi.org/10.1007/s12652-020-02333-z

Cho, Y., & Sagynov, E. (2015, January). Exploring Factors That Affect Usefulness, Ease Of Use, Trust, And Purchase Intention In The Online Environment. *International Journal of Management & Information Systems*, 21-36. https://doi.org/10.19030/ijmis.v19i1.9086

Codispoti, M., & Cesarei, A. D. (2010, October 14). Effects of Picture Size Reduction and Blurring on Emotional Engagement. *PLOS, 5*(10), 1-7. https://doi.org/10.1371/journal.pone.0013399

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 297-334.

Distante, D., Risi, M., & Scanni, G. (2014). Enhancing Navigability in Websites Built Using Web Content Management Systems. *International Journal of Software Engineering and Knowledge Engineering, 24*(3), 493-515. https://doi.org/10.1142/S0218194014500193

Djamasbi, S., Siegel, M., & Tullis, T. (2010, May). Generation Y, web design, and eye tracking. *International Journal of Human-Computer Studies, 68*, 307-323. https:/doi.org/10.1016/j.ijhcs.2009.12.006

Dodds, W., Monroe, K., & Grewal, D. (1991, aUGUST). Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. *Journal of Marketing Research, 28*(3), 307-319. https://doi.org/10.1177/002224379102800305

Doney, P., & Cannon, J. (1997). An examination of the nature of trust in buyer-seller. *Journal of Marketing, 61*(2), 35-51. https://doi.org/10.2307/1251829

Ekkekakis, P., Hall, E., & Petruzzello, S. (2007, February 18). Variation and homogeneity in affective responses to physical activity of varying intensities: An alternative perspective on dose–response based on evolutionary considerations. *Journal of Sports Sciences, 23*(5), 477-500. https://doi.org/10.1080/02640410400021492

Émile Durkheim. (1895). *Les Règles de la méthode sociologique.*

Eurostat. (2021). https://ec.europa.eu/eurostat

Evans, K. (2021, May 3). *DigitalCommerce 360.* Retrieved from https://www.digitalcommerce360.com/2021/10/25/online-retailers-bridge-the-offline-divide-with-customer-service-features/

Eytam, E., Tractinsky, N., & Lowengart, O. (2017, September). The paradox of simplicity: Effects of role on the preference and choice of product visual simplicity level. *International Journal of Human-Computer Studies, 105*, 43-55. https://doi.org/10.1016/j.ijhcs.2017.04.001

Fineman, M. (2013, September 02). Please Stop Complaining About How Busy You Are. *Harvard Business Review*. Retrieved from https://hbr.org/2013/09/please-stop-complaining-about

Forgas, J. (2011, March). Can negative affect eliminate the power of first impressions? Affective influences on primacy and recency effects in impression formation. *Journal of Experimental Social Psychology, 47*(2), 425-29. https://doi.org/10.1016/j.jesp.2010.11.005

Friese, M., Hofmann, W., & Wänke, M. (2009). The impulsive consumer: predicting consumer behavior with implicit reaction time measures. *Social Psychology of Consumer Behavior*, 335-364.

Garett, R., Chiu, J., Chang, L., & Young, S. (2017, July). A Literature Review: Website Design and User Engagement. *6*(3), 1-14. https://doi.org/10.1016/j.iedeen.2019.07.001

Geest, T., & Dongelen, R. (2017). What is beautiful is useful - Visual appeal and expected information quality. In IEEE (Ed.), *International Professional Communication Conference*, (pp. 1-5). https://doi.org/10.1109/IPCC.2009.5208678

Geissler, G. L., Zinkhan, G. M., & Watson, R. T. (2013, March). The Influence of Home Page Complexity on Consumer Attention, Attitudes, and Purchase Intent. *Journal of Advertisin, 35*(2), 69-80. https://doi.org/ 10.1080/00913367.2006.10639232

Gibreel, O., AlOtaibi, D. A., & Altmann, J. (2018, February). Social commerce development in emerging markets. *Electronic Commerce Research and Applications, 27*, 152-162. https://doi.org/10.1016/j.elerap.2017.12.008

Gräf, M., & Unkelbach, C. (2016, January 25). Halo Effects in Trait Assessment Depend on Information Valence: Why Being Honest Makes You Industrious, but Lying Does Not Make You Lazy. *Personality and Social Psychology Bulletin, 42*(3), pp. 290-310. https://doi.org/10.1177/0146167215627137

Gregor, S., Lin, A., Gedeon, T., Riaz, A., & Zhu, D. (2014, December 8). Neuroscience and a Nomological Network for the Understanding and Assessment. *Journal of Management Information Systems, 30*(4), 13-48. https://doi.org/10.2753/MIS0742-1222300402

Grossman, R., & Till, B. (1998). The persistence of classically conditioned brand attitudes. *Journal of Advertising, 27*(1), 23-31. https://doi.org/10.1080/00913367.1998.10673540

Hanna, P., & Hall, R. H. (2004, May). The impact of web page text-background colour combinations on readability, retention, aesthetics and behavioural intention. *Behaviour and Information Technolog, 23*(3), 183-195. https://doi.org/10.1080/01449290410001669932

Hansen, J., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interactionof perceived ease of use and behavioral control in predicting consumers' use ofsocial media for transactions. *Computer Sciences Behaviour, 80*, 197–206. https://10.1016/j.chb.2017.11.010

Hassenzahl, M. (2004, December). The Interplay of Beauty, Goodness, and Usability in Interactive Products. *Human-Computer Interaction, 19*(4), 319-349. https:/doi.org/10.1207/s15327051hci1904_2

Heller, J., Chylinski, M., Ruyter, K., Mahr, D., & KeeLING, D. (2019, December). Touching the Untouchable: Exploring Multi-Sensory Augmented Reality in the Context of Online Retailing. *Journal of Retailing, Elsevier*(95), 219-234. https://doi.org/10.1016/j.jretai.2019.10.008

Henderson, P., Cote, J., Leong, S., & Bernd , S. (2003, December). Building strong brands in Asia: Selecting the visual components of image to maximize brand strength. *International Journal of Research in Marketing, 20*(4), 297-313. https://doi.org/10.1016/j.ijresmar.2003.03.001

Hepola, J., Karjaluoto, H., & Hintikka, A. (2017, May). The effect of sensory brand experience and involvement on brand equity directly and indirectly through consumer brand engagement. *Journal of Product & Brand Management, 26*(3). https://doi.org/10.1108/JPBM-10-2016-1348

Hollebeek, L., Clark, M., Andreassen, T., Sigurdsson, V., & Smith, D. (2020, July). Virtual reality through the customer journey: Framework and propositions. *Journal of Retailing and Consumer Services, 55*. https://doi.org/10.1016/j.jretconser.2020.102056

Horvat, M., Kukolja, D., & Ivanec, D. (2015, May 07). Comparing affective responses to standardized pictures and videos: A study report. *International Journal of Human-Computer Studies*, 1394-1398.

Huang, S., & Zhou, F. (2021, October 19). The Effects of Photo Decoration Cues on Online Consumers' Affective Responses in Distribution Science. *Journal of Distribution Science, 19*(12), 71-81. https://doi.org/10.15722/jds.19.12.202112.71

Hulten, B. (2020). *Sensory Marketing : An Introduction* (Vol. 1). SAGE. https://doi.org/10.1108/09555341111130245

Janmohammadi, M. (2022, january 13). Investigating the impact of digital media advertising content on accepting or rejecting the message mediated by advertising value and modifier of brand trust and marketing innovation (case study: citizens of the west of Tehran). *International Journal of Electronic Marketing and Retailing, 13*(2), 206-223. https://doi.org/10.1504/IJEMR.2022.121868

Jarvenpaa, S., Tractinsky, N., & Vitale, M. (2000, January 14). Consumer trust in an Internet store. *Information Technology and Management*, 45–71. https://doi.org/10.1023/A:1019104520776

Jeon, M., Lee, S., & Jeong, M. (2018, September 5). E-Social Influence and Customers' Behavioral Intentions on a Bed and Breakfast Website. *Journal of Hospitality Marketing & Management, 27*(3), 366-385. https://doi.org/10.1080/19368623.2017.1367346

Jiang, Z., Wang, W., Tan, B., & Yu, J. (2016). The Determinants and Impacts of Aesthetics in Users' First Interaction with Websites. *Journal of Management Information Systems, 33*(1), 229-259. https://doi.org/ 10.1080/07421222.2016.1172443

Joseph, F., Black, B., Barry, J., & Rolph, E. (2010). *Multivariate Data Analysis* (Vol. 7th Edition). Pearson Prentice Hall.

Kardes, F., Posavac, S., & Cronley, M. (2008, January). Consumer Inference: A Review of Processes, Bases, and Judgment Contexts. *Journal of Consumer Psychology, 14*(3), 230-256. https://doi.org/10.1207/S15327663JCP1403_6

Katsanos, C., Tselios, N., & Avouris, N. (2010). Evaluating website navigability: validation of a tool-based approach through two eye-tracking user studies. *New Review of Hypermedia and Multimedia, 16*(2), 194-214. https://doi.org/10.1080/13614561003605179

Keib, K., Espina, C., Lee, Y.-I., Wojdynski, B., Choi, D., & Bang, H. (2016). Picture Perfect: How Photographs Influence Emotion, Attention and Selection in Social Media News Posts. *AEJMC.* Minneapolis, USA. https://doi.org/10.1080/15213269.2017.1378108

Keltner, D., Tracy, J., & Cowen, A. (2019, February 13). What Basic Emotion Theory Really Says for the Twenty-First Century Study of Emotion. *Journal of Nonverbal Behaviour, 43*, 195-201. https://doi.org/10.1007/s10919-019-00298-y

Kim, & Lennon. (2013, March). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention: Based on the stimulus-organism-response model. *Journal of Research in Interactive Marketing, 7*(1). https://doi.org/10.1108/17505931311316734

Kim, M., & Lennon, S. (2008, January 11). The effects of visual and verbal information on attitudes and purchase intentions in internet shopping. *Psychology & Marketing, 25*(2), 146-178. https://doi.org/10.1002/mar.20204

Kim, M., & Lennon, S. J. (2009, July). Television Shopping for Apparel in the United States: Effects of Perceived Amount of Information on Perceived Risks and Purchase Intentions. *Journal of Family and Consumer Sciences, 28*(3), 301-331. https://doi.org/10.1177/1077727X00283002

Kim, S., & Park, H. (2013). Effects of Various Characteristics of Social Commerce (S-Commerce) on Consumers' Trust and Trust Performance. *International Journal of Information Management*, 318-332. https://doi.org/10.1016/j.ijinfomgt.2012.11.006

Kimiagari, S., & Malafe, N. (2021, July). The role of cognitive and affective responses in the relationship between internal and external stimuli on online impulse buying behavior. *Journal of Retailing and Consumer Services, 61*. https://doi.org/10.1080/15332861.2020.1816324

Knoche, H., & Sasse, M. A. (2009, August). The big picture on small screens delivering acceptable video quality in mobile TV. *ACM Transactions on Multimedia Computing, Communications and Applications, 5*(3). https://doi.org/10.1145/1556134.1556137

Kotler, P. (1997). *Marketing Management: Analysis, Planning, Implementation, and Control* (9 ed.). Upper Saddle River.

Kotler, P. (2020). 2nd Digital Marketing Playbook. *Marketing Seminars.* Philippines.

Kouki-Block, M., & Wellbrock, C.-M. (2021, April 1). Influenced by Media Brands? A Conjoint Experiment on the Effect of Media Brands on Online Media Planners' Decision-Making. *Journal of Media Business Studies, 19*(1), 29-52. https://doi.org/10.1080/16522354.2021.1899741

Krishna, A. (2012). An integrative review of sensorial marketing: Enaging the senses to affect perception, judgement and behavior. *Journal of Consuemr Psychology, 22*, 332-351. https://doi.org/10.1016/j.jcps.2011.08.003

Labrecque, L., Vor dem Esche, J., Mathwick, C., Novak, T., & Hofacker, C. (2013, November). Consumer Power: Evolution in the Digital Age. *Journal of Interactive Marketing, 27*(4), 257-269. https://doi.org/ 10.1016/j.intmar.2013.09.002

Lavie, T., & Tranctinsky, N. (2004, March). Assessing dimensions of perceived visual aesthetics of web sites. *International Journal of Human-Computer Studies, 60*(3). https://doi.org/10.1016/j.ijhcs.2003.09.002

Lavrakas, P. (2008). *Cronbach's Alpha.* SAGE.

Lazaroiu, G., Negurita, O., Grecu, I., Grecu, G., & Mitran, P. (2020, May 15). Consumers' Decision-Making Process on Social Commerce Platforms: Online

Trust, Perceived Risk, and Purchase Intentions. *Frontiers in Psychology, 11*, 1-7. https://doi.org/10.3389/fpsyg.2020.00890

Lăzăroiu, G., Neguriţă, o., Grecu, i., Grecu, G., & Mitran, P. (2020, May 15). Consumers' Decision-Making Process on Social Commerce Platforms: Online Trust, Perceived Risk, and Purchase Intentions. *Frontiers Psychology*. https://doi.org/10.3389/fpsyg.2020.00890

Lee, M. K., & Turban, E. (2001, September). A Trust Model for Consumer Internet Shopping. *International Journal of Electronic Commerce, 6*, 75-91. https://doi.org/10.1080/10864415.2001.11044227

Lee, N., Broderick, A., & Chamberlain, L. (2014). What is 'neuromarketing'? A discussion and agenda for future research. *International Journal of Psychophysiolog7, 63*, 199-204. https://doi.org/ 10.1016/j.ijpsycho.2006.03.007

Lee, S., Hwang, T., & Choi, D. (2012, February). Open innovation in the public sector of leading countries. *Management Decision, 50*(147-162). https://doi.org/10.1108/00251741211194921

Lemon, K., & Verhoef, P. (2016, November 1). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing, 80*(6), 69-96. https://doi.org/10.1509/jm.15.0420

Lim, E. A., & Ang, S. H. (2013, March 4). The Influence of Metaphors and Product Type on Brand Personality Perceptions and Attitudes. *Journal of Advertising, 35*(2), 39-53. https://doi.org/10.1080/00913367.2006.10639226

Lin, M., & Xuemei, B. (2022, April 5). The asymmetric dominance of cognitive versus affective country image in driving purchase: Conditioning roles of cognition-affect intra-valence nature and product type. *International Business Review*. https://doi.org/10.1016/j.ibusrev.2022.102007

Lindgaard, G. (2007, May 1). Aesthetics, Visual Appeal, Usability and User Satisfaction: What Do the User's Eyes Tell the User's Brain? *Australian Journal of Emerging Technologies and Society, 5*(1), 1-14. https://doi.org/10.1016/j.sbspro.2013.10.140

Lindgaard, G., & Dudek, C. (2002, January). User Satisfaction, Aesthetics and Usability: Beyond Reductionism. *Proceedings of the IFIP 17th World Computer Congress - TC13 Stream on Usability: Gaining a Competitive Edge.* Ottawa, Canada. https://doi.org/ 10.1007/978-0-387-35610-5_16

Lindgaard, G., Fernandes, G., & Dudek, C. (2006, March). Attention web designers: You have 50 milliseconds to make a good first impression! *Behaviour and Information Technology, 25*(2), 115-126. https://doi.org/10.1080/01449290500330448

Ling, L. P., & Yazdanifard, R. (2014, November). Does Gender Play A Role In Online. *Global Journals - Consumer Satisfaction*. Retrieved from https://www.researchgate.net/publication/270393826_Does_Gender_Play_a_Role_in_Online_Consumer_Behavior

Liu, Y., & Li, H. (2013, June). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems, 55*(3), 829-837. https://doi.org/10.1016/j.dss.2013.04.001

Liu, W., Cao, Y., & Proctor, R. W. (2021). The Roles of Visual Complexity and Order in First Impressions of Webpages: An ERP Study of Webpage Rapid Evaluation. International Journal of Human–Computer Interaction, 1–14. https://doi.org/10.1080/10447318.2021.2002044

Lowry, P., Wilson, D., & Haig, W. (2013, November 27). A Picture is Worth a Thousand Words: Source Credibility Theory Applied to Logo and Website Design for Heightened Credibility and Consumer Trust. *International Journal of Human–Computer Interaction, 30*(1), 63-93. https://doi.org/ 10.1080/10447318.2013.839899

MacCallum, R., & Widaman, K. (1999). Sample Size in Factor Analysis. *American Psychological Association, 4*(1), 84-99. https://doi.org/10.1037/1082-989X.4.1.84

Mäki, T., Varela, M., Skorin-Kapov, L., & Hoßfeld, T. (2013). Towards an understanding of visual appeal in website design. *Fifth International Workshop*

on Quality of Multimedia Experience (QoMEX), (pp. 70-75). https://doi.org/10.1109/QoMEX.2013.6603213

Malhotra, N., Nunan, D., & Birks, D. (2017). Marketing Research: An applied approach. *5th Edition*.

Mansour, K., Kooli, K., & Utama, R. (2014). Online trust antecedents and their consequences on purchase intention: An integrative approach. *Journal of Customer Behaviour, 13*(1), 25-42. https://doi.org/ 10.1362/147539214X14024779343677

Manzano, R., Serra, T., & Gavilán, D. (2019, May 6). Sensory Marketing: Straight to the Emotions. https://doi.org/10.15178/va.2019.148.121-147

Martínez-Sala, A., Gauchi, J., & Martínez, D. (2020, January). User Usable Experience: A three-dimensional approach on usability in tourism websites and a model for its evaluation. *Tourism Management Perspectives, 33*. https://doi.org/10.1016/j.tmp.2019.100579

Miesler, L., Leder, H., & Herrmann, A. (2011, December 31). Isn't It Cute: An Evolutionary Perspective of Baby-Schema Effects in Visual Product Designs. *International Journal of Design, 5*, 17-30. Retreived from https://www.researchgate.net/publication/283950437_Isn't_It_Cute_An_Evolutionary_Perspective_of_Baby-Schema_Effects_in_Visual_Product_Designs

Mittal, V., & Ross, W. (1998). The impact of positive and negative affect and issue framing on issue interpretation and risk taking. *Organizational Behavior and Human Decision Processes, 76*(3), 298–324. https://doi.org/10.1006/obhd.1998.2808

Mora, M. (2012, February 7). The Importance Of Visual Appeal To Website Usability. *Relevant Insights*. https://www.relevantinsights.com/articles/usability-importance-website-visual-appeal/

Moslehpour, M., Dadvari, A., Nugroho, W., & Do, B.-R. (2020, May 30). The dynamic stimulus of social media marketing on purchase intention of

Indonesian airline products and services. *Journal of Marketing and Logistics, 33*(2), 563-583. https://doi.org/10.1108/apjml-07-2019-0442

Mou, J., & Cohen, J. F. (2014). Trust, Risk and Perceived Usefulness in Consumer Acceptance of Online. *25th Australasian Conference on Information Systems.* Auckland, NEW ZEALAND. https://doi.org/10.1080/0144929X.2016.1203024

Myers, C., & Tingley, D. (2017, January 4). The Influence of Emotion on Trust. *Political Analysis, 24*(4), 492-500. https://doi.org/10.1093/pan/mpw026

Nair, K. (2021, January 26). Application of AI technology in modern digital marketing environment. *World Journal of Entrepreneurship, Management and Sustainable Development, 17*(3). https://doi.org/10.1108/WJEMSD-08-2020-0099

Nia, M., & Shokouhyar, S. (2020, October 8). Analyzing the effects of visual aesthetic of Web pages on users' responses in online retailing using the VisAWI method. (Emerald, Ed.) *Journal of Research in Interactive Marketing, 14*(4). https://doi.org/10.1108/JRIM-11-2018-0147

Nienaber, A.-M., Hofeditz, M., & Romeike, P. (2015, June 1). Vulnerability and trust in leader-follower relationships. *Personnel Review, 44*(4). https://doi.org/10.1108/PR-09-2013-0162

Nikolaev, B., Shir, N., & Wiklund, J. (2019, January 23). Dispositional Positive and Negative Affect and Self-Employment Transitions: The Mediating Role of Job Satisfaction. *Journal of Markeitng, 44*(3), 451-474. https://doi.org/10.1177/1042258718818357

Nissen, A., & Krampe, C. (2021, August). Why he buys it and she doesn't – Exploring self-reported and neural gender differences in the perception of eCommerce websites. *Computers in Human Behaviour, 121*, 1-13. https://doi.org/10.1016/j.chb.2021.106809

Norman, D. A. (2002, July). Emotion & Design: Attractive Things Work Better. 36-42. https://doi.org/10.1145/543434.543435

Oberlo. (2021, October). Retrieved from https://www.oberlo.com/

Oyibo, K., & Vassileva, J. (2017, December 22). The Interplay of Aesthetics, Usability and Credibility in Mobile Website Design and the Effect of Gender. *Journal on Interactive Systems, 8*(2). https://doi.org/10.1145/3033701.3033711

Pandir, M., & Knight, J. R. (2006, December). Homepage aesthetics: The search for preference factors and the challenges of subjectivity. *Homepage aesthetics: The search for preference factors and the challenges of subjectivity*, 1351-1370. https://doi.org/10.1016/j.intcom.2006.03.007

Parboteeah, D., Valacich, J., & Wells, J. (2008, June 20). The Influence of Website Characteristics on a Consumer's Urge to Buy Impulsively. *Management Information Systems, 20*(1), 60-78. https://doi.org/10.1287/isre.1070.0157

Pavlou, P. (2003, March). Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of Electronic Commerce, 7*(3), 101-134. https://doi.org/10.1080/10864415.2003.11044275

Pengnate, S., & Sarathy, R. (2013). Visual appeal of websites: The durability of initial impressions. *43th Hawaii International Conference on System Sciences* (pp. 480-489). Hawaii, USA: IEEE. https://dl.acm.org/citation.cfm?id=1748458

Pengnate, S., & Sarathy, R. (2017, February). An experimental investigation of the influence of website emotional. *Computers in Human Behavior, 67*, 46-60. https://doi.org/ 10.1016/j.chb.2016.10.018

Perkins, C. (2013, March). Aradhna Krishna (ed.), Sensory Marketing: Research on the Sensuality of Products., *13*, pp. 68-70. https://doi.org/10.1177/1469540512474532b

Pinto, V., Filho, T., Minim, V., Lucia, S., Souza, L., Silva, F., . . . Perrone, Í. (2021, December 05). Proposal for determining valence and arousal thresholds: Compromised pleasure threshold, unpleasure threshold, and arousal threshold. *Journal of Sensory Studies*. https://doi.org/10.1111/joss.12726

Pisterman, S., & Campbell, A. (2017). A Fitting Approach to Interactive Service Design: The Importance of Emotional Needs. *Design Management Journal, 7*(4), 10-14.

Pollak, F., Soviar, J., & Vavrek, R. (2021). *Sensory Marketing*. IntechOpen. https://doi.org/10.5772/intechopen.100378

Pope Benedict XVI. (2010, September 17). Speech of His Holliness Pope Benedict XVI to students in London. Retrieved from https://www.vatican.va/content/benedict-xvi/en/speeches/2010/september/documents/hf_ben-xvi_spe_20100917_mondo-educ.html

Qalati, S., Vela, E., Li, W., Dakhan, S., & Thuy, T. (2021, January 11). Effects of perceived service quality, website quality, and reputation on purchase intention: The mediating and moderating roles of trust and perceived risk in online shopping. *Cogent Business & Management, 8*(1), 1-20. https://doi.org/10.1080/23311975.2020.1869363

Qin, Y., Cho, H., Li, P., & Zhang, L. (2021). First Impression Formation Based on Valenced Self-Disclosure in Social Media Profiles. *Frontiers in Psychology, 12.* https://doi.org/10.3389/fpsyg.2021.656365

Radeke, M. K., & Stahelski, A. J. (2020, July 2). Altering age and gender stereotypes by creating the Halo and Horns Effects with facial expressions. *Humanities and Social Sciences Communications*(7). https://doi.org/10.1080/23311975.2020.1869363

Razali, N., Noor, N., Zainudin, N., Malizan, N., Hasbullah, N., & Ishak, K. (2021). Emotional Evocative User Interface Design for. *International Journal of Advanced Computer Science and Applications, 12*(6), 360-36. https://doi.org/10.1109/ICCET.2019.8726892

René Descartes. (1641). *Médiations Métaphysiques* (Vol. 2nde méditation).

Rentinck, L. (2007). A dual way to design a navigation menu; concrete `storylines' combined with a negotiation process. *IEEE International Professional*

Communication Conference (pp. 1-6). IEEE. https://doi.org/10.1109/IPCC.2007.4464086.

Richetin, J., Demartini, E., Gaviglio A., Ricci, E., Stranieri, S., Banterle, A., Perugini M. (2021, July). The biasing effect of evocative attributes at the implicit and explicit level: The tradition halo and the industrial horn in food products evaluations. *Journal of Retailing and Consumer Services* 61. https://doi.org/10.1016/j.jretconser.2019.101890

Schmidt, T., & Blankenburg, F. (2018, September). Brain regions that retain the spatial layout of tactile stimuli during working memory – A 'tactospatial sketchpad'? *NeuroImage, 178*, 531-539. https://doi.org/10.1016/j.neuroimage.2018.05.076

Sillivan, Y., & Kim, D. (2018, April). Assessing the effects of consumers' product evaluations and trust on repurchase intention in e-commerce environments. *International Journal of Information Management, 39*, 199-219. https://doi.org/10.1016/j.ijinfomgt.2017.12.008

Simonin, B., & Ruth, J. (1998, February). Is a Company Known by the Company It Keeps? Assessing the Spillover Effects of Brand Alliances on Consumer Brand Attitudes. *Journal of Marketing Research, 35*. https://doi.org/10.2307/3151928

Sonderegger, A., & Sauer, J. (2010). The influence of design aesthetics in usability testing: effects on user performance and perceived usability. *Applied Ergonomics, 41*(3), 403-410. https://doi.org/10.1016/j.apergo.2009.09.002

Spears, N., & Singh, S. N. (2004, September). Measuring Attitude Toward the Brand and Purchase Intentions. *Journal of Current Issues and Research in Advertising, 26*(2), 53-66. https://doi.org/10.1080/10641734.2004.10505164

Statista. (2021). Retrieved from https://www.statista.com

Statista. (2021). Beauty and care products bought by U.S. consumers 2020, by gender. Retrieved from https://www.statista.com/statistics/716386/beauty-personal-care-products-purchased-by-consumers-us-by-gender/

Stojmenovic, M., Pilgrim, C., & Lindgaard, G. (2014). Perceived and Objective Usability and Visual Appeal in a. *Proceedings of the 26th Australian Computer-Human Interaction Conference on Designing Futures: the Future of Design*, (pp. 316-323). Sydney, Australia. https://doi.org/10.1145/2686612.2686660

Suen, L.-J., Huang, H.-M., & Lee, H.-H. (2014, June). A Comparison of Convenience Sampling and Purposive Sampling. *Journal of Statistics and Data Science Education, 61*(3), 105-111. https://doi.org/10.6224/jn.61.3.105

Sunitha, C. K., & Gnanadhas, E. (2014, June). Online Shopping - An Overview. Retrieved from https://www.researchgate.net/publication/264556861_Online_Shopping_-_An_Overview

Tang, P., Yao, Z., Luan, J., & Xiao, J. (2022). How information presentation formats influence usage behaviour of course management systems: flow diagram navigation versus menu navigation. *Behaviour & Information Technology, 41*(2), 383-400. https://doi.org/10.1080/0144929X.2020.1813331

Thelwall, M., & Harries, G. (2003, May 13). The connection between the research of a university and counts of links to its web pages: An investigation based upon a classification of the relationships of pages to the research of the host university. *Journal of the American Society for Information Science and Technology, 54*(7), 594-602. https://doi.org/10.1002/asi.10161

Thorndike, E. (1920). A constant error in psychological ratings. *Journal of Applied Psychology, 4*(1), 25-29. https://doi.org/10.1037/h0071663

Tuch, A., Avila, J., Opwis, K., & Wilhem, F. (2009, September). Visual complexity of websites: Effects on users' experience, physiology, performance, and memory. *International Journal of Human-Computer Studies, 67*(9), 703-715.

Varela, M., Mäki, T., Lea, S.-K., & Tobias, H. (2013). Towards an understanding of visual appeal in website design. *Fifth International Workshop on Quality of Multimedia Experience (QoMEX).* IEEE. https://doi.org/10.1016/j.ijhcs.2009.04.002

Ventre, I., & Kolbe, D. (2020, January 17). The Impact of Perceived Usefulness of Online Reviews, Trust and Perceived Risk on Online Purchase Intention in Emerging Markets: A Mexican Perspective. *Journal of International Consumer Marketing, 32*(4), 278-299. https://doi.org/10.1080/08961530.2020.1712293

Wang, L., Yan, Q., & Chen, W. (2019). Drivers of purchase behavior and post-purchase. *Journal of Consumer Marketing, 36*(6), 835-845. https://doi.org/10.1108/JCM-08-2017-2335

Wang, Y., & Li, Y. (2016). Users' satisfaction with social network sites: a self-determination perspective. *Journal of Computer Information Systems, 56*, 48-54. https://doi.org/10.1080/08874417.2015.11645800

Wargo, E. (2006, July). How Many Seconds to a First Impression? *APS*. Retrieved from https://www.psychologicalscience.org/observer/how-many-seconds-to-a-first-impression

Weideman, M., & Ngindana, M. (2004). Website navigation architectures and their effect on website visibility – can search engines deliver on the promise? *Proceedings of the SAICSIT* . Stellenbosch, South Africa. Retrieved from https://www.researchgate.net/publication/321807012_Website_navigation_architectures_and_their_effect_on_website_visibility_-_can_search_engines_deliver_on_the_promise

West, A. W. (2016). *Practical Web Design for Absolute Beginners* (1st ed.). Apress.

Wijntjes, M., Lienen, T., Verstijnen, I., & Kappers, A. (2008, February). The Influence of Picture Size on Recognition and Exploratory Behaviour in Raised-Line Drawings. *Perception, 37*(3), 602-614. https://doi.org/10.1068/p5714

Wongadoonwit, T., Cooharojananone, N., & Thitivesa, V. (2014, May 6). Factors Effecting Purchase Intention Using Coverpage Image on Cosmetic E-Commerce Website: A Case Study of Thai Female Customers. *International Conference on Information Science & Applications*, (pp. 1-4). https://doi.org/10.1109/ICISA.2014.6847400

Wright, K. (2005, April 1). Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services. *Journal of Computer-Mediated Communication, 10*(1-3). https://doi.org/10.1111/j.1083-6101.2005.tb00259.x

Wuensch, L., Pool, E., & Sander, D. (2021, June). Individual differences in learning positive affective value. *Current Opinion in Behavioral Sciences, 39*, 19-26. https://doi.org/10.1016/j.cobeha.2020.11.001

Xia, H., Zhou, Y., Pan, X., & Zhang, Z. (2020, April). Creating the best first impression: Designing online product photos to increase sales. *Decision Support Systems, 131*. https://doi.org/10.1016/j.dss.2019.113235

Xu, H., & Yang, J. (n.d.). Do M-Commerce User's Expectations Reflect Reality? 322-331. Retrieved from http://ijebm.ie.nthu.edu.tw/IJEBM_Web/

Yahia, I., Al-Neama, N., & Kerbache, L. (2018, March). Investigating the drivers for social commerce in social media platforms: Importance of trust, social support and the platform perceived usage. *Journal of Retailing and Consumer Services, 41*, 11-19. https://doi.org/10.1016/j.jretconser.2017.10.021

Yang, Q., Pang, C., Liu, L., Yen, D., & Tarn, J. (2015). Computers in Human Behavior Exploring Consumer Perceived Risk and Trust for Online Payments: An Empirical Study in China's Younger Generation. *Computers in Human Behaviorr, 50*, 9-24. https://doi.org/10.1016/j.chb.2015.03.058

Zarantonello, L., & Schmitt , B. (2010). Using the brand experience scale to profile consumers and predict consumer behaviour. *Journal of Brand Management, 17*, 532-540. http://doi.org/10.1057/bm.2010.4

Zhang, P. (2013). The Affective Response Model: A Theoretical Framework of Affective Concepts and Their Relationships in the ICT Context. *Management Information Systems Quarterly, 31*(1), 247-27. Retrieved from https://www.jstor.org/stable/43825945

Appendices

Appendix 1 – Questionnaire Structure

Mercados Online dos Cosméticos

Este formulário foi realizado no âmbito de uma Tese Final de Mestrado do Mestrado em Marketing da Católica Porto Business School, e tem como objetivo, analisar o comportamento dos consumidores relativamente às características visuais de um website.

O preenchimento deste breve questionário não deverá ultrapassar os 3 minutos e todas as respostas serão tratadas de uma forma confidencial e anónima. As respostas são todas de carácter obrigatório, sendo importante realçar que estamos interessados acima de tudo na sua opinião e que não existem respostas certas ou erradas.

Em caso de dúvida, pode contactar a responsável Leonor Ferraz, através do email: marialeonorferraz@gmail.com.

Ao submeter este questionário, assume-se que concorda com os termos acima descritos.

Agradecemos, desde já, a sua disponibilidade e participação.

Questionário 1:

Parte 1 - Website

Já comprou cosméticos online:

- Sim
- Não

Se compra (ou já comprou) cosméticos online, com que frequência é que o faz?

- Muito frequentemente
- Com alguma frequência
- Raramente

Com que frequência faz compras de cosméticos:

- Uma vez por semana
- Duas vezes por mês
- Uma vez por mês
- Algumas vezes no ano
- Quase nunca

O que mais receia quando compra cosméticos online? (selecione no máximo 3 opções)

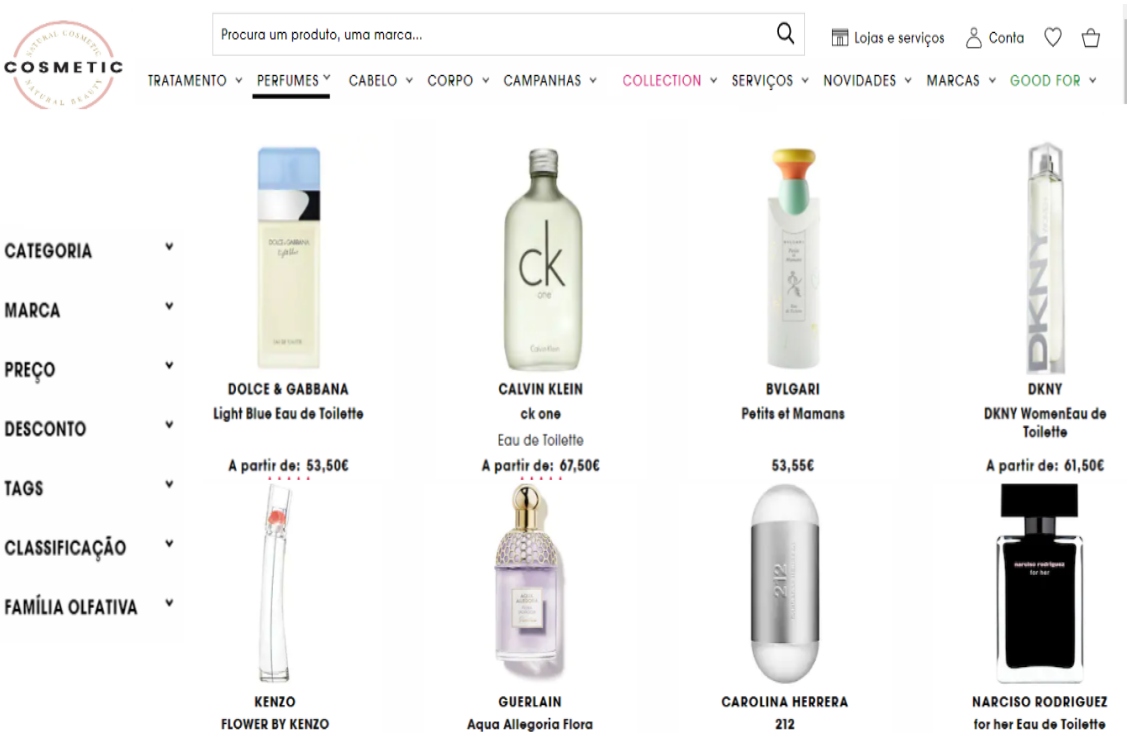
- Segurança
- Qualidade

- Modo de pagamento
- Marca
- Produtos

Alguma vez abandonou/saiu de um website (de cosméticos ou outro) porque não era visualmente apelativo?

- Sim
- Não

Tendo em conta este website, responda às seguintes perguntas:



Considero este website:

	1	2	3	4	5	6	7	
Desagradável								Agradável
Desfavorável								Favorável
Desinteressante								Interessante
Mau								Bom
Negativo								Positivo

<u>Parte 2 - Confiança</u>

Por favor responda às questões a seguir apresentadas, tendo em conta o website que acabou de visualizar.

	1 " Discordo Completamente "	2 " Discordo "	3 " Não Concordo nem	4 " Concordo "	5 "Concordo Completamente "

			Discordo"		
Este website é digno de confiança					
Este website parece ser de confiança					
Confio que este website tem em consideração os meus interesses					
Considero que este website é muito fiável					

Parte 3 – Intenção de Compra

Por favor responda às questões a seguir apresentadas, tendo em conta as suas respostas anteriores.

	1 " Discordo Completamente"	2 " Discordo "	3 " Não Concordo nem Discordo"	4 " Concordo "	5 "Concordo Completamente "
Possivelmente, compraria dum produto deste site					
É provável que eu comprasse					

um produto deste site					
Estaria disposto a comprar um produto deste site					

Sem alterar alguma resposta anterior, quando analisa e avalia o apelo visual de um website acha:

- Mais importante o tamanho das imagens
- Mais importante os títulos do menu de navegação e filtros
- Igualmente importante o tamanho das imagens e menu de navegação e filtros
- Nenhuma das opções

Parte 4 - Dados Demográficos:

Idade: _____

Qual o seu género:

- Feminino
- Masculino
- Outro:

Escolaridade (especifique por favor o último grau obtido):

- Ensino Básico
- Ensino Secundário
- Licenciatura
- Mestrado
- Doutoramento
- Outro: _____

Questionário 2:

Parte 1 - Website

Já comprou cosméticos online:

- Sim
- Não

Se compra (ou já comprou) cosméticos online, com que frequência é que o faz? Costuma comprar os seus cosméticos via online?

- Muito frequentemente
- Com alguma frequência

- Raramente

Com que frequência faz compras de cosméticos:

- Uma vez por semana
- Duas vezes por mês
- Uma vez por mês
- Algumas vezes no ano
- Quase nunca

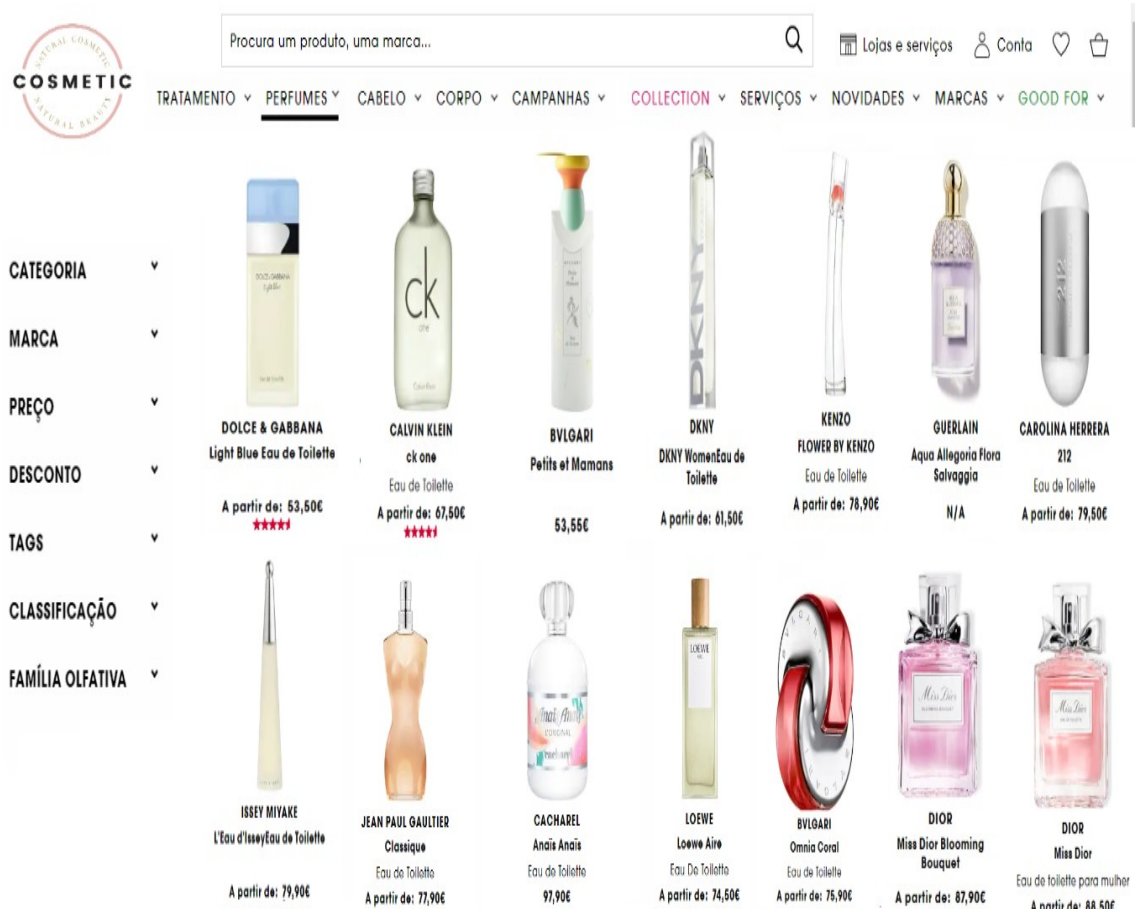
O que mais receia quando compra cosméticos online? (selecione no máximo 3 opções)

- Segurança
- Qualidade
- Modo de pagamento
- Marca
- Produtos

Alguma vez abandonou/saiu de um website (de cosméticos ou outro) porque não era visualmente apelativo?

- Sim
- Não

Tendo em conta este website, responda às seguintes perguntas:



Considero este website:

	1	2	3	4	5	6	7	
Desagradável								Agradável
Desfavorável								Favorável
Desinteressante								Interessante
Mau								Bom
Negativo								Positivo

<u>Parte 2 - Confiança</u>

Por favor responda às questões a seguir apresentadas, tendo em conta o website que acabou de visualizar.

	1 " Discordo Completamente "	2 " Discordo "	3 " Não Concordo nem Discordo"	4 " Concordo "	5 "Concordo Completamente "
Este website é					

digno de confiança					
Este website parece ser de confiança					
Confio que este website tem em consideração os meus interesses					
Considero que este website é muito fiável					

Parte 3 – Intenção de Compra

Por favor responda às questões a seguir apresentadas, tendo em conta as suas respostas anteriores.

	1 " Discordo Completamente"	2 " Discordo "	3 " Não Concordo nem Discordo"	4 " Concordo "	5 "Concordo Completamente "
Possivelmente, compraria dum produto deste site					
É provável que eu comprasse um produto deste site					
Estaria disposto a comprar um					

produto deste site					

Sem alterar alguma resposta anterior, quando analisa e avalia o apelo visual de um website acha:

- Mais importante o tamanho das imagens
- Mais importante os títulos do menu de navegação e filtros
- Igualmente importante o tamanho das imagens e menu de navegação e filtros
- Nenhuma das opções

Parte 4 - Dados Demográficos:

Idade: _____

Qual o seu género:

- Feminino
- Masculino
- Outro:

Escolaridade (especifique por favor o último grau obtido):

- Ensino Básico
- Ensino Secundário
- Licenciatura
- Mestrado
- Doutoramento
- Outro: _____

Questionário 3:

Parte 1 - Website

Já comprou cosméticos online:

- Sim
- Não

Se compra (ou já comprou) cosméticos online, com que frequência é que o faz? Costuma comprar os seus cosméticos via online?

- Muito frequentemente
- Com alguma frequência
- Raramente

Com que frequência faz compras de cosméticos:

- Uma vez por semana
- Duas vezes por mês
- Uma vez por mês

- Algumas vezes no ano
- Quase nunca

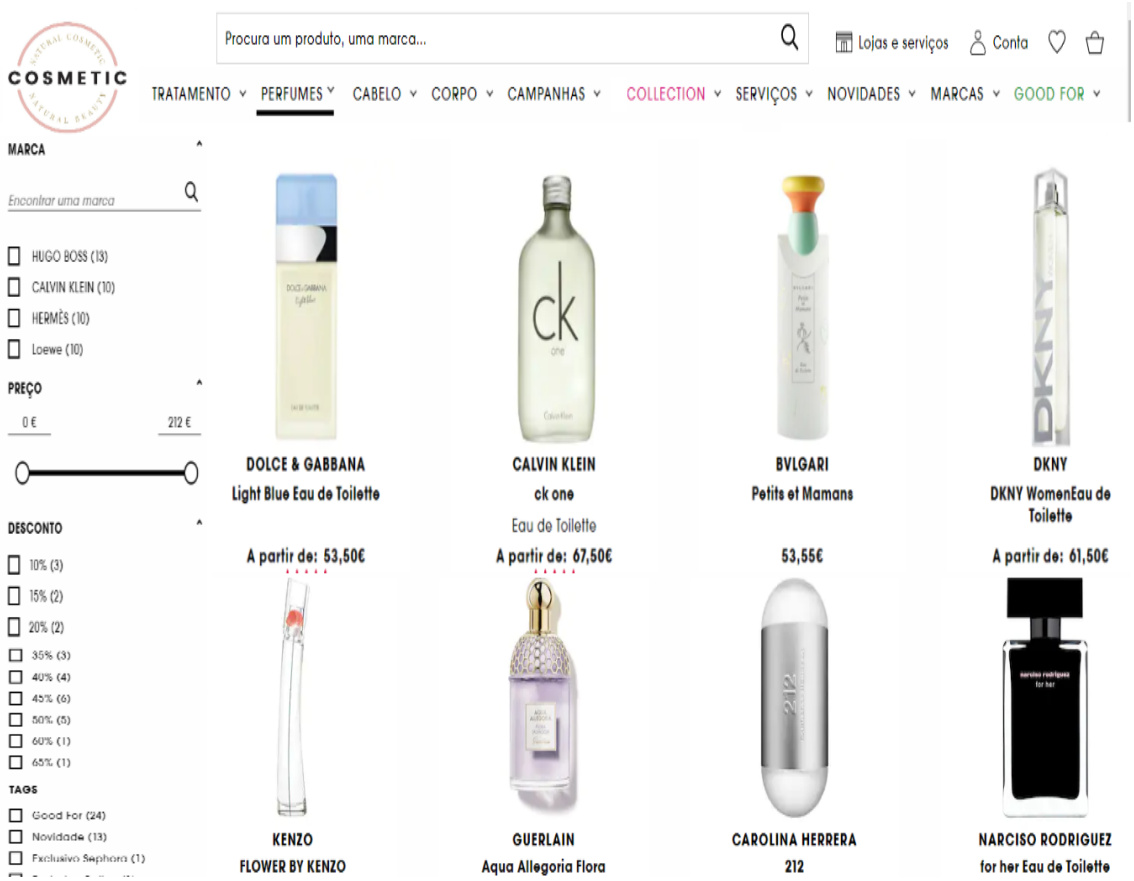
O que mais receia quando compra cosméticos online? (selecione no máximo 3 opções)

- Segurança
- Qualidade
- Modo de pagamento
- Marca
- Produtos

Alguma vez abandonou/saiu de um website (de cosméticos ou outro) porque não era visualmente apelativo?

- Sim
- Não

Tendo em conta este website, responda às seguintes perguntas:



Considero este website:

	1	2	3	4	5	6	7	
Desagradável								Agradável
Desfavorável								Favorável

Desinteressante								Interessante
Mau								Bom
Negativo								Positivo

Parte 2 - Confiança

Por favor responda às questões a seguir apresentadas, tendo em conta o website que acabou de visualizar.

	1 " Discordo Completamente "	2 " Discordo "	3 " Não Concordo nem Discordo"	4 " Concordo "	5 "Concordo Completamente "
Este website é digno de confiança					
Este website parece ser de confiança					
Confio que este website tem em consideração os meus interesses					
Considero que este website é muito fiável					

Parte 3 – Intenção de Compra

Por favor responda às questões a seguir apresentadas, tendo em conta as suas respostas anteriores.

	1 " Discordo Completamente"	2 " Discordo "	3 " Não Concordo nem	4 " Concordo "	5 "Concordo Completamente "

			Discordo"		
Possivelmente, compraria dum produto deste site					
É provável que eu comprasse um produto deste site					
Estaria disposto a comprar um produto deste site					

Sem alterar alguma resposta anterior, quando analisa e avalia o apelo visual de um website acha:

- Mais importante o tamanho das imagens
- Mais importante os títulos do menu de navegação e filtros
- Igualmente importante o tamanho das imagens e menu de navegação e filtros
- Nenhuma das opções

Parte 4 - Dados Demográficos:

Idade: _____

Qual o seu género:

- Feminino
- Masculino
- Outro:

Escolaridade (especifique por favor o último grau obtido):

- Ensino Básico
- Ensino Secundário
- Licenciatura
- Mestrado
- Doutoramento
- Outro: _____

Questionário 4:

Parte 1 - Website

Já comprou cosméticos online:

- Sim
- Não

Se compra (ou já comprou) cosméticos online, com que frequência é que o faz? Costuma comprar os seus cosméticos via online?

- Muito frequentemente
- Com alguma frequência
- Raramente

Com que frequência faz compras de cosméticos:

- Uma vez por semana
- Duas vezes por mês
- Uma vez por mês
- Algumas vezes no ano
- Quase nunca

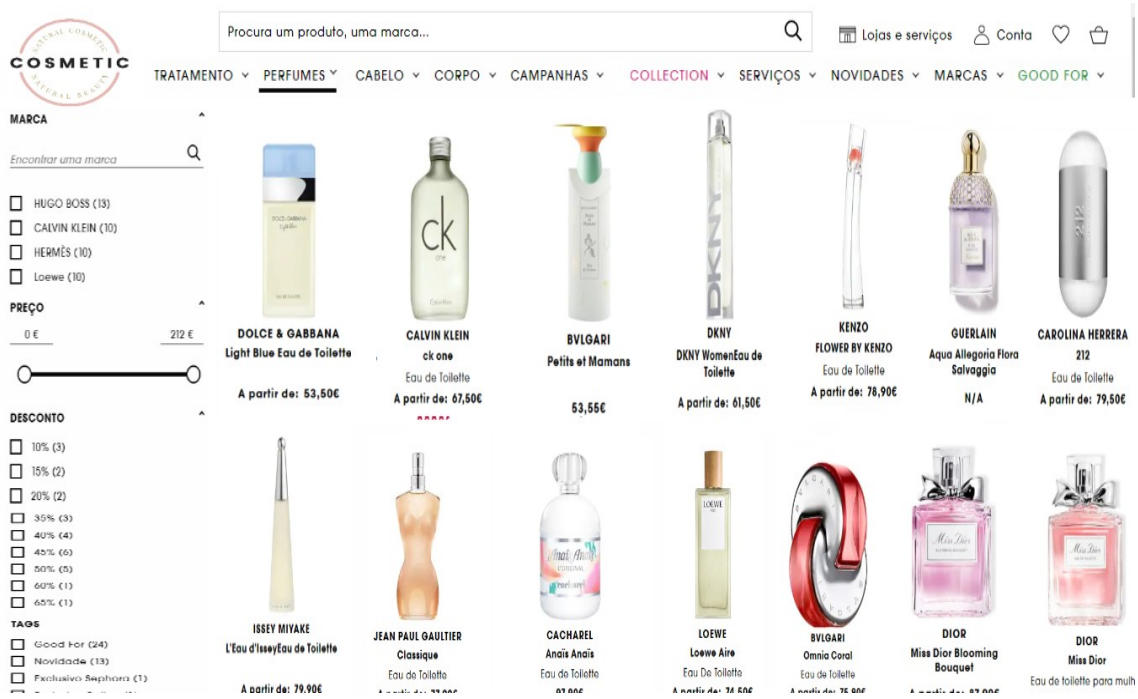
O que mais receia quando compra cosméticos online? (selecione no máximo 3 opções)

- Segurança
- Qualidade
- Modo de pagamento
- Marca
- Produtos

Alguma vez abandonou/saiu de um website (de cosméticos ou outro) porque não era visualmente apelativo?

- Sim
- Não

Tendo em conta este website, responda às seguintes perguntas:



Considero este website:

	1	2	3	4	5	6	7	
Desagradável								Agradável
Desfavorável								Favorável
Desinteressante								Interessante
Mau								Bom
Negativo								Positivo

<u>Parte 2 - Confiança</u>

Por favor responda às questões a seguir apresentadas, tendo em conta o website que acabou de visualizar.

	1 " Discordo Completamente "	2 " Discordo "	3 " Não Concordo nem Discordo"	4 " Concordo "	5 "Concordo Completamente "
Este website é digno de confiança					
Este website parece ser					

de confiança					
Confio que este website tem em consideração os meus interesses					
Considero que este website é muito fiável					

Parte 3 – Intenção de Compra

Por favor responda às questões a seguir apresentadas, tendo em conta as suas respostas anteriores.

	1 " Discordo Completamente"	2 " Discordo "	3 " Não Concordo nem Discordo"	4 " Concordo "	5 "Concordo Completamente "
Possivelmente, compraria dum produto deste site					
É provável que eu comprasse um produto deste site					
Estaria disposto a comprar um produto deste site					

Sem alterar alguma resposta anterior, quando analisa e avalia o apelo visual de um website acha:

- Mais importante o tamanho das imagens
- Mais importante os títulos do menu de navegação e filtros
- Igualmente importante o tamanho das imagens e menu de navegação e filtros
- Nenhuma das opções

Parte 4 - Dados Demográficos:

Idade: _____

Qual o seu género:

- Feminino
- Masculino
- Outro:

Escolaridade (especifique por favor o último grau obtido):

- Ensino Básico
- Ensino Secundário
- Licenciatura
- Mestrado
- Doutoramento
- Outro: _____

Appendix 2 – Scales

Affective Response	
Grossman & Till (1998) Simonin & Ruth (1998)	1. "I feel this website is unappealing/appealing" 2. " I feel this website is unfavourable/favourable " 3. " I feel this website is uninteresting/interesting" 4. " I feel this website is bad/good " 5. " I this website is negative/positive "
Trust	
Jarvenpaa, Tractinsky, & Vitale (2000) Mou & Cohen (2014) Doney & Cannon (1997)	1. "This website is trustworthy" 2. "This website appears to be trustworthy" 3. "I trust this store keeps my best interests in mind" 4. "I think this website is very reliable"
Purchase Intention	
Spears & Singh (2004) Chang & Liu (2009) Dodds et al. (1991)	1. "I would consider purchasing this product" 2. "I intend to try this product" 3. "I plan on buying this product" 4. "I am interested in buying this product" 5. "I will purchase this product"

Appendix 3 – Descriptive statistics of the dependent variables

AR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	2	,8	,8	,8
	1,60	2	,8	,8	1,5
	2,00	59	22,7	22,7	24,2
	2,60	1	,4	,4	24,6
	3,00	11	4,2	4,2	28,8
	3,40	1	,4	,4	29,2
	3,60	1	,4	,4	29,6
	4,00	52	20,0	20,0	49,6
	4,40	1	,4	,4	50,0
	4,60	2	,8	,8	50,8
	5,00	54	20,8	20,8	71,5
	5,40	1	,4	,4	71,9
	5,60	2	,8	,8	72,7
	6,00	9	3,5	3,5	76,2
	6,20	1	,4	,4	76,5
	6,40	2	,8	,8	77,3
	6,60	1	,4	,4	77,7
	6,80	1	,4	,4	78,1
	7,00	57	21,9	21,9	100,0
	Total	260	100,0	100,0	

Trust

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	1	,4	,4	,4
	2,00	63	24,2	24,2	24,6
	2,75	1	,4	,4	25,0
	3,00	63	24,2	24,2	49,2
	3,75	4	1,5	1,5	50,8
	4,00	61	23,5	23,5	74,2
	4,25	2	,8	,8	75,0
	4,50	1	,4	,4	75,4
	4,75	1	,4	,4	75,8
	5,00	63	24,2	24,2	100,0
	Total	260	100,0	100,0	

PI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	1	,4	,4	,4
	2,00	63	24,2	24,2	24,6
	2,66	1	,4	,4	25,0
	3,00	63	24,2	24,2	49,2
	3,66	4	1,5	1,5	50,8
	4,00	63	24,2	24,2	75,0
	4,33	1	,4	,4	75,4
	4,67	1	,4	,4	75,8
	5,00	63	24,2	24,2	100,0
	Total	260	100,0	100,0	

Source: SPSS